JOHN L. VOLAKIS
VITA

Dean, College of Engineering and Computing, Florida International University
Professor, Electrical and Computer Engineering Dept., Florida International University
Fellow of IEEE, ACES, AAAS, NAI, and URSI

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Google h-index: 77 (>30,000 citations)
Scopus h-index: 61
ISI h-index: 52 (as of April 2023)

EDUCATION:
B.E., Summa Cum Laude, Youngstown State University, June 1978
M.Sc., The Ohio State University, December 1979
Ph.D., The Ohio State University, September 1982

PROFESSIONAL POSITIONS:

2017-	Professor and Dean, College of Engineering and Computing Florida International University, Miami, FL
1/2003-2017	Roy and Lois Chope Chair in Engineering (Emeritus faculty since 6/2021)
1/2003-2017	Professor, Electrical and Computer Engineering Dept. The Ohio State University, Columbus, OH.
1/03-9/16	Director, ElectroScience Laboratory, The Ohio State Univ. Director sets vision; manages finances; defines future faculty and research positions; leads multidisciplinary activities; develops infrastructure; coordinates staff activities; works with Univ. on outreach activities; fund raising and alumni relations; organizes student recruiting & industry days.
9/84-12/2003	The University of Michigan, Ann Arbor, MI Electrical Engineering and Computer Science Dept Director, Radiation Laboratory, 1998-2000 Professor 1994-2003 Associate Professor 1989-1994 Assistant Professor 1984-1989
9/82-9/84	Rockwell International, North American Aircraft Operations (now Boeing), El Segundo and Lakewood, CA, Member of Technical Staff

RECENT MAJOR AWARDS & INTERNATIONAL APPOINTMENTS

- 2021: National Academy of Inventors (NAI) Fellow.

- 2020: URSI Booker Gold Medal for "seminal contributions to Electromagnetics, including small, ultra-wideband and textile antennas and arrays, low power transceivers, diffraction and for transitioning hybrid finite element methods into commercial computational toolsets."
- 2020: AAAS Fellow: for "leadership in engineering education, authorship of important texts, game-changing contributions to electromagnetics, and for developing and transitioning hybrid finite element into commercial tool sets."
- 2019: Fellow, International Radio Science Union (URSI)
- 2017-2020: Vice Chair of International URSI B
- 2016: Ohio State University Distinguished Scholar Award, top award given by Ohio State to a faculty member. Award video: https://www.youtube.com/watch?v=yeZOvrSp-Pw
- 2016: Ohio State University George Sinclair Award for "excellence in research, and his exemplary leadership of the ElectroScience Laboratory, including establishing new research areas in electromagnetic sensor technologies and securing a new ESL building."
- 2015-2017: Chair of URSI B (United States National Committee on Radio Science).
- 2014: IEEE Antennas and Propagation Society Distinguished Award, 2014 (given to one individual annually from across the world). **Award citation**: "For game-changing contributions to computational electromagnetics, radar scattering and antennas, and for educational leadership and service to the electromagnetics community."
- 2013: IEEE Rudolf Henning Distinguished Mentoring Award (given to one individual annually). **Nomination Comment from Prof. Mumcu (former Ph.D. advisee from OSU):** "During his 30 years of career in electromagnetics, microwaves, RF circuits and antennas, Prof. Volakis has sustained one of the largest research programs in the world and devoted his time to influence students to pursue a professional career in RF/Microwave Engineering….I have always felt lucky to have him as my mentor -His unique guidance in my professional development has provided the motivation to complete my PhD degree and pursue further career opportunities in RF/Microwave Engineering."
- 2013: Invited external committee member to oversee Italy-wide evaluation/selection of Electromangetics/Optics candidates in 2013-14.
- 2012-2014: Vice Chair for URSI B based on National Elections (United States National Committee on Radio Science)
- 2012: Chaired external review committee for the Technical University of Crete.
- 2011: Fellow, Applied Computational Electromagnetics Society
- 2011: IEEE Chen-To Tai Distinguished Education Award (given to one individual annually). **Citation:** For exemplary contributions as an inspiring teacher and mentor, and for advancing electromagnetic technology.
- 2010: Scott College of Engineering career award for teaching research and service, Ohio State University. **Citation:** For pioneering contributions in education, including authorship of important texts and excellent mentoring of students, in research, including seminal contributions to computational electromagnetics and antenna design, and for leadership and distinctive service to the engineering profession.
- 2010-2014: IEEE-wide Fellows Evaluation Committee (reviews about 800 fellows annually for appointment to this grade).
- 2006-2010: IEEE Distinguished Lecturer
- 2005-2010: Committee Member and Chair of the IEEE Antennas and Propagation Fellows Evaluation Committee

- 2004: President, IEEE Antennas and Propagation Society
- 2004: Listed by ISI among the top 250 most referenced authors
- 2003: General Chair of the IEEE International Antennas and Propagation in Columbus, OH; symposium attended by nearly 1,700 registrants.
- 1996: Fellow of Institute of Electrical and Electronics Engineers (IEEE)
- 1993: General Chair of the IEEE International Antennas and Propagation Symposium in Ann Arbor, MI (1993)

Brief Bio: Prof. Volakis is an IEEE, ACES, AAAS, NAI and URSI Fellow. Prior to becoming the Dean of Engineering and Computing at FIU, he was the Roy and Lois Chope Chair in Engineering at Ohio State and a Professor in the Electrical and Computer Engineering Dept. (2003-2017). He also served as the Director of the Ohio State Univ. ElectroScience Laboratory for 14 years. His career spans four decades: two years at Boeing, 19 years on the faculty at the University of Michigan and 15 years at Ohio State, and six years at FIU. At the University of Michigan, he served as the Director of the Radiation Laboratory (1998-2000).

Prof. John L. Volakis is currently the elected (voted by nearly 45 countries) International Radio Science (URSI) Commission B Chair (2021-2023) and served as its Vice Chair from 2017-2021). He also served as President of the IEEE APS Society in 2004. He has 40 years of experience, and has published over 450 journal papers, nearly 1000 conference papers, 30 chapters, and 32 patents/disclosures. In 2004, he was listed by ISI Web of Science as one of the top 250 most referenced authors, and as of April 2023, his google h-index=77 with over 30,000 citations, among the largest in engineering. He has mentored nearly 110 PhDs/Post-Docs and has written with them 43 papers which received best paper awards. Among his students, 25 are faculty members, several have become leaders at major corporations and at least 10 started their own companies. He is one of the most active and cited researchers in electromagnetics/wireless/RF, RF materials and metamaterials, antennas and phased array, RF transceivers, textile electronics, millimeter waves and terahertz, EMI/EMC as well as EM diffraction and computational methods. He is also the authors of 9 books, including the popular Antenna Handbook, referred to as the "antenna bible."

Prof. Volakis is recognized worldwide for introducing and/or establishing 1) hybrid finite method for microwave engineering, now *defacto* methods in commercial RF design packages, and helped establish two major traded companies, 2) novel composite materials for antennas & sensor miniaturization, 3) a new class of wideband conformal antennas and arrays with over 30:1 of contiguous bandwidth, referred to as tightly coupled dipole antennas, already garnering over 6 million citations, 4) textile surfaces for wearable electronics and sensors, 5) battery-less and wireless medical implants for non-invasive brain signal collection, 6) diffraction coefficients for material coated edges, and for 7) model-scaled radar scattering verification methods to minimize costly full scale airframe field measurements.

His work has been recognized by several international and University-wide awards during his career. Among them are: 1) Univ. of Michigan College of Engineering Research Excellence award (1993), 2) IEEE Tai Teaching Excellence award (2011), 3) IEEE Henning Mentoring award (2013), 4) IEEE APS Distinguished Achievement award (2015), 5) Ohio State Univ. Distinguished Scholar Award (2016), 6) Ohio State ElectroScience Lab Sinclair award (2016), and the 7) International Union of Radio Science Booker Gold Medal (2020), one of the most international prestigious awards in radio science/microwaves. He has also transitioned several antennas and

computational tools to the market, and at least 10 of his former graduate students started companies and several have become leaders in industry and academia.

As Dean, he significantly grew his College's patent growth, student success and research enterprise, helping FIU become among the top 50 public universities, and improving the College's ranking by more than 50 spots, reaching #61 public.

RESEARCH & SCHOLARSHIP ACTIVITIES

Volakis' research is in wireless technologies, secure communication links, spectrum management, antennas, medical sensing, novel materials, terahertz devices and applications, multi-physics engineering, computational methods, electromagnetic compatibility and interference, and biomedical engineering. He graduated/mentored 107 Ph.Ds/Post-docs, with 43 of them having received best paper awards at conferences.

During his 40 years career, he has published more than 450 journal articles in major refereed journals, nearly 1,000 conference papers and 30 book chapters. In addition, he co-authored nine books:

1. *Approximate Boundary Conditions in Electromagnetics* (Institution of Electrical Engineers, London,1995)
2. *Finite Element Method for Electromagnetics* (IEEE Press, New York, 1998),
3. *Frequency Domain Hybrid Finite Element Methods in Electromagnetics* (Morgan & Claypool, 2007)
4. *Antenna Engineering Handbook, 4th ed.* (McGraw-Hill, 2007); 5th ed. 2018
5. *Computational Methods for High Frequency Electromagnetic Interference* (Verlag, 2009)
6. *Small Antennas: Miniaturization Techniques* (McGraw Hill, 2010)
7. *Polymer-Ceramic Composites for Comformal Multilayer Antenna/RF Systems* (LAP Lambert Academic Publishing, 2010).
8. *Integral Equation Methods for Electromagnetics* (Scitech Publishing, 2012)
9. *Wearable Antennas and Electronics* (Artech House, 2021)

He has delivered short courses for numerous organizations and conferences on numerical methods, antennas, and frequency selective surfaces. In 2004, Volakis was listed by ISI among the top 250 most referenced authors in Computer Science. His current Scopus Index=61, and the corresponding google-scholar Hirsch Index is h=77 with over 30,000 citations. For many years, Volakis has maintained research funding at a level of about $3 million per year.

His latest research entails terahertz and millimeter waves, spectrum management, secure 5G/6G transceivers, medical sensors, neurosensing, electronic textiles, antenna design and miniaturization with emphasis on novel materials (polymers, periodic media, and metamaterials) for antennas, and body-worn wireless technologies. Through collaboration with mechanical and materials engineering faculty, he pioneered material design and a new class of patented photonic crystals for high gain antennas. Also, his group realized the first carbon nanotube and electronic-textile antennas, having nearly equivalent performance to traditional rigid antennas. The flexibility of these technologies opened new directions in 3D flexible electronics (with particular impact on e-health applications). Through collaboration with microfabrication faculty, he also contributed to an understanding of MEMS failure mechanisms based on asparity heating.

More recently, his research focused on terahertz and millimeter wave technologies. Specifically, he led an effort to develop a new terahertz laboratory equipped with $3M equipment

in all aspects of THz imaging, spectrometry, sources and communications. Notably, he established major laboratories at OSU and FIU, each with over $15M in DoD and NSF funding.

During his career, he has led or participated in five MURIs and several DARPA, NSF and DoD programs.

SERVICE ACTIVITIES (SINCE 1993)

Chair, Applied Computational Electromagnetics Society conference	2019
Chair, International Workshop Antenna Techn. Conference	2019
Chair, USNC/URSI B	2015-2017
External examiner for Italian-wide faculty selection committee	2013-2014
Chair of review committee for Technical University of Crete review	2012
Vice Chair, URSI Commission B	2012-2015
IEEE-wide committee for Fellows evaluation	2010-2014
Chair, IEEE Antennas and Propagation Society Fellows Evaluation committee	2005-2009
Convener to URSI General Assembly	2005, 2008
Advisory committee and co-organizer of International Workshop on Antennas and Wireless Applications	2005-2015
Track Chair for IEEE Vehicular Techn. Society Conference	2004-2005
Technical Committee Chair for URSI (Int. Union of Radio Science)	2004-2011
Technical Advisory member to International URSI	2002-
President and VP of IEEE Antennas and Propagation Society	2003-2005
Co-Chair, IEEE Antennas and Propagation Society Conference (1700 attendees)	2003
Chair and co-Organizer, Finite Elements Workshop	2002
IEEE Fellows Committee	1998-2004
IEEE Antennas and Propagation Administrative Committee	1996-98
Co- organizer of the 2000 Diffraction Days meeting	2000
JINA (France), Scientific Committee	2001-2005
Co-organizer of the International Finite Element Workshop	1994, 1998, 2000, 2002
Technical Committee, COMPUMAG (Computational EM) Conference	1994, 1995, 1998, 2000, 2001
Technical Committee, Advanced Computational Electromagnetics Conf.	1995, 1996
General Chairman, IEEE Antennas and Propagation International Symposium and Radio Science Meeting (with over 1000 attendees)	1993
Technical Committee, IEEE Antennas and Propagation Symposium	1988-pres

Editorial Services

• Associate Editor, URSI Bulletin	2002-2010
• Associate for *J. Electromagnetics Waves and Applications*	1995-2008
• Associate Editor, *IEEE Antennas and Propagation Magazine*	1992-2007
• Associate Editor, *Radio Science*	1994-97
• Associate Editor, *IEEE Antennas and Propagation Transactions*	1989-93
• Guest Editor for Special Electromagnetics issue	1993,1998
• Guest Editor for Special *Radio Sci.* Issue	1996

OSU Departmental Committees

Chair, Faculty Search Comt (Personnel Committee)	2015-pres.
Executive Comt	2003-pres.
Awards Comt.	2010-2015
Personnel Committee	2006-2009
Promotion and Tenure Cmts	2004-2008

EECS Dept., Financial Aid Chair	
Responsible for the $800,000 Fellowship budget of the EECS Dept.	2001-2002
EECS Dept. Executive Committee	1997-99
Director, Radiation Laboratory	1998-00
EECS Dept. EE Division Graduate Committee	1990-2002
EECS Dept. Graduate Advisor	1994-97.
EECS Dept. Computing Organization Faculty Committee	1993-97

***CoE Committees*:**

Chair, Ohio State College of Engineering awards committee	2015
Dean's Research Council	2012-pres.
Awards Committee Member	2012-pres.
College Centers Budget Guidance committee.	2012
College Ranking Review	2012
College of Engineering, Finance committee (OSU)	2005-06
CoE College strategic planning committee	2005
ECE Dept Chair Search Committee	2004-2005
EECS Dept. Review Committee	96/97

U of M Committees

University Tenure Committee, Chair	2000-01
SACUA Tenure Committee	1999-02
Senate Assembly	1994-97
Research Policies Committee	1994-97

EXAMPLE RESEARCH FUNDING

Current research expenditures at FIU are >$1.5 million/year (no 2 in CEC)
Research awards at Ohio State (15-year span) was ~ $65M.
He has served as PI for most of these awards. Below is a list for some of his major awards:

1. Multiphysics MEMS analysis and design (NSF, 2001-2005): Project involved the development of MEMS analysis and design capabilities to integrate electrical, mechanical and thermal physics. Worked with 2 mechanical engineering faculty.
2. Meta-Materials Design (funded by DARPA, 2001-2005): A multi-disciplinary project aimed at designing, developing and fabricating new synthetic materials for RF applications. Worked with Material Science, Mechanical and other RF Engineering faculty
3. Advanced multifunction RF system antenna isolation and simulation (funded by Office of Naval Research, 1998-2004). Project involved the development of antenna/array simulation and design tools for future DD21 ship platforms.
4. Electromagnetic compatibility and interference research studies (General Motor and HRL, 2001-2003). Project involved the development of EMI coupling analysis and verification/measurement methods aimed at understanding and mitigating coupling associated with future automobile electronic systems.
5. Electromagnetic Effects of RF pulses on Electronic Circuits and Systems (Air Force MURI, ended 2006). A 5- year MURI on the understanding of coupling mechanisms and their effects on electronic circuits. The project involved collaboration with 4 other Universities across several departments.
6. Antennas for wireless communication systems and automobile applications (funded by Air Force and General Motors, 1997-2003): Design, fabrication and testing of multifunctional antennas for pre-specified performance on airborne and automobile platforms.
7. Virtual electromagnetic testrange (VET) initiative (funded by DAPRA and Air Force, 2001-2004). An industry-university project to develop new fast algorithms for scattering and radiation by nonmetallic/composite structures.

8. Novel Materials for Antennas and RF Devices (MURI funded by the AFOSR)-2004-2009. A 5-year Multidisciplinary Univ. Research Initiative (MURI) project focused on the analysis, demonstration and design of novel magnetic photonic crystals for RF devices, antennas and sensors.
9. Center for Radio Frequency Systems (a joint University-Industry National Science Foundation Center)-2006-pres. A new NSF center to link industry and universities to educate future leaders in RF, and address next generation solutions in RF systems (from bits to receivers and antennas).
10. GAMECHANGER: Novel Materials for Load Bearing Antennas (MURI-like project funded by AFOSR)-2007-2010. Served as PI for this 3.5 years project focused on the development of novel materials for miniature, multifunctional antennas for future small vehicles such as UAVs.
11. DARPA Visibuilding (2006-2010): A 3-phase program to develop analyses, techniques and hardware for three dimensional imaging of building interiors.
12. Novel Materials for RF Applications (2009-2012):A 3-year program funded by Lockheed Martin's Corporate Program to develop a new class of magnetodielectric composites for phase shifters, leaky wave structures and miniature reconfigurable controllable antennas.
13. UWB metamaterial Antennas (2010-2012): A 3-phase program funded by AFRL to help companies transition new metamaterials antennas to real-world applications; Worked with Boeing and Lockheed Martin.
14. Ohio Research Scholars Program (2008-13): Served as PI for this $8.5M State of Ohio award to enhance Ohio State's sensors area by hiring new faculty, constructing new facilities and purchasing new equipment.
15. TeraHertz Center (2010-2013): Served as PI for this $3M 3rd Frontier award to establish a new Laboratory on Terahertz research and applications.
16. THz Device MURI (2011-2016): ONR MURI on III-N Devices and Architectures for Terahertz Electronics; Goal is to develop GaN THz devices operating above 1 THz. MURI is led by Patrick Fay at Notre-Dame and our group is focused on device testing and on developing THz sources.
17. Metamaterials and Metastructured UWB miniature conformal antennas (2010-2013): An ONR funded program to develop novel meta-structures for highly thin and conformal antennas exhibiting over 30:1 bandwidth. Focus is also on MIMO capabilities, low angle scanning, pattern re-configuration, and integration with wideband RFIC back-ends.
18. High Power Devices MURI (2012-2017): AFOSR MURI to develop high power Metamaterials in Confining, Controlling, and Radiating Intense Microwave Pulses. MURI is led by Edl Schamiloglu at the Univ. of New Mexico. Ohio State is focused on high power device miniaturizations.
19. Ultra Wideband Antenna Apertures with Adaptive Beam Forming (2013-2016): ONR grant to develop novel digital beam forming techniques over large bandwidths using on-site coding and reduced power digital to analog converters.
20. Physiological Studies of Brain Signals using a Wireless Neuro-Sensing-Diagnostic System (2013-2017): NSF Smart-Connected-Health program to create non-intrusive brain signal sensors to study causes of diseases such as Epilepsy and Parkinson; project is with Arizona State (Prof. J. Chae).
21. A New Class of Millimeter-wave Phased Arrays for Secure High Data Rate Systems with Low Power Back-Ends (2015-2019): NSF EARS: pusue innovative approaches to develop methods and fabrication techniques to enable practical access to the millimeter wave spectrum. Goal is to enable future cellular data traffic, expected to grow at a rate of 40-70% annually.
22. Ultra-Wideband and Secure Multiuser Communication System with Reduced Hardware, ONR grant: N00014-16-1-2253 (2015-2019): ONR grant to develop simultaneous transmit-receive (STAR) wideband transceivers with MIMO for higher data rate secure communications.
23. Transforming Antenna Center (co-PI), AFOSR grant FA9550-12-1-0489 (2017-2022), Center for physically reconfigurable and deployable multifunctional antennas; $10M, 5 year grant
24. NASA MIRO (co-PI), Center for Research and Education in 2D Applications (CREDO), $3M program for 3 years.
25. DARPA TWEED (co-PI), High gain 100 to 330 GHz TWT amplifier devices based on slow-wave structure using multiple 2D electron gas (2DEG) layers by exploiting plasmonic field confinement.

COURSE TEACHING AND STUDENT EVALUATIONS

Q1= Overall, this was an excellent course
Q2= Overall, the instructor was an excellent teacher

	Student Evaluations	
ECE 305, Math. Methods for Fields Analysis (Fall 84)		
ECE 631, Electromagnetic Scattering (Winter 85).	4.75/5	
EECS 331,Undergrad. Electromagnetics I (F85).	3.68/5	
EECS 631, Electromagnetic Scattering (W86).	4.5/5	
EECS 331, Undergrad. Electromagnetics I (F86).	4.07/5	
EECS 531, Antenna Theory (W87).	4.43/5	
EECS 331, Undergrad. Electromagnetics I (F87).	4.31/5	
EECS 631, Electromagnetic Scattering (W88).	4.25/5	
EECS 331, Undergrad. Electromagnetics I (F88)	3.76/5	
EECS 332, Undergrad. Electromagnetics II (W89)	4.09/5	
EECS 633, Antenna Theory II (F89)	3.88/5	
EECS 332, Undergrad. Electromagnetics II (W90)	4.17/5	
EECS 531, Antenna Theory (W91)	4.21/5	
EECS 633, Antenna Theory II (F91)	4.25/5	
EECS 332, Undergrad. Electromagnetics II (Spring92)	------	
EECS 530, Electromagnetic Theory (F92)	4.19/5	
EECS 332, Undergrad. Electromagnetics II (W92)	4.09/5	
EECS 633, Numerical Methods in Electromagnetics (F93)	4.25/5	
EECS 332, Undergrad. Electromagnetics II (W93)	4.09/5	
EECS 633, Numerical Methods for Electromagnetics	4.67/5	
EECS 331, Undergrad. Electromagnetics I (F94)	4.63/5	
EECS 730, Special Course: Approx. Boundary Conditions for EM(W94)	-----	
+EECS 503, Introduction to Numerical Electromagnetics (Fall 1995)	3.93/5	4.00/5
EECS 531, Antenna Theory (W96)	4.56/5	4.27/5
EECS 503, Introduction to Numerical Electromagnetics (Fall 1996)	4.31/5	4.56/5
EECS 531, Antenna Theory (W97)	4.50/5	4.61/5
EECS (F97)		
EECS 531 Antenna Theory (W98)		
EECS 503 Introduction to Numerical Electromagnetics (Winter 1999)	3.93/5	4.00/5
EECS 530: Electromagnetic Theory I(Fall 1999)	4.56/5	4.56/5
EECS 633: Analytical and Numerical Methods for Electromagnetics(W 2000)	4.07/5	4.07/5
EECS 530: Electromagnetic Theory (Fall 2000)	3.72/5	3.75/5
EECS 531: Antenna Theory (Winter 2001)	4.0/5.	3.90/5
EECS 530: Electromagnetic Theory (Fall 2001)	4.00/5	4.00/5
EECS 503: Intro to Numerical Electromagnetics (W 2002)	4.4/5	4.5/5
EECS 530: Electromagnetic Theory (Fall 2002)	4.25/5	4.5/5
Ohio State University Courses		
EE 311: UG Electromangnetics (2003)	4.2/5.0	
EE 711: Antenna Theory (W2004)	4.0/5.0	
ECE 711: Antenna Theory (W2005)	4.2/5.0	
ECE 694Y/715: Introduction to Numerical Methods (A2005)	4.5/5.0	
ECE 711: Antenna Theory (W2007)	4.2/5.0	
ECE 711: Antenna Theory (W2008)	4.3/5.0	
ECE 711: Antenna Theory (W2009)	4.4/5.0	
ECE 711: Antenna Theory (W2010)		

ECE 711: Antenna Theory (W2011)	
ECE 6010: Electromagnetic Theory I (F2012)	5.0/5.0
ECE 6010: Electromagnetic Theory I (F2013)	4.8/5.0
ECE 5011: Antennas (W2015)—online recording of lectures	4.8/5.0

Some typical student comments

Comments from Undergraduate Students

Prof. Volakis is an excellent instructor. He has thorough knowledge of the material and explains topics well. In fact his explanations .. make up for the poor text explanations

.. I really enjoyed coming to class and my interest in the subject deepened. The best thing that Volakis does is [to] show enthusiasm about what he is teaching. Can't say that for too many Professors in EECS

Very clear. Prof. Volakis explains everything in a very logical manner, starting from the very basics of the problem and leading to its end, rarely leaving out a step or explanation in lecture

... Demanding, but very systematic. ... Very organized ..His handouts were helpful as well as a lot of [his] examples.

Prof. Volakis was excellent overall. I found the way [he] ran the class, and gave explanations, very instructive and helpful. His explanations were clear and to the point; emphasizing the right material ...

.. Has very good understanding of subject and gave very useful examples ...

Very enthusiastic, ... accessible ...encouraged students to arrive at solutions themselves.

Comments from Graduate Students

[from former Ph.D. students*]*

…I think you should be very proud of what you have achieved with all of us, and we are thankful. It really takes to leave you, to understand how much of you is there in actions, research, writing, pizza meetings, etc.

…If I have all the professors in this world lined up and I get to choose again, I Wouldn't change my adviser. It's that simple.

...In the world of dream squashers, I am so blessed to have Prof. Volakis as my advisor, personal guide and mentor. My deepest thanks goes to him for having faith in me and providing opportunities that will eventually help my dreams come true.

IEEE Henning Award Nomination Comment from former Ph.D. advisees: *During his 30 years of career in electromagnetics, microwaves, RF circuits and antennas, Prof. Volakis has sustained one of the largest research programs in the world and devoted his time to influence students to pursue a professional career in RF/Microwave Engineering. He has mentored more than 75 PhD students with 16 of them being faculty members and major universities throughout the world. I have always felt lucky to have him as my mentor - His unique guidance in my professional development has provided the motivation to complete my PhD degree and pursue further career opportunities in RF/Microwave Engineering.*

[from Class Students]

…*As I always have considered you as one of the best teachers I had over a ~20 year period in school, I am especially happy that you are receiving this [IEEE Henning Mentoring] award.*

…Prof. Volakis does an excellent job of teaching the material. His explanations are <u>always</u> clear.

Instructor is very good ... My interest in antennas was heightened greatly as a result.

…Great enthusiasm and very good teacher

…Instructor is a great teacher. Worthy to mention, we learnt not only knowledge and theory from this class, but also how to be a good person.

…Made subject of EM theory exciting and thought provoking. Added great depth not found in books.

…Prof. Volakis: your handouts were tremendous help [and] saved a lot of time and energy; [you] taught the material in a way that was exciting; learned tremendous from HW assignments which were almost as valuable as lectures.
…Lectures got idea across to those with no EM background; talking about concepts first and then relating to math is always great; your HWs took many hours of life, but was worth it.
You are challenging, firm but fair.
…I was enrolled in the course ECE 5011 Antennas---- and I would like to really thank you for offering us such a well organized course which gave us a perfect insight on the various antennas. Also the assignments, not only gave us insight on antenna design procedures, [but also] loved the practical knowledge you had imparted on us through the challenging real time scenario questions. The exams were really competitive and it was nicely designed to test the conceptual knowledge rather than memorizing formulas.
…Prof. Volakis was exceptional in delivering [ECE 5011-Antennas] the physics, math behind the antenna concepts with ease. He also …helps students clarify new ways of seeing antennas. He is highly motivated, expressive and passionate while explaining every topic on antennas. In short, he and the ElectroScience are two main reasons for why I came to OSU.
--I think the most important I leant from the course is not about antennas. The most important thing is how to use the engineering thoughts to simplify the problem… Thank you Prof. Volakis. ECE 5011 is an excellent course.

PUBLICATIONS:

Books/Coursepacks

1. J.L. Volakis (ed.), *Antenna Engineering Handbook*, McGraw-Hill; 4th edition, 2007 (ISBN-13: 978-0071475747), and 5th edition, Nov. 2018 (ISBN-13: 9781259644696); with 60 chapters and over 50% new material as compared to the 4th edition. Covers all aspects of Antenna Theory, Design, Fabrication and related topics from applications to manufacturing and computations.
2. A. Kiourti and J.L. Volakis, *Wearable Antennas and Electronics*, Artech House, 2021, 260pp. ISBN-13: 978-1630818210; ISBN-10: 1630818216; https://us.artechhouse.com/Wearable-Antennas-and-Electronics-P2236.aspx, 2022
3. J.L. Volakis and K. Sertel, *Integral Equation Methods for Electromagnetics*, Scitech Publishing, ISBN: 9781891121937, 391pp, 2012.
4. J.L. Volakis, C.C Chen and K. Fujimoto, *Small Antennas: Miniaturization Techniques and Applications*, 448pp, McGraw-Hill, 2010 (ISBN**:** 9780071625531).
5. Y. Bayram and J.L. Volakis, *Computational Methods for High Frequency Electromagnetic Interference*, VDM-Publishing (Verlag), 2009, 130pp. (ISBN-10: 3639140052 ISBN-13: 978-3639140057)
6. J.L. Volakis (ed.), *Antenna Engineering Handbook*, McGraw-Hill; 4th edition, 2007, ISBN-10: 0071475745, ISBN-13: 978-0071475747; this is an 1800pp comprehensive Handbook with 59 chapters from 80 authors on all aspects of Antenna Theory, Design, Fabrication and related topics from applications to manufacturing and computations.
7. Y. Zhou, J.L. Volakis, and C-C Chen, *Polymer-Ceramic Composites for Conformal Multilayer Antenna/RF Systems*, ISBN 978-3-8383-7979-1, LAP Lambert Academic Publishing, 2019, 184pp.

8. J.L. Volakis, K. Sertel and B. Usner, *Frequency Domain Hybrid Finite Element Methods in Electromagnetics*, Morgan & Claypool Publishing (ISBN: 1598290800), 2006; ISBN-10: 1598290800, ISBN-13: 978-1598290806)
9. J.L.Volakis, A. Chatterjee and L. Kempel, *Finite Element Methods for Electromagnetics*, IEEE Press, New York (ISBN 0-7803-3425-6) and Oxford Univ Press, London (0-19-850479-9), 1998, 343pp.
10. T.B.A.Senior and J.L.Volakis, *Approximate Boundary Conditions in Electromagnetics*, IEE Press, New York and London, ISBN-13: 978-0852968499, ISBN-10: 0852968493;1995, 347pp.
11. J.L. Volakis, Introduction to Numerical Electromagnetics, a 350pp coursepack for the courses EECS 503 at the U. of Michigan and ECE 715 at Ohio State; was introduced in 1994, and is one of the very first comprehensive introductory numerical methods course to date.

Patents/Disclosures,
https://patents.justia.com/inventor/john-l-volakis

1. *Slot Spiral Antenna with Integrated Balun and Feed* by M. Nurnberger and J.L. Volakis, UM file 1172, U.S. patent no **5,815,122.**
2. *Partially Coupled Transmission Line (TRL) Pair to emulate material anisotropy using printed Circuits by* K. Sertel & J.L. Volakis, Filed: 7/2013, 2/2014**,** U.S Patent **8384493**
3. *Compact CRPA (R-CRPA) for GNSS Receivers by* C.-C. Chen, J.L. Volakis and I.J. Gupta, patent disclosure, 2007
4. *Compact GPS Antenna Element and Array with a Single Feed* by C.-C. Chen, J.L. Volakis and Y. Zhou, patent disclosure, 2007
5. *Ultrawide Bandwidth Inverted-Hat Monopole Antenna with Multiple Elliptical Curvatures by* J. Zhao, C-C. Chen and J.L. Volakis, 2008, Disclosure OSU ID #09061S
6. *Non-symmetric Antenna Element for Phased Array Apertures* by J. Kasemodel, C-C. Chen and J.L. Volakis, Patent Disclosure, 2009
7. *Interweaved spiral array with a 10:1 bandwidth on a ground plane*, U.S. Provisional patent, Nov 15, 2009, Inventors I. Tzanidis, K. Sertel, J.L. Volakis, 2009
8. *Stretchable, Flexible, Conformal Multilayer Electronics and Antennas Based on Polymer Substrate and Metal, Conductive Material Coated Fibers*, Y. Bayram, L. Zheng and J.L. Volakis, patent appl. 2009
9. *Stretchable, Flexible, Conformal Multilayer Electronics and Antennas Based on Polymer Substrate, and Carbon Nanotube Threads*, Y. Bayram, Y. Zhou, J.L.Volakis,patent appl. 2009
10. *Conformal Electronic Devices*, by Y. Bayram, L. Zhang, Z. Wang and J.L. Volakis, Filed for full US patent, 01/2012. US2012/0199056A, Patent **US13354638**,
11. *Multiple-input Multiple Output Ultra-Wideband Antenans, by* Chi-Chih Chen, John L. Volakis, Ersin Yetisir, Filed: 1/13/14, Awarded:4/25/17, U.S**.** Patent number: **9716312.**
12. *Ultra wideband digital beamformer with local encoding for reduced analog to digital converters* by Elias Alwan, S. Balasubramanian, W. Khalil, K. Sertel & J.L. Volakis, U.S. provisional patent application number 61/705,930.
13. *Stretchable Broad Impedance Bandwidth RFID Tag Antenn*a by R. Burkholder, A. Kiourti, S. Shao, and J.L. Volakis, Filed, 9/29/2015, Awarded: 4/23/2019 U.S. Patent **10268940**, (patent issued in Europe as well).
14. *Methods of Making Stretchable and Flexible Electronics* by *A.* Kiourti, J.L. Volakis and R. Lee, Filed: 7/2016, Awarded: 4/2019, U.S. Patent **10263320.**
https://dreamscapefoundation.org/tag/amputee-medical-equipment/
15. *Extremely Low Profile Ferrite Loaded Wideband Antenna Design*, C-C. Chen, H. Moon, J.L.Volakis, U.S. Patent **9,343,810** B2, May 17, 2016
16. *Method of making an extremely low profile wideband antenna*, C-C. Chen, H. Moon, J.L. Volakis, Filed: 10/16/2013, Awarded: 5/17/2016, U.S. Patent number: **9343810**
17. *Frequency-Independent Receiver and Beamforming Technique*, M. Novak. S. Bojja Venkatakrishnan & J.L. Volakis, Filed: 9/16/2016, awarded 10/2019 U.S. Patent **10439851**
18. *Hexagonal Waveguide Based Circularly Polarized Horn Antennas*, S. Bhardwaj and J.L. Volakis, 2019, U.S. Patent No. **10,218,076**
19. *Balanced Wideband Impedance Transformer*, by A. Johnson, J.L.Volakis, Filed: 11/2018, U.S. patent US no. **10320088** (issued June 11, 2019).
20. *Cross-Mixing Beamformer*, by Rimon Hokayem, Elias Alwan and John L. Volakis, U.S. Patent Appl. U.S Patent **10,680,694** (issued June 2020)

21. *Feed Network for Self Interference Cancellation*, by Satheesh Boja Venkatakrishnan and John L. Volakis, US Patent **10,833,724 B1**, issued Nov 10, 2020

22. *Balun for Increasing Isolation in Simultaneous Transmit and Receive Antennass,* J.L. Volakis, S. Bojja Venkatakrishnan, and A. Hovsepian, U.S. Patent **10,944,166 B1**, Issued March 9, 2021.

24. *Beamforming Configuration via Cross-Mixing, by* Rimon Hokayem, Elias Alwan and John L. Volakis U.S. Patent 11,133,851 B1, Sept 28, 2021.

25. *Near-Field Power Transfer and Harvesting System Made of Misalignment Resilient Anchor-Shaped Antennas (MiRASA) for Wearable Applications***,** by Dieff Vital, John L. Volakis, Shubhendu Bhardwaj, U.S. Patent Appl. in process

26. S*mart Bandage for Electrochemical Monitoring and Sensing Using Fabric-Integrtaed Data Modulation*, Dief Vital, Shubhendu Bhardwaj and J.L. Volakis, U.S. Patent Appl. (US 17/157,624, 2021

27. *Power Transfer and harvesting System having Anchore-Shaped Antenna and its Textile Integration,* Dieff Vital, John L. Volakis, Shubhendu Bhardwaj , U.S. Patent 11063475, 2022.

28. *Extremely Wideband (EWB) Tightly Coupled Dipole Array (TCDA),* A. Johnson, E. Alwan and J.L. Volakis, U.S. Patent Appl. in process.

29. *Kirigami Patch-Monopole Hybrid Antnena*, A. Johnson, V. Manomar and J.L. Volakis, U.S. Patent Appl. in process.

30. *Textile Tightly Coupled Dipole Array (T-TCDA),* A. Johnson, M. Nichols, and J.L. Volakis, U.S. Patent Appl. in process.

31. *Deployable Inverted-Hat Monopole (IHM) with 4:1 Constant Gain Bandwidth,* A. Johnson, and J.L. Volakis, U.S. Patent Appl. in process.

32. *Antenna Devices to Suppress Ground Plane Interference*, A. Johnson, S. Boja Venkatakrishnan and J.L. Volakis, U.S. Patent Appl. in process.

Paper Awards

1. Best student paper award at the 2002 Applied Computational Electromagnetics Society (ACES) Conference; Conf paper: *Z. Li, G. Kiziltas, J.L. Volakis and N. Kikuchi, "Material Design Optimization for Printed Antennas Using the Finite Element-Boudary Integral Method."*
2. First place best student paper award at the 2002 IEEE Int. Symposium on Antennas and Propagation; Conf Paper: *D. Filipovic and J.L. Volakis, "Design of a multi-functional slot aperture (combo-antenna) for automotive applications."*
3. Best paper award at the IEEE EMC International Syposium 2003, Istanbul, Turkey; Conf. paper: *E.S. Siah, K. Sertel, R.W. Kindt, J.L. Volakis and V.V. Liepa, "Fast Frequency Domain Computational EM tools for System Analysis of EMI/EMC topologies."*
4. Third place best student paper award at the 2003 IEEE Int. Symposium on Antennas and Propagation; Conf Paper: *R. Kindt and J.L. Volakis, "A multi-cell array decomposition approach to composite finite array analysis."*
5. Best Student Paper Award at the 2004 Antenna Measurement Techniques Association (AMTA), *Conf Paper: M. Lee, Chi-Chih Chen and John Volakis, "Antenna miniaturization using artificial transmission line,"*
6. 2005 IEEE EMC Society Leo L. Beranek Student Grant Award, and Runner-Up of Best Student Paper Award; Conf Paper: *"A Novel Technique for Concurrent On & Off - Board EMI Analysis of Mixed RF-Digital Circuits via Hybrid Scattering Parameters*", Y. Bayram, J.L. Volakis and P. Roblin.

7. 2005 ACES Conference best student paper award: *A Hybrid VSIE Method for Periodic Media and Metamaterials,*" by Brian C. Usner, Kubilay Sertel and John L. Volakis (received 3rd best paper award)
8. 2007 North American URSI Meeting best student paper finalist. A *UTD for the Radiation by Sources near thin planar Positive or Negative Material Structures with a Discontinuity* by Titipong T. Lertwiriyaprapa, P.H. Pathak and J.L. Volakis
9. 2008 2nd place best paper award at the North American URSI Meeting, *Miniature Antenna Design via Printed Coupled Lines emulating Degenerate Band Edge Crystals*, by G. Mumcu, K. Sertel, and J.L. Volakis.
10. 2008 best paper award at the International Antennas and Propagation (ISAP) conference, *An Approximate UTD Ray Solution of an Oblique EM Wave Diffraction at a Junction between Two Different thin Planar Material Slabs on Ground Plane*, by Titipong Lertwiriyaprapa, P.H. Pathak and J.L. Volakis
11. 2009 3rd place best paper award at the North American URSI Meeting, *Conductive Polymer-Carbon Nanotube Sheets for Conformal Load Bearing Antennas*, by Y. Zhou, Y. Bayram, J.L. Volakis and L. Dai.
12. 2009, 1st place best paper award at the Antennas Applications Symposium (Allerton, IL), *A novel non-symmetric tightly coupled element for wideband phased array apertures*, J.A. Kasemodel, C.C. Chen, J.L. Volakis.
13. 2010, 1st place best paper award at the IEEE Antennas and Propagation Conference (Toronto, Canada), *An Interweaved Spiral Array (ISPA) Providing a 10:1 Bandwidth over a Ground Plane,* I. Tzanidis, K. Sertel and J. L. Volakis
14. 2010, 2nd place best paper award at the IEEE Antennas and Propagation Conference (Toronto, Canada), *High Resolution Radar Imaging Utilizing a Portable Opportunistic Sensing Platform*, K. E. Browne, R. J. Burkholder and J. L. Volakis.
15. 2010 best paper award at the IEEE International Symposium on Phased Arrays Systems & Technology, Boston, MA, *Broadband Planar Wide-Scan Array Employing Tightly Coupled Elements and Integrated Balun*, Justin A. Kasemodel, Chi-Chih Chen, John L. Volakis.
16. 2011 3rd place for best paper award at the Antenna Measurement Techniques Association Symposium (AMTA) (Boston, MA), *Frequency and Impedance Agile Real-Time Tuning Network for 200-400 MHz Antennas*, N. J. Smith, C.C. Chen and J.L. Volakis.
17. 2012 best poster award at the International Wireless & Antennas Technologies (iWAT) conference: *Flexible Textile Antennas for Body-Worn Communication* by Zheyu Wang, Lanlin Zhang, Dimitris Psychoudakis and John L. Volakis.
18. 2012 best paper award at the IEEE Antennas and Propagation Symposium *6.3:1 Bandwidth Scanning Tightly Coupled Dipole Array with Co-Designed Compact Balun*, by Jon Doane, K. Sertel and J.L. Volakis.
19. 2012 2nd best student paper award at the Antenna Applications Symposium, *A Wideband Scanning Conformal Array with a Compact Compensating Balun*, by Jon Doane, K. Sertel and J.L. Volakis.
20. 2012 best poster award at the annual John D. Kraus Memorial award, *Determining the Relative Permittivity of Masses in the Human Body*, by Safa Salman, D. Psychoudakis and John Volakis.
21. 2nd place best student paper award at the 2013 USNC-URSI National Radio Science Meeting (Boulder, CO), *Computation of the Q Limits for Arbitrary-Shaped Antennas Using Characteristic Modes*, by Jeffry Chalas, Kubilay Sertel and John Volakis

22. Best paper at the 2013 Wireless Innovation Forum on Wireless Communications Technologies and Software Defined Radio (SDR 2013): *Ultra-wideband Digital Beamformer with Significant SWAP-C Reduction*, by A. Alwan, S. Balasubramanian, J.G. Atallah, M. Larue, W. Khalil, K. Sertel, J. L. Volakis.
23. 2nd place best student paper award at the 2013 Allerton Antenna Applications Symposium: *Efficient Self Powered Auto-Tuned VHF Impedance Tuner for High Power Applications,* by N. J. Smith, C-C. Chen, and J. L. Volakis
24. 2nd place best paper award at the 2013 Antenna Measurements Techniques Association (AMTA): *Implementation of a Novel Low-Cost Low- Profile Ku-Band Antenna Array for Single Beam Steering from Space* by N. Host, C-C. Chen and J.L.Volakis.
25. 1st place best paper award at the 2013 IEEE International Symposium on Phased Array Systems & Technology: *Low Cost, Power Efficient, On-Site Coding Receiver (OSCR) for Ultra-Wideband Digital Beamforming* by Elias Alwan, W. Khalil and J.L. Volakis.
26. Best student paper award at the 2014 USNC-URSI National Radio Science Meeting (Boulder, CO), *Analytical and Experimental Evaluation of a Novel Wideband Transceiver with On-Site Coding* by Elias Alwan, W. Khalil and J.L. Volakis.
27. 2014 Premium Award for Best Paper in IET Microwaves, Antennas & Propagation, *Design of an Efficient Ambient WiFi Energy Harvesting System," IET Microwaves, Ant. & Propagat.*, pp. 1200-1206, 2012 by U. Olgun, C.-C. Chen and J.L. Volakis
28. 2014 IEEE EMBS BRAIN Grand Challenges Young Investigator award, "*Fully-Passive Wireless Implants for Unobtrusive Brain Signal Monitoring,*" by Asimina Kiourti, Cedric Lee, Junseok Chae, and John L. Volakis.
29. 2nd place best paper award at the 2014 Antenna Measurements Techniques Association (AMTA), *Novel Phaseless Method for Gain Characterization of Circularly Polarized Antennas Operating in the mm-Wave and THz Bands*, Shubhendu Bharwaj, Niru K. Nahar and John L. Volakis.
30. 2014 IMWS-Bio 2014 Best Poster Award, *Fully-Passive and Wireless Detection of Very-Low-Power Brain Signals,"* Cedric Lee, Asimina Kiourti, Junseok Chae and John L. Volakis.
31. 2015 2nd place best poster award at the annual John D. Kraus Memorial award, *UWB Digital Beamformer Realization Employing a Novel On-Site Coding using FPGAs*, Satheesh Bojja Venkatakrishnan, Elias Alwan, W. Khalil and J.L. Volakis
32. 2015, 1st place best paper award at 37th Antenna Measurement Techniques Association, *Propagation Loss Measurement in 300-350 GHz Band Communication Link*, by S. Bhardwaj, Niru Nahar and John Volakis
33. 2016, 1st place best paper award at the National Radio Science Meeting in Boulder, CO, *Experimental Validation of Mode Dominance Reversal in Novel Slow Wave Structures for High Power Backward Wave Oscillators*, by Ushemadzoro Chipengo and John L. Volakis
34. 2016, 2nd place best paper award at the National Radio Science Meeting in Boulder, CO, A Novel Array with 6:1 Bandwidth and 70^{o} Scanning using Frequency Selective Surface Superstrate, by Ersin Yetisir, Nima Ghalichechian and John L. Volakis
35. 2016, best poster award at Int. Workshop on Antenna Technologies held in Cocoa Beach, FL for the paper *Tunable Band Rejection in a Tightly-Coupled Array Using Varactor Diodes*" by D. Papantonis, N. Galichechian and J.L. Volakis.

36. 2016, IEEE MTT/APS Columbus Chapter 1st place best paper award, "*Ultra-Wideband Phased Array for Millimeter-Wave 5G and ISM*," by M. Novak, J.L. Volakis and F. Miranda.
37. 2016, IEEE MTT/APS Columbus Chapter 2nd place best paper award, "*Novel Concepts for Slow Wave Structures Used in High Power Backward Wave Oscillators*," by Ushe Chipengo and J.L. Volakis.
38. 2017, 1st poster prize at the Int. Workshop on Antenna Technologies, Athens Greece for the paper "Septum-less, Hexagonal Waveguide Based Circularly Polarized Horn Antenna for mm-wave and Terahertz Band" by S. Bhardwaj and J. L. Volakis
39. 2017, 3rd poster prize at the Int. Workshop on Antenna Technologies "Ultra-Wideband Array in PCB for Millimeter-Wave 5G and ISM," by Markus Novak, Felix Miranda and John Volakis
40. 2017, 1st paper prize at the URSI General Assembly, "Novel Circularly-Polarized Antenna and Phase-less Characterization Method for sub-mm-wave and Terahertz Communication and Sensing," by S. Bhardwaj, N.K. Nahar and J.L. Volakis.
41. 2017, 2nd paper prize at the URSI General Assembly: "Multi-band Multi-Beam Performance Evaluation of On-Site Coding Digital Beamformer using Ultra-Wideband Antenna Array," by S. Bojja Venkatakrishnan, E. Alwan and J.L. Volakis.
42. 2018, 3rd poster prize at the FloridaMakes Bridge Workshop in Orlando, FL: "Millimeter Wave Integrated Interferometric Antenna Arrays on LTCC," by Max Carvalho, A. Akhiyat, P. Roman and J.L. Volakis.
43. 2019, 3rd prize at IMS Student design competition in Bostron, MA: "Wearable/frugal Microwave Energy Harvesting,'" by Dieff Vital, Alfredo Gonzalez, S. Bhardwaj and J.L. Volakis.

Chapters/Articles in Edited Books (some included in journals list)

1. J.L. Volakis and K. Barkeshli, "Applications of the Conjugate Gradient FFT method to Radiation and Scattering," in *Application of Iterative Methods to Electromagnetics and Signal Processing*, ed. T. Sarkar, Elsevier Pub. Co., pp. 159-240, 1991.
2. J.L. Volakis and T.B.A. Senior, "Application of a Class of Generalized Boundary Conditions to Scattering by a Metal-Backed Dielectric Half Plane," in *Radar Cross Section of Complex Objects*, ed. W. R. Stone, IEEE Press: New York, 1990, pp. 419-427.
3. H.H. Syed and J.L. Volakis, "Multiple Diffractions Among Polygonal Impedance Cylinders," in *Radar Cross Section of Complex Objects*, ed. W.R. Stone, IEEE Press: New York, 1990, pp. 441-449.
4. J.L. Volakis and M.A. Ricoy, "H-polarization Diffraction by a Thick Metal-Dielectric Join," in *Radar Cross Section of Complex Objects*, IEEE Press: New York, 1990, pp. 481-491.
5. M.A. Ricoy, S. Kilberg and J.L. Volakis, "Simple Integral Equations for Two-Dimensional Scattering with Further Reduction in Unknowns," in *Moment Methods in Antennas and Scattering*, ed. R.C. Hansen, Artech-House: Norwood, MA., 1990.
6. J.D. Collins and J.L. Volakis and J.M. Jin, "A Combined Finite Element-Boundary Integral Formulation for Solution via CGFFT of Two-Dimensional Scattering Problems," in *Finite Elements for Wave Electromagnetics:methods and techniques*, pp. 272-278; eds. P. Silvester and G. Pelosi, IEEE Press: New York, 1994.

7. J.M. Jin and J. L. Volakis, "A Hybrid Finite Element Method Scattering and Radiation From Microstrip Patch Antennas and Arrays Residing in a Cavity," in *Finite Elements for Wave Electromagnetics:methods and techniques*, pp. 299-305; eds. P. Silvester and G. Pelosi, IEEE Press: New York, 1994.
8. J.D. Collins, J.M. Jin and J.L. Volakis, "Eliminating Interior Cavity Resonances in Finite Element-Boundary Integral Methods for Scattering," in *Finite Elements for Wave Electromagnetics:methods and techniques*, pp. 313-315; eds. P. Silvester and G. Pelosi, IEEE Press: New York, 1994.
9. A. Chatterjee, J.M. Jin and J.L. Volakis, "A Finite Element Formulation with Absorbing Boundary Conditions for Three Dimensional Scattering," in *Finite Elements for Wave Electromagnetics:methods and techniques*, pp. 485-490; eds. P. Silvester and G. Pelosi, IEEE Press: New York, 1994.
10. J.L. Volakis, J. Gong and T. Ozdemir, "FEM Applications to Antennas," in *Finite Element Methods and Software in Electromagnetics* (eds. Itoh, Pelosi and Silvester), Wiley 1996.
11. T.B.A. Senior and J.L. Volakis, "Approximate Boundary Conditions in Electromagnetics," in *Review of Radio Science*, Ed. R.Stone, Oxford, pp. 205-234, 1996
12 J.L. Volakis, T.B.A. Senior, S.R. Legault, T. Ozdemir and M. Casciato," Artificial absorbers for truncating finite element meshes," Chapter I, pp. 15-25, in Direct and Inverse Electromagnetic Scattering, eds. Serbest and Cloude, Addison Wesley Longman Ltd. (Pitman Research Series in Mathematics).
13 J. L. Volakis, J.Gong and T. Ozdemir, "Hybrid Finite Elements for Electromagnetics," Chapter in Computational Electromagnetics and its Applications, eds. Campbell et.al. (pp. 252-287), Kluwer Academic Publishers, 1997.
14 L.A. Andersen and J.L. Volakis, "Hierachical Mixed-Order Tangential Vector Finite Elements for Triangular Elements," Chapter in book edited by N. Uzunoglu et.al. (pp. 164-174), Springer-Verlag, N.Y. 1998.
15 J.L. Volakis, "Two Dimensional Finite Element-Boundary Integral Method," Chapter in book edited by N. Uzunoglu et.al. (pp. 175-182), Springer-Verlag, N.Y. 1998.
16 T. Eibert, K. Sertel, D. Filipovic and J.L. Volakis,"Finite Element-Fast Integral Methods for Antenna Analysis," Chapter in book edited by N. Uzunoglu et.al. (pp. 183-197), Springer-Verlag, N.Y. 1998.
17 T. Eibert and J.L. Volakis, "Antennas, Radar and Mobile Communications", Chapter in book edited by Sabatier, Wiley and Sons, 2001, pp. 384-406
18 J.L. Volakis and T. Eibert, "Antenna Analysis Methods," chapter in *Encyclopedia of Telecommunications*, ed. J. Proakis (2004)
19 C.C. Chen and J.L. Volakis, "Spiral Antennas: Overview, Properties and Miniaturization Techniques, " in book edited Rod Waterhouse, Wiley & Sons, 2007
20 T. Eibert and J.L. Volakis, "Introduction and Fundamentals to Antennas," Chapter 1 (30pp) in the 4th ed. Antenna Engineering Handbook, ed. J.L. Volakis.
21 R. Emrick and J.L Volakis, "Millimeter Wave and TeraHertz Antennas," Ch 23 (15pp) in the 4th ed. Antenna Engineering Handbook, ed. J.L. Volakis
22 R. Burkholder, R. Marhefka, and J.L. Volakis, "Analytical Ray Methods for Through-Wall Radar Imaging," Chapter in book *Through-The-Wall Radar Imaging*, CRC press, ed. Moenes Amin, Dec. 2010, pp. pp. 269-306.
23 G. Mumcu, K. Sertel, and J.L. Volakis, "Metamaterial Antennas," Chapter in book *Frontiers in Antennas*, McGraw-Hill, ed. Frank Gross., 2011, pp. 203-236.

24 Dimitris Psychoudakis, Chi-Chih Chen, Gil-Young Lee and John L. Volakis, "An Epidermal Sensor Paradigm - Inner Layer Tissue Monitoring," ch. 19 in *Handbook of Biomedical Telemetry*, 2014.

25 Z. Wang, J.L. Volakis and A. Kiourti, "Embroidered Antennas for Communication Systems," in *Electronic Textiles: Smart Fabrics and Wearable Technology*, Woodhead Publishing, 2015.

26 M. Zuboraj and J.L. Volakis, "Realization of Slow Wave Phenomena Using Coupled Transmission Lines and their Application to Antennas and Vacuum Electronics," Chapter in book *Broadband Metamaterials in Electromagnetics: Technology and Applications*, ed. Douglas H. Werner, 2017, ISBN-13: 9789814745680

27 U. Chipengo, N. Nahar, J.L. Volakis, "Dispersion Engineering for Slow Wave Structure Design," *chapter in High Power Microwave Devices book edited by* E. Schamiloglu, 2021

28 Shubhendu Bhardwaj and John L. Volakis, "Numerical Simulations of Distributd Electromagnetic and Plasma-wave Effect Devices," chapter in *TeraHertz book*, ed. Patrick Fay, 2019.

29 S. Bhardwaj, Raj Pulugurtha, J. L. Volakis, "High Density Electronic Integration for Wearable Sensing," chapter in book *Antenna Sensor Technologies in Modern Medical Applications*, eds. E. Topsakal and Y. Rahmat-Samii, ISBN: 978-1-119-68330-8, Nov. 2020. https://www.wiley.com/en-us/Antenna+and+Sensor+Technologies+in+Modern+Medical+Applications-p-9781119683308

30 John L. Volakis, Michael Shields, Giuliano Manara, Sembiam R. Rengarajan, and Yang Hao, "URSI Commission B Centennial History Contribution," Ch. 24 (pp. 411-433) in 100 Years of International Union of Radio Science, Eds. Philip Wilkinson, Paul. Cannon, and W. Ross Stone, ISBN 9789463968034, 2021.

31 S. Bhardwaj, D. Vital, and J. L. Volakis, "Wearable Sensors. Wearable Antennas and Electronics" chapter in book *Wearable Antennas*, Aretech House, eds. A. Kiourti and J. L. Volakis, ISBN-13: 978-1630818210, 2022.

32 D. Vital, S. Bhardwaj, and J. L. Volakis, "Wearable RF Harvesting. Wearable Antennas and Electronics," chapter in book *Wearable Antennas*, Artech House, eds. A. Kiourti and J. L. Volakis, ISBN-13: 978-1630818210, 2022.

33 S. B. Venkatakrishnan, and J. L. Volakis, "Wearable Imaging Techniques. Wearable Antennas and Electronics,´ chapter in book *Wearable Antennas*, Artech House, eds. A. Kiourti and J. L. Volakis, ISBN-13: 978-1630818210, 2022.

Paper citations (1987 to 2022)

Google h-Index=76 (>30000 citations):
https://scholar.google.com/citations?hl=en&user=JakmyDIAAAAJ

ARTICLES IN REFEREED JOURNALS

1982

1. J.L. Volakis and J.D. Young, "Phase Linearization of a Broadband Antenna Response in Time Domain," *IEEE Trans. Antennas Propagat.*, AP-30, March 1982, pp. 309-313.

1983

2. J.L. Volakis and L. Peters, Jr., "Improved Identification of Underground Targets Using Video-Pulse Radars by Elimination of Undesired Natural Resonances," *IEEE Trans. Antennas Propagat.*, AP-31, March 1983, pp. 334-340.

1985

3. J.L. Volakis and T.B.A. Senior, "Simple Expressions for a Function Occurring in Diffraction Theory," *IEEE Trans. Antennas Propagat.*, AP-33, June 1985, pp. 678-680.
4. J.L. Volakis, W.D. Burnside and L. Peters, Jr., "Electromagnetic Scattering from Appendages on a Smooth Surface," *IEEE Trans. Antennas Propagat*., AP-33, July 1985, pp. 736-743.
5. J.L. Volakis and L. Peters, Jr., "Evaluation of Reflected Fields at Caustic Regions Using a Set of Geometrical Optics Equivalent Line Currents," *IEEE Trans. Antennas Propagat*., AP-33, August 1985, pp. 860-866.

1986

6. J.L. Volakis, "A Uniform Geometrical Theory of Diffraction for an Imperfectly Conducting Half-plane," *IEEE Trans. Antennas Propagat*., AP-34, Feb. 1986, pp. 172-180.
7. T.B.A. Senior and J.L. Volakis, "Scattering by an Imperfect Right-Angled Wedge," *IEEE Trans. Antennas Propagat*., AP-34, May 1986, pp 681-689.
8. J.L. Volakis and M.I. Herman, "A Uniform Asymptotic Evaluation of Integrals," *Proc. of the IEEE,* July 1986, pp. 1043-1044.

1987

9. J.L. Volakis and M.A. Ricoy, "Diffraction by a Thick Perfectly Conducting Half Plane," *IEEE Trans. Antennas Propagat*., AP-35, Jan. 1987, pp. 62-72.
10. J.L. Volakis, "Scattering by a Thick Impedance Half Plane," *Radio Sci.*, 22 , Jan-Feb. 1987, pp. 13-25.
11. M. I. Herman and J. L. Volakis, "High Frequency Scattering by a Resistive Strip and Extensions to Conductive and Impedance Strips," *Radio Sci.* , 22 , May-June 1987, pp. 335-349.
12. J. L. Volakis, "Revisions to A Uniform Geometrical Theory of Diffraction for an Impedance Half Plane," *IEEE Trans. Antennas Propagat.* AP-35, June 1987, pp. 742-744.
13. M.I. Herman, J.L. Volakis and T.B.A. Senior, "Analytic Expressions for a Function Occurring in Diffraction Theory," *IEEE Trans. on Antennas and Propagat.*, AP-35, Sept. 1987 pp.1083-1086.
14. J.L. Volakis, P.K. Wang and W.P. Harokopus, "Mapping of Electrostatic Fields Using the IBM Personal Computer," *IEEE Trans. on Education,* E-30, Nov. 1987, pp. 247-250.
15. T.B.A. Senior and J.L. Volakis, "Sheet Simulation of Dielectric Layers," *Radio Sci.* , 22 , Dec. 1987, pp. 1261-1272.
16. J.L. Volakis and T.B.A. Senior, "Diffraction by a Thin Dielectric Half Plane," *IEEE Trans. on Antennas and Propagat.*, AP-35, Dec. 1987, pp. 1483-1487.

1988

17. T.J. Peters and J.L. Volakis,"Application of a Conjugate Gradient FFT Method to Scattering by Thin Material Plates" *IEEE Trans Antennas and Propagat.*, AP-36, April 1988, pp. 518-526.
18. M.I. Herman and J.L. Volakis, "High Frequency Scattering by a Double Impedance Wedge," *IEEE Trans. on Antennas and Propagat.*, AP-36, May 1988, pp. 664-678.
19. M.I. Herman and J.L. Volakis, "High Frequency Scattering from Polygonal Impedance Cylinders and Strips," *IEEE Trans. on Antennas and Propagat.*, AP-36, May 1988, pp. 679-689.
20. J.L. Volakis, "High Frequency Scattering by a Material Half-Plane and Strip,"*Radio Sci*., 23, pp. 450-462, May-June 1988.

1989

21. J.-M. Jin, J.L. Volakis and V.V. Liepa, "A comparative Study of the OSRC Approach in Electromagnetic Scattering,"*IEEE Trans. on Antennas and Propagat.,* AP-37, pp. 118-124, Jan. 1989.
22. M.A. Ricoy and J.L. Volakis, "Integral Equations with Reduced Unknowns for the Stimulation of Two-Dimensional Composite Structures," *IEEE Trans. on Antennas and Propagat.,* AP-37, pp. 362-372, March 1989.
23. J.L. Volakis and T.B.A. Senior, "Application of a Class of Generalized Boundary Conditions to Scattering by a Metal-Backed Dielectric Half Plane," (invited paper) *Proceedings of the IEEE,* vol. 73, pp. 796-805, May 1989.
24. H.H. Syed and J.L. Volakis, "Multiple Diffractions Among Polygonal Impedance Cylinders," *IEEE Trans. on Antennas and Propagat*., AP-37, pp. 664-672, May 1989.
25. M.A. Ricoy and J.L. Volakis, "E-polarization Diffraction by a Thick Metal-Dielectric Join," *J. of Electromagnetic Waves and Applications*, Vol. 3, No. 5, pp. 383-407, 1989.
26. T.B.A. Senior and J.L. Volakis, "Scattering by Gaps and Cracks," *IEEE Trans. on Antennas and Propagat.,* AP-37, pp. 744-750, June 1989.
27. K. Barkeshli and J.L. Volakis, "Improving the Convergence of the Conjugate Gradient FFT Method Using Subdomain Basis Functions," *IEEE Trans. on Antennas and Propagat.*, AP-37, pp. 893-900, July 1989.
28. K.Barkeshli and J.L. Volakis, "A Vector-Concurrent Application of a Conjugate Gradient FFT Algorithm to Electromagnetic Radiation and Scattering Problems," *IEEE Trans. on Magnetics*, 25, pp. 2892-2894, July 1989.
29. M.A. Ricoy, S.A. Kilberg and J.L. Volakis, "Integral Equations for Two-Dimensional Scattering with Further Reduction in Unknowns," *IEE Proceedings, part H*, Vol. 136, pp. 298-304, August 1989.
30. J.-M. Jin and J.L. Volakis, "A New Technique for Characterizing Diffraction by Inhomogeneously Filled Slot of Arbitrary Cross Section in a Thick Conducting Plane," *IEE Electronic Letters*, Vol. 25, No. 17, pp. 1121-1122, 17th Aug. 1989.
31. J-M. Jin, J.L. Volakis and V.V. Liepa, "A Moment Method Solution of Volume-Surface Integral Equation Using Isoparametric Elements and Point-Matching," *IEEE Trans. Microwave Theory and Techniques*, MTT-37, pp. 1641-1645, Oct. 1989.
32. J.L. Volakis and M.A. Ricoy, "H-polarization Diffraction by a Thick Metal-Dielectric Join," *IEEE Trans on Antennas and Propagat.,* AP-37, pp. 1453-1462, Nov. 1989.
33. T.B.A. Senior and J.L. Volakis, "Derivation and Application of a Class of Generalized Boundary Conditions," *IEEE Trans. on Antennas and Propagat.,* AP-37, PP. 1566-1572, Dec. 1989.
34. T.J. Peters and J.L. Volakis, "On the Formulation and Implementation of the a Conjugate Gradient FFT Method,"*J. of Electromagnetic Waves and Applications*, Vol. 3, No. 8, pp. 675-696, 1989.

1990

35. J.L. Volakis and J. Collins, "Electromagnetic Scattering From a Resistive Half-Plane on a Dielectric Interface," *Wave Motion*, Vol. 12, pp. 81-96, 1990.
36. J.-M. Jin and J.L. Volakis, "Electromagnetic Scattering by a Perfectly Conducting Patch Array on a Dielectric Slab," *IEEE Trans. Antennas and Propagat.,* AP- 38, pp. 556-563, April 1990.

37. K. Barkeshli and J.L. Volakis, "On the Implementation and Accuracy of the Conjugate Gradient Fourier Transform Method," *IEEE Transactions Antennas and Propagation Magazine,* Vol. 32, No.2, pp. 20-26, April 1990.
38. J.-M. Jin and J.L. Volakis, "TM Scattering by an Inhomogeneously Filled Aperture in a Thick Ground Plane," *IEE Proceedings, Part H.* Vol. 137, No. 3, pp. 153-159, June 1990.
39. J.L. Volakis and P.B. Katehi, "Research in Computational Electromagnetics at the University of Michigan,"*IEEE Transactions Antennas and Propagation Magazine,* Vol. 32, pp. 16- 30, June 1990.
40. J.-M. Jin and J.L. Volakis, 'TE Scattering by an Inhomogeneously Filled Aperture in a Thick Conducting Plane," *IEEE Trans. Antennas and Propagat.*, AP-38, pp. 1280-1286, August 1990.
41. K. Barkeshli and J.L. Volakis, "TE Scattering by a Two-Dimensional Groove in a Ground Plane Using Higher Order Boundary Conditions," *IEEE Trans. Antennas and Propagat.*, pp.1421-1428, October 1990.
42. J.L. Volakis, "TE Scattering by a Pair of Material Half Sheets," *J. of Electromagnetic Waves and Applications*, Vol. 4, No. 5, pp 441-461, 1990.
43. M.A. Ricoy and J.L. Volakis, "Derivation of Generalized Transition/Boundary Conditions for Planar Multiple Layer Structures," *Radio Sci.*, Vol. 25, pp. 391-405, July-Aug. 1990.
44. J.D. Collins and J.L. Volakis and J.M. Jin, "A Combined Finite Element-Boundary Integral Formulation for Solution via CGFFT of Two-Dimensional Scattering Problems," *IEEE Trans. Antennas and Propagat.*, AP-38, pp. 1852-1858, November 1990.
45. J.L. Volakis and H.H. Syed, "Application of Higher Order Boundary Conditions to Scattering by Multi-layer Coated Cylinders," *J. of Electromagnetic Waves and Applications*., Vol. 4, No. 12, pp. 1157-1180, 1990
46 J. D. Collins, J.-M. Jin and J.L. Volakis, "A Combined Finite Element-Boundary Element Formulation for Solution of Two-Dimensional Problems via CGFFT," *Electromagnetics*, Vol 10, pp. 423-437, 1990.

1991

47. J.M. Jin and J.L. Volakis, "A Finite Element-Boundary Integral Formulation for Scattering by Three-Dimensional Cavity-Backed Apertures," *IEEE Trans. Antennas and Propagat..*, AP-39, pp.97-104, January 1991.
48. M.A. Ricoy and J. L. Volakis, "Diffraction by a Multilayered Slab Recessed in a Ground Plane via a Generalized Impedance Boundary Condition," *Radio Sci.,* pp. 313-327, March-April 1991.
49. K. Barkeshli and J.L. Volakis," Electromagnetic Scattering by an Aperture Formed by a Rectangular Cavity Recessed in a Ground Plane," *J. of Electromagnetic Waves and Applications*, Vol. 5, No. 7, pp.715-734, 1991.
50. J.M. Jin and J.L. Volakis, "Electromagnetic Scattering by and Transmission through a Three-Dimensional Slot in a Thick Conducting Plane," *IEEE Trans. Antennas and Propagat..*, AP-39, pp. 543-550, April 1991.
51. K. Barkeshli and J.L. Volakis, "Scattering by a Narrow Filled Rectangular Groove,"*IEEE Trans. Antennas and Propagat.*, AP-39, pp. 804-810, June 1991.
52. J.M. Jin, J.L. Volakis and J.D. Collins, "A Finite Element-Boundary Element Method for Scattering by Two and Three Dimensional Structures," *IEEE Antennas and Propagat. Magazine* , Vol. 33, No.3, pp. 22-32, June 1991.

53. H.H. Syed and J.L. Volakis, "High Frequency Scattering by a Smooth Coated Cylinder Simulated with Generalized Impedance Boundary Conditions," *Radio Sci.*, Vol 26, No.5, pp. 1305-1314, Sept.-Oct. 1991.
54. T.B.A. Senior and J.L. Volakis "Generalized Impedance Boundary Conditions in Scattering," *Proceedings of the IEEE*., Vol. 79, No. 10, pp. 1413-1420, Oct. 1991.
55. J.M. Jin and J. L. Volakis, "A Hybrid Finite Element Method Scattering and Radiation From Microstrip Patch Antennas and Arrays Residing in a Cavity," *IEEE Trans. Antennas and Propagat.*, AP-39, pp. 1598-1604, Nov. 1991

1992

56. H.H. Syed and J.L. Volakis, "An Approximate Diffraction Coefficient for an Impedance Wedge at Skew Incidence,"*Electromagnetics*, Vol. 12, No.1, pp.33-55, 1992.
57. J.L. Volakis, "Alternative Field Representations and Integral Equations for Modeling Inhomogeneous Dielectrics,"*IEEE Trans. Microwave Theory Tech.*, pp. 604-608, March 1992.
58. K.Barkeshli and J.L. Volakis, "Scattering by Filled Grooves and Slits," J. *of Electromagnetic Waves and Applications*, Vol. 6, No.4, pp.459-474, 1992.
59. J.M. Jin and J.L. Volakis, "A Biconjugate Gradient FFT Solution for Scattering by Planar Plates," *Electromagnetics*, Vol. 12, No.1, pp.105-119, 1992.
60. J.M. Jin, J. L. Volakis, C.L. Yu and A. Woo,"Modeling of Resistive Sheets in the Context of Finite Element Solutions," *IEEE Trans. Antennas and Propagat.*, Vol. 40, pp. 727-731, June 1992.
61. M.A. Ricoy and J.L. Volakis, "Diffraction by a Symmetric Material Junction Using Higher Order Impedance Boundary Conditions" *IEEE Trans. Antennas and Propagat.*, Vol. 40, pp. 742-754, July 1992.
62. A. Chatterjee, J.L. Volakis and W.J. Kent, "Scattering by a Coated Thin Wire and a Finite Rectangular Groove Using a Physical Basis Model," *IEEE Trans. Antennas and Propagat.*, Vol. 40, pp. 761-769, July 1992.
63. J.L. Volakis and J.M. Jin, "A Technique to Substantially Lower the Resonant Frequency of the Microstrip Patch Antenna," *IEEE Trans. Microwave Theory and Techn. Letters*, Vol. 2, No. 7, pp. 292-293, July 1992.
64. J.M. Jin and J.L. Volakis, "A Fictitious Absorber For Truncating Finite Element Meshes in Scattering," *IEE Proceedings, Part H*., Vol. 139, pp. 472-476, Oct.1992.
65. A. Chatterjee, J.M. Jin and J.L. Volakis, "Computation of Cavity Resonances Using Edge-Based Finite Elements," *IEEE Trans. Microwave Theory Techn.*, Vol. 40, pp. 2106-2108, Nov. 1992.
66. A. Chatterjee, J.M. Jin and J.L. Volakis, "A Robust Finite Element Formulation for Three Dimensional Scattering," *IEE Electronics Letters*, Vol. 28, No. 10, pp. 966-967, 1992.
67. J.L. Volakis, A. Alexanian and J.M. Jin, "Broadband RCS Reduction of Rectangular Patch Using Distributed Loading," *IEE Electronics Letters*, Vol. 28, No. 25, pp. 2322-2323, 3rd December 1992.
68. J.D. Collins, J.M. Jin and J.L. Volakis, "Eliminating Interior Cavity Resonances in Finite Element-Boundary Integral Methods for Scattering," *IEEE Trans. Antennas Propagat.*, Vol. 40, No. 12, pp.1583-1585, Dec. 1992.

1993

69. A. Chatterjee, J.M. Jin and J.L. Volakis, "A Finite Element Formulation with Absorbing Boundary Conditions for Three Dimensional Scattering," *IEEE Trans. Antennas Propagat.* , Vol. 41 pp. 221-226, Feb. 1993.
70. L. Kempel, J. L. Volakis and T.B.A. Senior, "TM Scattering from Tapered Resistive Junctions," *Radio Science* Vol 28, No.2, pp. 129-138, March-April 1993.
71 S.R. Nagesh, T.S. Vedavathy, M.A. Ricoy and J.L. Volakis, "Comments on 'Integral Equations with Reduced Unknowns for the Simulation of Two-Dimensional Composite Structures," *IEEE Trans. Antennas Propagat.*, Vol. 41, p. 393, March 1993.
72. L. Kempel and J.L. Volakis, "TM Scattering by a Metallic Half Plane with a Resistive Sheet Extension," *IEEE Trans. Antennas Propagat.*, Vo. 41, 910-917, July 1993.
73. L. Kempel, J.L. Volakis, T.B.A. Senior and S. Locus, "Scattering by S-shaped Surfaces," *IEEE Trans. Antennas and Propagat.*, Vol. 41, pp. 701-708, June 1993.
74. J.M. Jin and J.L. Volakis , "Scattering and Radiation Analysis of Three Dimensional Cavity Arrays via a Hybrid Finite Element Method,"*IEEE Trans. Antennas Propagat.,* Vol. 41, pp. 1580-1586, Nov. 1993.
75. J. R. Natzke and J.L. Volakis, "Diffraction by a Resistive Half Plane Over a Resistive Infinite Sheet," *IEEE Trans. Antennas and Propagat.*, Vol. 41, pp. 1063-1068, July 1993.
76. A. Chatterjee and J.L. Volakis, "Conformal Absorbing Boundary Conditions for the Vector Wave Equation," *Microwave and Optical Tech. Let.*, pp. 886-889, Vol. 6, Dec. 20, 1993 (see also correction in Vol. 8, No. 6,, p. 323-324, 20 April 1995).

1994

77. J.L. Volakis, J. Gong and A. Alexanian "A Finite Element Boundary Integral Method for Antenna RCS Analysis," *Electromagnetics*, Vol. 14, No.1, pp. 63-85, 1994.
78. J.L. Volakis, A. Chatterjee and J. Gong, "A Class of Hybrid Finite Element Methods for Electromagnetics: A Review," *J. Electromagnetic Wave and Applications,* Vol. 8, No. 9/10, Sept. 1994.
79. J. L. Volakis, Y.C. Lin and H. Anastassiu, "TE Characterization of Resistive Strips Gratings on a Dielectric Slab Using a Single Edge-Mode Expansion," *IEEE Trans. Antennas and Propagat,* Vol. 41, pp. 205-212, Feb 1994.
80. A. Chatterjee, J.L. Volakis and D. Windheiser, "Parallel Computation of 3D Electromagnetic Scattering Using Finite Elements," *Int. J. Numerical Modelling: Electr. Net. Dev. and Fields*, Vol. 7, pp. 329-342, 1994.
81. J. L. Volakis, A. Chatterjee and L.C. Kempel, "A review of the finite element method for three dimensional scattering," *J.Optical Society of America A*, pp. 1422-1433, April 1994.
82. J.L. Volakis, A. Chatterjee, J. Gong, L.C. Kempel and D. Ross, "Progress on the Application of the Finite Element Method to 3D Electromagnetic Scattering and Radiation," COMPEL, Vol. 13, Suppl. A, pp. 359-364, May 1994.
83. A. Chatterjee, J. L. Volakis and D. Windheiser, "Parallel computation of 3D electromagnetic scattering using finite elements and conformal ABCs," *IEEE Trans. Magnetics*, Vol. 30, pp. 3606-3609, Sept. 1994.
84. J.Gong and J.L. Volakis, A. Woo and H. Wang, "A hybrid finite element method-boundary integral method for the analysis of cavity-backed antennas of arbitrary shape," *IEEE Trans. Antennas Propagat.,* Vol. 42, No. 9, pp. 1233-1242, Sept. 1994.
85. T. Ozdemir and J. L. Volakis, "A comparative study of an absorber boundary condition and an artificial absorber for terminating finite element meshes," *Radio Science*, pp. 1255-1263, Sept.-Oct. 1994.

86. S. Bindiganavale and J.L. Volakis, "A new reduced-unknown formulation for scattering by three dimensional inhomogeneous ferrite/dielectric bodies," *J. Electomagnetic Waves & Appl.,* Vol. 8, No.11, Nov. 1994.
87. L.C. Kempel and J.L. Volakis, "Scattering by cavity-backed antennas on a circular cylinder," *IEEE Trans. Antennas Propagat.,* Vol. 42, No. 9, pp. 1268-1279,1994.
88. A. Woo. J. Volakis, G. Hulbert, J. Chase, "Survey of volumeric grid generators,Part I: non-profit grid generators" *IEEE Trans. Antennas Propagat.*, Vol . 36, pp. 72-75, Aug. 1994 (see also Feb. 1995 issue).

1995

89. J.L. Volakis and S. V. Krestianinov, "Isomom: A new method for reducing storage and execution time of moment method solutions in Electromagnetics," *Microwave and Optical Tech. Let.*, pp. 184-186, Mar. 1995.
90. J.L. Volakis and L. C. Kempel, "Electromagnetics: Computational methods and considerations," *IEEE Computational Science and Engineering Mag.*, Vol. 2, No.1, pp. 42-57, Spring 1995.
91. A. Chatterjee and J.L. Volakis, "Parallelization of large scale finite element codes for electromagnetic applications," March 1993-February 94 *NAS Technical Project Summaries*, NASA-Ames Research Center, p. 104.
92. A. Woo. J. Volakis, G. Hulbert, J. Chase, "Survey of volumeric grid generators, Part II: commercial grid generators," *IEEE Ant. Propag. Mag*., Vol.37, pp. 96-98, Feb. 1995
93. D. Ross, J.L. Volakis and H.T. Anastassiu, "Hybrid Finite element-modal analysis of jet engine scattering,"*IEEE Trans. Antenna Propagat.*, Vol. 43, pp. 277- 285, March 1995.
94. H. Syed and J.L. Volakis, "Skew incidence diffraction by an impedance wedge with arbirtrary face impedances," *Electromagnetics*, Vol. 15, No.3, p. 291-300, 1995.
95. L.C. Kempel, J.L. Volakis and R. Sliva, "Radiation by cavity-backed antennas on a circular cylinder," *IEE Proceedings-H*, pp. 233-239, 1995.
96. H. H. Syed and J.L. Volakis, "An Approximate solution for scattering by an impedance wedge at skew incidence," *Radio Science*, pp. 505-524, May-June 1995.
97. J.L. Volakis and A. Chatterjee, " A selective review of the finite element-ABC and the finite element-boundary integral methods for electromagnetic scattering," (invited paper) *Annales de Telecom.*, Vol. 50, No. 5-6, pp. 499-509, May-June 1995.
98. H.T. Anastassiu, J.L. Volakis and D.C. Ross, "The mode matching technique for electromagnetic scattering by cylindrical waveguides with canonical terminations," *J. Electromagn. Waves Appl*., Vol. 9, No. 11/12, pp. 1362-1392, 1995.
99. A. Chatterjee and J.L. Volakis, "Conformal absorbing boundary conditions for 3D problems: Derivation and applications,"*IEEE Trans. Antennas and Propagat.,* Vol. 43, pp. 860-866, Sept. 1995.
100. D. C. Ross, J. L. Volakis and H. Anastassiu, " Overlapping modal and geometric symmetries for computing jet engine scattering," *IEEE Trans. Antennas and Propapag.*, Vol. 43, pp. 1159-1163, Oct. 1995.
101. J. Gong and J.L. Volakis, "An efficient and accurate model of the coax cable feeding structure for FEM simulations," *IEEE Trans. Antennas and Propagat*., Vol. 43, pp. 1474-1478, Dec. 1995.
102 J. Gong and J.L. Volakis, "Optimal Selection of a uniaxial artificial absorber Layer for truncating finite element meshes," *IEE Electronics Lett*.., pp. 1559-1561, Vol. 31, No. 18, 31st August 1995.

1996

103. M. Nurnberger and J.L. Volakis, "A new planar feed for slot spiral antennas," *IEEE Trans. Antennas and Propagat*., Vol. 44, pp. 130-131, Jan. 1996.
104. S. Bindiganavale and J.L. Volakis, "Error and execution time analysis of the fast multipole method for calculating the RCS of large objects," *Microwave and Opt. Techn. Lett*, Vol. 11, No. 4, pp. 190-194, March 1996
105. H. Anastassiu, J.L. Volakis, D. Ross and D. Andersh, "Electromagnetic scattering from simple jet engine models," *IEEE Trans. Antenna Propagat.*, Vol. 44, pp. 420-421, March 1996
106. A. Chatterjee, J.L. Volakis and L.C. Kempel, "Optimization issues in finite element codes for solving open 3D electromagnetic problems," *Int. J. Numerical Modelling: Electr. Net. Dev. and Fields*, Vol. 9, pp. 335-344, Sept.-Oct. 1996.
107. S. Bindiganavale and J. L. Volakis, "Scattering by narrow gaps in an impedance plane,"*Radio Sci..*, pp. 401-408, March-April 1996.
108. J.L. Volakis "Iterative Algorithms for Sparse Systems," IEEE Antennas and Propagation Magazine, Vol. 37, No.6, Dec. 1995, pp. 94-96
109. H.H. Syed and J. L. Volakis, "PTD formulation for scattering by three dimensional impedance structures," Vol. 44, No. 7, *IEEE Trans. Antennas and Propagat..*, pp. 983-988, July 1996
110. D.M. Kingsland, J. Gong, J.L. Volakis and J-F. Lee, "Performance of an anisotropic artificial absorber for truncating finite element meshes, " Vol. 44, No. 7, *IEEE Trans. Antennas and Propagat..*, pp. 975-982, July 1996
111. T. B.A. Senior and J.L.Volakis, "Approximate Impedance Boundary Conditions in Electromagnetics," chapter in *Review of Radio Science.*
112. J.L. Volakis, J. Gong and T. Ozdemir, "Applications of the FEM to Conformal Antennas," Ch. 13 in the book *Finite Element Software for Microwave Engineering* ed. by Itoh, Silvester and Pelosi (Wiley, 1996), pp. 313-345
113. T. Ozdemir, M.W. Nurnberger, J.L. Volakis, R. Kipp and J. Berrie, "A hybridization of finite element and high frequency methods for pattern prediction of antennas on aircraft structures," *IEEE Antennas and Propagat. Soc. Mag, Vol. 38, No.3* pp. 28-38, June 1996.
114. J.Gong, J.L. Volakis and H.T.G. Wang, "Efficient finite element simulation of slot antennas using prismatic elements," *Radio Sci.* , Vol. 31, No. 6, pp. 1837-1844, Nov-Dec. 1996
115. D Ross, J. L. Volakis and H. Anastassiou,"Efficient computation of radar scattering modulation from jet engines," *Radio Science.*, Vol. 31, No. 4, pp. 991-997, July-August 1996
116. S. Legault, T.B.A. Senior and J.L. Volakis, "Design of Planar Absorbing Layers for Domain Truncation in FEM Applications," Vol. 16, No. 4 pp. 451-464, *Electromagnetics*, July-August 1996
117. J.Gong and J.L. Volakis, "An AWE Implementation for Electromagnetic FEM Analysis," *IEE Electronics Letters,* Vol. 32, No.24, pp.2216-2217, 21st November 1996.

1997

118 T.B.A. Senior, J.L. Volakis and S. Legault, "Higher order impedance and absorbing boundary conditions," *IEEE Trans. Antennas and Propagat..*, Vol. 45, pp. 107-114, Jan. 1997.

119. S. Bindiganavale and J.L. Volakis, "A hybrid Finite Element-Fast Multipole technique for electromagnetic scattering," *IEEE Trans. Antenna Propagat*., Vol. 45, pp. 180-181, Jan. 1997.
120. J.L. Volakis, T. Ozdemir and J. Gong "Hybrid Finite Element methodologies for antennas and scattering," (invited paper) *IEEE Trans. Antenna Propagat*., pp. 493-507, March 1997
121. T. Ozdemir and J. L. Volakis, "Triangular Prisms for Edge-Based vector finite elements analysis," *IEEE Trans. Antennas Propagat.*, pp. 788-797, May 1997
122. D. Ross, H. Anastassiu and J.L. Volakis, "Three dimensional, edge-based finite element analysis for discrete bodies of revolution," *IEEE Trans. Antenna Propagat*., pp. 1160-1165, July 1997.
123. H. Anastassiu and J.L. Volakis, "Comments on 'New Reciprocity Theorem'" IEEE Trans. Microwave Theory and Techn., p. 313, February 1997.
124. J.L. Volakis, T.B.A. Senior, S.R. Legault, T. Ozdemir and M. Casciato, "Artificial absorbers for truncating finite element meshes," in Direct and Inverse Electromagnetic Scattering, eds. Serbest and Cloude, Pitman Research Series in Mathematics 361, pp. 15-24, 1997.
125. S. Bindiganavale and J.L. Volakis "Comparison of three FMM techniques for solving hybrid FE-BI systems," *IEE Electronics Lett.,Vol. 33, No. 11, 22nd May 1997, pp. 924-925.*
126. A. Borgioli, R. Coccioli, G Pelosi and J.L. Volakis, "Electromagnetic Scattering from a corrugated wedge," *IEEE Trans. Antennas and Propagat*., Vol. 45, No.8, pp. 1265-1269, August 1997
127 S. Bindiganavale and J.L. Volakis, " Comparison of three FMM Techniques for Solving Hybrid FE-BI Systems," *IEEE Antennas Propagat. Magazine*, Vol. 39, No. 4, pp. 47-60, August 1997.
128 Z. Li, P. Papalambros, J.L. Volakis, "Designing broadband patch antennas using the sequential quadratic programming method," *IEEE Trans. Antennas and Propagat*., pp. 1689-1692, Nov. 1997.
129 Y. Botros, J.L. Volakis, P. VanBuren and E. Ebbini, "A Hybrid Computational Model for Ultrasound Phased Array Heating in Presence if Strongly Scattering Obstacles," *IEEE Trans. On Biomedical Applications*, pp. 1039-1050, Nov. 1997
130 Hristos T. Anastassiu, Mikhail Smelyanskiy, S. Bindiganavale and John L. Volakis, "Scattering from Relatively Flat Surfaces using the Adaptive Integral Method (AIM), *Radio Science*, Jan-Feb 1998.

1998

131 L. Andersen and J.L. Volakis, "Hierachical Tangential Vector Finite Elements for Tetrahedra," *IEEE Microwave and Guided Wave Letters*, vol. 8, No.3, pp. 127-129, March 1998.
132 G. Pelosi and J.L. Volakis, Short Biography of Arnold Sommerfeld(1868-1951), Vol 18: (2) 111-116, March-April 1998 (not refereed)
133 Y. Botros, E. Ebbini and J.L. Volakis, "Two step hybrid virtual array-ray(VAR) technique for deep localized hyperthermia through the rib-cage," *Trans. Ultrasonics Ferroelectrics and Frequ. Control* , July 1998
134 T. Eibert and J.L. Volakis, "A Fast Spectral Domain Algorithm for Rapid Solution of Integral Equations," *IEE Electronics Letters*, Vol. 34, no. 13, pp1297-1299, 25 June 1998.

135 L.S. Andersen and J.L. Volakis, "Mixed-order tangential vector finite elements for triangular elements," *IEEE Antennas and Propagation Magazine*, Vol. 40, no.1, pp104-108, Feb 1998

136 M. Smelyanskiy, J.L. Volakis and E. S. Davidson, "Performance Optimization of an Integral Equation Code for Jet Engine Scattering on CRAY-C90" Applied Computational Electromagnetics Soc. Journal (ACES), vol. 13, No.2, pp. 116-130, 1998.

137 S.S. Bindiganavale and J.L. Volakis, "Scattering and Radiation from Planar Structures Containing Small Features Using a Finite Element Fast Integral Method," IEE Electr. Lett, Vol. 34, No. 21, pp. 2015-2016, 15 Oct. 1998.

138 H. Anastassiu and J.L. Volakis, "Integral Equation Modeling of Angularly Periodic Scatterers in the Interior of the Cylindrical Waveguide," *IEEE Trans. Microwave Theory and Techn*., Nov. 1998

139 Y. Erdemli, J. Gong, C.J. Reddy and J.L. Volakis, " Fast RCS Pattern fill using AWE Techniques," *IEEE Trans. Antennas and Propagat.*, Vol. 46, pp. 1752-1753, Nov. 1998.

140 S. Bindiganavali, J. L. Volakis and H. Anastassiu, "Scattering from plates containing small features using the adaptive integral method(AIM)," *IEEE Trans. Antennas and Propagat*., pp.1867-1878, Dec. 1998.

1999

141 Arik Brown, J.L. Volakis, L. Kempel, Y. Botros, "Ferrite Antennas on Ferromagnetic Substrates," *IEEE Trans. Antennas and Propagat*., Vol. 47, pp. 26-32, Jan. 1999

142 L. Andersen and J.L. Volakis, "Development and application of a novel class of hierarchical tangential vector finite elements for electromagnetics" *IEEE Trans. Antennas and Propagat.*, Vol. 47, No. 1,pp. 104-108, Jan. 1999

143 Y. Botros and J. L. Volakis, "Preconditioned Generalized Minimal Residual Iterative Scheme for Perfectly Matched Layer Terminated Applications," IEEE Microwave and Guided Wave Lett., Vol. 9, pp. 45-47, Feb 1999

144 Y.E. Erdemli, C.J. Reddy and J.L. Volakis, " AWE Technique in Frequency Domain Electromagnetics," J. Electromagnetic Waves Appl., Vol. 13, pp. 359-378,1999

145 T. Eibert, J.L. Volakis, D. Wilton and D. Jackson, "Hybrid FE/BI Modeling of 3D Doubly Periodic Structures Using Triangular Prismatic Elements and a MFIE Accelerated by the Ewald Transformation," *IEEE Trans. Antenna Propagat*., Vol. 47, No. 5,pp. 843-850, May 1999

146 Y. Erdemli, C.J. Reddy and J.L. Volakis, "AWE Technique in Frequency Domain Electromangetics," *J. Electromagn. Waves and Appl.* Vol 13, pp. 359-378, 1999

147 Z. Shen, J.L. Volakis and R.H. MacPhie, "A coaxial-radial line junction with top loading disk for broadband matching," Microwave and Opt. Tech. Letters, Vol. 22, No.2, pp. 87-90, July 20, 1999.

148 T. Eibert and J. Volakis, "Adaptive Integral Method for Hybrid FE/BI Modeling of 3D Doubly Periodic Structures," *IEE Proceedings Microwaves, Antennas and Propagat.*, pp. 17-22, Vol. 146, Feb. 1999.

149 L.S. Andersen and J.L. Volakis, "Accurate and efficient simulation of antennas using hierarchical mixed-order tangential vector finite elements for tetrahedra," *IEEE Trans. Antenna Propagat,* Vol. 47, pp. 1240-1243, August 1999

150 L.S. Andersen and J.L. Volakis, "Condition number of various FEM matrices," J. Electromagnetic Waves Appl., Vol. 13, pp. 1661-1677, Dec. 1999

151 T. Ozdemir, J.L. Volakis and M.W. Nurnberger, "Analysis of Thin Multioctave Cavity-backed Slot Spiral Antennas," *IEE Proceedings-Microwave, Antennas and Propagation*, Vol.146, pp. 447-454, December 1999.

152 Y. Botros and J.L. Volakis, "On the convergence of FEM systems terminated with Perfectly Matched Layers," *Microwave and Opt Tech Letters*, Vol. 23, No.3, pp. 166-171, Nov. 5, 1999

2000

153 J.L. Volakis, T. F. Eibert and K. Sertel, "Fast Integral Methods for Conformal Antenna and Array Modeling in Conjunction with Hybrid Finite Element Formulations," *Radio Sci*., Vol. 35, No.2, pp. 537-546, March-April 2000.

154 T.F. Eibert, K. Sertel and J.L. Volakis, "Hybrid finite element modeling of conformal antenna and array structures utilizing fast integral methods" *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, Vol. 13, 2-3, March-June 2000.

155 J. Yoo, N. Kikuchi and J.L. Volakis, " Structural Optimization in Magnetic Fields Using the Homogenization Design Method," *IEEE Trans. Magnetics*, Vol. 36, No. 3, May/June 2000, pp. 574-580

156 Z. Shen, J.L. Volakis and R. MacPhie, " Modeling of cylindrical dielectric resonator antennas by the modal-expansion analysis," *Microwave and Optical Techn. Letters*, Vol. 26 (1), pp. 13-16, 5 July 2000.

157 J.L. Volakis, K. Sertel, L.S. Andersen, T.F. Eibert and Z. Li, " Fast Integral Methods in Hybrid Finite Element Methods for Electromagnetics," Les Annales de la Faculte des Sciences de Toulouse

158 M.W. Nurnberger and J.L. Volakis, "Extremely Broadband Slot Spiral Antennas with shallow reflecting cavities", *Electromagnetics*, Vol 20, No. 4, pp. 357-376, 2000.

159 K. Sertel and J.L. Volakis, "Incomplete ILU Preconditioner for Fast Multipole Method(FMM), " *Microwave and Optical Tech. Letters*, Vol. 28, pp. 265-267, Aug. 20, 2000.

160 T. Eibert and J.L. Volakis, "Fast Spectral Domain Algorithm for Hybrid Finite Element/Boundary Integral Modeling of Doubly Periodic Structures," *IEE Proceedings, Microwaves, Antennas and Propagation*, Vol. 147, No. 5, pp. 329-334, October 2000

161 D. Filipovic, L.S. Andersen and J.L. Volakis, "A multi-resolution method for simulating infinite periodic arrays," *IEEE Trans. Antenna Propagat*, Vol. 48, pp. 1784-1786, Nov. 2000

2001

162 L.S. Andersen and J.L. Volakis, "Adaptive multiresolution antenna modeling using hierarchical mixed-order tangential vector finite elements," *IEEE Trans. Antenna Propagat*, Vol. 48, pp. 211-222, Feb. 2001.

163 T. Eibert and J.L. Volakis, " Antennas, Radar and Mobile Communications", Chapter in book edited by Sabatier, Wiley and Sons, 2001, pp. 384-406

164 E. Topsakal, M. Carr, J.L. Volakis and M. Blezsynski, "On the use of Galerkin Operators in Adaptive Integral Methods," *IEE Proceedings-Microwaves, Antennas* and Propagation., Vol. 148, No.2, pp. 79-84, April 2001.

165 T.B.A. Senior, S. Legault and J.L. Volakis, "A novel technique for solution of second order difference equations," *IEEE Trans. Antennas and Propagat.*, Vol.49, No. 12, pp. 1612-1617, Dec. 2001.

166 M. Abdel Moneum, Z Shen, J.L. Volakis and O. Graham, "Hybrid PO-MOM analysis of large axi-symmetric radomes," *IEEE Trans. Antennas Propagat*., Vol. 49, No. 12, pp. 1657-1666, Dec. 2001.

167 E. Topsakal, R. Kindt, K. Sertel and J.L. Volakis, "Evaluation of BICGSTAB(I) algorithm for the finite element/boundary integral method," *IEEE Antennas and Propagat. Magazine*, Vol. 43, No. 6, pp. 124-131, Dec. 2001.

168 J. L. Volakis, M. W. Nurnberger and D. S. Filipović, "A Broadband cavity-backed slot spiral antenna" *IEEE Antennas and Propagat. Mag*., Vol. 43, No. 6, pp. 15-26, Dec 2001.

2002

169 J. Yoo, N. Kukuchi and J.L. Volakis, "Structural Optimization in Magnetic Fields Using the Homogenization Design Method-Part I", Arch. Comput. Meth. Engng., Vol. 9, 1, pp. 39-58, 2002.

170 M. Nurnberger and J.L. Volakis, " New Termination for Ultra Wide-Band Slot Spirals," *IEEE Trans. Antenna Propagat*., Vol. 50, pp. 82-85, Jan. 2002.

171 A. Brown, L. Kempel and J.L. Volakis, "Design method for antenna arrays employing ferrite printed transmission line phase shifters," *IEE Proceedings*-Microwaves, *Antennas and Propagation*, Vol. 149 (1), pp. 33-40, 2002

172 Z. Li, J.L. Volakis and P. Papalambros, "Design Optimization of Conformal Antennas By Integrating Stochastic Algorithms with the Hybrid Finite Element Method," *IEEE Antennas Propagat. Trans.***,** Vol. 50, pp. 676-684, May 2002,

173 M. Carr and J.L. Volakis, "Acceleration of free discrete body of revolution codes by exploiting circulant submatrices," *IEEE Trans. Antennas Propagat.*, Vol. 50, no.9, pp. 33-40, Sept. 2002.

174 E. Topsakal, J.L. Volakis and D.C. Ross, "Surface Integral Equations for Material Layers Modeled with Tensor Boundary Conditions," *Radio Sci*, Vol. 37 , No. 4, 2002.

175 K. Sertel and J.L. Volakis, "Method of moments solution of volume integrals equation using parametric geometry modeling," *Radio Sci.*, Vol. 37, No. 1, 2002.

176 Y. E. Erdemli, K. Sertel, R. Gilbert, D. Wright, and J. L. Volakis, "Frequency Selective Surfaces to Enhance Performance of Broadband Reconfigurable Arrays," *IEEE Trans. Antenna Propagation*, vol. 50, No. 12, pp. 1716-1724, Dec. 2002.

177 M. Carr and J.L. Volakis, "A physical approach to generating time-frequency distributions of dynamic CEM targets," *Microwave Optical Techn Letters*, vol. 35, no.3, Nov. 5, 2002

178 J.L. Volakis, T.F. Eibert, D. S. Filipovic, Y. Erdemli and E. Topsakal, "Hybrid finite element methods for array and FSS to analysis using multiresolution elements and fast integral techniques," *Electromagnetic*s, pp. 327-313, no. 4, May-June 2002.

179 Z. Li, P.Y. Papalambros and J.L. Volakis, "Frequency selective surface design by integrating optimization algorithms with fast numerical methods," *IEE Proceedings-Microwaves, Antennas and Propagation*, pp 175-180, Vol. 149, No. 3, June 2002.

180 J.L. Volakis and T. Eibert, "Antenna Analysis Methods," chapter in *Encyclopedia of Telecommunications*, ed. J. Proakis.

181 D.S. Filipovic and J.L. Volakis, "A broadband meanderline slot spiral antenna," *IEE Proceedings-Microwaves, Antennas and Propagation*, Vol. 149, no.2, pp. 98-105, 2002.

2003

182 D.S. Filipovic and J.L. Volakis, "Novel slot spiral antenna designs for dual-band/multi-band operation," *IEEE Antennas and Propagat. Trans.*, Vol. 51, March 2003, pp. 430-440.

183 R.W. Kindt, K. Sertel, E. Topsakal and J.L. Volakis "Array Decomposition Method for Accurate Analysis of Large Finite Arrays" *IEEE Trans. Antenna Propagat.* , Vol. 51, June 2003, pp. 1364-1372.

184 R.W. Kindt, K. Sertel, E. Topsakal and J.L. Volakis, "An extension of the array decomposition method for large finite arrays," *Microwave and Optical Tech. Lett.*, Vol. 38, No. 4, Aug. 20, 2003, pp. 323-328.

185 T. Eibert and J.L. Volakis, "Hybrid Finite Element--Fast Spectral Domain Multilayer Boundary Integral Modeling of Doubly Periodic Structures" *IEEE Antennas and Propagat. Trans.*, Vol. 51, No 9, pp. 2517-2520, Sept. 2003.

186 E. Siah, K. Sertel, J.L. Volakis and V.V. Liepa, R. Wiese, "EM Coupling and Shielding of Complex Multimode Enclosures using the Multilevel Fast Multipole Method," *IEEE Trans. Electromagn. Compatibility*, vol. 45, No. 2. pp. 245-257. May 2003 (special issue on EMC Numerical Modeling)

187 E.S. Siah, J.L. Volakis, D. Pavlidis, and V. Liepa "Electromagnetic Analysis of Plane Wave Illumination Effects onto Passive and Active Circuit Topologies", *IEEE Antennas and Wireless Propagation Letters,* Vol.2 (15), 2003, pp. 230-233.

188 B. Jensen, K. Saitou, J.L. Volakis and K. Kurabayashi, "Fully integrated electrothermal multi-domain modeling of RF MEMS switches," *IEEE Microwave and Wireless Components Letters*, Vol. 13, No. 9, pp. 364-356, Sept. 2003

189 G. Kiziltas, D. Psychoudakis, J.L. Volakis and N. Kikuchi, "Topology optimization of dielectric substrates for bandwidth improvements of patch antennas," *IEEE Trans. Antenna and Propagat.,* Vol. 51, Oct. 2003, pp. 2732-2743.

190 Z. Wang, J.L. Volakis, K. Saitu and K. Kurabayashi, "Comparison of Semi-Analytical Formulations and Gaussian Quadrature Rules for Quasi-Static Double-Surface Potential Integrals," IEEE Antenna and Propagation Magazine, Vol. 45, No. 6, pp. 96-102, Dec. 2003

2004

191 E.S. Siah, M. Sasena, J.L. Volakis and P.Y. Papalambros "Fast Parameter Optimization on Electromagnetic Objects Using an Efficient Global Optimizer", *IEEE Trans. On Microwave Theory and Techniques*, Vol. 52, pp. 276-285, Jan. 2004.

192 K. Barkeshli and J.L. Volakis, "Electromagnetic Scattering by Thin Strips Part I- Analytical Solutions for Wide and Narrow Strips" *IEEE Trans. Education*, vol. 47, No. 1, pp. 100-106, Feb 2004

193 K. Barkeshli and J.L. Volakis, "Electromagnetic Scattering by Thin Strips Part II- Numerical Solution for Strips of Arbitrary Size," IEEE *Trans. Education*, vol. 47, No. 1, pp. 100-106, Feb 2004, February 2004

194 D. Filipovic and J.L. Volakis, A flush mounted multifunctional slot aperture (Combo-Antenna) for Automotive Applications," *IEEE Antenna Propagat Trans*., Vol. 52, No. 2, pp. 563-571, February 2004

195 M. Carr, E. Topsakal and J.L. Volakis, "A procedure for modeling material junctions in 3-D surface integral equation approaches,**"** IEEE Trans. on Antennas and Propagat., Vol. 52 (5), May 2004, pp. 1374 - 1378

196 M. Carr, M. Blezynski and J.L. Volakis, "A near-field preconditioner and its performance in conjunction with the BiCG-STAB(*ell*) Solver," IEEE Antennas and Propag. Magazine. Feb. 2004, Vol. 46 (2) , April 2004, pp. 23 - 30

197 Rick W. Kindt, John L. Volakis, "The Array Decomposition-Fast Multipole Method for Finite Array Analysis," *Radio Sc*i., Vol. 39, No. 2, April 2004.

198 S. Govindaswamy, J. East, F. Terry, E. Topsakal, J. L. Volakis, G. I. Haddad,"Dual Frequency Selective Surfaces for Near-Infrared Bandpass Filters" Microwave and Optical Techn. Letters, Vol. 43, No. 2, pp. 95 – 98, 20 October 2004

199 S. Govindaswamy, J. East, F. Terry, E. Topsakal, J. L. Volakis, G. I. Haddad,"Frequency-Selective Surface-based bandpass filters in the near-infrared region, " Microwave and Optical Techn. Letters, Vol. 41, No.4, pp. 266-269, 20 May 2004

200 J. L. Volakis, K. Sertel, Eric Jorgensen, and R. W. Kindt, "Hybrid Finite Element and Volume Integral Methods for Scattering Using Parametric Geometry," in *Computer Modeling in Engineering and Sciences* (CMES), Vol. 5, No.5, pp. 463-476, 2004

201 K. Sertel and J.L. Volakis, "Multilevel fast multipole method solution of volume integral equations using parametric geometry modeling," *IEEE Trans. Antenna Propagat.*, Vol. 52, July 2004, pp. 1686 - 1692

202 B. C. Usner, K. Sertel, and J. L. Volakis, "A New Galerkin Testing Scheme for Volume Integral Equations using Parametric Geometry," *IEE Electronics Letters*, pp. 926- 927, 2004.

203 E.Topsakal and J.L. Volakis, "Frequency Selective Volumes for Optical Spatial Filters," *IEEE Antennas and Wireless Propagat. Letters*, pp. 236-238,2004

204 D. Psychoudakis, Y-H. Koh, J.L. Volakis and J. H. Halloran, "Aperture-coupled microstrip antennas on textured dielectric substrates" *IEEE Trans. Antennas Propagat, Vol. 52,* Oct 2004, pp. 2763 - 2766

205 E. Jorgensen, J.L. Volakis, Peter Meinke and Olav Brienbjerg, "Higher-order hierarchical Legendre basis functions for electromagnetic modeling," *IEEE Antennas and Propagat.*, Vol. 52, Nov 2004, pp. 2985 - 2995

206 G. Kiziltas, N. Kikuchi, J. L. Volakis, and J. Halloran , "Topology Optimization of Dielectric Subtrates for Filters and Antennas using SIMP," *Archives of Computational Methods in Engineering—State of the Art Review*, Vol. 11, no. 4, pp. 355-388, 2004

207 Y. Erdemli and J.L. Volakis, "Reconfigurable Slot Arrays with Periodic Substrates" *IEEE Trans. Antenna Propagat.*, Vo. 52, Nov. 2004, pp. 2860 - 2870

208 D. Psychoudakis, J.L. Volakis, J. Fowlkes and Paul Carson, "Potential of Microbubbles for Use as Point Targets in Phase Aberration Correction," *IEEE Trans on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 51 (12), Dec. 2004 , pp. 1639 – 1648

2005

209 B. A. Kramer, M. Lee, Chi-Chih Chen and J. L. Volakis, "Design and Performance of an Ultra Wideband Ceramic-Loaded Slot Spiral," *IEEE Antennas and Propagat.* Vol. 53, pp. 2193-2199, July 2005.

210 G. Kiziltas, J. L. Volakis and N. Kikuchi "Design of Frequency selective structure with inhomogeneous substrates as a thermophtovoltaic cell," *IEEE Antennas and Propagat. Trans.*, Vol. 53, July 2005.

211 Z. Wang, S. Safavi-Naeini and J.L. Volakis,"Mode Expansion with Moment Method (ME-MOM) to Analyze Dielectric Resonators," Applied Computational Electromagnetics Society (ACES), pp. 13-20, 2005

212 Y. Bayram and J.L. Volakis, "Generalized MoM-SPICE Iterative Technique for Field Coupling to Multiconductor Transmission Lines in Presence of Complex Structures," *IEEE Trans. Electromagn. Compatibility*, Vol. 47, pp. 234-246, May 2005.

213 B. D. Jensen, L. Chow, K. Huang, K. Saitou, J.L. Volakis and K. Kurabayashi, "Effect of Nanoscale Heating on Electrical Transport in RF MEMS Switch Contacts" IEEE/ASME J. of MicroElectroMechanical Systems, Vol. 14, No. 5, pp. 935-946., October 2005.

214 C-C. Chen and J.L. Volakis, "Bandwidth Broadening of Patch Antennas Using Non-Uniform Substrates," *Microwave and Optical Techn. Letters***,** Vol. 47(5**)**, pp. 421 **–** 423**,** 2005**.**

215 T.Yang and J.L. Volakis, "Coupling onto Wires Enclosed in Cavities with Apertures" *Electromagnetics*, 25:655–678, 2005

216 *Z.* Wang, B. Jensen, J.L. Volakis, K. Siatou, K. Kurabayashi, "Full-wave electromagnetic and thermal modeling for the prediction of heat-dissipation-induced RF-MEMS switch failure," *J. Micromech. Microeng.* Vol. **16** 157-164 , Dec 2005

217 G. Mumcu, K. Sertel, J.L. Volakis, and A. Figotin, "Propagation in Magnetic Non-reciprocal crystals," *IEEE Antennas and Propagation Trans.*, Vol. 53, pp. 4026-4034, Dec. 2005.

218 Y-H. Koh, J.W. Halloran, G. Kiziltas, D. Psychoudakis, and J.L. Volakis, Thermoplastic Green Machining for Textured Dielectric Substrate for Broadband Miniature Antenna," J. Am. Ceram. Soc., 88 (2) pp. 297–302, 2005

2006

219 B. Usner, K. Sertel, M. Carr and J.L. Volakis, "Generalized Volume-Surface Integral Equation for Modeling Inhomogeneities within High Contrast Composite Structures," accepted in *IEEE Trans. Antennas and Propagat*., Vol. 54, pp. 68-75, Jan 2006

220 M. Carr. E. Topsakal and J.L. Volakis, "Generalization of the moment method for multilayer scatterers with arbitrary junctions using half-basis functions," *IEEE Trans. Antenna Propagat Magazine.*, Vol. 48, no 1, pp 22-32, Feb 2006.

221 B Kramer, S. Koulouridis, C-C. Chen and J.L. Volakis, "A Novel Reflective Surface for an UHF Spiral Antenna" *IEEE Trans. Antennas and Propagat. Letters,* Vol. 5, pp. 32 – 34, 2006

222 D.Pyschoudakis and J.L. Volakis," Enhancing UHF Antenna Functionality Through Dielectric Inclusions and Texturization," *IEEE Trans. Antennas and Propagat.,* Vol. 54. pp. 317-329, Feb 2006.

223 G. Mumcu, K. Sertel and J.L. Volakis, "Miniature Antennas and Arrays Embedded within Magnetic Photonic Crystals" *IEEE Antennas and Wireless Propagat. Letters*, Vol. 5, 2006 pp. 168 – 171, 2006

224 M. Sancer, Kubilay Sertel, John L. Volakis and Peter Van Alstine, "On Volume Integral Equations," *IEEE Trans. Antenna Propagat*., Vol. 54, pp. 1488-1495, May 2006.

225 C.P. Lim, K. Sertel, R.W. Kindt, J.L. Volakis and A. Anastasopoulos, "Indoor Propagation Models Based on Rigorous Methods for Site-Specific Multipath Environments," *IEEE Trans. Antennas Propagation*, pp. 1718-1725, 2006

226 Yijun Zhou, Stavros Koulouridis, Gullu Kiziltas, and John L.Volakis, "A Novel 1.5" Quadruple Antenna for Tri-Band GPS Applications," *IEEE Antennas and Wireless Propagation Letters*, Vol. 5, pp.224 – 227, 2006

227 Suomin Cui, Daniel S. Weile and John L. Volakis,"Novel Planar Absorber Using Genetic Algorithms," *IEEE Trans. Antennas and Propagat.,*Vol. 54, pp.1811- 1817, May 2006.

228 R.J. Burkholder, R.W. Kindt, P.H. Pathak,K. Sertel,R.J. Marhefka, and J.L. Volakis,"A hybrid framework for antenna-platform analysis," Applied Computational Electromagnetics Society Journal, Vol. 21, No. 3, Nov. 2006, pp. 177-195 (invited paper)

229 J.L. Volakis, G. Mumcu, K. Sertel, C.-C. Chen, M. Lee, B. Kramer, D. Psychoudakis and G. Kiziltas, Antenna Miniaturization using Magnetic Photonic and Degenerate Band Edge Crystals," *IEEE Antennas and Propagation Magazine*, Vol. 48, Oct. 2006, No. 5, pp. 12-28.

230 S. Koulouridis, G. Kiziltas, Y. Zhou, D. Hansford, and J. L. Volakis, "Polymer – Ceramic Composites for Microwave Applications: Fabrication and Performance Assessment," IEEE Trans. Microwave Theory and Techniques, Vol. 54, no.12. Dec 2006, pp. 4202-4208.

231 C. Locker, K. Sertel and J.L. Volakis, "Emulation of propagation in bulk layered anisotropic media with equivalent coupled line microstrip circuits," IEEE Microwave and Guided Wave Letters, Vol. 16, No. 12, Dec 2006, pp. 642-644.

232 L. W. Chow, Z. Wang, B. D. Jensen, K. Saitou, J. L. Volakis, K. Kurabayashi, "Investigation of Skin-Effect Aggregated Heating for Power Handling Prediction in RF MEMS Suspended Structures," *J. Microelectromechanical Systems*, Vol. 15, No. 6, Dec 2006, pp. 1622-1631.

233 D. Psychoudakis and J.L. Volakis, "Cavity-backed Miniature Wideband UHF Circular Polarized Antenna with Textured Dielectrics," *IEEE Trans. Antennas and Propagation,* Vol. 54, No. 12, Dec. 2006, 3586-3592.

2007

234 J. S. Kula, D. Psychoudakis, W-J. Liao, C-C. Chen, J. L. Volakis, and J. W. Halloran, "Patch Antenna Miniaturization Using Thick Truncated Textured Ceramic Substrates," IEEE Antenna and Propagat. Mag, Vol.48, No.6, Dec. 2006, pp.13-20

235 Y. Zhou, C-C Chen and J.L. Volakis, "Dual Band Proximity-fed Stacked Patch Antenna for Triband GPS Applications," IEEE Antennas and Propagat. Trans., Vol. 55, No. 1, Jan 2007, pp. 220-222

236 S. Koulouridis, D. Psychoudakis, J.L. Volakis, "Multi-Objective Optimal Antenna Design based on Volumetric Material Optimization," IEEE *Trans. Antennas Propagat.,* Vol. 55(3),March 2007,pp. 594-603.

237 J. L. Volakis, K. Sertel and C-C. Chen, "Miniature Antennas & Arrays Embedded within Magnetic Photonic Crystals and Other Novel Materials," *Applied Computational Electromagnetics Society Journal*, Vol. 22,(1), March 2007, pp. 22-30.

238 B. Usner, K. Sertel and J.L. Volakis, 'A Doubly Periodic Volume-Surface Integral Equation Formulation for Modeling Metamaterials' IET (formerly IEE) Proceedings, Microwaves, Antennas & Propagation, Vol. 1 (1), March 2007, pp. 150-157.

239 Yakup Bayram and John L. Volakis "Hybrid S-Parameters for Transmission Line Networks with Linear/Nonlinear Load Terminations Subject to Arbitrary Excitations," *IEEE Microwave Theory & Techniques*, Vo. 55(5), May 2007.pp. 941-950.

240 Caleb Waltz, K. Sertel, and J.L. Volakis, "Massively Parallel Fast Multipole Method Solutions of Large Electromagnetic Scattering Problems," *IEEE Trans. Antennas and Propagat.*, vol. 55, no. 6, June 2007, pp. 1810-1816.

241 L. Chow, J.L. Volakis and K. Kurabayashi, "Lifetime extension of RF MEMS direct contact switches using a Ball-Grid-Array (BGA) Dimple Design," IEEE *Trans. Electron Device Letters*, Vol. 28, No. 6, June 2007, pp. 479-481

242 Chan-Ping Lim, John L. Volakis and Achilleas Anastasopoulos, "BER Calculation for Multiple-antenna Systems in Ricean Fading Channels", *IEEE Transactions on Vehicular Technology*, Vol. 56, No. 4, July 2007, pp.1862-1866

243 M. Lee, C-C. Chen and J.L. Volakis, "Distributed Lumped Loads and Lossy Transmission Line Model for Wideband Spiral Antenna Miniaturization and Characterization," *IEEE Trans. Antennas and Propagat*., October 2007.

244 Z. Wang, J.L. Volakis, K. Siatou, K. Kurabayashi, "An Efficient Preconditioner (LESP) for Hybrid Matrices Arising in RF MEMS Switch Analysis," *ACES Journal*, Vol. 22 No. 3, pp. 327-332, Nov. 2007.

245 T. T. Lertwiriyaprapa, P.H. Pathak and J.L. Volakis "A UTD for the Radiation by Sources near thin planar Positive or Negative Material Structures with a Discontinuity," Radio Science, Vol 42, No. 6, November–December 2007.

246 Y. Bayram and J.L. Volakis, "A Hybrid MoM-SPICE Technique for Field Coupling Analysis of Transmission Lines in Presence of Complex Structures," *IEEE Trans. Electromangnetic Compatibility*, 2007

247 C.-P. Lim, Ming Lee, Robert J. Burkholder, John L. Volakis and Ronald J. Marhekfa, "60 GHz Indoor Propagation Studies for Wireless Communications Based on a Ray-Tracing Method", *EURASIP Journal on Wireless Communications and Networking (Special Issue: Millimeter-Wave Wireless Communication Systems)*, Vol. 2007, Article ID 73928, 6 pages, 2007. doi:10.1155/2007/73928.

248 G. Mumcu, K. Sertel, and J.L. Volakis, "Anisotropic Periodic Assemblies and Metamaterials for Applications to Antennas and Microwave Devices," *IEICE Trans. Communications: Special Issue after ISAP 2006 International Symposium on Antennas and Propagation*, vol. E90-B, no. 9 pp. 2203-2207, Sept. 2007.

2008

249 L. Zhang, G. Mumcu, K. Sertel, J.L. Volakis, and H. Verweij, "Fabrication and characterization of anisotropic dielectrics for low-loss microwave applications", Journal of Materials Science , 43(5), 1505-1509, 2008

250 S. Yarga, K. Sertel, and J.L. Volakis, "Degenerate Band Edge Crystals for Directive Antennas," *IEEE Trans. Antennas and Propagat*., pp. 119 – 126, Jan. 2008

251 G. Mumcu, K. Sertel, and J.L. Volakis, "A Measurement Process to Characterize Natural and Engineered Low Loss Uniaxial Dielectric Materials at Microwave Frequencies," *IEEE Trans Microwave Theory and Techn.* pp. :217 – 223, Jan 2008

252 B. A. Kramer, C.-C. Chen and J.L. Volakis, "Size reduction and a low-profile spiral antenna using inductive and dielectric loading," *IEEE Trans. Antennas and Wireless Propagat Letters*, Vol. 7, pp. 22-25, 2008

253 Kenneth E. Browne, Chi-Chih Chen and John L. Volakis,"A Novel Radiator for a 2.4 GHz Wireless Unit to Monitor Rail Stress and Strain," IEEE Trans. Antennas & Propagation, pp. 887-892, March 2008.

254 Matthew B. Stephanson, Kubilay Sertel, and John L. Volakis, "Frozen Modes in Coupled Microstrip Lines Printed on Ferromagnetic Substrates," *IEEE Microwave and Wireless Components Letters*, Vol. 18 (5), pp. 305-307, May 2008

255 Yijun Zhou, Chi-Chih Chen and John L. Volakis, "Single-fed Circularly Polarized Antenna Element with Reduced Coupling for GPS Arrays," IEEE Trans. Antennas and Propagat., Vol. 56, No. 5, pp. 1469-1472, May 2008.

256 Z. Khan, Y. Bayram and J.L. Volakis, "EMI/EMC Measurements and Simulations for Cables and PCBs enclosed within Metallic Structures," *IEEE Trans. Electromagnetic Compatibility*, Vol. 50 (2), pp. 441-445, May 2008 (top downloaded IEEE Trans. paper in Aug. 2008).

257 G. Mumcu, K. Sertel, and J.L. Volakis, "Surface Integral Equation Solutions for Modeling 3D Uniaxial Media Using Closed Form Dyadic Green's Functions," *IEEE Trans. Antennas Propagat.*, Vol. 56, No. 8, pp. 2381-2388, August 2008. (see Correction in Dec. 2009 issue, Vol. 57, pp. 4018 - 4018)

258 Faruk Erkmen, C-C Chen and J.L. Volakis , "UWB Magneto-dielectric ground plane for low profile antenna applications," *IEEE Antennas and Propagation Magazine*, Vo. 50, No. 4, pp. 211-216, August 2008.

259 S. Koulouridis and J.L. Volakis, "L-band Circularly Polarized Small Aperture Thin Textured Patch Antenna," *IEEE Antennas and Wireless Propagat. Letters*, Vol. 7, 2008, pp. 225-228

260 Yakup Bayram, John L. Volakis, Suk Keum Myoung, Seok Joo Doo and Patrick Roblin, "High Power EMI on RF Power Amplifier and Digital Modulation Schemes," IEEE *Trans. Electromagn Compatibility*, Vol. 50, No.4, Nov 2008, pp. 849-859.

261 D. Psychoudakis,W. Moulder, Chi-Chih Chen; Heping Zhu, J.L. Volakis, "A Portable Low-Power Harmonic Radar System and Conformal Tag for Insect Tracking," *IEEE Antennas and Wireless Propagat. Letters*, Vol. 7, pp. 444 – 447, 2008.

262 Justin Kasemodel, C.C. Chen, I.J. Gupta and J.L. Volakis, "Miniature Continuous Coverage Antenna Array for GNSS Receivers,"*IEEE Antennas & Wireless Propagat. Letters*, Vol. 7, pp.592 – 595, 2008,

2009

263 J. Zhao, T. Peng, C-C. Chen and J.L. Volakis, "Low-profile ultra-wideband inverted-hat monopole antenna for 50 MHz-2 GHz operation", *IET Electronics Letters*, Volume 45(3) pp:142 – 144, 29 January 2009,

264 Faruk Erkmen, C-C Chen and J.L. Volakis,"Impedance Matched Ferrite Layers as Ground Plane Treatments to Improve Antenna Wideband Performance," *IEEE Trans. Antennas and Propagat.* Vol. 57, pp. 263-266, Jan. 2009.

265 T. Lertwiriyaprapa, P. H. Pathak and J. L. Volakis,"Electromagnetic Diffraction by a Thin Planar Positive/NegativeMaterial Half Plane," *J. Japan Society of Applied Electromagnetics and Mechanics (J. AEM)*, Vol.17 No.3 (paper APSAEM08), accepted.

266 S. Koulouridis and J.L. Volakis, "A Novel Planar Conformal Antenna Designed with Splines" *IEEE Antennas and Wireless Propagat. Letters*, Vol. 8, pp. 34-36, 2009

267 S. Yarga, K. Sertel and J.L. Volakis, "A Directive Degenerate Band Edge Crystal-Dielectric Resonator Antenna," *IEEE Trans. Antennas and Propagat.*, Vol. 57, pp. 799-803, March 2009.

268 M. Shalaby, Z. Wang, L. Chow, B. Jensen, J. Volakis, K. Kurabayashi, K. Saitu "Robust Design of RF-MEMS Cantilever Switches using Contact Physics Modeling" *IEEE Transactions on Industrial Electronics*, Vol. 56 (4),pp. 1012-1021, April 2009.

269 P. Chang, R. Burkholder, J.L. Volakis, R.J. Marhefka, "High Frequency EM Characterization of Through-Wall Building Imaging," *IEEE Trans. GeoScience & Remote Sensing*, Vol. 47, pp. 1375-1387, May 2009.

270 G. Mumcu, K. Sertel, and J.L. Volakis, "Miniature Antenna Design via Printed Coupled Lines emulating Degenerate Band Edge Crystals," *IEEE Trans. Antennas Propagat.*, Vol. 57, pp. 1618-1624, June 2009

271 Jae-Young Chung, Kubilay Sertel, and John L. Volakis, "A Non-invasive metamaterial characterization system using synthetic Gaussian aperture," *IEEE Trans. Antennas Propagat.*, vol. 57, no. 7, pp. 2006-2013, July, 2009.

272 B. Kramer, M. Lee, C-C Chen and J.L. Volakis, "Fundamental Limits and Design Guidelines for Miniaturizing Ultra-Wideband Antennas," *IEEE Antennas and Propagation Magazine*, Vol. 51, pp. 57-69, August 2009.

273 D. Psychoudakis and J.L. Volakis, "Conformal Asymmetric Meandered Flare (AMF) Antenna for Body-Worn Applications," *IEEE Antennas and Wireless Propagat. Letters*, Vol. 8, pp. 931-934, 2009.

274 S. Yarga, K. Sertel and J.L. Volakis, "Multilayer Dielectric Resonator Antenna Operating at Degenerate Band Edge Modes,"*IEEE Antennas and Propagation Letters*, vol. 8, pp. 287 - 290, 2009

275 Z Khan, Y. Bayram and J.L. Volakis,"EMI/EMC Analysis of Printed Circuit Boards Subject to Near-Zone Illuminations," *IEEE Trans. Electromagnetic Compatibility*, Vol. 51, pp. 406 – 408, May 2009.

2010

276 P. Chang, R. Burkholder and J.L. Volakis "Adaptive CLEAN with Target Refocusing for Through-Wall Image Improvement," IEEE *Trans. Antenna Propagat.*, Vol. 58 (1), pp. 155-162, Jan 2010

277 G. Mumcu, K. Sertel and J.L. Volakis, "Lumped Circuit Models for Degenerate BandEdge and Magnetic Photonic Crystal Dispersion Diagrams," *IEEE Microwave and Component Letters*, Vol. 21, pp. 4-6, Jan 2010

278 J. Zhao, C.C. Chen and J. L. Volakis, "Frequency-scaled UWB Inverted-Hat Antenna," *IEEE Antennas Propagat.*, Vol. 58, No. 7, pp. 2448-2450, July 2010

279 Titipong Lertwiriyaprapa, P.H. Pathak and J.L. Volakis, "An approximate UTD ray solution for the radiation and scattering by antennas near a junction between two different thin planar material slab on gound plane," PIERS 102, pp. 227-248, 2010.

280 Yakup Bayram, Yijun Zhou, Bong Sup Shim, Shimei Xu, Jian Zhu, Nick A. Kotov, and John L. Volakis, "E-textile Conductors and Polymer Composites for Conformal Light-Weight Antennas," *IEEE Antennas Propagat*, Vol. 58, No. 8, pp. 2732-2736, Aug. 2010.

281 Yijun Zhou, Yakup Bayram, Feng Du, Liming Dai and John L. Volakis, "Polymer-Carbon Nanotube Sheets for Conformal Load Bearing Antennas," *IEEE Antenna & Propagat Trans.*,Vol. 58(7), pp. 2169-2175, 2010.

282 Taesik Yang, Yakup Bayram and J.L. Volakis, "Hybrid Analysis of Electromagnetic Interference effects on Microwave Active Circuits within Cavity Enclosures," IEEE Trans. Electromagnetic Compatibility, Vol. 52 (3) pp. 745-748, 2010.

283 Jae-Young Chung, K. Sertel and J.L. Volakis, " Broadband Characterization of Bulk and Thin Magnetic Composites using Stripline Structures," *IEEE Trans. Microwave Theory Techniques*, Vol. 58(11)-Part I, pp. 2960-2967, 2010.

284 J. A. Kasemodel and J.L. Volakis "Dual-linear polarized L-band space deployable phased array element," *IEEE Antennas and Wireless Propagation Letters*, Vol. 9, pp. 787-790, 2010.

285 I. Tzanidis, C-C Chen and J.L. Volakis, "Low Profile, Cavity-Backed Spiral on a Thin Ferrite Ground Plane for High Power Operation at 220-500 MHz," *IEEE Trans. Antennas & Propagat.*, Vol. 58 (11), pp. 3715-3720, 2010

286 L. Zhang, Krenar Shqau, Henk Verweij, Gokhan Mumcu, Kubilay Sertel, and John L. Volakis, "A Viable Route for Dense TiO_2 with a Low Microwave Dielectric Loss," Journal of the American Ceramic Society, Volume 93 Issue 4, Pages 969 – 972, 2010

287 Nil Apaydin, G. Mumcu, E. Irci, K. Sertel and J.L. Volakis, "Miniature Antennas Based on Printed Coupled Lines Emulating Anisotropy," IET Microwaves Antennas and Propagation, Vol. 4 (8), pp. 1039-1047,2010.

288 E. Irci, K. Sertel and J.L. Volakis, "Antenna Miniaturization for Vehicular Platforms Using Printed Coupled Lines Emulating Magnetic Photonic Crystals," Metamaterials Elsevier issue, Volume 4, Issue 2-3, pp. 127-138, 2010

289 A. A. Serra, P. Nepa, G. Manara,G. Corsini & J. L. Volakis, "A Single On-Body Antenna as a Sensor for Cardiopulmonary Monitoring, " *IEEE Antennas and Wireless Propagat. Letters,* Vol. 9, pp. 930-933, 2010.

290 W. F. Moulder, W. Khalil and J. L. Volakis, "60 GHz Two-Dimensionally Scanning Array Employing Wideband Planar Switched Beam Network," *IEEE Antennas and Wireless Propagation Letters*, Vol. 9, pp. 818-821, 2010

291 G. Pelosi and J.L. Volakis, "On the Centennial of Sommerfeld's Solution to the Problem of Dipole Radiation over an Imperfectly Conducting Half-Space," *IEEE Antennas & Propagat. Magazine,* Vol. 52 (3), pp. 198-201, 2010.

2011

292 Gil-Young Lee, D. Psychoudakis, C-C Chen and J.L. Volakis, "A computationally efficient method for body-worn antenna diversity design," *Applied Computational Electromagnetics Society (ACES) Journal*, 2011.

293 Gil-Young Lee, Dimitris Psychoudakis, Chi-Chih Chen and John L. Volakis, "Systematic Design Approach for Diversity Antenna Systems," *IEEE Antennas Propagat. Trans.*, Jan 2011

294 I.I. Tzanidis, K. Sertel and J.L. Volakis, "Interwoven Spiral Array (ISPA) with a 10:1 Bandwidth on a Ground Plane," *IEEE Antennas and Wireless Propagat. Letters*, vol. 10, pp. 115-118, 2011.

295 Heping Zhu, D. Psychoudakis, R. D. Brazee, H. W. Thistle, and J.L. Volakis, "Capability of Patch antennas in a portable harmonic radar system to track small insects" (PM-08577-2010), *American Society of Agricultural and Biological Engineers (ASABE) Transactions*, Vol. 54(1), pp. 355-362, 2011

296 Taesik Yang and J.L. Volakis, "Susceptibility Analysis of Printed Circuit Boards within Cavity Enclosures," *Electromagnetics*, Vol. 31(6), 2011.

297 Niru K. Nahar, Jae-Young Chung, Ioannis Tzanidis, Kubilay Sertel, and John L. Volakis, "Optically Transparent RF-EO Aperture with 20:1 Bandwidth," *Microwave & Optical Techn. Letters*, Vol. 53 (8), pp.1683-1686, Aug. 2011

298 S. E. Morris, Y. Bayram, L. Zhang, Z. Wang, M. Shtein, and John L. Volakis, "High-Strength, Metalized Fibers for Conformal Load Bearing Antenna Applications," *IEEE Antennas Propagat. Trans.* Vol. 59 No. 9, pp. 3458-3462, 2011

299 K. Browne, R. Burkholder and J.L. Volakis, "Through-Wall Opportunistic Sensing System Utilizing a Low-Cost Flat-Panel Array," *IEEE Trans. Antennas & Propagat.*, Vol. 59 (3), pp. 859 – 868, March 2011

300 Gil-Young Lee, C.-C. Chen, D. Psychoudakis and J.L. Volakis," Omni-Directional Vest-Mounted Body-Worn Antenna System for UHF Operation" *IEEE Antennas and Wireless Propagation Letters*, pp. 581 – 583, 2011

301 E. Irci, K. Sertel and J.L. Volakis, "Miniature Printed Magnetic Photonic Crystal Antennas Embedded into Vehicular Platforms," *Applied Computational Electromagnetics Society* (ACES) journal, Vol. 26, No. 2, 2011

302 T. Peng, S. Koulouridis and J.L. Volakis, Miniaturization of a Coiled Helical Antenna with a Novel Equivalent Circuit Model," *Applied Computational Electromagn*. (ACES) Journal, Vol. 26, No. 6, pp. 452-458, June 2011.

303 J. L. Volakis and Kubilay Sertel, "Narrowband and Wideband Metamaterial Antennas Based on Degenerate Band Edge and Magnetic Photonic Crystals," *IEEE Proceedings*, Vol. 99, No. 10, pp. 1732-1745, October 2011

304 L. Zhang, A. Puri, K. Sertel, J.L. Volakis, and H. Verweij, "Low Loss $Ba_3Co_2Fe_{24}O_{41}$ Hexaferrite for GHz Frequency Applications," *IEEE Trans. Magn.*, Vol. 47 (8), pp. 2149-2152, 2011.

305 U. Olgun, C.C. Chen and J.L. Volakis, "Investigation of Rectenna Array Configurations for Enhanced RF Power Harvesting ," *IEEE Antennas and Wireless Propagat. Letters*, pp. 262-265, 2011.

306 G. Mumcu, S. Gupta, K. Sertel, and J. L. Volakis, "Small wideband double-loop antennas using lumped inductors and coupling capacitors," *IEEE Antennas and Wireless Propagation Letters*, pp. 107-110, Vol. 10, 2011.

2012

307 W. Khalil, S. Balasubramanian, S. Boumaiza, H. Sarbishaei, T. Quach, J. Volakis, G. Creech and J. Wilson,"The Quest for a Wholly-Digital Transmitter," *IEEE Microwave Magazine*, Jan. 2012.

308 E. Irci, K. Sertel and J.L. Volakis, "An Extremely Low-Profile, Compact and Broadband Tightly Coupled Patch Array," *Radio Science*, Vol. 47,(13pp. manuscript), Jan. 2012

309 E. Alwan, K. Sertel and J.L. Volakis, "A Simple Equivalent Circuit Model for Ultra-Wideband, Coupled Arrays" *IEEE Antennas and Wireless Propagat. Let.*, Vol. 11, pp. 117-120, 2012

310 A. Guraliuc, R. Caso, P. Nepa and J.L. Volakis, "Numerical Analysis of a Wideband Thick Archimedean Spiral Antenna," *IEEE Antennas and Wireless Propagat. Let.*, Vol. 11, pp. 168 – 171, 2012.

311 J.P. Doane, K. Sertel, and J.L. Volakis, "Bandwidth Limits for Lossless Planar Arrays over a Ground Plane," *IET Electronics Lett.*, Vol. 48 No. 10, 10th May 2012.

312 Haksu Moon, Gil-Young Chung, C-C. Chen and J.L. Volakis, "An Extremely Low Profile Ferrite-Loaded Wideband VHF Antenna Design," *IEEE Antennas and Wireless Propagat. Lett.(AWPL)*, pp. 322-325, 2012.

313 Lang Qin, Nahien Sharif, Lanlin Zhang, John Volakis and Henk Verweij,"Modified Pechini Synthesis of La Doped Hexaferrite Co_2Z with High Permeability," *American Ceramic Society's Ceramic Transactions*, Nov. 2012

314 Paul Chang, R. Burkholder, and J.L. Volakis, "Model-Corrected Microwave Imaging through Periodic Wall Structures," *Int. J. Antennas & Propagat.*, Vol. 2012, Article ID 948365, 7 pages, doi:10.1155/2012/948365

315 N. Apaydin, K. Sertel and J.L. Volakis, "Experimental Validation of Frozen Modes Guided on Printed Coupled Transmission Lines," *IEEE Microwave Theory & Thecn. Trans.*, Vol. 60 (6), pp. 1513-1519, June 2012.

316 Zheyu Wang, Lanlin Zhang, Yakup Bayram & John L. Volakis, "Embroidered Conductive Fibers on Polymer Composite for Conformal Antennas," *IEEE Antennas and Propagat. Trans.*, Vol. 60 (9), pp. 4141 – 4147, Sept. 2012.

317 William F. Moulder, Kubilay Sertel, and John L. Volakis, "Superstrate-Enhanced Ultrawideband Tightly Coupled Array with Resistive FSS," *IEEE Antennas and Propagat. Trans.*, Vol. 60 (9), pp. 4166 – 4172, Sept. 2012

318 I. Tzanidis, K. Sertel and J. L. Volakis, "Characteristic Excitation Taper for Ultra Wideband Tightly Coupled Antenna Arrays," *IEEE Antennas and Propagat. Trans.*, Vol 60 (4), pp. 1777-1784, April 2012.

319 Ugur Olgun, C.-C. Chen and J.L. Volakis, "Design of an efficient ambient WiFi energy harvesting system," *IET Microwaves, Ant. & Propagat.*, Vol. 6 (11), pp. 1200-1206, 2012

320 Jae-Young Chung, N. Nahar, L. Zhang, Y Bayram, and K. Sertel, "Broadband RF Conductivity Measurement Technique for Engineered Composites," *IET Microwaves, Ant. & Propagat, Vol. 6 (4)*, pp. 371 – 376, 2012.

321 Jing Zhao, D. Psychoudakis, C-C Chen, J.L. Volakis, "Design Optimization of a Low-Profile UWB Body-of-Revolution Monopole Antenna," *IEEE Trans. Antennas and Propagat,* Vol. 60 (12), pp. 5578-5586, 2012

2013

322 L. Zhang, Z. Wang & J.L. Volakis, "Textile Antennas and Sensors for Body-Worn Applications," *IEEE Antennas and Wireless Propagat. Letters*, Vol. 11, pp. 1690-1693, 2012

323 S. Salman, D. Psychoudakis & J.L. Volakis, "Determining the Relative Permittivity of Deep Embedded Biological Tissues," *IEEE Antennas and Wireless Propagat. Letters*, Vol. 11, pp. 1694-1697, 2012

324 Kenneth E. Browne, Robert J. Burkholder, and John L. Volakis, **"**Fast Optimization of Through-Wall Radar Images via the Method of Lagrange Multipliers," IEEE Trans. Antenna Propagat., Vol. 61(1), pp. 320 – 328, 2013.

325 Nathan Smith, C.C Chen and J.L. Volakis,"Loss Minimized Agile Impedance Tuning Architecture" *IEEE Antennas & Wireless Propagat. Letters*, *IEEE* , vol. 12, no., pp.92,95, 2013**.**

326 J. Doane, K. Sertel and J.L. Volakis, **"**Bandwidth Limits for Arrays Backed by a Conducting Ground Plane," *IEEE Trans. Antenna Propagat*., Vol. 61, No. 5, May 2013

327 I. Tzanidis, K. Sertel & J.L. Volakis, "UWB Low-Profile Tightly Coupled Dipole Array with Integrated Balun and Edge Terminations," *IEEE Trans. Antenna Propagat*., Vol. 61, No. 6, pp. 3017-3025, June 2013.

328 E. Alwan, S. Balasubramanian, J. Atallah, M. LaRue, K. Sertel, W. Khalil and J.L. Volakis, "Coding-based ultra-wideband digital beamformer with significant hardware reduction," *Analog Intergrated Circuits and Signal Processing Journal*, Springer, July 2013.

329 Zheyu Wang, Lanlin Zhang, and John L. Volakis, "Textile Antennas for Wearable Radio Frequency Applications," *Textiles and Light Industrial Science and Technology* (TLIST) *Journal*, www.tlist-journal.org, Volume 2 Issue 3, July 2013

330 Nil Apaydin, K. Sertel, and J.L. Volakis, "Nonreciprocal Leaky-Wave Antenna Based on Coupled Microstrip Lines on a Non-Uniformly Biased Ferrite Substrate" *IEEE Antenna Propagation Trans*., Vol. 61(7), pp. 3458 – 3465, July 2013.

331 J. Kasemodel, C.C Chen and J.L. Volakis, "Wideband Conformal Array with Integrated Feed and Matching Network for Wide-Angle Scanning," *IEEE Trans. Antennas & Propagat.***,** Vol. 61 (9), pp. 4528 – 4537, Sept. 2013

332 J.P. Doane, K. Sertel & J.L.Volakis, "A Wideband, Wide Scanning Tightly Coupled Dipole Array with Integrated Balun (TCDA-IB)," *IEEE Trans. Antenna Propagat.*, Vol. 61 (9), pp. 4538 - 4548, Sept. 2013.

333 William F. Moulder, Kubilay Sertel, and John L. Volakis, "Ultrawideband Superstrate-Enhanced Substrate-Loaded Array with Integrated Feed," *IEEE* Trans. *Antennas and Propagat*., pp. 5802 – 5807, Nov. 2013.

334 J.L. Volakis, "Diffraction by Canonical Metallic and Material Coated Structures: A Review," *IEEE Antennas & Propagat. Magazine, Vol. 55 (4),* pp. 21-31, Aug. 2013.

335 G. Pelosi, Y. Rahmat-Samii & J.L. Volakis, "High Frequency techniques in Diffraction Theory: 50 Years of Achievements in GTD, PTD, and Related Approachs," *IEEE Antennas & Propagat. Magazine*, Vo. 55 (No. 3 and No. 4), pp. 17-19, Aug. 2013.

336 Ming Chen, C.-C. Chen & J.L. Volakis, "A Novel Textured Ferrite Ground Plane for Low Profile Spiral Antenna," *J. Electromagnetic Waves and Applications (JEWA),* Vol. 12, pp. 1720-1724, 2013.

337 N. Host, C-C.Chen, J.L.Volakis and F.A. Miranda, "Novel Phased Array Scanning Employing a Single Feed without Using Individual Phase Shifters," *IEEE Antennas & Propagat. Magazine,* pp. pp. 290-296, Aug. 2013

2014

338 Tao Peng, K. Sertel and J.L. Volakis, "Fully overlapping domain decomposition method for h-refinement for finite element modelling of small features in large domains," *Electromagnetics*, Vol. 34,Special Issue on Finite Elements for Microwave Engineering, Issues 3 and 4, March-April 2014**.**

339 Nil Apaydin, K. Sertel, and J.L. Volakis, "Nonreciprocal and Magnetically Scanned Leaky-wave Antenna Using Coupled CRLH Lines," *IEEE Antenna Propagation Trans*., Vol. 62(6), pp. 2954-2961, July 2014

340 Varittha Sanphuang, Niru K. Nahar, and John L. Volakis, "Frequency Selective Surfaces Filters to Enhance Performance of Ka Band Applications," *Microwave and Optical Technology Letter*, Volume 56, Issue 3, pages 563–568, March 2014

341 E. Yetisir, C-C. Chen, and J.L. Volakis, "Low-Profile UWB 2-port Antenna with High Isolation," *IEEE Antenna &Wireless Propagat. Letters (AWPL),* Vol. 13, pp. 55-58, 2014

342 N. Smith, D. Papantonis, and J.L. Volakis, "Bandwidth Reconfigurable Metamaterial Arrays" *Int. Journal of Antennas and Propagation*, http://www.hindawi.com/journals/ijap/aip/397576/, 2014.

343 Nil Apaydin, K. Sertel, and J.L. Volakis, "Nonreciprocal and Magnetically Scanned Miniaturized Leaky-wave Antennas Using Coupled Transmission Lines," *EPJ Applied Metamaterials*, 1,3, pp. 1-12,2014

344 S. Salman, Z. Wang, A. Kiourti, E. Topsakal, and J.L. Volakis "Pulmonary Edema Monitoring Sensor with Integrated Body-Area Network for Remote Medical Sensing," *IEEE Trans. Antennas and Propagat.*, Vol. 62 (5), pp. 2787-2794,May 2014

345 J.P.Doane, K. Sertel & J.L. Volakis, "Bandwidth Limits for Fixed Beam Planar Arrays Over a Ground Plane," *IEEE Trans. Antenna Propagat.* Vol. 62 (5), pp. 2531-2542,May 2014

346 S. Salman, L. Lee, and J. L. Volakis, "A wearable wrap-around sensor for monitoring deep tissue electric properties," *IEEE Sensors Journal Special Issue Antenna Design and Integration in Smart Sensors,* pp. 2447 – 2451, Aug. 2014 (25 most downloadable papers in this journal).

347 Z. Wang, L.Z. Lee, D. Psychoudakis, J.L. Volakis, "Embroidered Multiband Body-Worn Antennas for GSM/PCS/WLAN Communications," *IEEE Trans. Antenna Propagat.*, Vol 62(6), pp. 3321 – 3329, June 2014

348 A. Kiourti and J.L. Volakis, "Stretchable and Flexible E-Fiber Wire Antennas Embedded in Polymer," *IEEE Antennas and Wireless Propagat. Lett.*, pp. 1381 – 1384, 2014.

349 S. Bhardwaj, S.; Niru Nahar, J.L. Volakis, "100 GHz Radial Line Slot Array Antenna Design using ParticleSwarm Optimization" *IEEE Antenna and Wireless Propagation Letters*, 2014.

350 S. Shao, R. J. Burkholder and J. L. Volakis, "Design Approach for UHF RFID Tag Antennas Mounted on a Plurality of Dielectric Surfaces," *IEEE Antennas and Propagation Magazine*, Oct. 2014.

351 M. Zuboraj, K. Sertel and J.L. Volakis, "Half-Ring Helical Structure for Traveling Wave Tube Amplifiers (TPS7669)," *IEEE Trans. on Plasma Science*, Vol. 42 (11) pp. 3465-3470, 2014.

352 E. Alwan, A. A. Akhiyat , W. Khalil , J. L. Volakis, "Analytical and Experimental Evaluation of a Novel Wideband Transceiver with On-Site Coding," J. of Electromagnetic Waves and Application, Vol. 28 (12), pp. 1401-1429, 2014.
https://www.tandfonline.com/doi/full/10.1080/09205071.2014.938175

353 A. Kiourti and J.L. Volakis, "High-Geometrical-Accuracy Embroidery Process for Textile Antennas with Fine Details," *IEEE Antennas and Wireless Propagat. Lett.*, pp. 1536-1225, Oct. 2014.

354 A. Kiourti, M. Sun, X. He and J.L. Volakis, "Microwave Cavity with Controllable Temperature for In Vitro Hyperthermia Investigations," *J. Electromagn. Eng. and Science.* Vol. 14 (3), 267-272, 2014.

2015

355 S. Bhardwaj, N. Nahar, J.L. Volakis "Radial Line Slot Array Antenna with Vertical Waveguide Feed for F-Band Communication," *IET Microwaves, Antennas & Propagation*, Vol. 9(3), 193 – 199, 2015.

356 E. Alwan, W. Khalil and J.L. Volakis, "Phase Error Evaluation for a Two-Path Receiver Front-End with On-Site Coding," *IEEE Access*, Vol. 3, pp. 55 – 63, 2015.

357 E. Alwan, S.B. Venkatakrishnan, A. Akhiyat, W. Khalil and J.L. Volakis, "Code Optimization for a Code Modulated RF Front End," IEEE Open Access, Vol. 3, pp. 260 - 273, 2015

358 Varittha Sanphuang, Woon-Gi Yeo, Niru K. Nahar, and John L. Volakis, "THz Transparent Metamaterials for Enhanced Spectroscopic and Imaging Measurements," *IEEE Trans. Terahertz Science and Techn.*, Vol. 5, No. 1, pp. 117-123, 2015

359 Z. Wang, K. Karathanasis & John L. Volakis, "Axial Ratio Reduced Ultra Wideband Slot Spiral on Hybrid Impedance Surfaces," J. of Electromagnetics and Applications (JEWA), Vol. 29 (2), pp.143-153, 2015.

360 U. Chipengo, M. Zuboraj, N. Nahar, and J.L. Volakis, "A Novel Slow Wave Structure for High Power Ka-Band Backward Wave Oscillator with Mode Control," *IEEE Trans. on Plasma Science*, Vol. 43 (6) pp. 1879-1886, June 2015.

361 S. Shao, A. Kiourti, R.J. Burkholder, and J.L.Volakis," Broadband Textile-Based Passive UHF RFID Tag Antenna for Elastic Material" *IEEE Antennas and Wireless Propag. Letters (AWPL)*, Vol. 14, pp. 1385-1388, 2015

362 E. Alwan, A. Kiourti, J.L. Volakis, “Indium Tin Oxide (ITO) Film Characterization at 0.1-20GHz Using a Coaxial Probe Method,” *IEEE Open Access*

363 H. Huang, M. Sun, T. Heisler-Taylor, A. Kiourti, J. L Volakis, G. Lafyatis, and X. He, “Stiffness-independent highly efficient on-chip extraction of cell-laden hydrogel microcapsules from oil emulsion into aqueous solution by dielectrophoresis,” *Small Journal www.small-journal.com*, Vol 11(40), Oct. 2015, Pages 5369-5374

364 Sai N. Tenneti, Niru K. Nahar, and John L. Volakis, "Full-Wave Modeling of THz RTD-Gated GaN HEMTs,” *Infrared Physics & Technology*, Vol. 72, pp. 221-228, 2015

365 S. Bhardwaj, N. Nahar, and J.L. Volakis, ”Novel Phaseless Gain Characterization for Circularly Polarized Antennas at mm-wave and THz Frequencies,” *IEEE Trans. Antennas Propagat.* Vol. 63 (10), 4263-4270, 2015

366 A. Michael, K. Karathanasis, P. Nepa and J.L. Volakis,”Accuracy of a Conformal Sensor for Estimating Deep Tissue Dielectric Constants,” *IEEE Sensors Journal*, Vol. 15 (9), pp. 5217-5221, 2015.

367 N. Host, C.-C. Chen, J.L. Volakis & F. Miranda, “Ku-Band Traveling Wave Slot Array Scanned Via Positioning a Dielectric Plunger,” *IEEE Antenna and Propagat. Trans.*, Vol. 63 (12), pp. 5475-5483, 2015.

368 Markus Novak and J.L. Volakis, ”Ultrawideband Antennas for Multiband Satellite Communications at UHF-Ku Frequencies,” IEEE Antenna and Propagat. Trans. (special issue on satellite antennas), Vol. 63 (4), pp. 1334-1341, 2015.

369 A. Kiourti & J.L. Volakis, “Colorful Textile Antennas Integrated into Embroidered Logos,” *J. Sensor and Actuator Networks*, Vol 4, 371-377, 2015, doi:10.3390/jsan4040371 Open Access, http://www.mdpi.com/2224-2708/4/4/371,

370 Cedric Lee, A Kiourti, Junseok Chae and J.L. Volakis, “A High-Sensitivity Passive Neurosensing System for Wireless Brain Signal Monitoring,” *IEEE Microwave Theory and Techn.*, Vol. 63 (6), pp. 2060-2068, June 2015.

371 V. Sanphuang, N. Ghalichechian, N. Nahar, and J.L. Volakis, "Equivalent Circuit for VO_2 Phase Change Material (PCM) Film in Reconfigurable FSS,” *Applied Phys. Lett.*, Vol. 107 (25), 2015.

2016

372 Asimina Kiourti, Cedric W. L. Lee, Junseok Chae, & John L. Volakis, “A Wireless Fully-Passive Neural Recording Device for Unobtrusive Neuropotential Monitoring,” IEEE Trans on Biomedical Engineering, Vol. 63 (1), pp. 131-137, Jan 2016.

373 M.A. Islam, A. Kiourti, and J.L. Volakis, “A Novel Method of Deep Tissue Biomedical Imaging Using a Wearable Sensor,’ *IEEE Sensors Journal*, Vol. 16 (1), pp. 265-270, Jan 2016.

374 D. Papantonis and J.L. Volakis, “Dual Polarized Tightly Coupled Array with Substrate Loading" *IEEE Antennas and Wireless Propag. Lett*. (AWPL),pp. 325-328, 2016

375 A. Kiourti and J.L. Volakis, “Fabrication of Textile Antennas and Circuits with 0.1 mm Precision” *IEEE Antennas and Wireless Propagat. Lett.*, pp. 151-153, 2016

376 S. Bhardwaj, S. Rajan, H. Xing, B. Sensale-Rodriguez, and J.L. Volakis "Resonant Tunneling Assisted Propagation and Amplification of Plasmons in HEMTs," *J. Appl. Physics*, vol. 119, 2016

377 Md. Zuboraj and J.L.Volakis, “Curved Ring-Bar Slow Wave Structure for Wideband High Power Traveling Wave Tube,” *IEEE Trans. Plasma Science*, Vol. 44, No. 6, pp. 903-910, June 2016.

378 U. Chipengo, N. Nahar and J.L. Volakis, “Cold Test Validation of Novel Slow Wave Structure for High Power Backward Wave Oscillators,” I*EEE Trans Pasma Science*, Vol. 44, No. 6, pp. 911 – 917, June 2016.

379 J. L. Volakis, A. O’Brien, and C.-C. Chen, “Small and Adaptive Antennas and Arrays for GNSS Applications,” *Proceedings of the IEEE,* vol. 104 (6), pp. 1221-1232, June 2016.

380 M. Amin, P. Closas, A. Broumanda, and J.L. Volakis, “Vulnerabilities, Threats, and Authentication in Satellite-Based Navigation Systems,” *Proceedings of the IEEE,* Vol. 104 (6), pp. 1169-1173, June 2016

381 Shubhendu Bhardwaj, Niru Nahar, Siddharth Rajan, John L. Volakis, “Numerical Analysis of Terahertz Emissions from an ungated HEMT using Full-wave Hydrodynamic Model,” *IEEE Trans. on Electron Devices,* Vol. 63, pp. 990 - 996, March 2016

382 S. Bhardwaj, Siddharth Rajan and J.L. Volakis, "Analysis of Plasma-modes of a Gated Bilayer System in High Electron Mobility Transistors" J. Appl. Phys. Vol. 119, May 2016. https://aip.scitation.org/doi/10.1063/1.4950795

383 S. Bhardwaj, Siddharth Rajan and J.L. Volakis, “Erratum: “Analysis of Plasma-modes of a Gated Bilayer System in High Electron Mobility Transistors,” *J. Applied Physics*, Vol.120 (4), 28 July 2016.

384 V. Sanphuang, N. Ghalichechian, N. K. Nahar and J. L. Volakis, “Reconfigurable THz Filters using Phase-Change Material and Integrated Micro-heater,” *IEEE Trans. Terahertz Science & Techn*, Vol. 6 (4), pp. 583-591, 2016

385 E. Yetisir, C-C. Chen and J.L. Volakis, “Wideband Low Profile Multi-Port Antenna with Omnidirectional Pattern and High Isolation,” *IEEE Trans. Antenna Propagat.*, pp. 3777-3786, Sept. 2016

386 Md. Zuboraj, U. Chipengo, N. Nahar, and J.L. Volakis, “Experimental Validation of Slow-wave Phenomena in Curved Ring-Bar Slow-wave Structure,” *IEEE Trans on Plasma Science*, Vol. 44, pp. 1794-1799, Sept. 2016.

387 Jeffrey Chalas, Kubilay Sertel & John L. Volakis,” Computation of Q Limits for Arbitrary-Shaped Antennas Using Characteristic Modes,” *IEEE Antennas Propagat. Trans.,* Vol. 64(7), pp. 2637-2647, Jul 2016

388 M. Sun, A. Kiourti, H. Wang, S. Zhao, X. Lu, J.L. Volakis, and X. He, “Enhanced Microwave Hyperthermia of Cancer Cells with Fullerene,*” Molecular Pharmaceutics*, Vol. 13, pp. 2184-2192, Jul. 2016

389 Z. Song, C. Lv, M Liang, V. Sanphuang, K. Wu, B. Chen, Z. Zhao, J. Bai, X. Wu, J. L. Volakis, L. Wang, X. He, Y. Yao, S. Tongay and H. Jiang, “Microscale Silicon Origami,” *Small*, Vol. 12 (39), pp. 5401-5406, 2016.

390 E. Yetisir, N. Ghalichechian, and J.L. Volakis, “Ultra-wideaband Array with 70° Scanning using FSS Superstrate,” *IEEE Antennas Propagat. Trans.*, Vol. 64, no. 10, pp. 4256-4265, Oct. 2016

2017

391 M. H. Novak, F. A. Miranda and J. L. Volakis, "Error Correction in Ku-Band Phased Array Measurements," *IEEE Antennas and Wireless Propagation Letters*, vol. 16, no. 1, pp. 1084-1087, 2017.

392 J. Zhong, A. Kiourti, T. Sabastian, Y. Bayram and J.L. Volakis, “Conformal Load-Bearing Spiral Antenna on Conductive Textile Threads,” *IEEE Antenna Wireless Propagat. Lett*, pp. 230-233, May 2017

393 Cedric Lee, A. Kiourti, and J.L. Volakis, ”Miniaturized Fully-Passive Brain Implant for Wireless Neuropotential Acquisition,” *IEEE Antenna Propagat. Letters* (AWPL),Vol. 18, pp. 645-648, 2017.

394 V. Sanphuang, N. K. Nahar and J. L. Volakis, "THz Spatial Filter Employing Bimaterial Switching for Temperature Sensing" *Microwave and Optical Technology Letters*, Vol. 59 (1), pp. 168-171, January 2017

395 Bhardwaj, S., Nahar, N., and Volakis J., “A Cost-Effective, Phaseless Pattern Measurement Method for CP Antenna in sub-mm-wave band*” IEEE Antennas and Wireless Propagation Lett.*

396 A. Islam, A. Kiourti and J.L. Volakis, "A Modified Gauss-Newton Algorithm for Fast Microwave Imaging Using Near-field Probes," *Microwave and Optical Technology Letters*, Vol 59 (6), pp. 1394-1400, 2017.

---

397 S. Bhardwaj, N. Nahar, and J. L. Volakis, “All Electronic Propagation Loss Measurements for 350 GHz communication link*” Microwave and Optical Technology Letters*, Vol 59 (2), pp. 415-423, Feb 2017, *https://onlinelibrary.wiley.com/doi/abs/10.1002/mop.30307*

398 M. Novak, F. Miranda, and J.L. Volakis, “Ultra-Wideband Phased Array Antennas for Satellite Communications,” *IET Microwaves, Antennas & Propag.*,Vol. 11, Issue 9 (18), July 2017, p. 1234 – 1240, http://digital-library.theiet.org/content/journals/10.1049/iet-map.2016.0517

399 S. Bojja Venkatakrishnan, D. Papantonis, A. Akiyat, E. A. Alwan & J. L. Volakis, “Experimental Validation of On-Site Coding Digital Beamformer with Ultra-Wideband Antenna Arrays,” *IEEE Microwave Theory and Techn*., Vol. 65 (11), pp. 4408-4417, 2017.

400 U. Chipengo, N.K. Nahar and J.L. Volakis, “Backward-Wave Oscillator Operating in Low Magnetic Fields Using a Hybrid-TE 11 Mode” *IEEE Transactions on Electron Devices*, vol. 64, issue 9, pp. 3863-3869, 2017

401 M. Zuboraj, Kubilay Sertel and J.L. Volakis “Novel Propagation Model of Degenerate Band-Edge Modes Using Dual Non-identical Pair of Coupled Transmission Lines,” *Physical Review Applied*, Vol. 7, 2017; 10.1103/PhysRevApplied.7.064030

402 J.L. Volakis and A. Kiourti, “New Class of Highly Conductive Textiles (E-Textiles) for Wearable Electronics,” Florida Engineering Society Journal, pp. 18-20, Sept 2017 issue

403 S. Bojja Venkatakrishnan, A. Akhiyat, E. A. Alwan, and J.L. Volakis, 'Challenges in Clock Synchronization for On-Site Coding Digital Beamformer,” *Int. Journal on Reconfigurable Computing*, Vol. 2017, Oct. 2017, 8 pp. https://doi.org/10.1155/2017/7802735.

404 S. Bojja Venkatakrishnan, A. Akhiyat, E. Alwan, and J.L. Volakis, "Multi-band and Multi-beam Direction of Arrival Estimation using On-Site Coding Digital Beamformer,” *IEEE Antennas & Wireless Propagation Letters* (AWPL), pp. 2332–2335, 10.1109/LAWP.2017.2717785, 2017

2018

405 G. Pelosi, Y. Rahmat-Samii, and J.L. Volakis, “Remembering Joseph B. Keller: The Father of GTD,” *IEEE Antennas and Propagation Magazine*, 2018**.**

406 Syed Muzahir Abbas, Sharvil Desai, Karu Esselle, John L. Volakis & Raheel Hashmi "Design and characterization of a flexible wideband antenna using Polydimethylsiloxane (PDMS) composite substrate" *Int. J. of Antennas and Propagation*, Article ID 4095765, 6. pp. https://doi.org/10.1155/2018/4095765 , 2018.

407 S. Bojja Venkatakrishnan, E. A. Alwan & J. L. Volakis, "Wideband RF Self-Interference Cancellation Circuit for Phased Array Simultaneous Transmit and Receive Systems," *IEEE Access*, pp. 3425 – 3432, Jan. 2018. https://ieeexplore.ieee.org/document/8245776

408 B. DeLong, A. Kiourti and J.L. Volakis,"A Radiating Near-Field Patch Rectenna for Wireless Power Transfer to Medical Implants at 2.4 GHz," *IEEE J. of Electromagnetics, RF, and Microwaves in Medicine and Biology, Vol 2 (1),* March 2018, http://ieeexplore.ieee.org/document/8315436/?reload=true

409 S. Bhardwaj, F. Teixeira, J.L. Volakis, "Fast Modeling of Terahertz Plasma-wave Devices Using Unconditionally Stable FDTD Methods," *IEEE J. Multiscale and Multiphysics Computational Techn*., 8pp., April 2018, https://ieeexplore.ieee.org/document/8338149/

410 S. Bhardwaj, N. Nahar, N., and J. L. Volakis, "Hexagonal Waveguide based Circularly-Polarized Horn Antennas for Sub-mm-wave/Terahertz Band," *IEEE Trans. Antenna and Propagat.*, 8pp, April 2018, *https://ieeexplore.ieee.org/document/8345575/*

411 J. Zhong, C. Lee, A. Kiourti, and J.L. Volakis, "Body-Worn 30:1 Bandwidth Tightly Coupled Dipole Array on Conductive Textiles," *Antennas and Wireless Propagat Letters* (AWPL), Vol 17 (5), pp 723-726, 2018. https://ieeexplore.ieee.org/document/8286864

412 U. Chipengo, N.K. Nahar and J.L. Volakis, "A Study of Vecocity-tapered Slow Wave Structures for High Efficiency Backward Wave Oscillators" *IEEE Trans. on Electron Devices*, Vol. 65(7), pp. 3054-3060, July 2018. http://ieeexplore.ieee.org/document/8114343/

---

413 B. J. DeLong, S. R. Govindarajulu, M. Novak, E. Alwan, and J. L. Volakis, "A 60 GHz Phased Array with Measurement and De-Embedding Techniques," *Analog Integrated Circuits and Signal Processing*, pp. 1-7, Spring-Verlag, Aug. 2018, https://doi.org/10.1007/s10470-018-1295-1

414 M. H. Novak, F. A. Miranda, J.L. Volakis, "Ultra-Wideband Phased Array for Millimeter-Wave ISM and 5G Bands, Realized in PCB," *IEEE Trans Antennas Propagat.,* Vol. 66, No. 12, pp. 6930 – 6938, Dec 2018

415 D. Siafarikas, E. Alwan, and J.L. Volakis, "Interference Mitigation for 5G Millimeter-Wave Communications," IEEE Open Access, Dec 2018, 10.1109/ACCESS.2018.2889620, https://ieeexplore.ieee.org/document/8587172

416 Wei-Chuan Chen, Cedric W. L. Lee, Asimina Kiourti, and John L. Volakis,"A Multi-Channel Passive Brain Implant for Wireless Neuropotential Monitoring," *IEEE J. of Elctromagnetics, RF and Microwaves in Medicine and Biology,Vol. 2 (4), pp. 262-269, Dec 2018***,** *https://ieeexplore.ieee.org/document/8501539*

417 B. DeLong, A. Kiourti, and J. L. Volakis, "A Radiating Near-Field Patch Rectenna for Wireless Power Transfer to Medical Implants at 2.4GHz," *IEEE J. of Elctromagnetics, RF and Microwabes in Medicine and Biology,* Vol. 2, pp. 64-69, 2018, https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8315436

2019

418 John L. Volakis, Rimon Hokayem**,** S. B. Venkatakrishnan, E. A. Alwan, "Low Power & Reduced Hardware UWB Beamformers for Future 5G Communications," *IEICE Trans. on Comm. (Special Issue)*, Vol.E102-B, No.2, 7pp, Feb. 2019. https://doi.org/10.1587/transcom.2018ISI0003

419 J. Xu, C-M Leung, X. Zhuang, J. Li, S. Bhardwaj, J.L. Volakis, D. Veihland, "A Low Frequency Mechanical Transmitter Based on Magnetoelectric Heterostructures," *MDPI Sensors Journal*, Vol.*19*(4), 13pp, Feb 2019, https://www.mdpi.com/1424-8220/19/4/853

420 Jingni Zhong, Alexander Johnson, Elias A. Alwan, and John L. Volakis, "Dual-Linear Polarized Phased Arrays with 9:1 Bandwidth and Scanning to 60 Degrees off Broadside," *IEEE Trans. on Antennas and Propagat.*, Vol. 47 (3), pp. 1996-2001, March 2019 https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8606988

---

421 C. Moncion, L. Balachander, S. Bojja Venkatakrishnan, J. Riera, J.L. Volakis, "Fully-Passive Wireless Implant for Neuropotential Acquisition: An In Vivo Validation" *IEEE J. of Electromagnetics, RF, and Microwaves in Medicine and Biology*, Vol. 3 (3), pp.199-205, Sept. 2019. https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8627932

422 M. A. Islam, A. Kiourti, and J.L. Volakis, "A Novel Method to Mitigate Real-Imaginary Permittivity Image Imbalance in Microwave Tomography," (TBME-00039-2019.R1) *IEEE Trans. Biomedical Engineering* (TBME), Aug. 2019. https://ieeexplore.ieee.org/document/8805326

423 Shiyi Liu, C. Moncion, J. Riera-Diaz, J.L. Volakis, Junseok Chae "A fully-passive flexible wireless neural recorder for the acquisition of neuropotentials from a rat model," *ACS Sensors*, Vol. 4, pp. 3175–3185, October 2019 https://pubs.acs.org/doi/10.1021/acssensors.9b01491

424 B. Yan, B. DeLong, Duo An, Xi Wang, A. Kiourti, K. Dungan, J. L. Volakis, M. Ma, and Liang Guo, "Battery-Free Implantable Insulin Micropump Operating at Transcutaneously Radio Frequency-Transmittable Power," *J. Medical Devices and Sensors*, manuscript MDS-2019-00018R2, Dec 2019

2020

425 Dieff Vital, Shubhendu Bhardwaj, John L. Volakis, "Textile Based Large Area RF-Power Harvesting System for Wearable Applications," *IEEE Trans. on Antennas and Propagat.* Vol. 68(3), pp. 2323-2331, March 2020. https://ieeexplore.ieee.org/document/8883249

426 A. Hovsepian, E. Alwan and J.L. Volakis, "Wideband, Scanning Using a Four-Arm Spiral Array for Simultaneous Transmit and Receive (STAR) Radios," *IEEE Antenna and Wireless Propagat. Lett.* (AWPL), Vol. 19(4), pp. 537-541, 2020, 10.1109/LAWP.2020.2970402

427 A.D. Johnson, Jorge A. Caripidis, S. Bojja Venkatakrishnan, M. Ali, and J. L. Volakis, "Deployable Inverted-Hat Monopole with 3:1 Constant Gain Bandwidth," *IEEE Antenna and Wireless Propagat. Lett.* (AWPL), https://ieeexplore.ieee.org/document/9050850

428 D. Siafarikas and J.L. Volakis, "Towards Direct RF Sampling for Digital Radios," *IEEE Microwave Magazine*, Vol. 21(9), pp. 43-52 Sept. 2020. https://ieeexplore.ieee.org/document/9154645

429 S. Bojja Venkatakrishnan, Alexander Johnson, Alexander Hovsepian, T. Nakatani, E. Alwan, and J.L. Volakis, "Techniques for Achieving High Isolation in RF Domain for Simultaneous Transmit and Receive," *IEEE Open J. Antenna and Propagat*. (OJAP), Vol. 1, pp. 358-367, 14 July 2020. https://ieeexplore.ieee.org/document/9139998

430 A. D. Johnson, Z. Zhong, S. Bojja Venkatakrishnan and J.L. Volakis, "Phased Array with Low Angle Scanning and 46:1 Bandwidth," *IEEE Trans. Antenna Propagat.*, Vol 68 (12), pp. 7833 – 7841, Dec 2020. https://ieeexplore.ieee.org/document/9109675

431 A. Hovsepian, S. Bojja Venkatakrishnan & J.L. Volakis, "Active Feed Tuning for Excitation Symmetry in Simultaneous Transmit and Receive Antennas" *IEEE Antennas & Wireless Propagat. Lett.*, 5p, Oct. 2020, https://ieeexplore.ieee.org/document/9238477

432 A. D. Johnson, J. Zhong, S. Sekelsky, E. A. Alwan, and J. L. Volakis, "A Dual-Polarized Wideband Tightly Coupled Dipole Array for Airborne Applications," *IET Microwaves, Antennas & Propagat*. Digitial Identifier: 10.1049/iet-map.2019.0674

433 M. Sazzad Hossain, M. Towsif Abir, M. Shah Alam, John L. Volakis, M. Asiful Islam, "An Algorithm to Image Individual Phase Fractions of Multiphase Flows Using Electrical Capacitance Tomography," *IEEE Sensors*, pp. 14924-14931, Dec 2020. DOI: 10.1109/JSEN.2020.3009673

434 Md. Asiful Islam and J.L. Volakis, "Wearable Microwave Imaging Sensor for Deep Tissue Real-Time Monitoring Using a New Loss-Compensated Back-Propagation Technique," *IEEE Sensors*, pp. 3324-3334, Vol. 21 (3), February 2021. https://ieeexplore.ieee.org/document/9194712

435 A.D. Johnson, M. W. Nichols, S. Bojja Venkatakrishnan, and J.L. Volakis," Reconfigurable Log Periodic Dipole Array (LPDA) on Textiles," *IET Microwaves, Antennas & Propagat*., Oct. 2020, https://doi.org/10.1049/iet-map.2019.0705

436 V. Manohar, A.D. Johnson, S. Bojja Venkatakrishnan, and J.L. Volakis, "Low Cost S-Band Reconfigurable Monopole/Patch Antenna for CubeSats," *IEEE Open Journal on Antennas and Propagation*, pp. 598-603, 2020; DOI: 10.1109/OJAP.2020.3034051

437 Maxence Carvalho, A. D. Johnson, E. Alwan, J.L. Volakis, "Semi-Resistive Approach for Tightly Coupled Dipole Array Bandwidth Enhancement," *IEEE Open J. Antennas and Propagat.*, pp. 110 – 117, 25 Dec 2020, https://ieeexplore.ieee.org/document/9308942

438 A. D. Johnson, J. Zhong, M Livadaru, S. Bojja Venkatakrishnan, E. A. Alwan and J. L. Volakis, "Wideband Dipole Array with Balanced Wideband Impedance Transformer (BWIT), *IEEE Open J. Antennas and Propagat.* https://ieeexplore.ieee.org/document/9292965

2021

439 John L. Volakis, Michael Shields, Giuliano Manara, Sembiam R. Rengarajan, and Yang Hao, "URSI Commission B Centennial History Contribution," Ch. 24 (pp. 411-433) in 100 Years of International Union of Radio Science, Eds. Philip Wilkinson, Paul. Cannon, and W. Ross Stone, ISBN 9789463968034, 2021.

440 D. Vital, P. Gaire, S. Bhardwaj, and J.L. Volakis, "An Ergonomic Wireless Charging System for Integration with Daily Life Activities," *IEEE Trans. Microwave Theory and Techn*, Vol. 69 (1), pp. 947-954, 2021. DOI: 10.1109/TMTT.2020.3029530

441 P. Song, S. Gogineni, I.A. Galkin, J. L. Volakis, J.M. Soderblom, A.G. Hayers, B.W. Reinisch, R.H. Giles, R. Sood, H.-L. Zhang, D. Braaten, H.J. Melosh, S. Bojja Venkaakrishnan, J.B. Yan, C.R. O/Neil, "Feasibility Study of a High-Resolution Shallow Surface Penetration Radar for Space Application," *Radio Science*, Vol. 56 (2), 20pp. 2021, https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020RS007118

442 Haixiang Zhao, S. Pulipati, S. Bojja Venkatakrishnan, Shubhendu Bhardwaj, J.L. Volakis, S. Mandal, Arjuna Madanayake, "A Broadband Multi-Stage Self-Interference Canceller for Full-Duplex MIMO Radios," *IEEE Trans. Microwave Theory and Techn.*, Vol. 69 (4), pp. 2253-2266, April 2021. https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9371299

443 A. D. Johnson, V. Manohar, S. Bojja Venkatakrishnan, and J. L. Volakis, "Optimized Differential TCDA (D-TCDA) with Novel Differential Feed Structure," *IEEE Open J. Antenna & Propagat.(OJAP), Vol. 2, pp. 464-472, 2021.* https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9381991

444 V. Manohar, S. Bhardwaj, S. Bojja Venkatakrishnan, "VHF/UHF Ultrawideband Tightly Coupled Dipole Array for CubeSats," *IEEE Open J. Antenna & Propagat.(OJAP),* 7pp, 2021. 10.1109/OJAP.2021.3083938.

445 Rimon Hokayem, E. Alwan and J.L. Volakis, "Cross-Mixing Hybrid Beamformer for Wideband Apertures," submitted to *IEEE Access,* ID: Access-2020-58685

446 Maxence Carvalho and J.L. Volakis, "Performance of Partially Deployed Spaceborne Ultra-Wideband Miura-Ori Apertures," *IEEE Open J. Antenna & Propagat.(OJAP),* pp. 718 – 725, june 2021. https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9448076

447 N. Akram, A. Madanayake, S. Pulipati, V. Ariyarathna, S. Bojja Venkatakrishnan, D. Psychogiou, J.L. Volakis, T. S. Psychogiou, T. L. Marzetta "Frequency-Multiplexed Array Digitization for MIMO Receivers: 4-Antennas/ADC at 28 GHz on Xilinx ZCU-1285 RF SoC," *IEEE Access*, Vol. 9, pp. 142743-142753, Oct. 2021. https://doi.org/10.1109/ACCESS.2021.3120704

448 A. G. Koutinos, G. A. Ioannopoulos, M. T. Chryssomallis, John L. Volakis, and G. A. Kyriacou, "Bandwidth Enhancement of Antennas Designed by Band-Pass Filter Synthesis Due to Frequency Pulling Techniques" *IET Microwaves, Antennas & Propagat,* Dec. 2021, 17 pp., https://doi.org/10.1049/mia2.12206

449 Maxence Carvalho and J.L. Volakis, "Deployable Rigid-Flexible Tightly Coupled Dipole Array (RF-TCDA)," *IEEE Open J. Antenna & Propagat. (OJAP),* pp. 1184 – 1193, 15 Nov 2021, https://ieeexplore.ieee.org/document/9612586

2022

450 C. Moncion, L. Balachandar, S. Bojja Venkatakrishnan, J.L. Volakis, J. Riera-Diaz, "Multichannel Wireless Neurosensing System for Battery-Free Monitoring of Neuronal Activity," *Biosensors and Bioelectronics*, Vol. 213, Oct. 2022, *https://doi.org/10.1016/j.bios.2022.114455*

451 Rakibur Islam, S. Bojja Venktashrisnan, and J. L. Volakis, "Packable and Readily Deployable Tightly Coupled Dipole Array (TCDA) with Integrated Planar Balun", Open J. Antenna Propagat., 2022, http://www.av.it.pt/creation/?p=343

452 Y. Been Sayeed, S. Bojja Venkatakrishnan, and R. Pulugurtha "Miniaturized Fully-Passive Wireless Neural Recording with Heterogeneous Integration in Thin Packages," submitted IEEE Trans. Components, Packaging and Manufacturing Techn., TCPMT-2022-043, https://www.techrxiv.org/articles/preprint/Miniaturized_Fully-Passive_Wireless_Neural_Recording_with_Heterogeneous_Integration_in_Thin_Packages/19093637/1

453 M. A. Islam and J.L. Volakis, "Real-Time Detection and 3D Localization of Coronary Athero-sclerosis Using a Microwave Imaging Technique," MDPI Sensors journal.MDPI Sensors, Vo. 22, Nov 2022, https://doi.org/10.3390/s22228822 (part of the sepcial issue on *Advanced Imaging and Sensing Technologies of Cardiovascular Disease*).

2023

454 M. W. Nichols, A. Gonzalez, E. A. Alwan, and J. L. Volakis, “An Accordion-Folding Series-Fed Patch Array with Finite Thickness,” IEEE Antenna Propapagat. Magazine, Jan.2023. DOI: 10.1109/MAP.2022.3229295

455 Sk Yeahia Been Sayeed, Satheesh B Venkatakrishnan, John L. Volakis and Pulugurtha Markondeya, “Miniaturized Fully-Passive Wireless Neural Recording with Heterogeneous Integration in Thin Packages,” *IEEE Trans. on Components, Packaging and Manufacturing Technology, accepted, 2023*

456 M. Anastasiadis, A. Akhiyat, B. Grisafe, D. Pavlidis, J.L. Volakis, “GaN/AlGaN Solid-State Travelling Wave Amplifier (SSTWA) Operating at W-band,” *IEEE Microwave and Wireless Technology Letters*, July 2023, Vol 33 (7), pp 1027-1030, 10.1109/LMWT.2023.3265353

457 R. Rahman, S. Bojja Venkatakrishnan, J.L.Volakis, “Experimental Demonstration of Interference Mitigation using Ultra-Wideband Spreading" *IEEE Journal of Microwave*, accepted, 2023

458 D. Vital, P. Bhushan, Pawan Gaire, K. Islam, S. Lahade, V. Pozdin, J.L. Volakis, S. Bhansali, S. Bhardwaj, “SkinAid: A Wirelessly Powered Smart Dressing Solution for Continuous Wound-Tracking Using Textile-Based Frequency Modulation,” accepted in *IEEE Trans. Biomedical Circuits and Sysems*, 2023

459 Kefayet Ullah, Satheesh Bojja Venkatakrishnan and John L. Volakis,”RFSoC-FPGA Realization of a Code-Multiplexed Digital Receiver (CMDR) Using 1-ADC/Quad-Channel,” accepted in *IEEE J. of Microwaves*, 2023

460 Sk. Yeahia Been Sayeed, H.V. Navaz, John L. Volakis, and Markondeyaraj Pulugurtha, " Wireless Fully-passive Seismocardiogram Device with RF Backscattering." *IEEE Trans. on Components, Packaging and Manufacturing Technology,* TCPMT-2023-329, accepted

461 Sk Yeahia Been Sayeed , Ghaleb Al Duhni, Hooman Vatan Navaz , John L. Volakis and Markondeya Raj Pulugurtha . "Passive Impedance-Matched Neural Recording Systems with Improved Signal Sensitivity”, Sensors 2023, 23, 6441, https://doi.org/10.3390/s23146441

462 M. Nichols, S. Koulouridis, S. Bojja Venkatakrishnan, E. Alwan J.L. Volakis, “Feed Integration and Packaging of a Millimeter Wave Antenna Array,’ Open J. Antenna Propagat., OJAP-0230-2022, accepted

463 M. Nichols, M. Anastasiadis, M. Taaffe Jr, E. Alwan, J.L. Volakis, “Ultra-wideband Tightly Coupled Dipole Array Fed by a Tapered Meandered Balun,” submitted to Open J. Antenna Propagat., OJAP-0229-2022, accepted.

464 C. Moncion, L. Balachander, J.L. Volakis, Jeorge Riera Diaz, “Recording Broadband/Multiscale Neuronal Activity with a Battery-Less Wireless Neurosensing System,” submitted to *IEEE Sensors Journal*.

465 Sk Yeahia Been Sayeed, Jaim Nulman, John L. Volakis and Markondeyaraj Pulugurtha,” Wearable Health-Monitoring Systems with Fully-Embedded Actives and Passives Based on Nanopackaging,” to be submitted

466 Sk. Yeahia Been Sayeed, John L. Volakis, and Markondeyaraj Pulugurtha. " Passive Impedance-Matched Neural Recording Systems with Improved Signal Sensitivity." (2022) in *Sensors (To be Submitted, Oct 2022)*

467 Sk. Yeahia Been Sayeed, Satheesh B. Venkatakrishnan, John L. Volakis, and Markondeyaraj Pulugurtha. Additively-Manufactured Fully-Embedded Data Telemetry for Biosensor Networks"." (2022) in *IEEE Open Journal of Antennas and Propagation: Advances in Additive Manufacturing & 3D Printing: Novel Materials & Metamaterial*

Structures for Antennas and other Electromagnetic Devices (To be submitted, November 2022)

468 S. Pulipati, V. Ariyarathna, A. L. Jayaweera, A. Johnson, S. B. Venkatakrishnan, J. L. Volakis, C. U. S. Edussooriya, C. Wijenayake, L. Belostotski, A. Madanayake, "Fully-Digital 2-D/3-D FIR Frost Receiver Beamformers with Mutual Coupling Compensation," submitted to *IEEE Trans. Microwave Theory and Techn.*

469 A. Johnson, M. Carvalho, S. Bojja Venkatakrishnan, and J.L. Volakis, "Low Cost Horn Antennas Through Additive Manufacturing," *IEEE APS Magazine*, submitted

470 D. Vital, Md. M. Monshi, S. Bhardwaj, R. Pulugurtha, and J.L. Volakis, "Flexible and Reliable Epoxy-Based Interconnects for Textile-Integrated RF Modules," submitted to *IEEE Wireless Propagation Letters (AWPL).*

471 Kefayet Ullah, Satheesh Bojja Venkatakrishnan and John L. Volakis, "A Code-Multiplexed MIMO Digital Beamformer Using Xilinx RF-SoC FPGA for 5G," submitted to *IEEE Open Journal of Circuits and Systems*

472 D. Vital, P. Bhushan, P. Gaire, Md K. Islam, slahade@nd.edu, V. Pozdin, J.L. Volakis, S. Bhansali, and S. Bhardwaj "SkinAid: A Wirelessly Powered Smart Dressing Solution for Continuous Wound-Tracking Using Textile-Based Frequency Modulation," *IEEE Trans. Microwave Theory and Techn.* ID TMTT-2022-09, submitted.

473 S. Bhardwaj and J.L. Volakis, "Prediction and Modeling of Surface Waves Using General Impedance Boundary Condition," submitted to IEEE Trans. Antenna and Propagat. ID AP1906-1154.

474 C. Moncion, L. Balachandar, J.L. Volakis and J. Riera, Recording Broadband/Multiscale Neuronal Activity with a Battery-Free Wireless Neurosensing System, submitted to IEEE Sensors Journal-60989-2023.

475 M. A. Islam, A. Kiourti, and J.L. Volakis, "An Error Tolerant Matrix-inversion Free High Speed Microwave Imaging Method," to be submitted to IEEE Trans. on Antennas and Propagation.

476 M. A. Islam, A. Kiourti, and J.L. Volakis, "Multiphase Flow Fraction Imaging using Microwave Tomography," to be submitted to Electronics Letters.

477 L. Zhang, K. Sertel, S. Yarga, and J.L. Volakis, "Experimental Verification of Electromagnetic Wave Slow Down and Field Growth within Magnetic Photonic Crystals at Microwave Frequencies," submitted to *IEEE Trans. Antenn. Propag***.**

Conferences and Symposium Proceedings Papers

1. J.L. Volakis and L. Peters, Jr., "Elimination of Undesired Natural Resonances for Improved Target Identification," URSI and IEEE/AP-S International Symposium, Session B15, Quebec, Canada, 1980.
2. R. Caldecott, L. Peters, A.T. Terzouli, J.D. Young and J.L. Volakis, "A Re-examination of the Potential of Video Pulse Radars for the Detection of Tunnels in Hard Rock Media," Symposium on Tunnel Detection, Golden, CO, July 1981.
3. J.L. Volakis, W.D. Burnside and L. Peters, Jr., "Backscattered Patterns from Appendages on Arbitrary Surfaces," IEEE AP-S/URSI Symposium, Session B10, Boston, MA, 1984.
4. J.L. Volakis and T.B.A. Senior, "Uniform Diffraction Coefficients for an Impedance Half Plane," IEEE AP-S/URSI International Symposium, Session B17, Vancouver, Canada, June 1985.
5. J.L. Volakis and M. Ricoy, "Scattering by a Thick Perfectly Conducting Edge and Strip," National Radio Science Meeting, Session B8-5, Boulder, CO, January 1986.
6. T.B.A. Senior and J.L. Volakis, "Scattering at Skew Incidence by an Imperfect Right-Angled Wedge," National Radio Science Meeting, Session B8-1, Boulder, CO, January 1986.
7. J.L. Volakis, "Diffraction by a Thick Impedance Half Plane," International IEEE/AP-S Symposium, Session APO2, Philadelphia, PA, June 1986.
8 M.I. Herman and J.L. Volakis, "Uniform Evaluation of the Surface Wave Diffraction by an Impedance Wedge and its Application to a Strip," National Radio Science Meeting, Session BO5, Philadelphia, PA, June 1986.
9. M.I. Herman and J.L. Volakis, "Diffraction by Resistive, Conductive and Impedance Strips," National Radio Science Meeting, Session B-7, Boulder, CO., January 1987.
10. T.B.A. Senior and J.L. Volakis, "Sheet Simulation of Dielectric Layers," National Radio Science Meeting, Session B-1, Boulder, CO, January 1987.
11. J.L. Volakis, M.A. Ricoy and T.J. Peters, "Numerical Simulation of Composite Structures," 3rd Annual Review of Progress in Applied Computational Electromagnetics, Monterey, CA, March 1987.
12. T.J. Peters and J.L. Volakis, "Application of a Conjugate Gradient FFT Method to Scattering From Thin Planar Material Plates," 1987 International Geoscience and Remote Sensing Meeting, Session WP-2, Ann Arbor, MI, May 1987.
13. J.L. Volakis, P.K. Wang and W.P Harokopus, "Mapping of Electrostatic Fields Using the IBM Personal Computer," 1987 IEEE Antennas and Propagation International Symposium, Session AP08, Blacksburg, VA.
14. T.J. Peters and J.L. Volakis, "Scattering from Thin Material Plates with Arbitrary Perimeter," 1987 IEEE Antennas and Propagation International Symposium, Session AP13, Blacksburg, VA.
15. M.I. Herman and J.L. Volakis, "High Frequency Scattering by a Double Impedance Wedge," 1987 URSI Meeting, Session JB11, Blacksburg, VA.
16. M.I. Herman and J.L. Volakis, "High Frequency Scattering by Polygonal Impedance Cylinders," 1987 URSI Meeting, Session JB11, Blacksburg, VA.
17. J.L. Volakis, M.A. Ricoy, V.V. Liepa and T.B.A Senior, "Numerical Simulation of Two Dimensional Structures of Arbitrary Composition," 1987 URSI Meeting , Session UB11, Blacksburg, VA.

18. J.L. Volakis, "High Frequency Scattering by a Thin Material Half-plane and Strip," 1988 National Radio Science Meeting, Session B-8, Syracuse, NY.
19. J.L. Volakis and J.D. Collins, "Diffraction by a Resistive Half-Plane on a Dielectric Interface," 1988 URSI Meeting, Session B-8, Syracuse, NY.
20. M.A. Ricoy and J.L. Volakis, 'An Integral Equation with Reduced Unknowns and Kernel Singularity," 1988 URSI meeting, Session B-33, Syracuse, N.Y.
21. T.B.A. Senior and J.L. Volakis, "Scattering by Gaps and Cracks," 1988 URSI Meeting, Session B-12, Syracuse, N.Y.
22. K. Barkeshli and J.L. Volakis, "Application of the Conjugate Gradient FFT Method to Large Radiating Systems Using Subdomain Basis Functions," 1988 IEEE/AP-S Symposium, Session 7, Syracuse, N.Y.; pp. 76-79.
23. T.J. Peters and J.L. Volakis, "Derivation of a Discrete Fourier Transform Using Higher Order Integration and Prime Factorization for Application to Conjugate Gradient FFT Methods," 1988 IEEE/AP-S Symposium, Session 7, Syracuse, N.Y.; pp. 96-98.
24. J.L. Volakis and M.A. Ricoy, "H-polarization Diffraction by a Parallel Plate Open-Ended Waveguide Loaded with an Extended Ferrite Slab," 1988 IEEE/AP-S Symposium, Session 11, Syracuse, N.Y.; pp. 162-165.
25. H.H. Syed and J.L. Volakis, "Multiple Diffraction Among Impedance Wedges," 1988 IEEE/AP-S Symposium, Session 11, Syracuse, N.Y.; pp. 166-169.
26. J. Jin, J.L. Volakis and V.V. Liepa, "A Comparison Between the OSRC Approach and the PO Approximation for Solving EM Scattering," 1988 IEEE/AP-S Symposium, Session 40, Syracuse, N.Y.; pp. 732-735.
27. J.L. Volakis and T.B.A. Senior, "Application of a Class Generalized Boundary Conditions to Scattering by a Metal-Backed Dielectric Half Plane," 1988 Journees Internationales De Nice Sur Les Antennes (JINA), Nice, France; pp. 115-119.
28. K. Barkeshli and J.L. Volakis, "A Vector-Concurrent Application of a Conjugate Gradient FFT Algorithm to Electromagnetic Radiation and Scattering Problems," 3rd Biennial IEEE Conference on Electromagnetic Field Computation, Bethesda, MD, Session 4, December 1988.
29. J.L. Volakis and T.B.A. Senior, "Generalized Impedance Boundary Conditions for Dielectric Surfaces and Layers," 1989 National Radio Science Meeting, Boulder, Co. Session B-7, Jan. 1989, p. 211.
30. J.D. Collins and J.L. Volakis, "A Boundary Integral Conjugate Gradient Fast Fourier Transform Method for Solving Two Dimensional Scattering Problems," 1989 IEEE URSI/AP-S symposium, Session 50, San Jose, CA. URSI, p. 216.
31. H.H. Syed and J.L. Volakis, "An Approximate Diffraction Coefficient for an Impedance Wedge at Skew Incidence," 1989 IEEE AP-S/URSI symposium, Session 57, San Jose, CA. AP-S , pp. 1286-1289.
32. M.A. Ricoy and J.L. Volakis, "Application of Higher Order Boundary Conditions in Scattering by Material Discontinuities," 1989 IEEE AP-S/URSI symposium, Session 63, San Jose, CA. URSI, p. 279.
33. J.-M. Jin and J.L. Volakis, "Electromagnetic Scattering by a Finite Array of Perfectly Conducting Patches on a Dielectric Slab," 1989 IEEE AP-S/URSI symposium, Session 12, San Jose, CA. AP-S, pp. 215-218.
34. J.-M. Jin, V.V. Liepa and J.L. Volakis, "Applications of Isoparametric elements in the Numerical Solution of Electromagnetic Field Problems," ISAE 1989, China.

35. J.L. Volakis, "Numerical Implementation of Generalized Impedance Boundary Conditions," 1989 URSI Electromagnetic Theory Symposium, Aug. 1989, Stockholm, Sweden. Symposium, pp. 434-437.
36. K. Barkeshli and J.L. Volakis, "TE Scattering by a Two-Dimensional Groove in a Ground Plane Using Higher Order Boundary Conditions," 1990 IEEE AP-S/URSI Symposium, Dallas, TX, URSI, p. 43.
37. M.A. Ricoy and J.L. Volakis, "Application of Generalized Impedance Boundary Conditions to Diffraction by a Multilayered Metal-Dielectric Junction," 1990 IEEE AP-S/USRI Symposium, Dallas, Tx., URSI, p.62.
38. H.H. Syed and J.L. Volakis, "Diffraction by a Smooth Coated Cylinder simulated with Generalized Impedance Boundary Conditions," 1990 IEEE AP-S/URSI Symposium, Dallas, Tx., URSI , p. 176.
39. J.M. Jin and J.L. Volakis, "A FEM/BEM Formulation for a CG-FFT Solution of 2-D Scattering by Grooves and Thick Slots," 1990 IEEE AP-S/URSI Symposium, Dallas, TX, URSI, p. 260.
40. J.D. Collins and J.L. Volakis, "A Combined Boundary Integral Finite Element Formulation for Solution of Three Dimensional Scattering via Conjugate Gradient Fast Fourier Transform Method," 1990 IEEE AP-S/URSI Symposium, Dallas, Tx., URSI, p. 263.
41. K. Barkeshli and J.L. Volakis," Scattering by an Aperture Formed by a Filled Cavity in a Ground Plane," 1990 IEEE AP-S/URSI Symposium, Dallas, Tx., URSI, p. 313.
42. J.L. Volakis and H.H. Syed, "Application of Higher Order Boundary Conditions to Scattering by Multilayered Coated Cylinders," 1990 IEEE AP-S/URSI Symposium, Dallas, Tx., AP-S, pp. 586-589.
43. J. M. Jin and J.L. Volakis, "A FEM/BEM Formulation for a CG-FFT Solution of 3-D Scattering by a Cavity ," 1990 IEEE AP-S/URSI Symposium, Dallas, Tx., AP-S, pp. 1726-1729.
44. J.M. Jin, J.L. Volakis and J.D. Collins, "A Finite Element Boundary Integral Formulation for Scattering by Two and Three Dimensional Structures," to be presented at the 1990 URSI General Assembly, Session B4, Prague, Chechoslovakia; Conference Proceedings, p. 384.
45. M.A. Ricoy and J.L. Volakis, "On the Analytical Implementation of Generalized Impedance Boundary Conditions,"to be presented at the 1990 URSI General Assembly, Session B5, Prague, Chechoslovakia; Conference Proceedings, p. 391.
46. J.M. Jin and J.L. Volakis, "A Finite Element-Boundary Integral Formulation for Scattering by A Three Dimensional Aperture in a Thick Conducting Plane," 4th Biennial IEEE Conference on Electromagnetic Field Computation, Oct. 1990, Toronto.
47. M.A. Ricoy and J.L. Volakis, "Diffraction by Material Junctions," Journess Internationales De Nice Sur Les Antennes (JINA), Nov. 1990, Nice France; Conference Proceedings, pp. 34-44.
48. H.H. Syed and J.L. Volakis, "High Frequency Scattering by a Smooth Coated Convex Cylinder Simulated with Higher Order Impedance Boundary Conditions," 1991 IEEE AP-S International Symposium; Symposium, pp. 782-785.
49. J.M. Jin and J.L. Volakis, "Scattering and Radiation from Microstrip Patch Antennas and Arrays Residing in a Cavity," 1991 IEEE AP-S International Symposium; Symposium, pp. 1216-1219.
50. J.M. Jin and J.L. Volakis, "An Engineer's Approach for Terminating Finite Element Meshes," 1991 IEEE AP-S International Symposium;Symposium, pp. 657-660.

51. M.A. Ricoy and J.L. Volakis, "Diffraction by a Symmetric Material Junction, Part I: General Solution" 1991 IEEE AP-S International Symposium; pp. 538-541.
52. M.A. Ricoy and J.L. Volakis, "Diffraction by a Symmetric Material Junction, Part II: Resolution of Non-Uniqueness," submitted to the 1991 IEEE AP-S International Symposium; pp. 541-544.
53. L. Kempel, J.L. Volakis, T.B.A. Senior and S. Locus, "Scattering by S-shaped Surfaces," 1991 Radio Science Meeting, Ontario, Canada; p. 281.
54. A. Chatterjee, J. L. Volakis and W. J. Kent, "Scattering by Coated Wires and Finite Length Narrow Rectangular Grooves," 1991 Radio Science Meeting, Ontario, Canada; p.114.
55. K. Barkeshli and J.L. Volakis, "Numerical Simulation of 3D Coatings and Cavities Using Higher Order Impedance Boundary Conditions," 1991 Radio Science Meeting, Ontario, Canada.
56. J.L. Volakis, J-M. Jin and C.L. Yu., "A finite boundary integral method for scattering by tow and three dimensional structures," 1991 PIERS Symposium, Boston, MA.
57. J.L. Volakis and T.B.A. Senior, "On the Use of Higher Order Boundary and Transition Conditions in Diffraction Theory," 1991 PIERS Symposium, Boston, MA.
58. J.L. Volakis and J.M. Jin, "Radiation and Scattering Analysis of Microstrip arrays via a Hybrid finite element method," 1991 Int. Conference on Electromagnetics in Aerospace Applications(ICEAA), Torino, Italy., pp. 195-198.
59. J.L. Volakis, A Alexanian, J.M. Jin and C.L. Yu, "Radar Cross Section Analysis and Control of Microstrip Patch Antennas," 1992 IEEE AP-S International Symposium, Chicago, IL, pp.1645-1648.
60. J.M. Jin, J.L. Volakis and C.L. Yu,"Scattering and Radiation Analysis of Three-Dimensional Cavity Arrays via a Hybrid Finite Element Method," 1992 Radio Science Meeting, Chicago, IL, pp. 573.
61. K. M. Mitzner, J.L. Volakis, J.M. Jin, L.C. Kempel and D. Ross, "An Integral Equation in Terms of Charge for TE Scattering by Curved Open Surfaces," 1992 Radio Science Meeting, Chicago, IL, p. 85.
62. J.D. Collins and J.L, Volakis, "Characterization of a Class of Axially Symmetric Radomes Using the Finite Element-Boundary Integral Technique" 1992 Radio Science Meeting, Chicago, IL, p. 235.
63. J.L. Volakis and S. Bindiganavale, "A New Three-Dimensional Integral Equation for Modeling Thin Ferrite Coatings On Conductors," 1992 Radio Science Meeting, Chicago, IL, p.426.
64. A. Chatterjee, J.M. Jin and J.L. Volakis, " Application of Edge-Based Finite Elements and Vector ABCs in 3D Scattering," 1992 IEEE AP-S International Symposium, Chicago, IL, pp.528-531.
65. H.H. Syed and J.L. Volakis, "Equivalent Current Formulation for an Impedance Wedge of Arbitrary Included Angle," 1992 IEEE AP-S International Symposium, Chicago, IL, pp. 1857-1860.
66. L. C. Kempel, J.L. Volakis and T.B.A. Senior, "Diffraction from Tapered Resistive Sheet Junctions," 1992 IEEE AP-S International Symposium, Chicago, IL, pp. 957-960.
67. T. Ozdemir and J.L. Volakis, "Skew Incidence on a Thick Metal-Dielectric Join," 1992 IEEE AP-S International Symposium, Chicago, IL, pp. 949-952.

68. J. Gong, J.L. Volakis, A. Chatterjee and J.M. Jin, "Characterization of cavity backed conformal antennas and arrays using a hybrid finite element method with tetrahedral elements," 1992 IEEE AP-S International Symposium, Chicago, IL., pp. 1629-1632.
69. J. Collins, J.M. Jin and J.L. Volakis, "Eliminating Interior Resonances in a Finite Element-Boundary Integral Solution of Scattering Problems," 1992 Conf. on Electromagnetic Field Computation, Claremont ,CA.
70. A. Chatterjee and J.L. Volakis and D. Windheiser "On the Optimization of a Finite Element Code for 3D Scattering Computations," 9th Annual Review of Progress in ACES, Monterey, CA, March 1993; pp. 855-861.
71. J. L. Volakis and A. Alexanian, "Characterization of wires and narrow grooves using traveling wave theory," 1993 URSI Radio Science meeting, Ann Arbor, MI.; p. 132.
72. D. C. Ross and J.L. Volakis, Numerical, divergenceless shape functions for three dimensional finite element analysis," 1993 URSI Radio Science meeting, Ann Arbor, MI.; p. 189.
73. J. L. Volakis, Y.C. Lin and A. Anastassiu, "TE characterization of resistive strip gratings on a dielectric slab using a single edge-mode expansion," 1993 IEEE Antennas and Propagat. symposium, Ann Arbor, MI; pp. 90-93.
74. D. C. Ross, J. L. Volakis and H. Anastassiu, "A hybrid finite element-modal formulation for inlet scattering", 1993 URSI Radio Science meeting, Ann Arbor, MI.; p. 194.
75. J. Natzke and J.L. Volakis, "Characterization of a resistive half plane over a resistive sheet," 1993 IEEE Antennas and Propagat. Symposium, Ann Arbor, MI.; pp. 1726-1729.
76. A. Chatterjee, J. L. Volakis, D. Windheiser and E. Hao "Parallelization of a finite element code for 3D scattering," 1993 IEEE Antennas and Propagat. Symposium, Ann Arbor, MI.; pp. 304-307.
77. L. C. Kempel and J.L. Volakis," A finite element-boundary integral method for cavities in a circular cylinder," 1993 IEEE Antennas and Propagat. Symposium, Ann Arbor, MI.; pp. 292-295.
78. L.C. Kempel and J.L. Volakis, "TM scattering by a resistive card extension to a half plane," 1993 IEEE Antennas and Propagat. Symposium, Ann Arbor, MI.; pp. 1738-1741.
79. J. Gong and J.L. Volakis, "Analysis of nonrectangular cavity backed patch antennas using edge-based hybrid finite element method with BiCG-FFT solver," 1993 IEEE Antennas and Propagat. Symposium, Ann Arbor, MI.; pp. 960-963.
80. J.L. Volakis, L.C. Kempel and J. Gong, "Hybrid finite element-integral equation methods for conformal antenna characterizations," 1993 Progress in Electromagnetics Research Symposium, Pasadena, CA.; p. 41.
81. J.L. Volakis and A. Chatterjee,"Computation of 3D electromagnetic scattering problems using finite elements," 2nd U.S. National Congress on Computational Mechanics, Aug. 1993, Washington, D.C.
82. J.L. Volakis, "Hybrid finite element and integral methods for electromagnetic characterizations," XXIV URSI General Assembly, Kyoto, JAPAN, 1993.
83. A. Chatterjee, J.L. Volakis and D. Windheiser, "Computation of 3D electromagnetic scattering on massively parallel architectures," 1993 COMPUMAG Conference, Miami, FL.
84. J. Gong, L.C. Kempel and J.L. Volakis, "Computer Codes for the Analysis of Planar and Cylindrically Conformal Printed Antennas," 1994 ACES Conference, Monterey, CA; Digest pp.203-209.

85. D. C. Ross, J. L. Volakis and H. Anstassiu, "Hybrid finite element-modal analysis of jet engine inlet scattering, " 1994 ACES Conference, Monterey CA; Digest pp. 300-307.
86. L.C. Kempel and J.L. Volakis, "Scattering by cavity-backed antennas on a circular cylinder using the FE-BI method," 1994 IEEE Antennas and Propagat. Symposium, Seattle, WA, pp. 182-185.
87. L.C. Kempel and J.L. Volakis, "Radiation by patch antennas on a circular cylinder using the FE-BI method," 1994 IEEE Antennas and Propagat. Symposium, Seattle, WA, pp. 1382-1385.
88. T. Ozdemir and J.L. Volakis, "A comparative study of an ABC and artificial absorber for truncating 3D finite element meshes," 1994 IEEE Antennas and Propagat. Symposium, Seattle, WA, pp. 410-414.
89. D.C. Ross, J.L. Volakis and H.T. Anastassiu, "A finite element-modal technique for scattering by complex 3-D cavity terminations and code parallelization," 1994 IEEE Antennas and Propagat. Symposium, Seattle, WA, pp. 1378-1381.
90. A. Chatterjee and J.L. Volakis, "Derivation and application of conformal ABCs in 3D scattering," 1994 IEEE Antennas and Propagat. Symposium, Seattle, WA, pp. 398-401.
91. M.W. Nurnberger, J. L. Volakis, J.A. Mosko and T. Ozdemir,"Analysis of a log-periodic folded slot array," 1994 IEEE Antennas and Propagat. Symposium, Seattle, WA, pp. 1282-1285.
92. L.C. Kempel, S. Bindiganavale and J.L. Volakis, "Evaluation of new vector ABCs for conformal printed antennas," 1994 URSI meeting, Seattle, WA, p. 166.
93. H. Anastassiu and J.L. Volakis, "Electromagnetic scattering from jet engine inlet including a compressor," 1994 URSI meeting, Seattle, WA, p. 139.
94. J. Gong and J.L. Volakis, "On feed modeling of cavity-backed antennas in the context of the finite element method," 1994 URSI meeting, Seattle, WA, p. 401.
95. S. Bindiganavale and J.L. Volakis, “Analysis of TE scattering by a filled groove in an impedance plane via the FE-BI method,” 1995 Radio Science Meeting, Boulder CO., p. 284.
96. D.C. Ross, J.L. Volakis, H. Anastassiu and D. Andersh, “Overlapping modal and geometric symmetries for computing jet engine inlet scattering,” 1995 ACES conference Proceedings, pp. 1142-1149, Monterey, CA.
97. A. Chatterjee and J.L. Volakis, “Optimization issues in finite element codes for solving open domain 3D electromagnetic problems,” 1995 ACES conference Proceedings, pp. 1212-1219, Monterey, CA.
98. S. Bindiganavale, J.L. Volakis and V. Kristianinov, “A sparse moment method technique for a wide class of scattering problems,” 15th TriennialURSI International Symposium on EM Theory, St. Petersburg, Russia, Sept. 1995; Digest pp. 280-282.
99. J.L. Volakis, T.B.A. Senior and S.R. Legault, “Derivation, implementation and application of absorbign boundary conditions,” 15th TriennialURSI International Symposium on EM Theory, St. Petersburg, Russia, Sept. 1995; Digest pp. 327-329.
100. T. Özdemir and J.L. Volakis, “Finite element analysis of conformal antennas on doubly curved platforms,” 1995 USNC/URSI Radio Science Meeting, p. 89.
101. E. Kipp, S.W. Lee, T. Özdemir, J.L. Volakis, L. Kempel and J. Berrie, “Antenna pattern evaluations using a hybridization of the finite element and high frequency methods,” 11995 USNC/URSI Radio Science Meeting p. 183.

102. J. Gong and J. L. Volakis, “An efficient hybrid FEM formulation for analysis of cavity-backed thin spiral slot antenna,” 1995 USNC/URSI Radio Sci. Meeting, p. 280.
103. H.T. Anastassiu and J.L. Volakis, “The mode matching technique for electromagnetic scattering by cylindrical waveguides with canonical terminations,” 1995 IEEE International Antennas and Propag. Symposium, pp. 26-29.
104. D.C. Ross, J.L. Volakis and H.T. Anastassiu, “Overlapping geometric and modal symmetries in jet engine scattering and modulation,” 1995 IEEE International Antennas and Propag. Symposium, pp. 30-33.
105. T. Özdemir and J.L. Volakis, “Triangular prisms for edge-based vector finite element analysis, ”1995 IEEE International Antennas and Propag. Symposium, pp. 48-51.
106. J. Gong and J.L. Volakis, “Two novel schemes for truncating finite element meshes,” 1995 IEEE International Antennas and Propag. Symposium, pp. 80-83.
107. S. Bindiganavale and J.L. Volakis,“A sparse moment method technique for a wide class of scattering problems,” 1995 IEEE International Antennas and Propag. Symposium, pp. 1536-1539.
108. J.L. Volakis, T.B.A. Senior, S.R. Legault, T. Ozdemir and M. Casciato, “Artificial absorbers for truncating finite element meshes,” Int. Workshop on Direct and Inverse Electromagnetic Scattering, Gebze, Turkey, Sept. 1995.
109. S. Bindiganavale and J.L. Volakis, “A hybrid FEM-FMM technique for electromagnetic scattering,” 1996 ACES Conference Proceedings, pp. 563-560, Monterey, 1996.
110. M. Casciato, M. Nurnberger, T. Ozdemir and J.L. Volakis, “Finite element scattering and radiation uisng prismatic meshes and artificial absorbers for conformal domain truncation,” 1996 ACES Conference Proceedings, pp. 1174-1180, Monterey, CA
111. H.H. Syed and J.L. Volakis, “Physical theory of diffraction analysis of impedance structures,” 1996 ACES Conference Proceedings, pp.76-83, Monterey, CA
112. S. Bindiganavale and J. L. Volakis, “Guidelines for using the fast multipole method to calculat the RCS of large objects,” 1996 ACES conference Proceedings, pp. 596-603, Monterey, CA.
113. Y. Botros, J.L. Volakis and E. Ebbini, “Analysis and synthesis of multiple-focus phased array heating patterns through the rib cage: A simulation model,” invited paper, 13th National Radio Science Conference, Cairo, Egypt, March 1996.
114. J.L. Volakis, “Applications of the Finite Element Method to Large Scale Radiation and Scattering,” invited paepr, NASA Langley ICASE/LaRC Workshop on Computational Electromagnetics and its Applications, May 29-30, 1996
115. A. Chatterjee, M. Nurnberger, J. Volakis and M. Casciato, “FEMATS: A general purpose scattering code using the finite element method,” IEEE National Radar Conference, Proceedings pp. 339-344, Ann Arbor, MI. May 1996
115. H. Anastassiu, J. Volakis and D. Ross “An AIM based analysis of electromagnetic scattering from jet engines,” 1996 Int. IEEE AP-S Symposium, Baltimore, pp. 958-96
116. T. Ozdemir, and J. L. Volakis “Analysis of doubly curved conformal antennas with material overlays: A finite element-artificial absorber technique,” 1996 Int. IEEE AP-S Symposium, Baltimore, pp. 134--137
117. J. Gong and J. Volakis “Parametric study and design of slot-spiral antennas using an FE-BI antenna code,” 1996 Int. IEEE AP-S Symposium, Baltimore.

118. S. Bindiganavale, J. L. Volakis and H. T.G Wang "Dielectric nose radome scattering by using the fast multipole method to calculate the RCS of large objects," 1996 Int. IEEE AP-S Symposium, Baltimore, pp. 930-933.
119. D. Ross, J. Volakis and H. Anastassiu, "A three dimensional edge-based finite element formulation for discrete bodies of revolution," 1996 Int. IEEE AP-S/URSI Symposium, Baltimore, p. 57
120. A. Borgioli, R. Coccioli, G. Pelosi and J. Volakis "Electromagnetic scattering from a finite planar corrugated structure," 1996 Int. IEEE AP-S/URSI Symposium, Baltimore, p.
121. T. Ozdemir, J. Volakis,J. Berrie and L. Kempel. "Finite element analysis of frequency independent antennas," ," 1996 Int. IEEE AP-S/URSI Symposium, Baltimore, p. 152.
122. J. Gong and J. L. Volakis, "A novel Matrix Compression Technique for Antenna Modeling Using the Finite Element-Boundary Integral Method," 1996 Int. IEEE AP-S/URSI Symposium, Baltimore, p. 262
123 S. Bindiganavale and J.L. Volakis, "A hybrid FEM-FMM technique for electromagnetic scattering," 1996 Int. IEEE AP-S/URSI Symposium, Baltimore, p. 261
124 M.D. Deshpande, Y. Botros and J. Volakis, "Characterization of lossy anisotropic materials using an eigenvalue analysis in conjunction with the finite element method,' 1996 Int. IEEE AP-S/URSI Symposium, Baltimore, p. 207
125. H. Anastassiu, D. Ross and J. L. Volakis, "Engine Scattering Using the Adaptive Integral Equation Method in Conjunction with High Frequency Methods," 1996 URSI General Assembly, Lille, France.
126. J.L. Volakis, "Hybrid Finite Methods for Conformal Antenna Simulations," invited paper, 1996 URSI General Assembly, Lille, France.
127. J.Gong, S. Legault, Y. Botros, J. Volakis, P. Petre, " Application and design guidelines for the PML absorber for the finite element simulations of microwave circuits," 1996 International IEEE Microwave Theory and Techniques Symposium, Digest pp. 209-211.
128. J. L. Volakis, "Hybrid finite element methods for conformal antenna modeling," Journes Internationales De Nice Sur Les Antennes(JINA), Nice 12-14 Nov. 1996, Digest pp. 15--23.
129. Y. Botros, J.L. Volakis, E. Ebbini and P. vanBaren, " Deep localized hyperthermia through the rib-cage using ultrasound heating patterns," 1996 J. Acoustical Soc. Am. Conference, Honolulu, Vol. 100, No.4, pp. 2646-2647.
130. S. Bindiganavali, J. Gong, Y. Erdeml and J. Volakis, "Improved hybrid finite element-integral equation methods," 1997 Apllied Computational EM Soc. conference, Monterey, digest p. 721-728.
131. S. Bindiganavali, J. Volakis and H. Anastassiu, "Planar Structures Analysis with the Adaptive Integral Method, "1997 Apllied Computational EM Soc. conference, Monterey, digest p. 958-965.
132. Z. Li, P. Papaplambros and J.L. Volakis, "Design Optimization of Patch Antennas Using the SQP method," 1997 Apllied Computational EM Soc. conference, Monterey, digest p. 1366-1373.
133. M. Nurnberger, J. Volakis, D. Fralick and F.B. Beck, " A planar slot spiral for conformal vehicle applications," 1996 American Measurement techniques Assoc.(AMTA) Symposium, Seattle, Digest pp. 121-126.

134. Z. Li, P.Papalambros, J. Volakis, “Design optimization of patch antennas using the sequential quadratic programming method,” Applied Computational Electromagnetics Society (ACES), Monterey, 1997; Digest pp. 1366-1373
135. Y. Botros, E. Ebbini and J.L. Volakis, “Phased array pattern synthesis for the hyperthermia treatment of liver cancers,” 45th Annual Meeting of the Radiation Research Soc. and the 16th Annual Meeting of the North American Hyperthermia Soc., Digest p. 99.
136. Yunus E.Erdemli, John L.Volakis, J.Gong, C.J.Reddy, "Frequency Extrapolation Analysis in Conjuction with Finite Element-Boundary Integral System", North American Radio Science Meeting, Montreal, Canada, July 13-18 1997, Digest p:42
137. Sunil S.Bundiganavale, Tayfun Ozdemir, John L. Volakis, J.Berrie "Broadband Antenna Analysis and Scattering from Planar Structure Using a Fast Integral Method", North American Radio Science Meeting, Montreal,Canada, July 13-18 1997, Digest p:72
138. Youssry Y. Botros, Jian Gong, john L. Volakis, " Perfectly Matched Layer(PML) Absorbers Studies for Truncating Finite Element Meshes" North American Radio Science Meeting,Montreal,Canada, July 13-18 1997, Digest p:269
139. Hristos T.Anastassiu, John L.Volakis, "An AIM Based Analysis of Scattering from Cylindrically Periodic Structures", IEEE Antennas and Propagation Society International Symposium, Montreal, Canada, July 13-18 1997, Digest-vol.1, pp:60-63
140. Z. Li, P.Papalambros, John L.Volakis, "Antenna Optimization Using Sequential Quadratic Programming(SQP) Algorithms, IEEE Antennas and Propagation Society International Symposium, Montreal, Canada, July 13-18 1997, Digest-vol.1, pp:514-517
141. Arik Brown, Jian Gong, Leo Kempel, John L.Volakis, " Patch Antennas on Ferromagnetic Substrates", IEEE Antennas and Propagation Society International Symposium, Montreal, Canada, July 13-18 1997,Digest-vol.2 pp:606-609
142. Lars S.Andersen, John L. Volakis, " A Novel Class of Hierarchical Higher Order Tangential Vector Finite Elements for Electromagnetics” IEEE Antennas and Propagation Society International Symposium, Montreal, Canada, July 13-18 1997,Digest-vol.2, pp:648-651
143. John L.Volakis, "Hybrid Finite Element Methods for Conformal Antenna Simulations", IEEE Antennas and Propagation Society International Symposium, Montreal, Canada, July 13-18 1997, Digest-vol.2,pp:1318-1321
144. Y. Botros, E. Ebbini and J.L. Volakis,”Optimal Synthesis of Phased Array Field Patterns in the Presence of the Ribcage,” 1997 Int. Ultrasonics Symposium, Digest pp.247-248.
145. M.W. Nurnberger and J.L. Volakis, "A planar slot spiral for mobile communications," 19th *American Measurement Techniques Assoc.* (AMTA), Symposium Proceedings pp. 61-66, Boston, MA, 1997.
146. K. Sertel, D. S. Filipovic, S. Bindiganavale, and J. L. Volakis,'Comparisons of FMM and AIM Compression Schemes in Finite Element-Boundary Integral Implementations for Antenna Modeling' 1998 ACES Conference Monterey ,CA
147. Y. Botros and J.L. Volakis, 1998 ACES paper
148. T. Eibert and J.L. Volakis, "Hybrid FE/BI Modeling of Commensurate and Non-commensurate Periodic Structures," 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, Digest pp. 414-417

149. T. Eibert and J.L. Volakis, ”Adaptive Integral Equation Method for Hybrid FE/BI Modeling of 3D Doubly Periodic Structures, " 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, Digest pp. 1754-1757.
150. M. Nurnberger, J.Volakis and T. Ozdemir, "A Planar Slot Spiral for Multifunction Communication Apertures," 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, pp. 774-777.
151. T. Ozdemir, M. Nurnberger, J Volakis, "A Thin Cavity-Backed Archimedean Slot Spiral for 800-3000 MHz Band Coverage" 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, pp. 2336-2339.
152. M. Carr, J. Volakis and D. Ross "New Time Frequency Technique for Identification and Extraction of Scattering Mechnisms," 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, pp. 346-349
153. A. Brown, J. Volakis, L. Kempel and Z. Li, "Numerical Analysis of the Radiation Properties of Ferrite Patch Antennas," 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, pp. 244-248.
154. L. Andersen and J. Volakis, "Hierachical Tangential Vector Finite Elements for Tetrahedra," 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, pp. 240-244.
155. K. Sertel and J. Volakis, "FMM Solutions of Finite Element-Boundary Integral Implementations for Antenna Modeling Involving Curved Geometries," 1998 IEEE Antennas and Propagat Symposium, Atlanta, GA, pp. 232-236.
156. M. Nurnberger, M. Smelyanskiy and J. Volakis, "Optimization and Parallelization of GMRES for Very Large Dense and Hybrid Systems," to 1998 URSI Meeting, Atlanta, GA, p. 105.
157. Y. Botros and J. Volakis, "Convergence Improvements of Iterative Solvers for Poorly Conditioned Antenna Applications," 1998 URSI Meeting, Atlanta, GA, p. 203
158. J. L. Volakis, K. Sertel, and T. F. Eibert, Hybrid Finite Element Modeling of Conformal Antenna and Array Structures Utilizing Fast Integral Methods, 4th International Workshop on Finite Elements for Microwave Engineering, From Electromagnetics to Microwave Electronics Software, Poitiers, Futuroscope, France, 1998.
159. J. L. Volakis, Thomas F. Eibert, Sunil Bindiganavale, Kubilay Sertel, Fast Integral Methods for Conformal Antenna and Array Modeling in Conjunction with Hybrid Finite Element Formulations, URSI International Symposium on Electromagnetic Theory, Thessaloniki, Digest pp. 357-359, 1998.
160. J.L. Volakis, L.S. Andersen, T.F. Eibert, K. Sertel and Z. Li, “Fast Hybrid Finite Element Methods and Their Applications for Conformal Antennas,” 1999 Applied Computational Electromagnetics Society (ACES) Conference, Monterey, CA, Digest pp. 250-258.
161. Y. Erdemli, A.D. Brown and J.L. Volakis, “Frequency and Angular Extrapolation in Hybrid Finite Element-Boundary Integral Systems,” 1999 Applied Computational Electromagnetics Society (ACES) Conference, Monterey, CA, Digest pp. 302-307.
162. Y. Erdemli and J.L. Volakis, AWE Technique in Frequency Domain,” SC98, Reno, Navada
163. A. Brown, L. Kempel, K. Trott, H. How and J. L. Volakis, 'Compact, integrated coplanar phase shifter/antenna array,' 1999 IEEE Antennas and Propagat Symposium, Orlando, FL., pp. 662-665

164. K. Sertel and J. Volakis, "Effects of Fast Multipole Methods(FMM) on radar cross section computations," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL., pp. 624-627.
165. Z.Li, J.L. Volakis and P. Papalambros, Optimization of patch antennas on ferrite substrate using the finite element methods," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL, pp. 1026-1029.
166. D. Filipovic, J. Volakis and L. Andersen, "Efficient modeling and analysis of infinite periodic antenna arrays by tetrahedral finite elements," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL, pp. 2504-2507.
167. Z. Shen and J. Volakis, "Hybrid physical optics moment method for large nose radome antennas," ," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL, pp. 2554-2557.
168. L. Andersen and J.L. Volakis, "Accurate and efficient simulation of antennas using hierarchical mixed order tangential vector finite elements for tetrahedra," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL., pp. 2618-2691
169. M.W. Nurnberger, M. Abdel-Monuem and J. Volakis, "New techniques for extremely broadband planar slot spiral antennas," ," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL., pp. 2690-2693.
170. L. Andersen and J.L. Volakis, "Condition number for various FEM matrices," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL, pp. 2614-2617.
171. J.L. Volakis, T. Eibert, K. Sertel, L. Andersen and D. Filipovic, "Fast hybrid finite element algorithms for conformal antenna analysis," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL, pp. 1206-1209.
172. E. Topsakal, J. Volakis and D. Ross, "Surface integral equations for 3D surfaces containing circuit analog sheets," 1999 IEEE Antennas and Propagat Symposium, Orlando, FL pp. 1832-1835.
173. J.L. Volakis, T. Eibert, K. Sertel, L. Andersen and D. Filipovic, "Fast hybrid finite element algorithms for conformal antenna analysis," 1999 URSI Meeting, Orlando, FL pp 346
174. E. Topsakal, J. Volakis, D. Ross, "Tensor Boundary Conditions for Modeling Non-Reciprocal Material Layers", Proc. XXVI General Assembly URSI, Toronto, CANADA, pp. 83, August 13-21, 1999.
175. J. L. Volakis, T. F. Eibert, K. Sertel, L. S. Andersen, Dejan S. Filipovic, “Fast Hybrid Finite Element Methods for Multilayer Array and FSS Analysis”, Proc. XXVI General Assembly URSI, Toronto, CANADA, pp. 165, August 13-21, 1999.
176. D.S. Filipovic and J.L. Volakis, “ A hybrid multiresolution FE-BI method for analysis and design of infinite periodic antenna arrays,” 4th Int. Conf. Telecom. in Modern Satellite, Cable and Broadcasting Services, Nis, Yugoslavia, 13-15 Oct. 1999, Vol. 1, pp. 48-50.
177. L. Andersen, Y. Erdemli and J.L. Volakis, "Finite printed antenna array modeling using an adaptive multiresolution approach," 2000 Applied Computational Electromagnetics Society, Monterey, CA, pp. 723-741
178. K. Sertel and J.L. Volakis, "Incomplete LU preconditioner for FMM implementations," 2000 Applied Computational Electromagnetics Society, Monterey, CA, pp. 859-866.
179. Y.E. Erdemli, J.L. Volakis, "Analysis of large finite arrays using a new hybrid approach," Millenium Conference on Antennas and Propagation (AP2000), Davos, Switzerland, Digest pp. 294-295.
180. Z. Li, J. Volakis, P. Papalambros, "Performance Enhancement of Bandgap Printed Antennas Using Finite Element Method and Size/Topology Optimization Methods"

Millenium Conference on Antennas and Propagation (AP2000), Davos, Switzerland, Digest pp. 456-457, April 2000.

181. K. Sertel and J.L. Volakis, "Error evaluation of fast integral methods for RCS computations," Millenium Conference on Antennas and Propagation (AP2000), Davos, Switzerland, Digest pp. 612., April 2000
182. J.L. Volakis, A. Moneum and O. Graham, "Hybrid Moment Method-High Frequency Methods for antenna modeling," Days of Diffraction 2000, St. Peterburg, Russia.
183. M. Carr, E. Topsakal and J.L. Volakis, "Scattering from Impenetrable Surfaces Using Adaptive Integral Methods," 2000 Electromagnetics Code Consortium, St. Louis, May 10,2000
184. J.L. Volakis, K. Sertel, M. Carr, E. Topsakal, Fast Integral Methods for Electromagnetic Scattering, 2000 PIERS Conference, Boston, MA., Proceedings p. 132..
185. D. S. Filipovic, Mike Nurnberger and J. L. Volakis, “UltraWideband Slot Spiral With Dielectric Loading: Measurements and Simulations," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 1536-1539.
186. M.W. Nurnberger and J.L. Volakis, ``New Termination and Shallow Reflecting Cavity for Ultra Wideband Slot Spirals," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 1528-1531.
187. Topsakal, E., Carr, M., Volakis, J.L. and Bleszynski, M., “Scattering from 3-D multi layered surfaces using adaptive integral method," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 1868-1871.
188. Sertel, K. and Volakis, J.L.,”Multilevel fast multipole method implementation using parametric surface modeling," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 1852-1855.
189. Carr, M.A., Volakis, J.L. and Ross, D.C.,”Acceleration of moment method solutions for discrete bodies of revolution in free space," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 2286-2289.
190. Li, Z., Volakis, J.L. and Papalambros, P.Y.,”Antenna design on periodic and a periodic structures," Antennas and Propagation Society 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 1050-1053.
191. Andersen, L.S. and Volakis, J.L.,”Simulation of linearly tapered slot antennas using an adaptive multi-resolution FE/BI approach," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 1180-1183.
192. Brown, A.D., Kempel, L.C. and Volakis, J.L.,”Phase characterization of ferromagnetic materials using a coplanar waveguide," 2000 IEEE Antennas and Propagat. Symposium, Salt Lake City, Utah, pp. 376-379.
193. Y. E. Erdemli, E. Topsakal, L. Andersen, J. Volakis, "Hybrid Finite Element Methods for Array Analysis Using Multiresolution Elements and Fast Integral Techniques," 5th International Workshop on Finite Elements for Microwave Engineering, Boston, USA, June 2000.
194. Toufic Abboud, Jean-Claude Nedelec, and John Volakis, "Stable solution of the retarded potential equations, “Proc. 17th Ann. Rev. Progress in Appl. Comp. Electromagnetics, Monterey, CA, March 2001, pp. 146-151.
195. Kubilay Sertel and John L. Volakis, "Volume integral equation formulation for scattering using conformal finite elements," Proc. 17th Ann. Rev. Progress in Appl. Comp. Electromagnetics, Monterey, CA, March 2001, pp.193-198.

196. Y. E. Erdemli, Z. Li, D. Wright, R. Gilbert, and J. L. Volakis, "Optimized Frequency Selective Surface Designs as Artificial Substrates for Reconfigurable Arrays," ACES conference, Monterey, USA, March 2001.
197. Y.E. Erdemli 1 , K. Sertel 1 , J.L. Volakis 1 , D.E. Wright, R. Gilbert, "Multilayer Frequency Selective Surfaces to Enhance Performance of Broadband Reconfigurable Slot Arrays", International URSI EM theory symposium, Victoria, Canada, Symposium Digest pp. 74-76, May 2001.
198. E. Topsakal, M. Carr, J.L. Volakis, "Adaptive Integral Method for 3-D Penetrable Surfaces, "International URSI EM theory symposium, Victoria, Canada, Symposium Digest pp. 152-153, May 2001.
199. Y. E. Erdemli, J. L. Volakis, R. Gilbert, and D. Wright, "Reconfigurable Conformal Slot Arrays on Artificial Substrates," IEEE AP-S/URSI conference Boston, USA, July 2001.
200. J.L. Volakis, K.Sertel and T. Eibert, "Developments and Research Challenges in Frequency Domain Electromagnetics," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest pp. (invited).
201. J.L. Volakis, Z. Li, Y. Erdemli and G. Kiziltas, "Antenna Design using Rigorous Hybrid Finite Element Toolsets", *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest, Vol. 1, pp. 181. (invited).
202. D. Filipovic, E. Siah, K. Sertel, V. Liepa and J.L. Volakis, " Thin broadband cavity-backed slot spiral antenna for automotive applications," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest Vol. 1, pp. 414-417. (invited)
203. Y. Erdemli, J.L. Volakis, D. Wright and R. Gilbert, "Reconfigurable Conformal Slot Arrays on Artificial Substrates," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest Vol. 2 pp. 338-341.
204. K. Sertel and J.L. Volakis, "Multilevel fast multipole method solution of volume integral equations using parametric geometry modeling," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest pp. pp. 786-789.
205. M. Carr, E. Topsakal, J.L. Volakis and D. Ross, "Adaptive integral methods applied to multilayer penetrable scatterers with junctions," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest pp. 858-861.
206. E. Topsakal, R. Kindt, K. Sertel and J.L. Volakis, "Input impedance characteristics of tapered slot antennas," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest pp. 172-175.
207. G. Kiziltas, N. Kikuchi and J.L. Volakis, "The Homogenization Method and Its Application to Designing Frequency Selective Structures," *2001 IEEE Antenna and Propagat.and URSI Int. Symposium*, Boston, July 2001, URSI Digest pp.
208. D. Filipovic and J.L. Volakis, "Design and Demonstration of a Novel Conformal Slot Spiral Antenna for VHF to L-Band Operation," *2001 IEEE Antenna and Propagat. Int. Symposium*, Boston, July 2001, Digest Vol. 4, pp. 120-123
209. C. Brennan, P.J. Cullen, and J.L. Volakis, " Efficient Integral Equation Based Analysis of Propagation in a Simplified Urban Environment," Int. Conference on Electromagnetics in Advanced Applications (ICEAA), Torino, Italy, 2001, Digest pp. 129-132.
210. M.A. Carr, J.L. Volakis and E. Topsakal, "Adaptive Integral Method for 3D Composite Structures Involving Junctions," Int. Conference on Electromagnetics in Advanced Applications (ICEAA), Torino, Italy, Sept. 2001, Digest. pp. 849-852.

211. E. Siah, K. Sertel, J.L. Volakis and V. Liepa, “EM coupling through slots into overmoded cavities and large scale complex platforms using the multilevel fast multipole method”, 2002 National Radio Science Meeting, Jan 2002, Boulder, CO, Digest p. 50
212. K. Sertel and J.L. Volakis, “Multilevel fast multipole method for volumetric integral structures,” 2002 National Radio Science Meeting, Jan 2002, Boulder, CO, Digest p. 90
213. Rick Kindt, Kubilay Sertel, Erdem Topsakal and John Volakis, “A domain decomposition of the finite element-boundary integral method for finite array analysis,” 2002 ACES conference, Monterey, CA
214. Z. Li, G. Kiziltas, J.L. Volakis and N. Kikuchi, “Material Design Optimization for Printed Antennas Using the Finite Element-Boudary Integral Method,” 2002 ACES conference, Monterey, CA. **(won the best paper award).**
215. R.W. Kindt, K. Sertel, E. Topsakal and J.L. Volakis, ”Domain Decomposition Method for Large Finite Array Analysis,” 2002 EMCC Meeting, Kirtland AFB, NM.
216. E.S. Siah, K. Sertel, J.L. Volakis and V. Liepa, “Electromagnetic coupling and suppression through slots on the surface of lossless overmoded cavities using the Multilevel Fast Multipole Method,” 2002 IEEE Electromagnetic Compatibility Conference, Vol. 1, pp. 161-166.
217. D. Filipovic and J.L. Volakis, “Design of a multi-functional slot aperture (combo-antenna) for automotive applications” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, vol. II, Digest pp. 428-431. (**won the best paper award)**
218. T.F. Eibert, Y.E. Erdemli and J.L. Volakis, “Upgrading the Hybrid Finite Element -- Boundary Integral Method Using Multilayer Periodic Green's Functions,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, Vol. III, Digest pp. 282-285.
219. E. Jørgensen, J. L. Volakis, P. Meincke, and O. Breinbjerg, “Higher Order Hierarchical Legendre Basis Functions for Iterative Integral Equation Solvers with Curvilinear Surface Modeling,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, Vol IV, Digest pp. 618-621.
220. E.S. Siah, T. Yang, K. Sertel, J.L. Volakis and V. Liepa, “Electromagnetic analysis and shielding of slots on resonant and non-resonant realistic structures with MLFMM,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, Vol. II, Digest pp 423-426.
221. D. Psychoudakis, R. Riley, D. Filipovic, V. Liepa and J. L. Volakis, “Antenna platform evaluation for automotive applications,” *Proceedings of the 2002 USNC/URSI National Radio Science Meeting, San Antonio TX,* URSI Digest p. 281
222. G. Kiziltas, C. Yilmaz, J. L. Volakis, N. Kikuchi and J. Halloran, “Design of metamaterial textures for microwave applications,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, vol. II, Digest pp. 388-391.
223. G. Kiziltas, J. L. Volakis and N. Kikuchi, “Metamaterial design via the density method,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, Vol. 1, pp. 748-751.
224. Y.E. Erdemli, J.L. Volakis, D.E. Wright and R.A. Gilbert, “A Broadband Substrate/Feed Design for Conformal Slot Arrays,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, IV, 208-211.
225. C. Reilly, W.J. Chappell, J. Halloran, K. Sarabandi, J. Volakis, N. Kikuchi, and Linda P.B. Katehi, “New Fabrication Technology for Ceramic Metamaterials,” *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, Vol II, Digest pp. 376-379.

226. M. Carr and J.L. Volakis, "Domain Decomposition by Iterative Field Bouncing," *2002 IEEE Antennas and Propagation Symposium*, San Antonio, TX, Vol.III, Digest pp. III 298-301.
227. K. Sertel and J. L. Volakis, "Comparison of Finite Element-Boundary Integral and Volume Integral Equation Methods for Modeling Inhomogeneous Targets," 2002 Finite Elements Workshop, Chios, Greece, Digest p. 70.
228. E. Jørgensen, J. L. Volakis, P. Meincke, and O. Breinbjerg, "Divergence-Conforming Higher Order Hierarchical Basis Functions and Preconditioning Strategies for Boundary Integral Operators," 2002 Finite Elements Workshop, Chios, Greece, p. 63.
229. Rick Kindt, K. Sertel, E. Topsakal and J. L. Volakis, "Finite array analysis using an extended hybrid finite element-boundary integral method," 2002 Finite Elements Workshop, Chios, Greece, p. 49
230. D. S. Filipovic and J. L. Volakis, "Multifunctional Conformal Antennas for Automobile Applications," 2002 URSI General Assembly, Maastricht
231. J.L. Volakis, K. Sertel, E. Jorgensen and M. Carr, "Fast Integral Methods for Volumetric Structures," 2002 URSI General Assembly, Maastricht
232. E. Jorgensen, J.L. Volakis, Meincke, O. Breinbjerg, "Iterative Solutions of Very High Order Moment Method Systems," 2002 URSI General Assembly, Maastricht
233. B. D. Jensen, K. Saitou, J.L. Volakis, and K. Kurabayashi., "Impact of Skin Effect on Thermal Behavior of RF MEMS Swtiches," *Proc. the 6th ASME-JSME Thermal Engineering Joint Conference*, Kohala Coast, Hawaii Island, Hawaii, March 16-20, 2003.
234. G. Kiziltas, J.L. Volakis, "3D Material Optimization for Bandwidth Improvements of a Microstrip Patch Antenna, " 2003 ACES Conference Proceedings, Monterey, CA, pp. 42-47, 2003
235. E.S. Siah, K. Sertel, R.W. Kindt, J.L. Volakis and V.V. Liepa, "Fast Frequency Domain Computational EM tools for System Analysis of EMI/EMC topologies", IEEE EMC International Syposium 2003, Istanbul, Turkey.
236. E.S. Siah, T. Ozdemir, J.L. Volakis, P.Y. Papalambros and R.W. Wiese, "Optimization for RF Coupling and Interference Reduction of Devices in Complex Systems", IEEE EMC International Syposium 2003, Istanbul, Turkey.
237. R. Kindt and J.L. Volakis, "The Array Decomposition-fast multipole method," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. 3-6, Vol. 4, Columbus, OH.
238. R. Kindt and J.L. Volakis, "A Multi-Cell Array Decomposition Approach To Composite Finite Array Analysis," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp.15-18, Vol. 4, Columbus, OH. (won third place best student paper award)
239. G. Kiziltas, Y. Koh, J.L. Vokakis, N. Kikuchi and J. Halloran, "Optimum design and fabrication of volumetric graded substrates for a broadband miniature antenna," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. 485-488, Vol. 1, Columbus, OH.
240. E.S. Siah, J.L. Volakis, D. Pavlidis and V.V. Liepa, "Plane Wave Illumination Effects onto circuit Topologies", URSI 2003 Symposium, Columbus.
241. E.S. Siah, K. Sertel, R.W. Kindt and J.L. Volakis "Generalized FE-BI for Solving mixed Volume and Surface Geometries", URSI 2003 Symposium, Columbus.

242. E.S. Siah, T. Ozdemir, J.L. Volakis, P.Y. Papalambros and R.W. Wiese, "Fast Parameter Optimization Using Kriging Macro-Modeling" in IEEE AP Symposium 2003, Symposium digest, pp. 76-79, vol 2, Columbus. OH.
243. T. Yang, T. Ozdemir, E.S. Siah, J.L. Volakis, "Network Analysis of multiple apertures on cavity enclosures with wire penetrations", 2003 IEEE Int. Antennas and Propagation Symposium, Columbus, OH, Digest Vol. 2, pp. 215-218.
244. D. Psychoudakis, A. Knapp, G. Kiziltas, J.L. Volakis and J. Halloran, "Textured substrates for printed antenna miniaturization and bandwidth improvements," 2003 IEEE Antennas and Propagation Symposium Proceedings, pp. 375-378, vol. 3, Columbus, OH.
245. J.L. Volakis, "Current and Future ElectroScience Activities," 2003 URSI meeting, Columbus, OH.
246. J. Lee, R. Lee, R. Teixeira and J.L. Volakis, "Numerical Methods At the ESL Part 1 and 2," 2003 URSI symposium, Digest pp. 610-611, Columbus, OH.
247. Y. Bayram, T. Ozdemir and J.L. Volakis, "Coupling Among Multi-Conductor Transmission Lines and Complex Structures" 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. xxxx-xxx, Vol. xx, Columbus, OH.
248. M.A. Carr and J.L. Volakis, "A Near-Field Preconditioner for Fast Methods," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, Columbus, OH.
249. M.A. Carr and J.L. Volakis, "Generalized Hybridization with Iterative Field Refinement," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. xxxx-xxx, Vol. xx, Columbus, OH.
250. K. Sertel, M. Sancer and J.L. Volakis, "Volume Integral Equations for Permeable Structures," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. 2-5, Vol. 3, Columbus, OH
251. E. Topsakal and J.L. Volakis, "On the Properties of Materials for Designing Filters At Optical Frequencies," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. 635-637, Vol. 4, Columbus, OH
252. Z. Wang, B. Jensen, J.L. Volakis, K. Saitou and K. Kourabayashi, "Analysis of RF-MEMS Switches using Finite Element-Boundary Integration with Moment Method," 2003 IEEE Int Symposium on Antennas and Propagation, Symposium digest, pp. 173-176, Vol. 2, Columbus, OH.
253. R.W. Kindt and J.L. Volakis, "Finite Array Analysis Using Multi-dimensional, multi-cell hybrid array decomposition-Fast Multipole Methods, 8th Int. Conference on Electromagnetics in Advanced Appl. (ICEAA), Conf. Proceedings, pp. 317-320, 2003 Torino, Italy (ISBN 88-8202-009-6).
254. G. Kiziltas, D. Psychoudakis, J. L. Volakis and J. Halloran, "Miniature antenna designs on metamaterial substrates," *3rd European Workshop on Conformal Antennas*, (Invited Paper), Bonn, Germany, Oct. 22-23, 2003
255. G. Kiziltas, D. Psychoudakis, J. L. Volakis, N. Kikuchi and J. Halloran, "Miniature Antenna Designs on Metamaterial Substrates, 8th Int. Conference on Electromagnetics in Advanced Appl. (ICEAA), Conf. Proceedings, pp. 431-434, 2003, Torino, Italy.
256. J.L. Volakis, "A perspective on the recruitment, retention and education of graduate students in electromagnetics and microwave programs," 8th Int. Conference on Electromagnetics in Advanced Appl. (ICEAA), Conf. Proceedings, pp. 823-824, 2003, Torino, Italy.

257. B. D. Jensen, Z. Wang, Linda Chow, K. Saitou, K. Kurabayashi, and J. L. Volakis, "Integrated Electrothermal of RF MEMS switches for improved power handling capability," NSF Wireless Conference, Hawaii, Nov 2003.
258. R.W. Kindt, K. Sertel, and J.L. Volakis, "Composite Finite Array Analysis with Supporting Structure Using a Mulit-dimensional, mulit-cell hybrid array decomposition-fast multipole method," PIERS Conference, Hawaii, Nov 2003
259. J.L. Volakis, "A concept paper for attracting U.S. students to RF Engineering," NSF Wireless Conference, Hawaii, Nov 2003
260. B. A. Kramer, Ming Lee; Chi-Chih Chen and J. Volakis," GPR implications of miniaturized antenna developments**,** " Proceedings of the 10th International Conf. on Ground Penetrating Radar, Vol. 1 , 21-24 June 2004 Digest pp117 – 119
261. Wang, Z.; Jensen, B.; Volakis, J.L.; Saitou, K.; Kurabayashi, K., "A preconditioner for hybrid matrices arising in RF MEMS switch analysis," 2004 IEEE Antennas and Propagat. Society Symposium, Vol. 3, 20-25 June 2004, pp. 2847 – 2850.
262. T. Yang and J.L. Volakis, "Coupling to wires in cavity enclosure using iterative algorithm**,"** IEEE Antennas and Propagation Society Symposium, Vol. 1 20-25 June 2004, pp. 379 – 382.
263. Y. Bayram and J.L. Volakis, "A generalized MoM-SPICE iterative technique for field coupling to multiconductor transmission lines in presence of complex structures," 2004 URSI EM theory symposium, Pisa, Italy, Digest pp 810-813 (invited)
264. G. Kiziltas and J.L. Volakis, "Automating the design of a band-pass spectral filter with frequency selective surfaces on inhomogeneous substrates," 2004 URSI EM theory symposium, Pisa, Italy, Digest pp 185-187 (invited)
265. J.L. Volakis, "Hybrid Frequency Domain Methods: From Analysis to Design," plenary talk, 2004 URSI EM theory symposium, Pisa, Italy, Digest pp 275-277 (invited).
266. G. Mumcu, K. Sertel, J. L. Volakis, A. Figotin, I. Vitebskiy, 'Propagation Characteristics of Finite non-reciprocal magnetic photonic crystals (MPCs),' 2004 URSI EM theory symposium, Pisa, Italy, Digest pp 651-653.
267. G. Kiziltas , J. L. Volakis, N. Kikuchi and J. Halloran, "Miniature broadband SATCOM antenna design using automated material optimization techniques," 2004 FEM workshop, Madrid, Spain.
268. G. Kiziltas, J. L. Volakis, and N. Kikuchi, "Automated topology design for electromagnetic devices," 8th International Conference on Numerical Methods in Industrial Forming Processes, NUMIFORM, Columbus, OH, June 13-17, 2004
269. B.D. Jensen, Chow, L.W., Webbink, R.F., Saitou, K., Volakis, J.L., and Kurabayashi, K., "Force Dependence of RF MEMS Switch Contact Heating," *Proc.The 17th IEEE International Conference on Micro Electro Mechanical Systems*, Maastricht, The Netherlands, pp. 137-140, Jan. 25-29, 2004.
270. B. D. Jensen, Huwang, K., Chow, L., Saitou, K., Volakis, J.L, and Kurabayashi, K., "Asperity Heating for Repair of Metal Contact RF MEMS Switches," *2004 IEEE International Microwave Symposium*, Fort Worth, Texas, June 6-11, 2004. Vol. 3, pp. 1939 – 1942.
271. B. Kramer, C.-C. Chen and J.L. Volakis, "Design and Performance of an Ultra Wideband Ceramic-Loaded Slot Spiral" 2004 IEEE Int. Symposium on Antennas and Propagation, Digest pp. 1883-1885, Monterey, CA.

272. Lim, C.P.; Kindt, R.W.; Sertel, K.; Volakis, J.L.; Anastasopoulos, A., **"**Propagation studies using rigorous methods for indoor wireless connectivity," 2004 IEEE Antennas and Propagation Society Symposium, Vol. 2, 20-25 June 2004 pp. 1643 – 1646.
273. D. Psychoudakis, S. K. C. Pillai, J. H. Halloran and J. L. Volakis, "Miniaturization of a Bow-Tie Antenna with Textured Dielectric Superstrates," 2004 IEEE Antennas and Propagation Symposium, Digest pp. 2572-2575, Monterey, CA.
274. Carr, M.A.; Volakis, J.L, **"**Spherical patch discretization of k-space for improved interpolation and parallelization of the multilevel fast multipole method**;** IEEE Antennas and Propagation Society Symposium, Vol. 2, 20-25 June 2004, pp. 1219 – 1222.
275. Kiziltas, J. L. Volakis, Kikuchi, J. Halloran, Design of a Miniature Broadband SATCOM Antenna Using Textured Dielectric Loading via Topology Optimization, 2004 IEEE Antennas and Propagation Symposium and URSI Meeting, Digest p. 274, Monterey, CA.
276. J. S. Kula, D. Psychoudakis, C.-C. Chen, J. Volakis, J. Halloran, "Patch Antenna Miniaturization Using Thick Truncated Textured Ceramic Substrates," 2004 IEEE Antennas and Propagation Symposium, pp 3800-3803, Monterey, CA.
277. G. Mumcu, K. Sertel, J. L. Volakis, A. Figotin, I. Vitebskiy, "RF Propagation in Finite Thickness Nonreciprocal Magnetic Photonic Crystals," 2004 IEEE Antennas and Propagation Symposium, Monterey, CA.
278. Fischer, B.E.; Yagle, A.E.; Volakis, J.L., " Electromagnetic optimization of a patch antenna over a textured substrate using total least squares," 2004 IEEE Trans. Antennas and Propagat. Symposium, 2004. IEEE , Vol. 4, June 2004, Digest pp. 4428 – 4431.
279. Burkholder, R.J.; Sertel, K.; Pathak, P.H.; Volakis, J.L.; Navale, S.S.,"Analysis of radiation and coupling associated with large multiple antenna arrays on ships**,"** 2004 EEE Antennas and Propagation Society Symposium, Vol. 3, 20-25 June 2004, pp. 2687 – 2690.
280. R.W. Kindt and J.L. Volakis, "Multi-level decomposition approach to translational symmetry problems of several dimensions**,"** 2004 IEEE Antennas and Propagation Society Symposium, 20-25 June 2004, Vol. 1, pp. 351 – 352.
281. M. Lee, Chi-Chih Chen and John Volakis, Antenna miniaturization using artificial transmission line," Antenna Measurements and Techniques Association (AMTA), Atlanta, Georgia, Oct. 2004 (won best paper award)
282. Brad A. Kramer, Chi-Chih Chen and John L. Volakis," Development of a Mini-UWB Antenna," Antenna Measurements and Techniques Association (AMTA), Atlanta, GA, Oct. 2004.
283. J.L. Volakis, "Hybrid Frequency Domain Methods: from Analysis to Design Applications," Int. Conference on Computational Electromagnetics with Applications (ICCEA), Beijing China, Proceeding pp. PS-5 to PS-8; 2-4 Nov 2004, *invited plenary presentation*
284. J.L. Volakis, "Hybrid Frequency Domain Methods: from Analysis to Design," JINA, Nice France, 7-11 Nov. 2004, *invited plenary presentation*, Digest pp.
285. Volakis, J.L.; Mumcu, G.*; Sertel, K, "Receiving antennas embedded within nonreciprocal magnetic photonic crystals**,"** 2005 URSI National Radio Science Meeting Digest**,** Jan. 2005, Boulder, CO.

286. Mumcu, G.*; Sertel, K.; Volakis, J.L., "Antenna miniaturization using novel magnetic photonic and degenetare band edge crystals**,"** Mediterranean Microwaves Symposium 2005 Digest**,** 6-8 Sep. 2005
287. Volakis, J.L.; Mumcu, G.*; Sertel, K, Miniature antennas within degenerate band edge crystals**,** International Conference on Electromagnetics and Advanced Applications Digest**,** 12-16 Sep. 2005.
288. C. P. Lim, J. L. Volakis, K. Sertel, R. Kindt and A. Anastasopoulos, "Statistical Modeling of Site-specific indoor channels in wireless communications," 2005 IEEE/ACES International Conference on Wireless Communications and Applied Electromagnetics, Honolulu, Hawaii, Digest pp. 474-477..
289. G. Kiziltas* and J. L. Volakis, "Topology Optimization of a Compact UHF Spiral Array Embedded in Textured Dielectric", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
290. Y. Zhou*, G. Kiziltas, S. Koulouridis, and J. L. Volakis, "A miniature Four-Arm Antenna for Tri-band GPS Applications", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
291. C. P. Lim*, J. L. Volakis, and A. Anastasopoulos, "Multi – Ricean Modeling of Site-Specific Indoor Channel in Wireless Communications", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005, Digest pp. 402-405.
292. B. Usner*, K. Sertel, and J. L. Volakis, "Generalized VSIE Formulation for Arbitrary High Contrast Objects", submitted to the 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
293. G. Mumcu*, K. Sertel, and J. L. Volakis, "Superdirective Miniature Antennas Embedded within Magnetic Photonic Crystals", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
294. S. Yarga, K. Sertel and J.L. Volakis, "Chiro-Ferrites for Low-Loss Magnetic Photonic Crystals," USNC/URSI Radio Science Meeting, Washington, DC,July 2005
295. D. Psychoudakis* and J. L. Volakis, "Miniature Wideband UHF Circularly Polarized Antenna Using Textured Dielectric Loading", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
296. B. A. Kramer*, M. Lee, Chi-Chih Chen, J. L. Volakis, "UWB Miniature Antenna Limitations and Design Issues", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
297. Y. Bayram* and J. L. Volakis, "Hybrid S-Parameters for Analysis of Mixed RF-Digital Circuits Subject to External Electromagnetic Interference", 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
298. M. Lee*, Chi-Chih Chen, and J. L. Volakis, "Ultra-Wideband Antenna Miniaturization Using Distributed Lumped Element Loading", submitted to the 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
299. Z. Wang*, L. Chow, J. L. Volakis, K. Saitou and K. Kurabayashi, "Contact Physics Modeling and Optimization Design of RF-MEMS Cantilever Switches", submitted to the 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
300. Z. Khan*, Y. Bayram, and J. L. Volakis, "EM Coupling to Cable Bundles in Shielding Cavities using a Semi-Analytical Iterative Approach", submitted to the 2005 IEEE APS/URSI Symposium, Washington, DC, July 2005.

301. S. Koulouridis*, G. Kiziltas, D. Hansford, and J. L. Volakis, “Design of Polymer Ceramic Composites for Conformal Integrated Antennas”, 2005 IEEE APS/URSI Symposium, Washington, DC, July 2005.
302. B. Usner*, K. Sertel, and J. L. Volakis, “Application of Hierarchical Basis Functions to the Generalized SIE for Simulation of Metamaterial Antennas”, submitted to the 2005 IEEE APS/URSI Symposium, Washington, DC, July 2005.
303. K. Sertel*, R. J. Burkholder, P. H. Pathak, and J. L. Volakis, “Numerical Green's Function Method for Antenna Platform Analysis”, submitted to the 2005 IEEE APS/URSI Symposium, Washington, DC, July 2005.
304. Taesik Yang and J. L. Volakis, “EMI Effects on Printed Circuit Boards Enclosed within Multilayer Cavities with Apertures”, submitted to the 2005 IEEE APS/URSI Symposium, Washington, DC, July 2005.
305. R. W. Kindt*, P. Japungdee, P. H. Pathak, and J. L. Volakis, “Analysis of Large Finite Arrrays Integrated Into Curved Platforms”, submitted to the 2005 IEEE APS/URSI Symposium, Washington, DC, July 2005.
306. C. P. Lim, J. L. Volakis, K. Sertel, R. W. Kindt, and A. Anastasopoulos, “Statistical Modeling of Site-specific Indoor Channels in Wireless Communications”, IEEE/ACES International Conference on Wireless Communications and Applied Computational Electromagnetics, 2005.
307. B. E. Fischer*, A. E. Yagle and J. L. Volakis, “On the Eigen-Decomposition of Electromagnetic Systems and the Frequency Dependence of the Associated Eigenvalues”, submitted to the 2005 IEEE Antennas and Propagation Conference, Washington, DC, July 2005.
308. Y. Bayram and J.L. Volakis, “A Novel Technique for Concurrent On & Off - Board EMI Analysis of Mixed RF-Digital Circuits via Hybrid Scattering Parameters” 2005 IEEE Electromagnetic Compatability Conference, Chicago, Illinois, Digest pp. xxx-xxx (best paper award runner-up; received 2005 IEEE EMC Society Leo L. Beranek Student Grant Award)
309. Y. Bayram and J.L. Volakis, “A Hybrid MoM-SPICE Technique for Field Coupling Analysis ofTransmission Lines in Presence of Complex Structures,” 2005 IEEE Electromagnetic Compatability Conference, Chicago, Illinois, Digest pp. xxx-xxx
310. G. Mumcu, K. Sertel and J.L. Volakis, “Antenna Miniaturization Using Novel Magnetic Photonic and Degenerate Bandgap Crystals,” Mediterranian Microwave Symposium, 6-8 Sept 2005, National Technical Univ of Athens, Greece, Symposium Digest pp. 45-49.
311. P. Janpugdee, P.H. Pathak, R.W. Kindt, R.J. Marhefka and J.L. Volakis, “A Hybrid Numerical-UTD Analysis of Large Arrays on a Large Platform,” ICEAA, 12-15 September 2005, Torino, Italy, Symposium Digest pp. 1069-1072.
312. J.L. Volakis, G. Mumcu and K. Sertel, “Antenna Miniaturization using Slow Modes in Magnetic Photonic Crystals,” ICEAA, 12-15 September 2005, Torino, Italy, Symposium Digest pp. 95-98.
313. Chan-Ping Lim and John L. Volakis, "On the Capacity for MIMO Systems in Ricean Fading Indoor Environments", Proceedings of IEEE VTC Fall 2005, Dallas, Texas, USA, September 2005, Digest pp. 1269-1273.
314. J.L. Volakis and Y. Bayram,”EMI/EMC Characterization of Mixed Radio Frequency-Digital Circuits,” URSI General Assembly, October 2005, New Dehli, India (invited)

315. J.L. Volakis, C-C. Chen, G.Mumcu and K. Sertel,"Miniature Antennas and Arrays Using Novel Materials," URSI General Assembly, October 2005, New Dehli, India (invited)
316. B. Kramer, C-C. Chen, S. Koulouridis, and J.L. Volakis, "A Low Profile UWB Antenna with Embedded Inductive Loading," Antenna Measurement Techniques Associations (AMTA), Newport, RI, USA, Nov. 2005.(paper competition)
317. M. Lee, C-C. Chen, and J.L. Volakis, "Miniaturized Broadband Spiral Antenna on Ground Plane," Antenna Measurement Techniques Associations (AMTA), Newport, RI, USA, Nov. 2005.
318. Y. Zhou, C.C. Chen and J.L. Volakis, "Investigation of Several Miniature Antenna Designs for Tri-band GPS Applications," Antenna Measurement Techniques Associations (AMTA), Newport, RI, USA, Nov. 2005.(paper competition)
319. B. Kramer, M. Lee, C.-C. Chen, and J. Volakis, "Miniature UWB Antenna with Embedded Inductive Loading," 2006 IWAT Metamaterial Antennas (Wedn, March 8,2006)
320. S. Yarga, G. Mumcu, K. Sertel, and J. Volakis, "Degenerate Band Edge Crystals and Periodic Assemblies for Antenna Applications," 2006 IWAT Metamaterial Antennas (Wedn 14:30, March 8,2006)
321. B. C. Usner, K. Sertel and J. L. Volakis **"**A Hybrid VSIE Method for Periodic Media and Metamaterials," 2006 Applied Computational Electromagnetics Conference, Miami, FL, 2006 (*received 3rd best paper award*).
322. J.L. Volakis, "Metamaterial Analysis and Phenomenology for Antenna Applications" 2006 Applied Computational Electromagnetics Conference, Miami, FL, 2006 (*plenary talk)*
323. R. J. Burkholder, R. W. Kindt, P. H. Pathak, K. Sertel, R. J. Marhefka and J. L. Volakis, ``Generalized Hybrid Approach for Antenna Platform Analysis," 2006 Applied Computational Electromagnetics Conference, Miami, FL, 2006.
324. R. Emrick and J.L. Volakis, "Antenna Requirments for Short Range High Speed Wireless Systems Operating at Millimeter-Wave Frequenices (Paper #1747), 2006 Int. Microwave Theory Symposium, San Francisco, CA, 2006
325. S. Yarga, K. Sertel, and J. L. Volakis, "Degenerate Band Edge Crystals and Periodic Assemblies for High Gain Antennas," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM,
326. D. Psychoudakis, S. Koulouridis and J. L. Volakis, "Magneto-Dielectric Antenna Designs Using Material and Metallic Genetic Algorithm Optimization," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
327. S. Koulouridis, D. Psychoudakis and J. L. Volakis, "Multifrequency Metallo-Material Antenna Optimization," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
328. T. Peng, S. Koulouridis, J. L. Volakis and C-C. Chen, "Analysis and Optimization of Miniaturized Broadband Conical Helical Antenna," *2006 URSI/IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
329. C. P. Lim, R. J. Burkholder, J. L. Volakis, and R. J. Marhefka, "Propagation Modeling of Indoor Wireless Communications at 60 GHz," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM, pp. 2149-2152

330. J. L. Volakis, K. Sertel, G. Mumcu and S. Yarga, "Frozen Modes in Bounded Photonic Crystals for High Gain Antennas," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM, (invited special session paper).
331. M. Lee, B. A. Kramer, C-C. Chen, and J. L. Volakis, "Broadband Spiral Antenna Miniaturization Limit," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
332. G. Mumcu, K. Sertel, and J. L. Volakis, "Full Wave Modeling of Miniature Antennas Embedded within 3D Finite Electromagnetic Bandgap Structures," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
333. T. Yang and J. L. Volakis, "Aperture Coupling Method for EMI Analysis of Microwave Circuits within Multilayer Cavities," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
334. Y. Bayram, C. Chang, K. Kim, S.K. Myoung, S.J. Doo, P. Roblin, A.Iliadis, and J. L. Volakis, "Experimental and Theoretical Analysis of RF and Digital Systems in Presence of Complex Platforms Subject to Electromagnetic Interference," *2006 URSI/IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
335. B. A. Kramer, C-C. Chen and J. L. Volakis, "Miniature UWB Conformal Aperture via Volumetric Inductive Loading," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
336. J. L. Volakis, B. C. Usner, and K. Sertel, "Hybrid Volume-Surface Integral Equation Method for High Contrast Composite Media and Metamaterials," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM, (invited special session paper).
337. K. Sertel and J. L. Volakis, "Band-Diagrams and Wave Properties in Dispersive Media," *2006 URSI/IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM, (invited special session paper).
338. Y. Zhou, C-C. Chen and J. L. Volakis, "Proximity-Coupled Stacked Patch Antenna for Tri-band GPS Applications," *2006 IEEE Antennas and Propagation Society International Symposium*, Albuquerque, NM.
339. J.L. Volakis and K. Sertel, "Anisotropic Periodic Assemblies and Metamaterials For Applications to Antennas and Microwave Devices," Int. Symposium Antennas and Propagation Symp (ISAP), *Invited Plenary Paper*, Singapore, Nov 1-4, 2006, 6pp. proceedings paper
340. J.L. Volakis, "Anisotropic Metamaterials and Their Fabrication For Applications to Antennas and Microwave Devices**"** European Antennas and Propagation Symposium (EuCAP), *Invited Plenary Talk, Nice*, France, Nov. 6-10, 2006; 6pp proceedings paper
341. Chi-Chih Chen, Brad A. Kramer, Ming Lee and John L. Volakis, "Miniature UWB Antenna Design and Its Limitations," European Antennas and Propagation Symposium (EuCAP), Nice, France, Nov. 6-10, 2006; 4pp proceedings paper
342. K. Sertel, J.L. Volakis and Loeker, "Layered Anisotropic Media Modeled with Equivalent Microstrip Lines," European Antennas and Propagation Symposium (EuCAP), Nice, France, Nov. 6-10, 2006; 5pp proceedings paper
343. J. L. Volakis, J-F. Lee, R. J. Burkholder and K. Sertel, "Hybrid Methods for Large Antennas and Periodic Arrays in Isolation and on Platforms," European Antennas and Propagation Symposium (EuCAP), Nice, France, Nov. 6-10, 2006; 4pp proceedings paper

344. M. Shalaby, Z. Wang, L. Chow, B. Jensen, J. Volakis, K. Kurabayashi, K. Saitu, "Robust Design of RF-MEMS Cantilever Switches using Contact Physics Modeling**",** 2006 ASME Int. Mechanical Engineering Congress and Exposition, Nov. 5-10, 2006, Chicago, IL.
345. J.L. Volakis, K. Sertel, C.-C. Chen, "Miniature Antennas & Arrays Embedded within Magnetic Photonic Crystals and Other Novel Materials," 25th ARMY Symposium, Nov 27-30, 2006 (Orlando) and IDGA Military Antenna Systems, Sept 19-20, 2006 (Arlington, VA).
346. L. Zhang, G. Mumcu, K. Sertel, J.L. Volakis, H. Verweij, "High-gain magnetic photonic assembly antennas for GHz frequencies," 2007 TMS Annual Meeting & Exhibition, Feb. 25-Mar. 1, Orlando, FL.
347. J.L. Volakis, K. Sertel. H. Verweij, "Periodic Materials and Printed Structures for Miniature Antennas," 2007 Int. Workshop on Antenna Technologies (IWAT) conference, Cambridge, England, U.K., March 2007 (invited keynote presentation).
348. J.L. Volakis and K. Sertel, Loughborough Antennas and Propagation Conference (LAPC), Loughborough, England, 1-2 April 2007.
349. J.L. Volakis and K. Sertel, "Slow wave structures for miniature antennas," Int Workshop on Anti-Counterfeiting and Indentification, Xiamen University, Xiamen, China, 16-18 April 2007 (invited keynote presentation)
350. J.L. Volakis and G. Kiziltas, "Novel Materials for RF Devices," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
351. K. Browne, C-C. Chen and J.L. Volakis, "A Novel Radiator for a 2.4 GHz Wireless Unit to Monitor Rail Stress and Strain from a Train Mounted Receiver," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
352. Y. Bayram, P.C.Chang, R.J. Burkholder and J.L. Volakis, "Hybrid Semi-Analytical Technique for Modeling Brick Walls at High Frequencies," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
353. S. Koulouridis and J.L. Volakis, "Novel Textured, Small Aperture, Thin Patch for L-Band Satellite Communications," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
354. S. Koulouridis and J.L. Volakis, "Minimization of Flare Dipole via Shape Optimization and Matching Circuits," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
355. B.A. Kramer, C-C. Chen and J.L. Volakis, "Optimization of an Inductively Loaded Log-Spiral Antenna," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
356. B.A. Kramer, M. Lee C-C. Chen and J.L. Volakis, „A Miniature Conformal Spiral Antenna using Inductive and Dielectric Loading," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
357. C-C. Chen, B.A. Kramer and J.L. Volakis, "Considerations on Size Reduction of UWB Antennas," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
358. J.L. Volakis, C-C. Chen, J. Halloran and S. Koulouridis, "Miniature VHF/UHF Conformal Spirals with Inductive and Ferrite Loading," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.

359. G. Mumcu, K. Sertel and J.L. Volakis, "Printed Coupled-lines Emulating Anisotropic Materials for Miniature Antenna Design," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
360. D. Psychoudakis, C-C. Chen and J.L. Volakis, "Optimizing Wearable UHF Antennas for On-Body Operation," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
361. S. Yarga, K. Sertel and J.L. Volakis, "Finite Degenerate Band Edge Crystals Using Barium Titanate-Alumina Layers Emulating Uniaxial Media for Directive Planar Antennas," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
362. Y. Zhou, C-C. Chen and J.L. Volakis, "Tri-band Miniature GPS Array with a Single-fed CP Antenna Element," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
363. Z.A. Khan, Y. Bayram and J.L. Volakis, "Hybrid S-Parameters for Modeling Cavity-Cable-PCB Interactions," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
364. R.M. Emrick and J.L. Volakis, Inductively Loaded Millimeter-Wave Spiral Array on Silicon," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
365. I.J. Gupta, C-C. Chen, M. Lee, A. O'Brien and J.L. Volakis, "Adaptive Small Conformal Antenna of Spiral Elements for GNSS Receivers," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
366. E.C. Jones, V, Verma, J.L. Volakis and M. Jiang, "How RFID Reliability Effects Inventory Control Accuracy," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
367. M.D. Valerio and J.L. Volakis, "Design of Frequency Selective Surface as Antenna Ground Planes Using a Modular Distributed Optimization Framework," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
368. R.J. Burkholder, P. Chang, Y. Bayram, R.J. Marhefka and J.L. Volakis, "Model-Based Near-Field Imaging of Objects Inside a Room," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
369. E. Apaydin, D. Hansford, S. Koulouridis and J.L. Volakis, "Integrated RF Circuits Design and Packaging in High Contrast Ceramic-Polymer Composites," 2007 IEEE Antennas and Propagation Society Conference, Honolulu, Hawaii, USA, June 2007.
370. J.L. Volakis and Kubilay Sertel, "Metamaterials and novel printed circuits for narrowband and ultrawideband antennas," Mediterranean Microwave Symposium, Budapest, Hungary, May 13-15, 2007, symposium proceedings, pp. 15-18.
371. G. Mumcu, K. Sertel, and J.L. Volakis, "Printed Antennas Using Novel Propagation Modes of Periodic Structures", *submitted to International Symposium on Antennas and Propagation, ISAP-2007*, August 20-24, 2007, Toki Messe, Niigata, JAPAN
372. I. Tzanidis, C-C. Chen, D. Hansford, J.L. Volakis, "Spiral Antenna Miniaturization Using Variable Magnetic Material Loading", USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
373. F. Erkmen, C-C. Chen, J.L. Volakis, "Wide-band Conformal Antenna Design Using Ferrite Loaded Ground Planes", USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007

374. T. Peng, C-C. Chen, J.L. Volakis, “Multifunctional Broadband CP Boresight Antenna with Simultaneous Miniaturized Wideband Horizontal Coverage”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
375. D. Psychoudakis, C-C. Chen, J.L. Volakis, “Wearable Antenna Optimization and Fabrication for VHF/UHF Applications”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
376. M. Valerio, K. Sertel, J.L. Volakis, “Automated Design of Engineered Metamaterials via the Finite Element Method integrated with Optimization Tools on Distributed Platforms”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
377. J.S. Kula, K. Sertel, P.H. Pathak, J.L. Volakis, “Efficient design, Simulation and Analysis of 3-D Infinitely Periodic Metamaterial Arrays”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
378. T. Lertwiriyaprapa, P.H. Pathak, J.L. Volakis, “A UTD for the Radiation by Sources near Thin Planar Positive or Negative Material Structures with a Discontinuity”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
379. R.J. Burkholder, P. Chang, Y. Bayram, R.J. Marhefka, J.L. Volakis, “Through-Wall Imaging of Building Interiors: Electromagnetic Modeling and Experimental Validation”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007
380. J-Y Chung, K. Sertel, J.L. Volakis, “Free-Space Measurement Using Gaussian Distributed Planar Scanning System”, USNC/URSI National Radio Science Meeting, Ottawa, ON, Canada, July 22 - 26, 2007.
381. Titipong Lertwiriyaprapa, P.H. Pathak, and J.L. Volakis "A UTD for the Radiation by Sources near Thin Planar Metamaterial Structures with a Discontinuity", 2007 Asia-Pacific Microwave Conference.
382. I. Tzanidis, C-C. Chen, and J.L. Volakis, "Antenna miniaturization using impedance-matched ferrites", 2007 Antenna Measurement and Techniques Association (AMTA), St Louis, MO, November 2007
383. F. Erkmen, C-C. Chen, and J.L. Volakis, "UWB Magneto-Dielectric Ground Plane For Low Profi le Antenna Applications", 2007 Antenna Measurement and Techniques Association (AMTA), St Louis, MO, November 2007
384. B. E. Fischer, J.L. Volakis, and A E. Yagle, "Computation And Use Of Characteristic Frequency Modes For Patch Antenna Design", 2007 Antenna Measurement and Techniques Association (AMTA), St Louis, MO, November 2007.
385. J. Kasemodel, C-C. Chen, I.J. Gupta, and J.L. Volakis, "Compact Wideband Antenna Array For GNSS Receivers", 2007 Antenna Measurement and Techniques Association (AMTA), St Louis, MO, November 2007
386. J. L. Volakis, K. Sertel and S. Ghosh, “Multiphysics Tools for Load Bearing Antennas Incorporating Novel Materials”, 2nd European Conference on Antennas and Propagation (EuCAP 2007), Edinburgh, UK, November 2007.
387. J. L. Volakis, K. Sertel and G. Mumcu, “Emulating Anisotropy to Form Novel Low Cost Printed Metamaterial Antennas”, 2nd European Conference on Antennas and Propagation (EuCAP 2007), Edinburgh, UK, November 2007.
388. R. S. Awadallah, D. E. Freund, C. R. Sprouse, R. J. Burkholder, R. J. Marhefka, C.-L. Chang, J. L. Volakis, E. J. Baranoski, "Propagation Modeling and Validation in the DARPA VisiBuilding Program", USNC-URSI, Session BS9, Boulder, Co., Jan. 2008

389. P. C. Chang, R. J. Burkholder, J. L. Volakis, R. J. Marhefka, "Model-Based CLEAN Algorithm for Through-Wall Radar Image Enhancement", USNC-URSI, Session BS9, Boulder, Co., Jan. 2008
390. K.E. Browne, J.L Volakis, C-C Chen, "Miniaturized Active RFID Sensor Tags for Use in a Robust Container Monitoring System", USNC-URSI, Session BS9, Boulder, Co., Jan. 2008
391. I. Tzanidis, C.-C. Chen, J. L. Volakis, "Ferrite loaded Volumetric Spiral Antenna", USNC-URSI, Session BS10, Boulder, Co., Jan. 2008
392. G. Mumcu, K. Sertel, J. L. Volakis, "Miniature Antenna Using Printed Coupled Lines Emulating Degenerate BandEdge Crystals", USNC-URSI, Session BS10, Boulder, Co., Jan. 2008
393. S. Koulouridis, J. L. Volakis, "Passive and Active Circuit Matching for VHF Antennas", USNC-URSI, Session BS10, Boulder, Co., Jan. 2008
394. D. Psychoudakis, C.-C. Chen, J. L. Volakis, "Polarization and Spatial Diversity for Wearable Antennas", USNC-URSI, Session BS11, Boulder, Co., Jan. 2008
395. F. Erkmen, C-C Chen and J.L. Volakis, "Low Profile Magneto-Dielectric Ground Plane for Ultra-Wideband Antennas," ACES Conference, Niagara Falls, April 2008,
396. Salih Yarga, Kubilay Sertel, and John L. Volakis, "Directive Multilayer Dielectric Resonator Antenna Design using Degenerate Band Edge Modes," ACES Conference, Niagara Falls, April 2008
397. T. Peng, K. Sertel, J. L. Volakis,"Overlapping Domain Decomposition Finite Element Method for Modeling Intricate Detail in Natural and Engineered Host Media", 9th International Workshop on Finite Elements for Microwave Engineering, pp. 58, May 8-9, Bonn, Germany
398. Y. Bayram, Y. Zhou, J. L. Volakis, B-S Shim, N. Kotov, "Conductive Textiles and Polymer-Ceramic Composites for Novel Load Bearing Antennas", IEEE APS/URSI International Symposium, San Diego, CA July 2008.
399. Titipong Lertwiriyaprapa, P. H. Pathak and J. L. Volakis, "Electromagnetic Diffraction by a Thin Planar Positive/Negative Material Half Pllane" Asia-Pacific Symposium on Applied Electromagnetics and Mechanics 2008 (APSAEM08), Thailand, 24 July 2008
400. P. C. Chang, R. J. Burkholder, J. L. Volakis, *Through-Wall Building Image Improvement via Signature-Based CLEAN*,APS-USNC/URSI, Session IF218, San Diego, CA, July 2008.
401. R. J. Burkholder, R. J. Marhefka, J. L. Volakis, *Radar Imaging Through Cinder Block Walls and Other Periodic Structures,*APS-USNC/URSI, Session IF218, San Diego, CA, July 2008.
402. R. M. Emrick, J. L. Volakis, *On Chip Spatial Power Combining for Short Range Millimeter-Wave Systems,* APS-USNC/URSI, Session 102, San Diego, CA, July 2008.
403. D. Psychoudakis, W. Moulder, C.-C. Chen, H. Zhu, J. Volakis, *A Portable Low Power Harmonic Radar System for Insect Tracking,* APS-USNC/URSI, Session 122, San Diego, CA, July 2008.
404. T. Peng, C.-C. Chen, J. Volakis, *Low Profile Broadband Antenna Design*, APS-USNC/URSI, Session 137, San Diego, CA, July 2008.
405. R. J. Burkholder, P. C. Chang, R. J. Marhefka, J. L. Volakis, *UTD Ray Tracing for Building Imaging Studies,* APS-USNC/URSI, Session 201, San Diego, CA, July 2008.

406. J. L. Volakis, *Ray Solutions for Diffraction by Impedance and Material Coated Wedges*, APS-USNC/URSI, Session 201, San Diego, CA, July 2008.
407. Y. Bayram, Y. Zhou, J. L. Volakis, *Conductive Textiles and Polymer-Ceramic Composites for Novel Load Bearing Antennas*, APS-USNC/URSI, Session 227, San Diego, CA, July 2008.
408. S. Koulouridis, M. Livadaru, J. L. Volakis, *Antenna Minimization with Active and Passive Matching Circuits*,APS-USNC/URSI, Session 229, San Diego, CA, July 2008
409. D. Psychoudakis, C.-C. Chen, J. L. Volakis, *Wearable UHF Antenna for Squad Area Networks(SAN)*,APS-USNC/URSI, Session 231, San Diego, CA, July 2008.
410. G.-Y. Lee, D. Psychoudakis, C.-C. Chen, J. L. Volakis, *MIMO for Body-Worn Antennas: Approach and Measurements*,APS-USNC/URSI, Session 231, San Diego, CA, July 2008.
411. M. D. Valerio, J. L. Volakis, *Idle CPU Resource Farming for Electromagnetic Simulation and Optimization with Applications in FSS and Antenna Design*, APS-USNC/URSI, Session 312, San Diego, CA, July 2008
412. Y. Zhou, C.-C. Chen, J. L. Volakis, *A Single-Fed Element Antenna for Tri-Band anti-Jamming GPS Arrays*,APS-USNC/URSI, Session 323, San Diego, CA, July 2008.
413. E. Apaydin, Y. Zhou, D. Hansford, S. Koulouridis, J. L. Volakis, *Patterned Metal Printing on Pliable Substrates for RF Design*, APS-USNC/URSI, Session 401, San Diego, CA, July 2008.
414. G. Mumcu, K. Sertel, J. L. Volakis, *Printed Coupled Lines with Lumped Loads for Realizing Degenerate Band Edge and Magnetic Photonic Crystal Modes*, APS-USNC/URSI, Session 402, San Diego, CA, July 2008.
415. B. A. Kramer, C.-C. Chen, J. L. Volakis, *Some Basic Guidelines for Miniaturizing UWB Antennas*, APS-USNC/URSI, Session 412, San Diego, CA, July 2008.
416. I. Tzanidis, C.-C. Chen, J. L. Volakis, *Smaller UWB Conformal Antennas for VHF/UHF Applications with FerroDielectric Loadings*, APS-USNC/URSI, Session 424, San Diego, CA, July 2008.
417. F. Erkmen, C.-C. Chen, J. L. Volakis, *UWB Low Profile Antennas Using Ferrite Loaded GP*, APS-USNC/URSI, Session 424, San Diego, CA, July 2008.
418. Y. Zhou, E. Apaydin, S. Koulouridis, Y. Bayram, D. Hansford, J. L. Volakis, *High Conductivity Printing on Polymer-Ceramic Composites*, APS-USNC/URSI, Session 428, San Diego, CA, July 2008.
419. J.-Y. Chung, K. Sertel, J. L. Volakis, *Synthetic Aperture Gaussian Beam Measurement System for Wideband Characterization of RF Materials and Metamaterials*, APS-USNC/URSI, Session 436, San Diego, CA, July 2008.
420. S. Yarga, K. Sertel, J. L. Volakis, *Highly Directive Dielectric Resonator Antennas Operating at Higher Order Degenerate Band Edge Modes*, APS-USNC/URSI, Session 503, San Diego, CA, July 2008.
421. J. A. Kasemodel, C.-C. Chen, I. J. Gupta, J. L. Volakis, *Miniature Continuous Coverage Wideband GPS Antenna Array*, APS-USNC/URSI, Session 521, San Diego, CA, July 2008.
422. I. Tzanidis, S. Koulouridis, K. Sertel, D. Hansford, J. Volakis, *Characterization of Low-Loss Magnetodielectric Composites for Antenna Size Reduction*, APS-USNC/URSI, Session 522, San Diego, CA, July 2008.
423. E. Irci, K. Sertel, J. L. Volakis, *Unidirectional Transmission Characteristics of Printed Magnetic Photonic Crystals*, APS-USNC/URSI, Session 525, San Diego, CA, July 2008.

424. J.-Y. Chung, K. Sertel and J. L. Volakis, "A non-invasive metamaterial characterization system using synthetic gaussian aperture", *XXIX URSI General Assembly*, Session A06.6, Chicago, IL., USA, 2008 (Wedn, 10am, Columbus IJ)
425. T. Lertwiriyaprapa, P. H. Pathak and J. L. Volakis, "An approximate utd ray solutionfor skew incidence diffraction by material coated wedges of arbitrary angle", *XXIX URSI General Assembly*, Session B02.3, Chicago, IL., USA, 2008. (Wedn, 2:20pm, Grand B)
426. Y. Bayram, J. L. Volakis and Z. Khan, "Hybrid s-parameters for emi/emc analysis of electronic systems", *XXIX URSI General Assembly*, Session EB.7, Chicago, IL., USA, 2008 (10:20am, Thursday, Columbus, CD)
427. J. L. Volakis & K. Sertel, "Antennas and RF components using dispersion engineered coupled microstrip transmission lines", *XXIX URSI General Assembly*, Session B04.8, Chicago, IL., USA, 2008. (Friday, 2:20pm, Grand B)
428. P. C. Chang, R. J. Burkholder, R. J. Marhefka and J. L. Volakis, "Diffraction coefficients for dielectric wedges and corners with application to monostatic building imaging", *XXIX URSI General Assembly*, Session B07.6, Chicago, IL., USA, 2008 (Monday, 10am, Grand B)
429. D. Psychoudakis, G. Y. Lee, C.-C. Chen and J. L. Volakis, "Body-worn diversity antennas for squad area networks (SAN)", *XXIX URSI General Assembly*, Session BCK.2, Chicago, IL., USA, 2008 (Tues, 1pm, Grand B)
430. S. Yarga, K. Sertel and J. L. Volakis, "Highly directive degenerate band edge crystal-type resonator antenna", *XXIX URSI General Assembly*, Session BDPS4.4, Chicago, IL., USA, 2008. (Thursday, 3:40pm, Poster)
431. Titipong Lertwiriyaprapa, P.H. Pathak, and J.L. Volakis, "An approximate UTD ray solution of an oblique EM wave diffraction at a junction between two different thin planar material slabs on ground plane" 2008 International Symposium on Antennas and Propagation (ISAP'08), Taipei, Taiwan. (**won best paper award**)
432. Y. Zhou, Y. Bayram, L. Dai and J. L. Volakis, "Conductive Polymer-Carbon Nanotube Sheets for Conformal Load Bearing Antennas", 2009 USNC/URSI Meeting, BS1-4, Boulder, CO (won 3rd best paper award)
433. W. F. Moulder, J. L. Volakis, R. M. Emrick, "A Low-Cost Broadband 60 GHz Beamforming Array with Integrated CMOS Components",2009 USNC/URSI Meeting, BS1-6**,** Boulder, CO.
434. J. Zhao, C. -C. Chen, J. L. Volakis, "Low-profile Inverted-hat Monopole Antennae for UWB Application", 2009 USNC/URSI, B1-4**,** Boulder, CO.
435. J.-Y. Chung, K. Sertel, J. L. Volakis, "Permittivity and Permeability Characterization of Engineered Composites", 2009 USNC/URSI Meeting, AS1-6, Boulder, CO
436. E. Irci, K. Sertel, J. L. Volakis, "Miniature Antenna Using Coupled Microstrip Lines Emulating Magnetic Photonic Crystals", 2009 USNC/URSI Meeting, BDS1-7, Boulder, CO.
437. G.-Y. Lee, D. Psychoudakis, C.-C. Chen, J. L. Volakis, "Diversity Evaluation for Multiple Body-Worn Antennas", 2009 USNC/URSI Meeting, BKS1-5, Boulder, CO.
438. P. C. Chang, R. J. Burkholder, J. L. Volakis, "Adaptive CLEAN with Target Refocusing for Through-Wall Image Improvement", 2009 USNC/URSI, C1-4, Boulder, CO.
439. Xi Yang, P. Roblin, D. Chaillot, S. Mutha, J. Strahler, J. Kim, M. Ismail, J. Wood and J. Volakis, "Fully Orthogonal Multi-Carrier Predistortion Linearization," 2009 IEEE International Microwave Symposium, Boston, MA, Proc. pp. 1077-1080, 7-12 June 2009.

440. S. Mutha, P. Roblin, D. Chaillot, Xi Yang, Jiwoo, Kim, Jeff Strahler,Roberto Rojas, John Volakis, “Techniques for Joint Balancing of IQ Modulator-Demodulator Chains in Wireless Transmitters,” 2009 IEEE International Microwave Symposium, Boston, MA, Proc. pp. 221-224, 7-12 June 2009
441. Jing Zhao, Chi-Chih Chen, John L. Volakis, “Ultra-wideband Triple-Ellipse Inverted-Hat Antenna for Aircraft Communications,” 2009 Applied Computational Electromagnetics Society (ACES) Conference, Monterey, CA, March 2009.
442. J. L. Volakis, K. Sertel, Y. Bayram, “25 Years of Progress in Integral and Hybrid Finite Element Methods for Electromagnetics: from Analysis to Design,” 2009 Applied Computational Electromagnetics Society (ACES) Conference, Monterey, CA, March 2009.
443. Yijun Zhou, Chi-Chih Chen, John L. Volakis, “A Miniature Dual-band GPS Antenna with Slot Loading,” 2009 Applied Computational Electromagnetics Society (ACES) Conference, Monterey, CA, March 2009.
444. V. Sarangan, J. Kunthong, X. Cai, S.T.S. Bukkapatnam, R. Komanduri, J.L. Volakis, 'A Low-cost, Small-footprint Wireless Sensor for Container Integrity Monitoring,” 6th IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2009), 2009
445. Yijun Zhou, Yakup Bayram, Liming Dai and John L. Volakis,”Conformal Load-Bearing Polymer-Carbon Nanotube Antennas and RF Front-Ends,” 2009 IEEE Antennas and Propagation Symposium, Charleston, SC., June 1-7,2009
446. K. Sertel, J.L. Volakis, and E. Irci, “Small Wideband Antennas Based on Magnetic Photonic Crystals,” 3rd International Congress on Advanced EM Materials in Microwaves and Optics, London, UK, 1-4 Sept 2009.
447. N. Apaydin, K. Sertel, and J.L. Volakis, “3-D Artificial Media Exhibiting Degenerate Band Edge and Frozen Modes,”*2009 IEEE Antennas and Propagation Society Symposium*, June 2009, Charleston, SC.
448. G. Mumcu, K. Sertel, and J.L. Volakis, “Printed Degenerate Band Edge Antennas Loaded with Varactor Diodes,” *2009 IEEE Antennas and Propagation Society Symposium*, Charleston, SC, June 2009
449. S. Yarga, K. Sertel, and J.L. Volakis, “Non-reciprocal Radiation using Magnetic Photonic Crystals,” *2009 IEEE Antennas and Propagation Society Symposium*, Charleston, SC, June 2009.
450. E. Irci, K. Sertel, and J.L. Volakis, “Antenna Miniaturization Using Coupled Microstrip Lines Emulating Magnetic Photonic Crystals,”*2009 IEEE Antennas and Propagation Society Symposium*, Charleston, SC, June 2009
451. W. F. Moulder, R. M. Emrick, J. L. Volakis, "PTFE Based 60 GHz Array for Active CMOS Integration,” APS/URSI-A, Session 110, Charleston, SC., 2009
452. T. Peng, K. Sertel, J. Volakis, "Fully Overlapping Domain Decomposition Method" APS/URSI-B, Session 125, Charleston, SC., 2009
453. Y. Bayram, J. L. Volakis, "EMI/EMC Analysis of “Black Box” Line Replaceable Units Via Hybrid Circuit/Computational EM Tools", URSI-E, Session 134, Charleston, SC., 2009
454. Y. Zhou, C.-C. Chen, J. L. Volakis, "A Compact 4-Element Dual-Band GPS Array" APS/URSI-A, Session 205, Charleston, SC., 2009

455. G. C. Trichopoulos, G. Mumcu, K. Sertel, L. H. Mosbacker, Y. Tang, Z. Zhang, P. Fay, J. Volakis, "A Focal Plane Imaging Array for High Sensitivity Direct Detection of Excised Tissue Characteristics", URSI-K, Session 209, Charleston, SC., 2009
456. M. Livadaru, C.-C. Chen, J. Volakis, "A Passive Matching Network Design for a Wideband VHFUHF Antenna", URSI-A, Session IF213, Charleston, SC., 2009
457. G.-Y. Lee, D. Psychoudakis, C.-C. Chen, J. L. Volakis, "A Novel Evaluation Method for Body-Worn Radio Systems", APS, Session 220, Charleston, SC., 2009
458. K. E. Browne, R. J. Burkholder, J. L. Volakis,, "Low-Cost Flat-Panel Array for Through Wall Opportunistic Sensing", APS/URSI, Session 225, Charleston, SC., 2009
459. S. Koulouridis, J. L. Volakis, "Non-Foster Circuits for Small Broadband Antennas", APS/URSI-B, Session 234, Charleston, SC., 2009
460. Y. Zhou, Y. Bayram, L. Dai, J. L. Volakis, "Conformal Load-Bearing Polymer-Carbon Nanotube Antennas and RF Front-Ends", APS/URSI, Session 301, Charleston, SC., 2009
461. E. Apaydin, Y. Zhou, S. Koulouridis, J. L. Volakis, D. Hansford, "Multilayer Printing on PDMS-Ceramic Composites for RF Integration and Packaging", APS, Session 311, Charleston, SC., 2009
462. U. Olgun, D. Psychoudakis, C.-C. Chen, J. L. Volakis, "High Gain Lightweight Array for Harmonic Portable RFID RADAR", APS/URSI, Session 327, Charleston, SC., 2009
463. H. Moon, C.-C. Chen, J. L. Volakis, "Quad Split Ultrawideband Inverted-Hat-Antenna with Pattern and Polarization Diversity", APS/URSI-B, Session 409, Charleston, SC., 2009
464. J. A. Kasemodel, C. C. Chen, J. L. Volakis, "A Miniaturization Technique for Wideband Tightly Coupled Phased Arrays", APS, Session IF416, Charleston, SC., 2009
465. J. Zhao, C.-C. Chen, J. L. Volakis, "A Novel Low-Profile Frequency-Independent Inverted-Hat Antenna for UWB Application", APS, Session 427, Charleston, SC., 2009
466. N. Apaydin, K. Sertel, J. L. Volakis, "3-D Artificial Media Exhibiting Degenerate Band Edge and Frozen Modes", APS, Session 502, Charleston, SC., 2009
467. I. Tzanidis, C.-C. Chen, J. L. Volakis, "Low Profile, Cavity Backed Spiral on Thin Ferrite Ground Plane for High Power Operation above 200MHz", APS, Session 506, Charleston, SC., 2009
468. R. J. Burkholder, J. L. Volakis, "Time-Reversal Radar Imaging Through Periodic Structures", APS/URSI-B, Session 510, Charleston, SC., 2009.
469. J.A. Kasemodel, C.C. Chen, J.L. Volakis, "A novel non-symmetric tightly coupled element for wideband phased array apertures," in *Proc. Antennas Applications Symposium*, Allerton, IL, Sept. 2009
470. Jing Zhao, Shenario Ezhil Valavan A, Chi-Chih Chen, John L. Volakis, “Compact 11-Ellipse Inverted-Hat Antenna for UWB Operations”, 2009 Antenna Measurement and Techniques Association (AMTA), Salt Lake City, UT, November, 2009
471. Gil-Young Lee, Dimitris Psychoudakis, Chi-Chih Chen, and John L. Volakis, “Systematic Design Approach For Diversity Antenna Systems”, 2009 Antenna Measurement and Techniques Association (AMTA), Salt Lake City, UT, November, 2009
472. J. Mahaffey, K. Sertel, and J. L. Volakis, “On the Implementation of Fast-Iterative Solvers on Graphical Processor Units,” *URSI National Radio Science Meeting*, Boulder, CO, Jan 2010.
473. W. Moulder, W. Khalil, and J. L. Volakis, “60 GHz Volumetric Switched Beam Array,” *URSI National Radio Science Meeting*, Boulder, CO, Jan 2010.

474. I. Tzanidis, K. Sertel, and J. L. Volakis, “Interweaved Spiral Array (ISPA) Providing a 10:1 Bandwidth in Conformal Installations,” *URSI National Radio Science Meeting*, Boulder, CO, Jan 2010.
475. S. E. Amaldoss, D. Psychoudakis, C. C. Chen, and J. L. Volakis, “Low Profile Top-Loaded Cone Antenna for VHF to UHF Operation,” *URSI National Radio Science Meeting*, Boulder, CO, Jan 2010.
476. William F. Moulder, Waleed Khalil and John L. Volakis, “Volumetric Switched Beam Array at the 60 GHz Band for High Data Rate Connectivity,” GOMACTech, 2010.
477. J.L.Volakis, J.A. Kasemodel, C.C. Chen, K. Sertel and I Tzanidism Wideband Conformal Metamaterial Apertures,” International Workshop on Antnena Technologies (IWAT), Lisbon, Portugal, March 2010.
478. J. L. Volakis, K. Sertel, I. Tzanidis , “Small Wideband Antennas Based On Photonic Crystals”, EUCAP 2010, Barcelona, Spain, April 2010
479. D. Psychoudakis, G.-Y. Lee, C.-C. Chen, J. L. Volakis, "Military UHF Body-Worn Antennas for Armored Vests," EuCAP 2010, Barcelona, Spain, April 2010
480. K. E. Browne, R. J. Burkholder, J. L. Volakis, “Through-Wall Radar Imaging System Utilizing a Light-Weight Low-Profile Printed Array”, EUCAP 2010, Barcelona, Spain, April 2010
481. J.L. Volakis, “Antennas and RF Sensors: Changing the Way with Live,” Distinguished Lecture, EUCAP 2010, Barcelona, Spain, April 2010
482. Ugur Olgun, Chi-Chih Chen and John L. Volakis, “Wireless Power Harvesting with Planar Rectennas for 2.45 GHz RFIDs,” URSI EM Theory Symposium, Berlin, Germany, 2010.
483. M. Chen, C-C. Chen, D. Psychoudakis, and J. L. Volakis, "Low Profile Spiral Antenna with Partially Coated Ferrite Ground Plane," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
484. E. Irci, K. Sertel, and J. L. Volakis, "Miniature Multiband Microstrip Antenna Design via Dispersion Engineering," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
485. T. Peng, K. Sertel, and J. L. Volakis, "3D Fully Overlapping Domain Decomposition Method for Modeling Fine Antenna Features in Large Platforms," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
486. L. Zhang, Z. Wang, Y. Bayram, and J. L. Volakis, "Nanostructured Materials for Conformal RF Applications," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
487. I. Tzanidis, K. Sertel, and J. L. Volakis, "An Interweaved Spiral Array (ISPA) Providing a 10:1 Bandwidth over a Ground Plane," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
488. L. Zhang, S. Yarga, K. Sertel, and J. L. Volakis, "Experimental Validation of Non-Reciprocal Properties Formed in Volumetric Magnetic Photonic Crystals," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
489. I. Tzanidis, K. Sertel, and J. L. Volakis, "Finite Size, UltraWideband Conformal Dipole Array Antenna with 10:1 Bandwidth," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (**received student best paper award)**.
490. J. Chalas, K. Sertel, and J. L. Volakis, "Antenna Optimization for UAV Platforms Using Characteristic Modes," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)

491. E. Alwan, I. Tzanidis, K. Sertel, and J. L. Volakis, "Equivalent Circuit Models for Tightly Coupled Interweaved Spiral Antenna Arrays," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
492. J. A. Kasemodel, C-C. Chen, and J. L. Volakis, "Low-Cost, Planar and Wideband Phased Array with Integrated Balun and Matching Network for Wide-Angle Scanning," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
493. N. Apaydin, K. Sertel, and J. L. Volakis, "Demonstration of Unidirectional Printed Structures Emulating Magnetic Photonic Crystals," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
494. H. Moon, C-C. Chen, and J. L. Volakis, "Ultra Low Profile Wideband Antenna with Ferrite Loading," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
495. U. Olgun, C-C. Chen, and J. L. Volakis, "Low-Profile Planar Rectenna for Batteryless RFID Sensors," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
496. J. Zhao, C-C. Chen, and J. L. Volakis, "Low Profile Ultra-Wideband Antennas for Software Defined Radio," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
497. K. E. Browne, R. J. Burkholder, and J. L. Volakis, "High Resolution Radar Imaging Utilizing a Portable Opportunistic Sensing Platform," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
498. K. E. Browne, R. J. Burkholder, and J. L. Volakis, "Overcoming Practical Issues in Through-Wall Radar Imaging via a Novel Opportunistic Sensing Platform," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary) (**received 2nd place for best paper award)**.
499. P. C. Chang, R. J. Burkholder, and J. L. Volakis, "Time-Reversal Processing and Autofocus of Targets Behind Complex Wall," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
500. J. Zhao, C-C. Chen, D. Psychoudakis, and J. L. Volakis, "Broadband Characteristics of a Dome-Dipole Antenna," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
501. E. Irci, K. Sertel, and J. L. Volakis, "Ultrathin Miniature Antenna to Mitigate Platform Loading Effects," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
502. G. C. Trichopoulos, K. Sertel, and J. L. Volakis, "Slot Spiral Detector Array for Broadband THz Imaging," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
503. G-Y. Lee, D. Psychoudakis, C-C. Chen, and J. L. Volakis, "Multiple Antenna Design Method for Mobile Platform Diversity Systems," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
504. L. Yue, C. C. Chen, D. Psychoudakis, and J. L. Volakis, "Miniaturized 1" Dual-Band GPS Antenna Element," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
505. W. F. Moulder, W. Khalil, and J. L. Volakis, "60 GHz Volumetric Switched Beam Array," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (abstract)
506. Y. Bayram, F. Du, L. Dai, and J. L. Volakis, "Surface Conditioned Carbon Nanotube Conductive Sheet for Flexible and Conformal Antennas," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)

507. J-Y. Chung, K. Sertel, and J. L. Volakis, "Broadband Permeability Characterization of Thin and Small Magnetic Composites with Patterned Anisotropy," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary)
508. N. K. Nahar, I. I. Tzanidis, K. Sertel, and J. L. Volakis, "Ultra Wideband Transparent RF Aperture for Electro-Optical Integration," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary),
509. Z. Wang, L. Zhang, Y. Bayram, and J. L. Volakis, "Embroidered E-Fiber-Polymer Composites for Conformal and Load Bearing Antennas," 2010 International IEEE APS/URSI Conference, Toronto, CA, July 2010 (4pp summary).
510. Justin A. Kasemodel, Chi-Chih Chen, John L. Volakis, "Broadband Planar Wide-Scan Array Employing Tightly Coupled Elements and Integrated Balun," 2010 IEEE International Symposium on Phased Arrays Systems & Technology, Boston, MA
511. N. Apaydin, K. Sertel, J. L. Volakis, "Experimental Verification of Unidirectional Propagation in Printed Magnetic Photonic Crystals ", 2011 USNC/URSI National Radio Science Meeting Boulder, Jan. 2011, Boulder, CO.
512. W. F. Moulder, I. Tzanidis, K. Sertel, J. L. Volakis, " Initial Characterization of a Conformal Metamaterial-Based Antenna Array", 2011 USNC/URSI National Radio Science Meeting Boulder, Jan. 2011, Boulder, CO.
513. E. Irci, K. Sertel, J. L. Volakis, " An Extremely Low-Profile, Compact and Broadband Tightly Coupled Patch Array", 2011 USNC/URSI National Radio Science Meeting Boulder, Jan. 2011, Boulder, CO.
514. M. Chen, C. C. Chen, D. Psychoudakis, J. L. Volakis, " Low Profile Spiral with Partially Coated Ferrite Ground Plane and Reactive Loading", 2011 USNC/URSI National Radio Science Meeting Boulder, Jan. 2011, Boulder, CO.
515. Nil Apaydin, Lanlin Zhang, Kubilay Sertel & John. L. Volakis, "Experimental Verification of Frozen Modes Supported on Printed Transmission Lines," European Conference Antennas and Propagat (EuCAP), Rome, Italy, 2011
516. Woon-Gi Yeo, Niru K. Nahar, Robert Lee and John L. Volakis, "New Frontiers for Commercial Applications of Terahertz," IEEE National Aerospace and Electronics Conference (NAECON), Dayton, OH, July 2011.
517. Jonathan Doane, Kubilay Sertel, and John Volakis, "Fundamental Bandwidth Limits for Planar Arrays over a Ground Plan," *2011 IEEE Antennas and Propagation Society International Symposium*, July 2011, Spokane, W
518. I. Tzanidis, K. Sertel and John L. Volakis," A Technique for Feeding Tightly Coupled Antenna Arrays," *2011 IEEE Antennas and Propagation Society International Symposium (APSURSI)*, July 2011, Spokane, WA
519. William F. Moulder, Kubilay Sertel, and John L. Volakis, "Finite Implementations of Superstrate-Enhanced Wideband Tightly Coupled Arrays," *2011 IEEE Antennas and Propagation Society International Symposium*, July 2011, Spokane, WA
520. J. Zhao, D. Psychoudakis, C-C. Chen, J. L. Volakis, "Ultra-Wideband Performance Optimization of a Body-of-Revolution Monopole Antenna", 2011 IEEE APS/URSI, July 2011, Spokane, WA.
521. E. Irci, K. Sertel, J. L. Volakis, "Bandwidth Enhancement of Low-Profile Microstrip Antennas Using Tightly Coupled Patch Arrays", 2011 IEEE APS/URSI, July 2011, Spokane, WA
522. S. Salman, D. Psychoudakis, J. L. Volakis, J. West, L. Paulsen, "Broadband Bowtie-Shaped Current Sheet Antenna Array", 2011 IEEE APS/URSI, July 2011, Spokane, WA

523. Z. Wang, L. Zhang, Y. Bayram, J. L. Volakis, “Multilayer Printing of Embroidered RF Circuits on Polymer Composites”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
524. N. Apaydin, K. Sertel, J. L. Volakis, “Magnetically Scanned Leaky Wave Antenna using Periodic Microstrip Lines on Ferrite Substrate”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
525. D. Psychoudakis, M. Livadaru, J. L. Volakis, “Non-Foster Matching and Miniaturization of a Monopole Antenna”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
526. E. A. Alwan, K. Sertel, J. L. Volakis, “An Equivalent Circuit Model for a 20:1 Coupled Array with Superstrate”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
527. L. Zhang, K. Sertel, J. L. Volakis, “Self-Biased Magnetic Photonic Crystals for Unidirectional Antennas”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
528. N. Smith, C-C. Chen, J. L. Volakis, “Wideband Impedance Agile Automatic Capacitive Matching Network”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
529. K. Browne, R. Burkholder, J. L. Volakis, “Non-Linear Optimization Methods for Enhancing Through-Wall Radar Imagery Forged via a Portable Wideband UHF Array”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
530. P. Chang, R. Burkholder, J. L. Volakis, “Wall Compensation and Multipath Exploitation for Near-Zone Microwave Imaging through Periodic Wall”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
531. T. Peng, Ku. Sertel, J. L. Volakis, “Fully Overlapping Domain Decomposition Method with h-Refinement for Finite Element Modeling of Small Features in Large Domains”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
532. U. Olgun, C-C. Chen, J. L. Volakis, “A Conformal Cylindrical Patch Array System with Omni-Directional Pattern”, 2011 IEEE APS/URSI, July 2011, Spokane, WA
533. J. Chalas, K. Sertel, J. L. Volakis, “Computation of the Q Limits for Arbitrary-Shaped Antennas Using Characteristic Modes”, 2011 IEEE APS/URSI, July 2011, Spokane, WA.
534. N. J. Smith, C.-C. Chen, J. L. Volakis, “Frequency and Impedance Agile Real-Time Tuning Network for 200-400 MHz Antennas”, Antenna Measurement Techniques Association Symposium, Oct. 2011; won 3rd best prize for best paper award.
535. R. Burkholder and J.L. Volakis, “Imaging in High Clutter Environments,” Loughborough Antennas and Propagation Conference, Loughborough, U.K., Nov. 13-15, 2011 (invited talk).
536. W. F. Moulder, K. Sertel, J. L. Volakis, “Superstrate-Enhanced Ultrawideband Tightly Coupled Array with Resistive Frequency-Selective Surface”, 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
537. I. Tzanidis, K. Sertel, J. L. Volakis, “An Ultra-Wideband 7x7 Single-Polarized Tightly Coupled Dipole Array with Integrated Feed and Terminations”, 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
538. H. Odabasi, F. L. Teixeira, “Isoimpedance Anisotropic Substrates for Planar Antenna Profile Reduction”, 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
539. S. Salman, D. Psychoudakis, J. L. Volakis, “Determining the Relative Permittivity of Human Body Masses”, 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
540. J. P. Doane, K. Sertel, J. L. Volakis, “Bandwidth Limits for Low Profile Scanning Arrays”, 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.

541. W.-G. Yeo, N. K. Nahar, R. Lee, J. L. Volakis, C. L. Hitchcock, "Terahertz Characterization of Biological Tissues", 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
542. Z. Wang, L. Zhang, Y. Bayram, D. Psychoudakis, J. L. Volakis, "Highly Flexible Textile Antennas on Organza and Polymer Substrates", 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
543. L. Zhang, D. Psychoudakis, J. L. Volakis, "Pixelated Dielectric Composite Substrates for Microwave Frequency Application", 2012 USNC/URSI National Radio Science Meeting Boulder, Jan. 2012, Boulder, CO.
544. L. Zhang, Z. Wang, D. Psychoudakis and J.L. Volakis, "E-fiber Electronics for Body-Worn Devices," *EuCAP 2012: the 6th European Conference on Antennas and Propagation*, Prague, Czech Republic, March 2012.
545. Zheyu Wang, Lanlin Zhang, Dimitris Psychoudakis and John L. Volakis, "Flexible Textile Antennas for Body-Worn Communication," International Wireless & Antennas Technologies (iWAT) conference, Tucson, AZ. (won best poster award), 2012.
546. John L. Volakis, Lanlin Zhang & J. L. Volakis "Embroidered Flexible RF Electronics," keynote presentation, International Wireless & Antennas Technologies (iWAT) conference, Tucson, AZ, 2012
547. Jeffrey Chalas, Kubilay Sertel, and John L. Volakis, "Evaluation of In-Situ Antenna Performance Using Characteristic Modes," 2012 The Applied Computational Electromagnetics Society (ACES) Conference, Columbus, OH.
548. Tao Peng, Kubilay Sertel, and John L. Volakis, "An Overview of Non-Overlapping and Fully Overlapping Domain Decomposition Methods," 2012 The Applied Computational Electromagnetics Society (ACES) Conference, Columbus, OH.
549. Tao Peng, Kubilay Sertel, and John L. Volakis, "Improving Convergence and Accuracy of Fully Overlapping Domain Decomposition Method," 2012 The Applied Computational Electromagnetics Society (ACES) Conference, Columbus, OH.
550. William F. Moulder, Kubilay Sertel, and John L. Volakis, "Finite Size Effects on the Performance of Ultrawideband Tightly Coupled Arrays," 2012 The Applied Computational Electromagnetics Society (ACES) Conference, Columbus, OH.
551. Ming Chen, Chi-Chih Chen, Dimitrios Psychoudakis, and John L. Volakis, "A Novel Textured Ferrite Ground Plane for Low Profile Spiral Antenna," 2012 The Applied Computational Electromagnetics Society (ACES) Conference, Columbus, OH.
552. N. Apaydin, L. Zhang, K. Sertel, and J.L. Volakis, "Nonreciprocal and Magnetically Scanned Leaky-wave Antenna Using Coupled Microstrip Lines," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
553. L. Zhang, Z. Wang and J.L. Volakis, "Embroidered Textile Circuits for Microwave Devices," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
554. Z. Wang, L. Zhang, D. Psychoudakis and J.L. Volakis, "GSM and Wi-Fi Textile Antenna for High Data Rate Communications," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
555. E. Yetisir, D. Psychoudakis, J. L. Volakis, "Small Size Conformal UWB Arrays for MIMO and Diversity Applications" IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
556. Safa Salman, Dimitris Psychoudakis and John L. Volakis, "Determining the Relative Permittivity of Biological Tissues (dielectric bio-sensing and non-invasive diagnosis),"

IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012

557. Jon Doane, Kubilay Sertel and John L. Volakis "6.3:1 Bandwidth Scanning Tightly Coupled Dipole Array with Co-Designed Compact Balun," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012 (won best paper award).
558. W. Moulder, K. Sertel, and J.L. Volakis, "Finite Size Effects on Performance of Ultrawideband Tightly Coupled Arrays with Resistive Substrate Loading," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
559. W. Moulder, K. Sertel, and J.L. Volakis, "Compact Ultrawideband Beam-Steering Horn Antenna," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
560. E.A. Alwan, K. Sertel, and J.L. Volakis, "Circuit Model Based Optimization of Ultra-Wideband Arrays," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
561. J.P. Doane, K. Sertel, and J.L. Volakis, "Minimum Q for Arrays above a Ground Plane," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
562. N.J. Smith, C-C. Chen, and J.L. Volakis, "Real-Time Agile Impedance Tuner Maximizing Radiation Efficiency," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
563. I.Tzanidis, J.P. Doane, K. Sertel, and J.L. Volakis, "Wheeler's Current Sheet Concept and Munk's Wideband Arrays," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
564. N. Apaydin, K. Sertel, and J.L. Volakis, "Metamaterial-Based Slow Wave Structures for Travelling Wave Tubes," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
565. N. Host, C-C. Chen, and J.L. Volakis, "Reconfigurable Wave Velocity Transmission Lines for Phased Arrays," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
566. E.A. Alwan, K. Sertel, W. Khalil, and J.L. Volakis, "Cost and Power Efficient Ultra-Wideband Digital Beamforming for Cognitive Sensing," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
567. W-G. Yeo, V. Sanphuang, N.K. Nahar, and J.L. Volakis, "THz Transparent Metamaterials for Spectroscopic Measurements," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
568. J.L. Volakis, "Learning Electromagnetics and Diffraction Theory from Prof. Robert Kouyoumjian," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
569. W-G. Yeo, N.K. Nahar, and J.L. Volakis, "Validation of CW THz Spectral Measurements," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
570. T. Peng, K. Sertel, and J.L. Volakis, "Spurious Fields Suppression in Domain Decomposition Algorithms Using Lagrange Multipliers," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
571. T. Peng, K. Sertel, and J.L. Volakis, "Convergence of a Fully Overlapping Domain Decomposition Method," IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.

572. G. Fontgalland, and J.L. Volakis, “Conformal Biomimetic Antenna Array for Direction Finding,” IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
573. G. Fontgalland, C-C. Chen, and J.L. Volakis, “Capacitively Excited and Fully Planar Small Size Printed Antenna,” IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
574. V. Sanphuang, N.K. Nahar, and J.L. Volakis, “Novel FSS Filters in Ka Band,” IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
575. U. Olgun, C-C. Chen, and J.L. Volakis, “Efficient Ambient WiFi Energy Harvesting Technology and Its Applications,” IEEE *AP-S International Symposium and USNC/CNC/URSI Meeting*, Chicago, IL, USA, 2012.
576. Varittha Sanphuang, Niru K. Nahar, and John L. Volakis, "Broadband THz Filters for THz Sensing Devices," *IEEE National Aerospace and Electronics Conference (NAECON)*, Dayton, OH, July 2012.
577. Sai N. Tenneti, Niru K. Nahar, and John L. Volakis, "Increased Output Power 300 GHz Oscillator Based on Linear Superposition ," *IEEE National Aerospace and Electronics Conference (NAECON)*, Dayton, OH, July 2012.
578. Jon Doane, K. Sertel and J.L. Volakis, “A Wideband Scanning Conformal Array with a Compact Compensating Balun," Antenna Applications Symposium, Allerton, Illinois, Sept 18-20, 2012; received 2nd best paper award.
579. L. Zhang, S. Salman & J.L. Volakis, "Embroidered Textiles for RF Electronics and Medical Sensors," 2012 IEEE Int. Conference on Wireless Information Technology and Systems (ICWITS), Maui, Hawaii, November 11-16, 2012.
580. E. A. Alwan, S. Balasubramanian, J. G. Atallah, M. Larue, W. Khalil, K. Sertel & J. L. Volakis, “Coding-Based Transceiver for Phased Array with Significant Hardware Reduction,” 2012 IEEE Int. Conference on Wireless Information Technology and Systems (ICWITS), Maui, Hawaii, November 11-16, 2012.
581. E. A. Alwan, S. Balasubramanian, J.G. Atallah, M. Larue, W. Khalil, K. Sertel, J. L. Volakis, “Ultra-wideband Digital Beamformer with Significant SWAP-C Reduction,” *Wireless Innovation Forum* on Wireless Communications Technologies and Software Defined Radio *(SDR 2013)*, January 2013.
582. Nil Apaydin, Panagiotis Douris, Kubilay Sertel, John L. Volakis, "Metamaterial Based Slow Wave Structure For Travelling Wave Tubes," National Radio Science Meeting, Session B1-3, Boulder, CO, January 2013.
583. Jonathan P. Doane, Kubilay Sertel, John L. Volakis , "Improved Scanning of Wideband Array Using a Reconfigurable Surface," National Radio Science Meeting, Session B2-1, Boulder, CO, January 2013.
584. Safa Salman, John L. Volakis, "Determining the Relative Permittivity of Deep Embedded Biological Tissues," National Radio Science Meeting, Session BK1-3, Boulder, CO, January 2013.
585. Jeffrey Chalas, Kubilay Sertel, John L. Volakis, "Computation of the Q Limits for Arbitrary Shaped Antennas Using Characteristics Modes," National Radio Science Meeting, Session B3-1, Boulder, CO, January 2013.
586. Shubhendu Bhardwaj, Niru Nahar, John L. Volakis, "Link Budget Analysis for 350 GHz Communication Link," National Radio Science Meeting, Session CD1-8, Boulder, CO, January 2013.

587. Will Moulder, Kubilay Sertel, John L. Volakis, "Ultrawideband Substrate-Loaded Tightly Coupled Array with Integrated Feed Structure," National Radio Science Meeting, Session BJ1-9, Boulder, CO, January 2013.
588. Safa Salman & John L. Volakis, "An In-vivo Electrical Property Based Health Monitoring Sensor," *European Antennas and Propagation Conference (EuCAP)*, Gotheberg, Sweden, April 2013.
589. Nathanael J. Smith, Chi-Chih Chen, and John L. Volakis,"Adaptive Tuning Topologies to Overcome Losses in Matching Circuits for Small Antennas," *European Antennas and Propagation Conference (EuCAP)*, Gotheberg, Sweden, April 2013.
590. G. Fontgalland [#*], Z. Wang [*] and John L. Volakis, "Small Biomimetic Array for Direction Finding and Superdirectivity," *Trienial URSI EM Theory Symposium*, Hiroshima, Japan, May 2013
591. J. P. Doane, Willam F. Moulder, Kubilay Sertel, and John L. Volakis, "Wideband, Wide Scanning Conformal Arrays with Practical Integrated Feeds," *Trienial URSI EM Theory Symposium*, Hiorshima, Japan, May 2013.
592. J.L. Volakis, "System Level Requirements and Antenna Designs for mm-wave Satellite Communications to Ka-Band and Moving Beyond," *Int. Microwave Symposium, WFK: Satcom and Aerospace Beyond Ka-Band: Progress and Challenges*, Seattle, WA, June 7, 2013.
593. J. Doane, K. Sertel, and J. L. Volakis, "Matching Bandwidth Limits for Linearly Polarized Scanning Arrays above a Ground Plane," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
594. N. Host, C.C. Chen, F. Miranda, and J. L. Volakis, "Reconfigurable Transmission Line for a Series-Fed Ku-Band Phased Array Using a Single Feed," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
595. M. Novak, D. Papantonis, K. Sertel, and J. L. Volakis, "Superstrate Enhanced Ultrawideband Array with Dual Polarization," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
596. W. Moulder, K. Sertel, and J. L. Volakis, "Feeding of a Wideband Superstrate-Enhanced Substrate Loaded Array," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
597. M. Zuboraj, N. Apaydin, K. Sertel, and J. L. Volakis, "Dispersion Shaping of Double-Ring-Bar Slow-Wave Structures for Traveling Wave Tubes," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
598. N. Apaydin, L. Zhang, K. Sertel, and J. L. Volakis, "Nonreciprocal and Magnetically Scanned Leaky-wave Antenna Using Coupled CRLH Lines," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
599. Z. Wang, L. Zhang, and J. L. Volakis, "A 10:1 Bandwidth Textile-Based Conformal Spiral Antenna with Integrated Planar Balun," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
600. N. Smith, C. C. Chen, and J. L. Volakis, "Adaptive Tuning Topologies with Mechanical Tuning for Small Antennas," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 2013
601. N. Ghalichechian, J. P. Doane, W. Hong, K. Sertel, and J. L. Volakis, "Characterization of SU-8 Using Terahertz Time-Domain Spectroscopy," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI)*, Orlando, FL, 7-13 Jul. 201

602. V. Sanphuang, N. K. Nahar, and J. L. Volakis, "MEMS Tunable THz Filters for Sensing," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
603. S. Shao, L. Zhang, R. Burkholder, and J. L. Volakis, "Embedded UHF RFID Tag Antennas for Automotive Tire Sensing," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
604. E. A. Alwan, W. Khalil, and J. L. Volakis, "Ultra-Wideband On-Site Coding Receiver (OSCR) For Digital Beamforming Applications," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
605. S. Bhardwaj, N. K. Nahar, and J. L. Volakis, "A Concentric-Arrayed Radial Line Slot Array Antenna for THz Applications Optimized Using PSO Algorithm," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
606. S. Salman, L. Zhang, and J. L. Volakis, "An In-vivo Wrap-Around Permittivity Sensor for Deep Biological Tissue Monitoring," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
607. E. Yetisir, C. C. Chen, and J. L. Volakis, "Wideband MIMO Antennas with High Isolation for Personal Communications," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
608. G. Fontgalland, U. Olgun, and J. L. Volakis, "Low-profile vertically polarized printed antenna for body-worn applications," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
609. G. Fontgalland, U. Olgun, Z. Wang, and J. L. Volakis, "Biomimetic Bowtie Array for Beamwidth Reduction," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
610. J. L. Volakis, K. Sertel "Optimal Ultra Wideband Conformal Arrays," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
611. E. A. Alwan, M. LaRue, W. Khalil, and J. L. Volakis, "Experimental Validation of a Coding-Based Digital Beamformer," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
612. Z. Wang, A. Kiourti, M. Zhang, L. Zhang, and J. L. Volakis, "A Wireless Communication System for Remote Medical Monitoring," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
613. J. Chalas, K. Sertel, and J. L. Volakis, "Design of in-Situ Antennas Using Platform Characteristic Modes," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013
614. M. Chen, C. C. Chen, and J. L. Volakis, "Reconfigurable 800-1500MHz Double Stub Tuner Using MEMS Capacitive Switches," *2013 IEEE Int. Symp. Antennas and Propagation (APS/URSI),* Orlando, FL, 7-13 Jul. 2013.
615. Sai Tenneti, N. Nahar, and J.L. Volakis, "Full-Wave Electromagnetic Modeling of THz RTD-Gated HEMT," *2013 IEEE Int. Symp. Antennas and Propa/ation (APS URSI),* Orlando, FL, 7-13 Jul. 2013
616. N. Host, C.-C. Chen, J.L. Volakis and F. Miranda, "Implementation of a Novel Low-Cost Low-Profile Ku-Band Antenna Array for Single Beam Steering from Space," 2013 AMTA, Columbus, OH.
617. N. J. Smith, C-C. Chen, and J. L. Volakis, "Efficient Self Powered Auto-Tuned VHF Impedance Tuner for High Power Applications," 2013 *Allerton Antenna Applications Symposium.*

618. E. Alwan, W. Khalil, and J. Volakis, "Low Cost, Power Efficient, On-Site Coding Receiver (OSCR) for Ultra-Wideband Digital Beamforming," in *IEEE International Symposium on Phased Array Systems & Technology*, Waltham, MA, October 2013.
619. W. Moulder, K. Sertel, and J. Volakis, "Developments in Realization of an Ultrawideband Substrate-Loaded Tightly Coupled Array," in *IEEE International Symposium on Phased Array Systems & Technology*, Waltham, MA, October 2013.
620. N. Host, C.-C. Chen, J. Volakis, and F. Miranda, "Low Cost Beam-Steering Approach for a Series-Fed Array," in *IEEE International Symposium on Phased Array Systems & Technology*, Waltham, MA, October 2013.
621. Sai N. Tenneti, Niru K. Nahar, and John L. Volakis, "Modeling of RTD-Gated GaN HEMTs at Terahertz Frequencies Using a Full-Wave Simulation Toolset Coupled with Particle-Based Equations," 2014 Radio Science Meeting (USNC URSI), Boulder, CO.
622. S. Bhardwaj, Niru Nahar, J.L. Volakis, "A Method of Phase-less Measurements for the Circularly Polarized Gain in the Millimeter Band," 2014 Radio Science Meeting (USNC URSI), Boulder, CO.
623. D. Papantonis, M. Novak and J.L. Volakis, "Ultra-Wideband TCDA-IB with Substrate Loading for Dual-Polarization," 2014 Radio Science Mtg (USNC/URSI), Boulder, CO.
624. D. Papantonis, M. Novak and J.L. Volakis, " Ultra-Wideband Bandwidth Reconfigurable Tightly Coupled Arrays," 2014 Radio Science Meeting (USNC/URSI), Boulder, CO.
625. M. R. Zuboraj, N. K. Nahar, K. Sertel, J. L. Volakis, "High Power Microwave Slow-Wave Structures for Relativistic Beams," 2014 Radio Science Meeting (USNC/URSI), Boulder, CO.
626. Elias A. Alwan, Waleed Khalil, and John L. Volakis,"Analytical and Experimental Evaluation of Novel Wideband Transceiver with On-Site Coding," 2014 Radio Science Meeting (USNC/URSI), Boulder, CO
627. Asimina Kiourti, Zheyu Wang, John L. Volakis," A Wireless, Fully Passive Neurosensing System for Brain Signals Monitoring," 2014 Radio Science Meeting (USNC/URSI), Boulder, CO
628. Safa Salman, Asimina Kiourti & John L. Volakis, "An on-Body Wrap-Around Sensor for Monitoring Changes in Lungs," 2014 Radio Science Meeting (USNC/URSI), Boulder, CO
629. Markus Novak, and John L. Volakis, "Dual Polarized Tightly Coupled Dipole Array (TCDA) for UHF to Millimeter Wave Applications," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
630. Asimina Kiourti, Samuel Luther, and John L. Volakis, "Microwave Cavity with Controllable Temperature for Hyperthermia Treatment Investigations," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
631. Shuai Shao, Asimina Kiourti, Robert Burkholder, and John L. Volakis, "Broadband and Flexible Textile RFID Tags for Tires," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
632. Zheyu Wang, Konstantinos Karathanasis, and John L. Volakis, "Axial Ratio Enhanced Ultra Wideband Slot Spiral on Hybrid EBGs," 2014 IEEE International Symposium on

Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.

633. Varittha Sanphuang, Nima Ghalichechian, Niru K. Nahar, and John L. Volakis, "Phase Change Materials for Reconfigurable Systems," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
634. Roland Tallos, Zheyu Wang, and John L. Volakis, "Wi-Fi Energy Harvesting System Using Body-worn Antennas," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
635. Shuai Shao, Robert Burkholder, and John L. Volakis, "Physics-Based Approach for Antenna Design Optimization of RFID Tags Mounted on and Inside Material Layers," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
636. Dimitrios Papantonis, and John Volakis, "Dual-Polarization TCDA-IB with Substrate Loading," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
637. John L. Volakis, "Two Publications in the IEEE Antennas and Propagation Journals that Impacted my Career," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
638. Asimina Kiourti, Cedric Lee, Abe Akhiyat, Helen Schwerdt, Junseok Chae, and John L. Volakis, "Passive, On Chip and In Situ Detection of Neuropotentials," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
639. Satheesh Bojja Venkatakrishnan, Abe Akhiyat, Elias A. Alwan, Waleed Khalil, and John L. Volakis, "Realization of a Novel On-Site Coding Digital Beamformer using FPGAs," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
640. Nicholas Host, Chi-Chih Chen, John L. Volakis, and Felix Miranda, "2D Traveling Wave Array Employing a Trapezoidal Dielectric Wedge for Beam Steering," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
641. Nathanael Smith, Chi-Chih Chen, and John L. Volakis, "Far-Field Sensor for Adaptive Antenna Tuning," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
642. M. Zuboraj, Niru K. Nahar, and John L. Volakis, "A S-band High Power Traveling Wave Tube for RADAR application," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
643. Ersin Yetisir, Chi-Chih Chen, and John L. Volakis, "Wideband Dual-Polarized Omnidirectional Antenna with very High Isolation across 1.65-2.7 GHz," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
644. Varittha Sanphuang, Nima Ghalichechian, Niru K. Nahar, and John L. Volakis, "Reconfigurable THz Filters with Integrated Micro-Heater," 2014 IEEE International

Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.

645. Dimitrios Papantonis, Nathanael Smith, and John L. Volakis, "Bandwidth Reconfigurable Ultra-Wideband Arrays," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
646. Jeffrey Kula, Prabhakar Pathak, and John L. Volakis, "Reconfigurable Band Rejection Frequency Selective Structures," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
647. Elias A. Alwan, Abe Akhiyat, Waleed Khalil, and John L. Volakis, "Phase Characterization of a 2-Path On-Site Coding Digital Beamformer," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
648. Shubhendu Bhardwaj, Niru K. Nahar, and John L. Volakis, "Fixed Frequency Slotted Waveguide Beam Reconfigurable Antenna for mmWave Application," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
649. Konstantinos Karathanasis, Asimina Kiourti, and John L. Volakis, "A Wireless Body Area Network for Carefree Medical Sensing," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
650. Jeffrey Chalas, Kubilay Sertel, and John L. Volakis, "NVIS Synthesis for Electrically Small Aircraft Using Characteristic Modes," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
651. Sai Tenneti, Niru Nahar, and John L. Volakis, "Full-Wave Optimization of Nitride-Based Resonant Tunneling Diodes for Terahertz Amplification," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
652. Shubhendu Bhardwaj, Niru K. Nahar, and John L. Volakis, "Analysis and Design of High Electron Mobility Transistors for THz Signal Generation," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
653. Jingni Zhong, Asimina Kiourti, and John L. Volakis, "Increasing the Efficiency of Electrically Small Antennas Across a Large Bandwidth Using Matching Networks," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, July 6-12, 2014.
654. Glauco Fontgalland, and John L. Volakis, "Tuning and Matching a Miniature Antenna Array," 2014 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, Memphis, TN, USA, July 6-12, 2014.
655. Asimina Kiourti, Cedric Lee, Junseok Chae, and John L. Volakis, "Fully-Passive Wireless Implants for Unobtrusive Brain Signal Monitoring," 2014 IEEE EMBS BRAIN Grand Challenges conference, Nov 12-14, Washington, DC

656. S. Bhardwaj, N. K. Nahar and J. L. Volakis, "Novel Phaseless Method for Gain Characterization of Circularly Polarized Antennas Operating in the mm-Wave and THz Bands," 2014 Antenna Measurements Techniques Association (AMTA), Tempe, AZ.
657. Cedric W. Lee, Asimina Kiourti, Junseok Chae and John L. Volakis, "Fully-Passive and Wireless Detection of Very-Low-Power Brain Signals," 2014 IMWS-Bio, London, Dec 2014 (won best poster award)
658. J.L. Volakis, Electronic and Medical Sensors, invited presentation at *Make @ OSU* Workshop sponsored by the Center for Clinical and Translations Science, May 20, 2014
659. J.L. Volakis, "Upcoming Technologies to Address Large Bandwidth Requirements, invited talk at Ohio Innovation Summit, 9 October 2014.
660. J.L. Volakis, 'Textile Sensors for Non-invasive Health Monitorin," Keynote talk at 2014 IMWS-Bio, London, Dec 2014.
661. J.L. Volakis, E.A. Alwan, D. Papantonis, N. Novak, N. Ghalichechian, and W. Khalil, "Low Power Ultra-Wideband Digital Beamforming for UHF to Millimeter-Wave Applications," Keynote talk at 2015 Int. Woskshop on Antenna Technologies (iWAT), Seoul, S. Korea, March 2015.
662. J. Chalas, K. Sertel, and J.L. Volakis, "Multi-Feed NVIS Realization on Small Aircraft Using Characteristic Modes," European Conference on Antennas and Propagation (EuCAP), Lisbon, Portugal, 12-17 April 2015.
663. A. Kiourti and J.L. Volakis, "Stretchable and Flexible E-Fiber Antennas with High Geometrical Accuracy," European Conference on Antennas and Propagation (EuCAP), Lisbon, Portugal, 12-17 April 2015.
664. A. Dey, A. Kiourti, G. Mumcu, and J.L. Volakis, "Microfluidically Reconfigured Frequency Tunable Dipole Antenna," European Conference on Antennas and Propagation (EuCAP), Lisbon, Portugal, 12-17 April 2015.
665. D. Papantonis, M. Novak, N. Ghalichechian, and J.L. Volakis, "Low-Profile Ultra-Wideband Reconfigurable Tightly-Coupled Arrays," European Conference on Antennas and Propagation (EuCAP), Lisbon, Portugal, 12-17 April 2015.
666. J. Zhong, A. Kiourti, and J.L. Volakis, "Reducing and Controlling the Beamwidth of Electrically Small Antenna Arrays," European Conference on Antennas and Propagation (EuCAP), Lisbon, Portugal, 12-17 April 2015.
667. L. Chau, J.G. Ho, Xing Lan, Norma Riely, R.M. Young, Nabil El-Hinnawy, D. Nichols, J. L. Volakis, and N. Galichechian, "Reconfigurable Antenna Aperture with Optically Controlled GeTe-Based RF Switches," GOMAC 2015.
668. D. Papantonis, N. Ghalichechian, and J.L. Volakis, "Reconfigurable Ultra Wideband Array with Tunable Band Rejection across a 7:1 Bandwdith," 2015 International Microwave Symposium, Tempe, AZ.
669. C. Lee, A. Kiourti, J. Chae and J.L. Volakis, A high sensitivity fully-passive neurosensing system for unobtrusive brain signal monitoring," 2015 International Microwave Symposium, Tempe, AZ.
670. J. L. Volakis and S. Bhardwaj,"Plasma Mode HEMTs with RTD gate and Multiple 2DEG Channels for Stable Terahertz Operation," CSIC2015, Louisiana, 2015. (Registration Key: PDHRt5ZdGjNh) entitled Paper #153,
671. S. Bhardwaj, Berardi Sensale Rodriguez, H. (Grace) Xing, and J.L. Volakis, "Full-Wave Hydrodynamic Model for Predicting THz Emission from Grating-Gate RTD-Gated

Plasma Wave HEMTs," 73rd annual Device Research Conference at Ohio State University,June 21-24, 2015.

672. N Host, C. C. Chen, J.L. Volakis, and F. Miranda, "Ku-Band Traveling Wave Slot Array Using Simple Scanning Control," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
673. E. A. Alwan, N. Ghalichechian, and J.L. Volakis, "Low Power Millimeter Wave Beamforming Transceiver System using On-Site Coding," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
674. C. Lee, A. Kiourti, and J.L. Volakis, "Wireless Biomedical Telemetry Using a Fully-Passive Brain Implant," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
675. M. Livadaru and J.L. Volakis, "Low Cost, Wide Scanning Dual-Polarized Planar Radiating Element for Weather Measurements," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
676. M. A. Islam, A. Kiourti, and J.L. Volakis, "Conformal Sensor Accuracy for Deep Tissue Biomedical Imaging," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
677. B. DeLong, C. C. Chen, and J.L. Volakis, "Wireless Energy Harvesting for Medical Applications," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
678. A. Kiourti and J.L. Volakis, "Body-Worn Antennas, Sensors and a Novel Class of Electronic Textiles," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
679. A. Kiourti and J.L. Volakis, "High-Accuracy Conductive Textiles for Embroidered Antennas and Circuits," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
680. M. Novak, F. Miranda, and J.L. Volakis, "Wideband Array for C, X, and Ku-Band Applications with 5.3:1 Bandwidth," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
681. M. Zuboraj and J.L. Volakis, "Cold-Test experiment of Curved-Ring-Bar Structures for High Power TWT," 2015 IEEE International Symposium on Antennas

and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

682. D. Papantonis, N. Ghalichechian, and J.L. Volakis, "Reconfigurable Antennas for Adaptive and Mobile Systems," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

683. J. Kula, P. H. Pathak, and J.L. Volakis, "Reconfigurable Band Rejection and Band-pass Frequency Selective Structures," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

684. S. Bhardwaj, S. Rajan, and J.L. Volakis, "Room temperature Detection of Plasma Resonances using Multiple 2DEG Channels in HEMT," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

685. E. Yetisir, N. Ghalichechian, and J.L. Volakis, "Wideband & Wide Angle Scanning Array with Parasitic Superstrate," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

686. K. Scherer, S. Watt, E. A. Alwan, A. A. Akhiyat, B. Dupaix, W. Khalil, and J.L. Volakis, "Simultaneous Transmit and Receive System Architecture with Four Stages of Cancellation," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

687. J. Zhong, A. Kiourti, and J.L. Volakis, "Conformal, Lightweight Textile Spiral Antenna on Kevlar Fabrics," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

688. S. B. Venkatakrishnan, A. A. Akhiyat, E. A. Alwan, W. Khalil, and J.L. Volakis, "Phase Characterization of an 8-Channel On-site Coding Receiver for Digital Beamforming," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

689. S. B. Venkatakrishnan, A. A. Akhiyat, E. A. Alwan, W. Khalil, and J.L. Volakis, "Angle of Arrival Estimation across a 10:1 Bandwidth Architecture using On-Site Coding Receiver," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

690. S. Salman, A. Kiourti, and J.L. Volakis, "Rudimentary Deep Tissue Imaging Through a Wearable Real-Time Monitoring System," 2015 IEEE International

Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.

691. V. Sanphuang, N. Ghalichechian, N. K. Nahar, and J.L. Volakis, "Bandwidth Reconfigurable THz Filter Employing Phase-Change Material," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
692. S. Watt, E. A. Alwan, W. Khalil, and J.L. Volakis, "Wideband Self-Interference Cancellation Filter for Simultaneous Transmit and Receive Systems," 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, Vancouver, Canada, 19-24 July, 2015.
693. Qiaowei Yuan, Brock DeLong and J.L. Volakis, "Long Range and Safe Wireless Power Transmission with Matched Rectifier," 2015 International Symposium on Antennas and Propagation (*ISAP*), Tasmania, Australia.
694. John L. Volakis and Shubhendu Bhardwaj , "Plasma Mode HEMTs with RTD gate and Multiple 2DEG Channels for Stable Terahertz Operation," 37 IEEE Compound Seminconductor IC (CSIC) Symposiu, New Orleans, 11-14 October 2015 (invited).
695. S. Bhardwaj, Niru Nahar and John Volakis,"*Propagation Loss Measurement in 300-350 GHz Band Communication Link,"* 37th Antenna Measurement Techniques Association, Long Beach, CA, 2015—won best paper award.
696. A. Kiourti and J.L. Volakis, 'Wearable Antennas, Sensors and a Novel Class of Textiles," Loughborough Antennas and Propagation Conference, 2015—keynote talk.
697. Ushemadzoro Chipengo and John L. Volakis, "Experimental Validation of Mode Dominance Reversal in Novel Slow Wave Structures for High Power Backward Wave Oscillators," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO
698. Ersin Yetisir, Nima Ghalichechian and John L. Volakis "Novel Array with 6:1 Bandwidth and 70^{o} Scanning using Frequency Selective Surface Superstrate," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
699. Md Asiful Islam, Asimina Kiourti, and John L. Volakis, "Portable and conformal RF sensor for high accuracy real-time imaging," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO
700. Asimina Kiourti and John L. Volakis, "A new class of colorful textile antennas for wearable electronics," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
701. Stephen J. Watt, Elias A. Alwan, and John L. Volakis, "Ultra-wideband RF filter for self-interference cancellation in star systems," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
702. Varittha Sanphuang, Nima Ghalichechian, Niru K. Nahar, and John L. Volakis, "Reconfigurable THz array employing vanadium dioxide," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
703. Dimitrios Siafarikas, Elias A. Alwan, and John L. Volakis, "High data rate multi-path transmit/receive system with on-site coding," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO

704. Satheesh Bojja Venkatakrishnan, Elias A. Alwan, and John L. Volakis, "Experimental validation of digital beamformer performance with ultra-wideband antenna arrays using on-site coding," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
705. Brock DeLong, Qiaowei Yuan, and John Volakis, "High efficiency wireless power harvesting at low powers," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
706. Markus H. Novak, Félix A. Miranda, and John L. Volakis, "A multi-function millimeter-wave phased array for small satellites," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
707. Varittha Sanphuang, Niru K. Nahar, and John L. Volakis, "THz spatial filter with bimaterial switching," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
708. Cedric W. Lee, David E. Like, Asimina Kiourti, and John L. Volakis, Miniaturized fully-passive brain implantforwireless acquisition of low-level neuropotentials," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO
709. Matilda Livadaru and John L. Volakis, "Modal analysis of a planar, printed array for weather measurement," National Radio Science Meeting, Jan 5-8, 2016, Boulder CO.
710. D. Papapantis, N. Galichechian and J.L. Volakis, *Tunable Band Rejection in a Tightly-Coupled Array Using Varactor Diodes*" Int. Workshop on Antenna Technologies held in Cocoa Beach, FL, Feb 29-March 3 2016.
711. Asimina Kiourti, Jingni Zhong, and John L. Volakis, "Conformal Spiral Antenna based on Conductive Textile Threads for Load-Bearing Applications," International Workshop on Antenna Technology (iWAT 2016), Cocoa Beach, Florida, March 2016.
712. Elias A. Alwan, Dimitrios Siafarikas, and John L. Volakis, "High-Data Rate Multi-Path Transmit/Receive System with On-Site Coding," (iWAT 2016), Cocoa Beach, Florida, March 2016.
713. Q. Yuan, B. DeLong, and L.L. Volakis, "Approach to Optimize Rectification Efficiency for Lower Power Energy Harvesting," (iWAT 2016), Cocoa Beach, Florida, March 2016
714. Markus Novak, Felix Miranda, and John L. Volakis, "An Ultra-Wideband Millimeter-Wave Phased Array," European Antennas and Propagation Conference (EuCAP), Davos, Switzerland, April 2016.
715. Asimina Kiourti and John L. Volakis, "Wearable Antennas Using Electronic Textiles for RF Communications and Medical Monitoring," European Antennas and Propagation Conference (EuCAP), Davos, Switzerland, April 2016.
716. E. A. Alwan, D. Papantonis, M. Novak, A. Akhiyat, B. Dupaix, W. Khalil, and J. L. Volakis, "Reduced-Power Millimeter-Wave reconfigurable Systems," European Antennas and Propagation Conference (EuCAP), Davos, Switzerland, April 2016.
717. Shubhendu Bhardwaj, Niru Nahar, and John L. Volakis,"Phase-less Measurement Methods of CP Antennas in Sub-Mm-Wave and THz Bands," European Antennas and Propagation Conference (EuCAP), Davos, Switzerland, April 2016.
718. M. Novak, F. Miranda and J. L. Volakis, "Low Cost Ultra-Wideband Millimeter-Wave Array," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.

719. A. Kiourti, R. B. V. B. Simorangkir, S. M. Abbas, K. P. Esselle, and J. L. Volakis, "UWB Antennas on Conductive Textiles," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
720. J. Kula, P. H. Pathak, and J. L. Volakis, "Reconfigurable Band Rejection and Band-Pass Frequency Selective Structures," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
721. V. Sanphuang, N. K. Nahar, and J. L. Volakis, "THz Spatial Filter Integrating Bimaterial Switching for Sensors," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
722. V. Sanphuang, N. K. Nahar, and J. L. Volakis, "Thermally-Controlled THz Biosensor employing Phase-Change Materials," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
723. M. Livadaru and J. L. Volakis, "Low Cost Dual-Polarized Antenna Array with High Cross-Polarization Isolation and Wide Scanning Coverage," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
724. D. Papantonis, E. Yetisir, and J. L. Volakis, "Tightly-coupled Array with Tunable BW using Reconfigurable FFS/Superstrate," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
725. D. Papantonis and J. L. Volakis, "Tunable Band Rejection of Wideband Arrays Using Digital Variable Capacitors," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
726. A. Hovsepian, E. A. Alwan, and J. L. Volakis, "High Isolation Ultra Wideband Dual Polarization Arrays for Simultaneous Transmit and Receive Systems," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016
727. M. Zuboraj, K. Sertel, and J. L. Volakis, "Non-identical Coupled Transmission Lines and Higher-order Dispersion Engineering," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
728. M. Zuboraj, N. K. Nahar, and J. L. Volakis, "A Novel Slow Wave Structure for V-band Traveling Wave Tube," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
729. C. Lee, A. Kiourti, and J. L. Volakis, "Miniature Fully-Passive Brain Implant for Wireless Real-Time Neuropotential Monitoring," Proceeding of the 2016 IEEE International

Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.

730. S. B. Venkatakrishnan, A. Akhiyat, E. A. Alwan, and J. L. Volakis, "Dual-Band Validation of On-Site Coding Receiver using Ultra-Wideband Antenna Array at C, X and Ku-bands," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
731. D. Siafarikas, E. A. Alwan, and J. L. Volakis, "Millimeter Wave Transceivers with Coding Gain for Secure High Data Rate Communication," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
732. U. Chipengo, N. K. Nahar, and J. L. Volakis, " Cold Test of Homogeneous and Inhomogeneous Slow Wave Structures for High Power Backward Wave Oscillators," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
733. S. Bhardwaj, N. K. Nahar, and J. L. Volakis, "Accurate Low Cost Phaseless Measurement Method of CP Antennas at Millimeter Wave and Terahertz Bands," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
734. S. Bhardwaj, S. Rajan, and J. L. Volakis, "Analytical and Multiphysial-Numerical Models for Plasma-Waves in double and Multiple Channel HEMTs," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
735. N. Saini, R. Burkholder, and J. L. Volakis, "Smart Sensing and Data Logging using RFID," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
736. J. Zhong, A. Kiourti, J. L. Volakis, T. Sebastian, and Y. Bayram, "Mechanical and Thermal Tests of Textile Antennas for Load Bearing Applications," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
737. B. DeLong, A. Kiourti, and J. L. Volakis, " A 2.4-GHz Wireless Sensor Network using Single Diode Rectennas," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
738. S. Watt, E. A. Alwan, and J. L. Volakis, "Cascaded Network Analysis of a Wideband RF Self-Interference Cancellation (RF-SIC) Filter for STAR Systems," Proceeding of the 2016 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APSURSI), Fajardo, Puerto Rico, Jun 26 – Jul 1, 2016.
739. S. Bhardwaj, J. L. Volakis and S. Rajan, "Full-wave Hydrodynamic Modeling of Terahertz Plasma-wave HEMT Emitters" 2016 Les Eastman Conference, Lehigh, PA Aug 2016.

740. C. Lee, D. Papantonis, A. Kiourti, and J.L. Volakis, "Body–Worn 67:1 Bandwidth Antenna Using 3 Overlapping Dipole Elements," *11th European Conference on Antennas and Propagation (EuCAP 2017)*, Paris, France, Mar. 19–24, 2017.
741. S. Liu, C. Lee, A. Kiourti, J.L. Volakis, and J. Chae, "A Wireless Fully – Passive Neural Recorder Using RF Backscattering Effect," *Biomedical Engineering Society Annual Meeting (BMES 2016)*, Minneapolis, Minnesota, Oct. 5–8, 2016.
742. Satheesh Bojja Venkatakrishnan, Elias A. Alwan and John L. Volakis,"Wideband RF Self-Interference Cancellation Filter for Simultaneous Transmit/Receive Systems," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
743. Muhammed R. Zuboraj, Kubilay Sertel, John L. Volakis," Novel Propagation Model of Degenerate Band Edge Modes Using Dual Non-Identical Pair of Coupled Transmission Lines," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
744. Asiful Islam, Asimina Kiourti, John L. Volakis,"Efficient Microwave Biomedical Imaging Through Sparse Reconstruction of Frequency Independent Parameters," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
745. Ushemadzoro Chipengo, Niru K. Nahar, John L. Volakis, "Experimental Demosntration of Higher Order Dispersion in Inhomogeneous Slow Wave Structures for Structures for Backward Wave Oscillators," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
746. Navtej S. Saini, Asimina Kiourti, John L. Volakis, Robert Lee,"Wearable Electronics Integrated with Flexible Textile Antennas," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
747. Shubhendu Bhardwaj and John Volakis,"Multiphysics Models of Electron-Plasma Electronics for Terahertz Sources and Detectors," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
748. Dimitrios Siafarikas, Elias A. Alwan, John L. Volakis, "Millimeter-Wave Transmit/Receive System for Secure High Data Rate Communicaitons," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
749. Satheesh Bojja Venkatakrishnan*, Elias A. Alwan, and John L. Volakis, " Wideband and Multibeam angle of Arrival Estimation Using On-Site Coding," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
750. Jingni Zhong*, Elias A. Alwan, John L. Volakis,"Dual Polarized 7.2:1 Bandwidth Phased Arrays with 60 Degree Scanning," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
751. Alexander Hovsepian, Elias A. Alwan, John L. Volakis, "Wideband Phased Array of Spiral Antnenas for Simultaneous Transmit and Receive (STAR)," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
752. Varittha Sanphuang, Brock J. DeLong, Markus Novak, Elias A. Alwan, John L. Volakis, "Low Cost Multilayered Array Design for mm-wave Communicatiaons," USNC Radio Science Meeting, Boulder CO, 4-7 Jan 2017.
753. W. Chen, C. W. Lee, A. Kiourti and J. L. Volakis, "A Multi-Channel Passive Brain Implant for Wireless Neuropotential Monitoring," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.

754. C. W. Lee, A. Kiourti and J. L. Volakis, "A Wireless, Fully-Passive Recorder for Medical Applications," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
755. A. Ibrahim, M. A. Abdalla, and J. L. Volakis, "4 Elements UWB MIMO Antenna for Wireless Applications," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
756. M. A. Islam, A. Kiourti, and J. L. Volakis, "A Microwave Tomographic Technique to Enhance Real-Imaginary Permittivity Image Quality," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
757. S. Bojja Venkatakrishnan, E. Alwan, and J. L. Volakis, "Clock Synchronization Challenges for On-Site Coding Digital Beamformer," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
758. M. Novak, F. Miranda, and J. L. Volakis, "24–71 GHz PCB Array for 5G/ISM," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
759. C. W. Lee, D. Papantonis, A. Kiourti, and J. L. Volakis, "Body-Worn 67:1 Bandwidth Antenna Using 3 Overlapping Dipole Elements," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
760. A. Hovsepian, E. Alwan, and J. L. Volakis, "Wideband Scanning Array of Spiral Antennas for Simultaneous Transmit and Receive (STAR)," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
761. A. Johnson, E. Alwan, and J. L. Volakis, "A Wideband Tightly Coupled Dipole Array with Novel Differential Feeding Network," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
762. M. Novak, S. Bojja Venkatakrishnan, and J. L. Volakis, "Universal Radio for Beamforming and Signal Detection without Carrier Knowledge," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
763. S. Bhardwaj, F. Teixeira, and J. L. Volakis, "Full-wave-Hydrodynamic Modeling of 2DEG Graphene Channels for Terahertz Devices using ADI-FDTD Algorithm," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
764. S. Bhardwaj, and J. L. Volakis, "Circularly-Polarized Horn Antennas for Terahertz Communication using Differential-Mode Dispersion in Hexagonal Waveguides,"

Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.

765. U. Chipengo, N. K. Nahar, and J. L. Volakis, "Significant Efficiency Enhancements in High Power Backward Wave Oscillators using Inhomogeneous Slow Wave Structures," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
766. S. Bojja Venkatakrishnan, E. Alwan, and J. L. Volakis, "Wideband RF and Analog Self-Interference Cancellation Filter for Simultaneous Transmit and Receive System," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
767. S. Mensah, A. Akhiyat, E. A. Alwan, and J. L. Volakis, "Optimization of Ultra-Wideband Phased Arrays in MIMO Configuration with Coding for Increased Channel Capacity," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
768. M. Livadaru, and J. L. Volakis, "Fabrication and Measurements of a Low-Cost, Dual-Polarized Advanced Planar Array with Wide Scanning Coverage," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
769. M. Zuboraj, and J. L. Volakis, "Dispersion Engineering and Mode Control using Multiple Pairs of Non-Identical Coupled Transmission Lines," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
770. D. Siafarikas, E. Alwan, and J. L. Volakis, "Processing Gain Using CDMA in Ultra-Wideband Multi-Channel Digital Beam-Formers," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
771. D. Siafarikas, E. Alwan, and J. L. Volakis, "Synchronization Issues in Ultra-Wideband Multi-Channel Digital Beam-Formers," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
772. B. DeLong, E. Alwan, and J. L. Volakis, "Measurements and De-embedding Techniques for 5G Millimeter-wave Arrays," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
773. J. Kula, and J. L. Volakis, "Reconfigurable Band Rejection and Band-Pass Frequency Selective Structures," Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.

774. J. Zhong, E. Alwan, and J. L. Volakis, “7.2 to 1 Ultra-Wideband Dual-Linear Polarized Phased Array with 60o Scanning,” Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
775. C. Wang, S. Bhardwaj, and J. L. Volakis, “Resonant Tunneling Diodes for Feeding Antenna-Structures for Terahertz Source Applications,” Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
776. J. L. Volakis, “Ultra wideband phased arrays and low-cost beamforming,” Proceeding of the 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), San Diego, California, Jul 9 – Jul 14, 2017.
777. S. Bhardwaj, N.K. Nahar and J.L. Volakis, “Novel Circularly-Polarized Antenna and Phase-less Characterization Method for sub-mm-wave and Terahertz Communication and Sensing,” August 2017 URSI General Assembly, Montreal, Canada (won 1st paper prize).
778. S. Bojja Venkatakrishnan, E. Alwan and J.L. Volakis “Multi-band Multi-beam Performance Evaluation of On-Site Coding Digital Beamformer using Ultra-Wideband Antenna Array,” August 2017 URSI General Assembly, Montreal, Canada (won 2nd paper prize).
779. A.D. Johnson, E. A. Alwan and J. L. Volakis "A Wideband Tightly Coupled Dipole Array with Novel Differential Feeding Network,” 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
780. S. Bhardwaj , M. Zuboraj and J. L. Volakis "Dispersion Engineering for Slow-wave Structures Using Quad Coupled Transmission Lines," 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
781. S. Bhardwaj and J. L. Volakis "Modeling of Layered And Corrugated Surfaces Using Higher Order Generalized Impedance Boundary Conditions," 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
782. S. Bojja Venkatakrishnan, E. Alwan and J. L. Volakis "Coupled Transmit Signal And Noise Cancellation at the RF Front-End in Simultaneous Transmit/Receive System," 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
783. A. Hovsepian, S. Bojja Venkatakrishnan, E. A. Alwan and J. L. Volakis "Wideband, Scanning Spiral Array for Simultaneous Transmit and Receive (STAR)” 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
784. S. S. Mensah, A. A. Akhiyat, Elias A. Alwan and J. L. Volakis "Ultra-Wideband Phased Array Optimization in MIMO Configuration for Increased Channel Capacity,” 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
785. A. D. Johnson and J. L. Volakis Ultra-low Profile Wideband Tightly Coupled Dipole Array," 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
786. D. Siafarikas, E. A. Alwan and J. L. Volakis "Interference Mitigation for 5G Millimeter Wave Communications," 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018
787. B. J. DeLong, C. W. L. Lee, Asimina Kiourti , S. Bojja Venkatakrishnan and J. L. Volakis "Wireless Energy Harvesting From 700-900 MHz," 2018 USNC/URSI National Radio Science Meeting, Boulder CO, Jan 2018.

788. S.M. Abbas, R.M. Hashmi, S. Desai, K.P. Esselle, and J.L. Volakis, "A Wideband Antenna Based on Composite Flexible Substrate for Wearable Application," AT-RASC URSI meeting, Gran Canaria Island, Spain, 2018.
789. D. Siafarikas, E. Alwan, and J. Volakis, "Processing Gain Using CDMA in Ultra-Wideband Multi-Channel Digital Beam-Formers," Government Microcircuit Applications & Critical Technology Conference (GOMACTech) 2018, Miami, FL, Mar 12-Mar 15, 2018
790. J. L. Volakis, "Ultra-Wideband Transceivers with Low Cost Beamforming Back-Ends", 2018 International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, CO, Mar 24 – Mar 29, 2018 (plenary talk)
791. A. Hovsepian, S. B. Venkatakrishnan, E. A. Alwan, and J. L. Volakis, "Wideband, Scanning Array for Simultaneous Transmit and Receive," 2018 International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, CO, Mar 24 – Mar 29, 2018
792. S. Bhardwaj, and J. Volakis "Hexagonal Waveguides: New Class of Waveguides for mm-wave Circularly Polarized Horns," 2018 International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, CO, Mar 24 – Mar 29, 2018
793. J. Zhong, E. A. Alwan, and J. L. Volakis, "2 to 18 GHz Ultra-Wideband Dual-Linear Polarized Phased Array with 60° Scanning," 2018 International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, CO, Mar 24 – Mar 29, 2018
794. B. Yan, B. DeLong, D. An, A. Kiourti, K. Dungan, J. Volakis, M. Ma, and L. Guo, "An RF-Driven Lightweight Implantable Insulin Pump," 2018 International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, CO, Mar 24 – Mar 29, 2018
795. J. Volakis, "Multi-Channel Wireless and Battery-Less Brain Signal Monitoring System," IEEE MTT-S International Microwave Biomedical Conference (IMBioC), Philadelphia, PA, Jun 14 – Jun 15, 2018 (plenary talk)
796. C. Moncion, S. Bojja-Venkatakrishnan, J. R. Diaz, and J. Volakis, "Low-Impedance Probes for Wireless Monitoring of Neural Activation" IEEE MTT-S International Microwave Biomedical Conference (IMBioC), Philadelphia, PA, Jun 14 – Jun 15, 2018
797. M. Livadaru, and J. Volakis, "Realization of Low-Cost Wide Scanning Arrays," 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
798. A. Hovsepian, S. B. Venkatakrishnan, E. Alwan, and J. Volakis, "Wideband Beam Steering Using a 4-Arm Spiral Array for Simultaneous Transmit and Receive (STAR) Operation," 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018 (***Honorable Mention)***
799. E. A. Alwan, S. B. Venkatakrishnan, and J. L. Volakis, "Millimeter-Wave RF Front-ends for 5G Applications," 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
800. S. R. Zahran, M. A. Abdalla, and J. L. Volakis, "A Novel Wideband Antenna with Added Bottom Rectangular Slabs for Gain Improvement," 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018

801. J. Kula, N. Nahar, and J. Volakis, “Reconfigurable Band Rejection and Band-Pass Frequency Selective Structures,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
802. A. Johnson, J. Zhong, M. Livadaru, E. Alwan, and J. Volakis, “Tightly Coupled Dipole Array with Wideband Differential Feeding Network,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
803. S. B. Venkatakrishnan, E. Alwan, and J. Volakis, “Simultaneous Transmit and Receive System with 1 GHz RF Cancellation Bandwidth,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
804. S. B. Venkatakrishnan, E. Alwan, and J. Volakis, “Wideband Coupled Transmit Noise Suppression in Simultaneous Transmit/Receive Systems,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
805. Wei-Chuan Chen, K. Asimina, and J. L. Volakis, “A Passive Multi-Channel Brain Implant for Wireless Neuropotential Monitoring,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
806. D. Siafarikas, E. Alwan, and J. Volakis, “Interference Mitigation for 5G Millimeter-Wave Communications,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
807. C. Moncion, S. B. Venkatakrishnan, J. Riera Diaz, and J. Volakis, “Improved Probes for Fully-Passive Wireless Recording of Neural Activation,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018 (***Honorable Mention)***
808. M. Ali, S. Bhardwaj, and J. L. Volakis, “Miniaturization of Waveguide Structures by Coupled Transmission Lines,” In 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
809. B. DeLong, A. Kiourti, J. Volakis, “Cutting The Cord: A Button-Sized Rectenna for Wireless Patient Monitoring Using Radiated Near-Field Signals at 2.4 GHz,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
810. J. Zhong, A. Johnson, E. Alwan, and J. Volakis, “Ultra-Wideband Tightly Coupled Dipole Array with FSS R-Card,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
811. D. Siafarikas, and J. Volakis, “Direction Finding of Ultra-Wideband Signals using Direct RF Sampling,” In 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
812. D. Vital, J. Zhong, S. Bhardwaj, and J. L. Volakis, “Loss-Characterization and Guidelines for Embroidery of Conductive Textiles,” 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018
813. S. Bhardwaj, C. Chase, and J. L. Volakis, “Modeling of 2D and 3D Metamaterials Using Higher Order General Impedance Boundary Conditions (GIBCs),” In 2018 IEEE

International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018

814. J. Zhong, D. Vital, S. Bhardwaj, and J. Volakis, "2.45 GHz Wearable RF-Harvestor for Large Area Textile Harvester (LATH) Integration," 2018 IEEE International Symposium on Antenna and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, Jul 8- Jul 13, 2018.
815. Alexander D. Johnson, Elias A. Alwan, John L. Volakis, "A Wideband Differentially Fed Tightly Coupled Dipole Array", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
816. Matthew W. Nichols, Alexander D. Johnson, Elias A. Alwan, John L. Volakis, "Deployable Ultra–Wideband Tightly Coupled Dipole Textile Array", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
817. Satheesh Bojja Venkatakrishnan, Alexander Hovsepian, Elias Alwan, John Volakis, "Wideband Transmit Noise Suppression in Star System with UWB Arrays", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
818. Maxence Carvalho, Abe Akhiyat, John Volakis," Millimeter Wave Integrated Antenna Array On LTCC", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
819. Alexander Hovsepian, Satheesh Bojja Venkatakrishnan, Elias A. Alwan, John L. Volakis, "Port to Port Isolation of an Omnidirectional Antenna Through Perfect Symmetry for Simultaneous Transmit and Receive (STAR)", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
820. Alexander D. Johnson, Satheesh Bojja Venkatakrishnan, Maifuz Ali, John L. Volakis, "Deployable Ultra Wideband Antenna for Cubesats", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
821. Carolina Moncion, Lakshmini Balachandar, Satheesh Bojja–Venkatakrishnan, Jorge Riera Diaz, John L. Volakis, "In Vivo Recording of Epileptiform Neural Activation Using a Novel Fully–Passive Implantable System", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
822. Rimon J. Hokayem, John L. Volakis, Elias A. Alwan, "Low Cost Power Efficient Beamformer with Element–To–Element Mixing (BEEM)", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
823. Dieff Vital, Shubhendu Bhardwaj, John L. Volakis, "A 2.45 GHz Textile–Based RF Rectenna Array for Sensor Applications", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
824. Dieff Vital, John L. Volakis, Shubhendu Bhardwaj, "On–Textile Coupled Magnetic Resonators for Wireless Power Harvesting Applications", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
825. Dimitrios Siafarikas, Elias A. Alwan, John L. Volakis, "Interference Mitigation for 5G Millimeter Wave Communication Links", USNC Radio Science Meeting 2019, Boulder, CO, Jan 9-12, 2019.
826. C. Moncion, J. Borges, L. Balachandar, S. Bojja Venkatakrishnan, J. Riera Diaz, J. L. Volakis, "In Vivo Evaluation of a Fully Passive Wireless Neurosensing System". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
827. A. Johnson, E. Alwan and J. L. Volakis, "UWB Differential Millimeter -Wave Phased Array". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019

828. S. Muzahir Abbas, H. Zahra, R. Maqsood Hashmi, J. L. Volakis, "Compact On-body Antennas for Wearable Communications Systems". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
829. J. L. Volakis and E. Alwan, "Wideband Beamforming Arrays for 5G Communications ". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
830. A. Johnson, E. Alwan, J. L. Volakis, "Considerations for UWB Millimeter-Wave Phased Array Feeding". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
831. M. Carvalho, A. Akhiyat, E. Alwan, and J. L. Volakis, "Directivity Improvement of a 94GHz LTCC Integrated Pyramidal Horn Antenna Using EBG Structure". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
832. D. Siafarikas, E. Alwan and J. L. Volakis "Experimental Results of Interference Mitigation Using Ultra-Wideband Spreading". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
833. R. Hokayem, J. L. Volakis, and E. Alwan, "A Compact Beamforming Concept Based On Element to Element Mixing for 5G applications". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
834. D. Vital, J. L. Volakis, and S. Bhardwaj, "Textile-Based Novel Anchor-Shaped Antenna for Near-Field Wireless Power Transfer". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
835. D. Vital and J. L. Volakis, "Mutual Coupling Reduction in MIMO Antenna using a Novel Metamaterial Structure". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
836. M. W. Nichols, A. Johnson, S. Bojja Venkatakrishnan, E. Alwan, and J. L. Volakis "Investigation of Current Textile Antenna Technology on Various Substrates with Environmental Factors". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
837. D. Viehland, J. Xu, C. Ming Leung, X. Zhuang, J. Li, S. Bhardwaj, and J. L. Volakis, "A Magnetoeletric Transmitter with Enhanced Magnetic Field Emission". Int. Workshop on Antenna Technologies (IWAT) Conference, Miami, FL, 3-6 March 2019
838. Dief Vital, S. Bhandwaj, J.L. Volakis, "A 2.45 GHz RF Power Harvesting System Using Textile-Based Single-Diode Rectennas" (Paper ID 266-VO849), IMS2019 (won 3rd best paper award).
839. S. Bojja Venkatakrishnan, A. Hovsepian, E. Alwan, J.L. Volakis, "Noise in STAR across 1 GHz Bandwidth," URSI Electromagnetic Theory Symposium (EMTS), San Diego, May 2019.
840. S. Bojja Venkatakrishnan, A. Hovsepian, E. Alwan, J.L. Volakis, "RF Cancellation of Coupled Transmit Signal and Noise in STAR Across 1 GHz Bandwidth," URSI Electromagnetic Theory Symposium (EMTS), San Diego, May 2019.
841. J.L. Volakis, "Wideband Beaming Arrays for 5G Communications," Plenary Session Talk at URSI Electromagnetic Theory Symposium (EMTS), San Diego, May 2019.
842. A. Johnson, E. Alwan, and J.L. Volaks, "A Low Cost Millimeter-Wave Phased Arrays," URSI Electromagnetic Theory Symposium (EMTS), San Diego, May 2019.

843. M. W. Nichols, A. D. Johnson, E. A. Alwan, J. L. Volakis, "Textile-Based Ultra-Wideband Tightly Coupled Dipole Array," URSI Electromagnetic Theory Symposium (EMTS), San Diego, May 2019.
844. M. Islam, J. Volakis, "Deep Tissue Biomedical Imaging Using a Wearable Sensor," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
845. D. Siafarikas, J. Volakis, "Wideband CDM Transceiver Performance in Presence of Multiple Interference Scenarios," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
846. I. Sefa, A. Johnson, S. Venkatakrishnan, J. Volakis, "Ultra Wideband Balanced Feeds for Scanning Arrays," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
847. A. Johnson, E. Alwan, J. Volakis, "Dual Polarized UWB Millimeter-Wave Phased Arrays," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
848. A. Johnson, E. Alwan, J. Volakis, "Low Angle Scanning Phased Arrays With Greater Than 50:1 Bandwidth," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
849. M. Nichols, A. Johnson, E. Alwan, J. Volakis, "Textile Antenna Arrays and their Environmental Durability," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
850. M. Carvalho, A. Akhiyat, E. Alwan, J. Volakis, "Grounded Coplanar Waveguide-Fed Millimeter Wave Volumetric Pyramidal Horn on LTCC," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
851. A. Hovsepian, S. Venkatakrishnan, J. Volakis, "Transmit-Receive Antenna Isolation Using a Passively Tuned Balun for Simultaneous Transmit and Receive (STAR) Applications," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
852. S. Venkatakrishnan, A. Hovsepian, T. Nakatani, H. Ghajari, J. Yan, J. Volakis, "Improved Self-Interference Suppression in Wideband STAR," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
853. C. Moncion, S. Venkatakrishnan, J. Diaz, J. Volakis, "Recording Critical Epilepsy Indicators using a Fully-Passive Wireless System," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
854. C. Moncion, S. Venkatakrishnan, J. Diaz, J. Volakis, "Optimization of a Fully-Passive Neurosensor for Recording Neural Activity of a Free-Moving Animal: Characterization of Rat Skin Dielectric Properties," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
855. D. Vital, S. Bhardwaj, J. Volakis, "Misalignment Resilient, Near Field Wireless Power Transfer (WPT) Antennas using Anchor Shape," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.

856. D. Vital, S. Bhardwaj, J. Volakis, "Bending and Twisting Tests for RF Performances of Textile Transmission Lines," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
857. R. Hokayem, E. Alwan, J. Volakis, "Beamforming Apertures with Wideband Low-Cost Front-Ends," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
858. A. Madanayake, N. Akram, E. Alwan, S. Venkatakrishnan, J. Volakis, S. Mandal, L. Belostotski, "A Four-Element Digital Array Receiver at 2.4 GHz Using a Single Frequency-Multiplexed ADC," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
859. M. Rahman, S. Venkatakrishnan, E. Alwan, J. Volakis, "Spread Spectrum Techniques for Interference Mitigation in Large Bandwidth," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, 7-12 July 2019.
860. S. Sekelsky, David Turowski, Han Liu, A. Johnson, E. Alwan, J.L. Volakis, Gregory A Mitchel, and Steven J. Weiss, "Ultra-wideband Dual-Polarized Scanning Meta-material / Meta-ferrite Arrays," *IEEE Int. Symposium on Phased Arrays Systems & Technology*, Waltham, MA, Oct 15-18, 2019.
861. A. D Johnson, S. Bojja Venkatakrishnan, E. Alwan, and John L. Volakis, "UWB Millimeter-Wave Phased Array with Differential Feed and Wide Scan Range," *IEEE Int. Symposium on Phased Arrays Systems & Technology*, Waltham, MA, Oct 15-18, 2019.
862. C. Moncion, J. Borges, D. Borrego, L. Balachandar, S. Bojja-Venkatakrishnan, John L. Volakis, and Jorge Riera Diaz, "Recording Neural Activity with a Battery-Free Wireless Neurosensor," NeuroScience October 2019 Conference, Chicago, IL
863. Shubhendu Bhardwaj, S K Yeahia Been Sayeed, Jose Solis Camara, Dieff Vital, P. M. Raj; Reconfigurable mm Wave Flexible Packages with Ultra-thin Fan-Out Embedded Tunable Ceramic IPDs. International Symposium on Microelectronics 1 October 2019; 2019 (1): 000434–000437. doi: https://doi.org/10.4071/2380-4505-2019.1.000434
864. A.D. Johnson & J.L. Volakis, "Dynamically Reconfigurable and Packable Multifunctional Origami Antennas and Array," 2020 *iWAT* Conference, Poland.
865. M. R. Pulugurtha, S. Venkatakrishnan, and J. Volakis, "Heterogeneous Package Integration for 5G Systems: Design and Packaging Advances," GoMACTech 2020 Annual Conference Microelectronics for a New Decade: Global Competition and Near-Peer Challenges, San Diego, CA, 16-19 March 2020.
866. A. Johnson, S. Venkatakrishnan, E. Alwan, and J. Volakis, "UWB Millimeter-Wave Phased Array with Wide Scan Range and Polarization Diversity," GoMACTech 2020 Annual Conference Microelectronics for a New Decade: Global Competition and Near-Peer Challenges, San Diego, CA, 16-19 March 2020.
867. A. Hovsepian, S. Venkatakrishnan, and J. Volakis, "Tunable Balun in an Antenna Agnostic Feed Network for Simultaneous Transmit and Receive Applications," GoMACTech 2020 Annual Conference Microelectronics for a New Decade: Global Competition and Near-Peer Challenges, San Diego, CA, 16-19 March 2020.
868. M. R. Pulugurtha, S. Bhardwaj, M. Monshi and J. Volakis, "High-Density Flexible and Textile Electronics with Die (Fan-Out) Embedding, Remateable and Deformable Interconnects and Flexible Embedded Passives," GoMACTech 2020 Annual Conference

Microelectronics for a New Decade: Global Competition and Near-Peer Challenges, San Diego, CA, 16-19 March 2020.

869. M. Monshi, J. Camara, S. Bhardwaj, P. Raj and J. Volakis, "High-Density Embedded Electronics in Textiles with 3D Flex Package Transfer," 2020 IEEE 70th Electronic Components and Technology Conference, Lake Buena Vista, FL, 26-29 May 2020.
870. S. Sayeed, S. Venkatakrishnan, M. Monshi, A. Abdulhameed, P. Raj and J. Volakis, "3D Heterogeneous and Flexible Package Integration for Zero-Power Wireless Neural Recording," 2020 IEEE 70th Electronic Components and Technology Conference, Lake Buena Vista, FL, 26-29 May 2020.
871. J. Camara, S. Soroushiani, D. Wilding, S. Sayeed, M. Monshi, S. Bhardwaj, P. Raj and J. Volakis, "Remateable and Deformable Area-Array Interconnects in 3D Smart Wireless Sensor Packages," 2020 IEEE 70th Electronic Components and Technology Conference, Lake Buena Vista, FL, 26-29 May 2020.
872. Abe Akhiyat, Mustafa Karabiyat, and John L.Volakis,"Passive Millimeter-Wave Imaging Toward 1K Resolution," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference); 2pp page summary.
873. Abe Akhiyat, Mustafa Karabiyat, and John L.Volakis,"Integrated Planar Antenna with High Field Enhancement for On-Chip Electro-Optical Modulator Design," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference); abstract
874. Satheesh Bojja Venkatakrishnan; Alexander Hovsepian, Elias Alwan; Toshifumi Nakat; John L. Volakis; "Comparison of RF Cancellation Approaches for UWB Star Radios," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
875. Md Rakibur Rahman; Satheesh Bojja-Venkatakrishnan; Elias Alwan; John L. Volakis; "Spread Spectrum Techniques with Channel Coding for Wideband Secured Communication Links," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
876. Carolina Moncion; Satheesh Bojja Venkatakrishnan; Jorge Riera; John L. Volakis; "Fully-Passive and Wireless Recording of Neural Activity in Freely Moving Animals," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
877. Dieff Vital; Shekhar Bhansali; Shubhendu Bhardwaj; John L. Volakis; "Electronic Wound Monitoring using Fabric-Integrated Data Modulation," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
878. Jorge Antonio Caripidis Troccola; Alexander D. Johnson; Satheesh Bojja Venkatakrishnan; John L. Volakis; "Metallization Techniques for Wearable Textile Electronics," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
879. Pulugurtha Markondeya Raj; Md Monirojjaman Monshi; Shubhendu Bhardwaj; John L. Volakis; "High-Density Component Integration in Fabrics with Thin Flex Interposers,"

2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).

880. Alexander Hovsepian; Satheesh Bojja Venkatakrishnan; John L. Volakis; "Active Excitation Tuning for Simultaneous Transmit and Receive Antennas," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
881. Dieff Vital; Md Monirojjaman Monshi; Shubhendu Bhardwaj; P. Markondeya Raj; John L. Volakis; "Flexible Ink-Based Interconnects for Textile-Integrated RF Components," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
882. Shubhendu Bhardwaj; Dwight Viehland; John L. Volakis; "Magnetoelectric Heterostructures Based Very Low Frequency Antenna," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
883. Alexander Johnson; Satheesh Venkatakrishnan; John L. Volakis; "Telescopic Deployable Inverted Hat Monopole (IHM) for Cubesats," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
884. Asif Hassan; Md Asiful Islam; Alexander Johnson; Satheesh Bojja Venkatakrishnan; John L. Volakis; "Wearable Sensor for High Accuracy Tissue Imaging Using Reciprocity," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
885. Kefayet Ullah; Satheesh Bojja Venkatakrishnan; John L. Volakis; "Vertical Integration of RF Devices Using System-in-Package (SIP) Technology," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
886. Maxence Carvalho; Elias A. Alwan; John L. Volakis; "Ultra Wideband Arrays with Reconfigurable Metamaterials for Bandwidth Enhancement," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
887. Rimon Hokayem; Satheesh Bojja Venkatakrishnan; Elias Alwan; John Volakis; "Frequency Independent Millimeter-Wave Beamformer via Cross-Mixing," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
888. Dieff Vital; Alfredo Gonzalez; Elias A. Alwan; Shubhendu Bhardwaj; John L. Volakis; "A 2.5-GHZ Frugal Dumbbell-Shaped Rectenna Built on Recyclable Substrates," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
889. Alfredo Gonzalez; Elias Alwan; John L. Volakis; "Sub-Terahertz Wideband Array on Low-Cost Organic Substrate," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
890. Md Rakibul Islam; Matthew Nichols; Alexander Johnson; Satheesh Bojja Venkatakrishnan; Elias Alwan; John L. Volakis; "Wideband Tightly Coupled Dipole Array (TCDA) with 5.4:1 Bandwidth on a Miura-Ori Pattern," 2020 IEEE International

Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).

891. Matthew W. Nichols; Alexander D. Johnson; Satheesh Bojja Venkatakrishnan; John L. Volakis; “Joint Design for Finite Thickness Miura Folding Antenna Arrays,” 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, CA, 4-10 July 2020 (remotely conducted conference).
892. Dief Vital, J.L. Volakis and S. Bhardwaj "Textile-Based Corrugated-X Resonators for Wireless RF Power Transfer for Wearable Applications,” AMTA 2020 Virtual Symposium, 2-5 Nov 2020.
893. Najath Akram, Arjuna Madanayake, Satheesh Venkatakrishnan, John Volakis, Dimitra Psychogiou, Thomas Marzetta, Theodore Rappaport, “Massive-MIMO and Digital mm-Wave Arrays on RF-SoCs using FDM for M-Fold Increase in Antennas per ADC/DAC,” IEEE Space Hardware and Radio Conference (SHaRC), Paper ID 306-WQ60, San Diego, 17-20 Jan 2021.
894. A. Akhiyat and J. L. Volakis "Planar Millimeter Wave Antenna Design for On-Chip Electro-Optical Sensing Devices” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
895. M. Carvalho and J. L. Volakis "Deployable and Reconfigurable Ultra-Wideband Apertures on Origami Lattices” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
896. J. C. Troccola, A. Johnson, V. Manohar, S. Venkatakrishnan and J. L. Volakis "Wideband UHF Apertures on Textile Substrates for Space Applications” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021
897. K. Ullah, S. B. Venkatakrishnan and J. L. Volakis "Millimeter-Wave Beamforming Receiver Fabrication Challenges” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
898. A. Hassan, M. A. Islam, V. Manohar, S. B. Venkatakrishnan and J. L. Volakis "Three-Dimensional Wearable Sensor for Real-Time Imaging using a Back-Projection Technique” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
899. M. Anastasiadis, A. Johnson, V. Manohar, S. Venkatakrishnan and J. L. Volakis "Mechanically Actuated Low-Profile Reconfigurable Circularly Polarized Antenna for CubeSats” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
900. M. R. Islam, A. D. Johnson, V. Manohar, S. B. Venkatakrishnan and J. L. Volakis "Foldable Miura-Ori Tightly Coupled Dipole Array (TCDA) With Integrated Planar Feed Using LET Joints” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
901. V. Manohar, S. Bhardwaj, S. Venkatakrishnan and J. L. Volakis "VHF/UHF Tightly Coupled Dipole Array for CubeSats” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
902. C. Moncion, L. Balachandar, S. Bojja-Venkatakrishnan, A. Kiourti, J. R. Diaz and J. L. Volakis "Passive Wireless Neurosensing System for Multi-unit Neuronal Activity Monitoring” 2021 USNC-URSI National Radio Science Meeting, Virtual, Jan 2021.
903. D. Vital, J.L. Volakis, S. Bhardwaj, “An Ultra-High-Frequency Wirelessly-Powered Smart Bandage for Wound Monitoring and Sensing Using Frequency Modulation,” IEEE IMS, Virtual 2020.

904. A. Akhiyat and J. L. Volakis, "Planar Millimeter Wave Antenna Design for On-Chip Electro-Optical Sensing Devises" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
905. M. R. Rahman, S. Bojja Venkatakrishnan and J. L. Volakis "Experimental and Theoretical Assessment of UWB Secure Communication in Presence of Dynamic Interference" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021
906. K. Ullah, S. Bojja Venkatakrishnan and J. L. Volakis "Millimeter-Wave Beamforming Receiver Fabrication Challenges" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
907. D. Vital, J. L. Volakis and S. Bhardwaj "Anchor-Shaped Antenna-Based Wireless Charging Platform for Internet of Things" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
908. J. Caripidis Troccola, A. Johnson, V. Manohar, S. Bojja Venkatakrishnan and J. L. Volakis "Wideband UHF Apertures on Textile Substrates for Space Applications" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
909. M. Carvalho and J. L. Volakis "Deployable and Reconfigurable Ultra-Wideband Apertures on Origami Lattices" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
910. A. Hovsepian, S. Bojja Venkatakrishnan, E. A. Alwan and J. L. Volakis "Ultra Wideband (UWB) Slot Antenna Array for Low Profile, High Power Applications" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
911. P. Gaire, S. Bhardwaj, M. Pulugurtha, and J. L. Volakis "Reconfigurable Shielding Architecture Using Multiferroics in 1 to 6 GHz Frequency Band" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
912. M. Anastasiadis, A. Johnson, V. Manohar, S. Bojja Venkatakrishnan, E. A. Alwan and J. L. Volakis "Mechanically Actuated Low-Profile Reconfigurable Circularly Polarized Antenna for CubeSats" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
913. V. Manohar, S. Bhardwaj, S. Bojja Venkatakrishnan and J. L. Volakis "VHF/UHF Tightly Coupled Dipole Array for CubeSats" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
914. C. Moncion, L. Balachandar, S. Bojja Venkatakrishnan, A. Kiourti, J. Riera Diaz and J. L. Volakis "Passive Wireless Neurosensing System for Multi-unit Neuronal Activity Monitoring" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
915. A. Hassan, Md. A. Islam, V. Manohar, S. Bojja Venkatakrishnan and J. L. Volakis "Three-Dimensional Wearable Sensor for Real-Time Imaging using a Back-Projection Technique" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
916. M. Nichols, A. Johnson, S. Bojja Venkatakrishnan and J. L. Volakis "Joint Design for Finite Thickness Miura Folded Antenna Arrays" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.
917. Md. R. Islam, A. Johnson, V. Manohar, S. Bojja Venkatakrishnan and J. L. Volakis "Foldable Miura-Ori Tightly Coupled Dipole Array (TCDA) With Integrated Planar Feed Using LET Joints" 2021 USNC/URSI National Radio Science Meeting, Virtual, Jan 4-9, 2021.

918. Alfredo Gonzalez, John L. Volakis, Elias A. Alwan, “Sub-Terahertz Antenna Array Packaged in Bio-Compatible Polymer for Fully-Passive Subdermal Sensing," 2021 IEEE MTT-S International Microwave Biomedical Conference (IMBioC).
919. S. Bhardwaj, M. Anastasiadis, J. L. Volakis “Novel Traveling Wave Amplifier Design with Interdigital Grating and 2DEG Substrate for High Gain at 300GHz,” in *2021 International Applied Computational Electromagnetics Society Symposium (ACES)*, 2021, pp. 1–4.
920. A. Akhiyat and J.L. Volakis, “High Efficiency Antenna Integrated Electro-Optic modulator for Sensing Applications,” 2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Singapore.
921. K. Ullah, S. B. Venkatakrishnan and J. L. Volakis, “Low Power and Low Cost Millimeter-wave Digital Beamformer Using an Orthogonal Coding Scheme,” Proceedings of International Conference on Electromagnetics in Advanced Applications, Hawaii, 2021
922. S Bojja Venkatakrishnan, A Hovsepian and J Volakis, “Increased Isolation In Single And Multi-antenna Full Duplex Wideband Radios,” Proceedings of International Conference on Electromagnetics in Advanced Applications, Hawaii, 2021
923. J.A.C. Troccoloa, M. Nichols, A.D. Johnson, S. B. Venkatakrishnan, V. Manohar and J. L. Volakis. “Textile Electronics for EM Applications”, Proceedings of International Conference on Electromagnetics in Advanced Applications, Hawaii, 2021
924. V. Manohar, T. Valera, S. B. Venkatakrishnan and J. L. Volakis. “High Resolution VHF/UHF Radars Realized Through CubeSat Constellations”, Proceedings of International Conference on Electromagnetics in Advanced Applications, Hawaii, 2021.
925. A.A. Akhiyat, P. Gaire, and J. L. Volakis, “Millimeter Wave Antenna Design for On-chip Electro-optical Sensing Devices Using Optical Up-conversion,” Proceedings of International Conference on Electromagnetics in Advanced Applications, Hawaii, 2021
926. D. Vital, S. Bhardwaj, J.L. Volakis, "A Novel Corrugated-Shank Anchor-Shaped Antenna for Wireless Power Transfer," 2021 URSI General Assembly (GASS), Rome, Italy, 28 Aug -5-Sept 2021
927. J.L. Volakis (invited), "Ultra Wideband Tightly Coupled Dipole Arrays with Low-Cost Beamformers," 2021 URSI General Assembly (GASS), Rome, Italy, 28 Aug -5-Sept 2021
928. J.L.Volakis (invited), "Working with Professor T.B.A. Senior on Diffraction by Impedance Structures and Higher Order Boundary Conditions," 2021 URSI General Assembly (GASS), Rome, Italy, 28 Aug -5-Sept 2021
929. Pawan Gaire,Veeru Jaiswal, Yeahia Been Sayeed, John L. Volakis, Shubhendu Bhardwaj and Markondeya Raj Pulugurtha, “Magnetically - Tunable Multiferroic Stacks for Reconfigurable RF System Packages,” 2021 IEEE 16th Nanotechnology Materials and Devices Conference (NMDC).
930. Sayeed, S. Y. B., Abdal, A., Volakis, J., Lin, WC., D., Bhardwaj, S., & Raj, P. M. (2021), Chipscale Piezo-Magnetostrictive Interfaces – A new simplified and microminiaturized telemetry paradigm for Medical Device Packages, Proceedings, 71st Electronic Components and Technology Conference (ECTC).
931. Soroushiani, S., Nguyen, H., Riera-Cercado, C., Sayeed, S. Y. B., Abdal, A., Volakis, J., Lin, WC., D., Bhardwaj, S., & Raj, P. M. (2021), Wireless Photonic Sensors with Flex Fan-Out Packaged Devices and Enhanced Power Telemetry, Proceedings, 71st Electronic Components and Technology Conference (ECTC).

932. M. Carvalho, and J. L. Volakis, “Deployable Miura-Ori Tightly Coupled Dipole Array for Small Satellites,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
933. M. Hernandez, C. Moncion, S. B. Venkatakrishnan, and J. L. Volakis, “Active Impedance Matching of a Passive and Wireless Neuropotential Recorder,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
934. C. Moncion, L. Balachandar, S. B. Venkatakrishnan, J. R. Diaz, and J. L. Volakis, “Monitoring Neuronal Activity with a Multichannel Passive Wireless Neurosensing System,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
935. K. Ullah, S. B. Venkatakrishnan, and J. L. Volakis, “28 GHz Millimeter-Wave Digital Beamformer: Design and Experimental Evaluation,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
936. M. R. Islam, V. Manohar, S. B. Venkatakrishnan, and J. L. Volakis, “Low-Profile, Low-Cost Ultrawideband VHF/UHF Antennas for Communications and Remote Sensing,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
937. A. Akhiyat, and J. L. Volakis, “High Efficiency Efficiency Antenna Integrated Electro-Optic modulator for Sensing Applications,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
938. P. Gaire, V. Jaiswal, S. Y. B. Sayeed, J. L. Volakis, M. R. Pulugurtha and S. Bhardwaj, "Tunable Multiferroics for Reconfigurable RF System Packages," 2021 IEEE 16th Nanotechnology Materials and Devices Conference (NMDC), 2021, pp. 1-4.
939. M. R. Rahman, S. B. Venkatakrishnan, and J. L. Volakis, “Ultra-Wideband RF Self Interference Cancellation Filter for STAR Radios,” IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI), Marina Bay Sands, Singapore, Dec 4 – Dec 10, 2021.
940. K. Ullah, S. B. Venkatakrishnan, and J. L. Volakis, “Millimeter-Wave Digital Beamforming Receiver Using RFSoC FPGA for MIMO Communications," 2022 IEEE 22nd Annual Wireless and Microwave Technology Conference (WAMICON), March 2022.
941. J.L. Volakis (invited talk), “UWB Future G Transceivers & Wearable Electronics,” 2022 IEEE 22nd Annual Wireless and Microwave Technology Conference (WAMICON), March 2022.
942. M. R. Rahman, S. B. Venkatakrishnan, and J. L. Volakis, “Wideband High Isolation Antenna with Self Interference Cancellation (SIC) Filter for Simultaneous Transmit and

Receive Radios (STAR)," URSI Atlantic Radio Science Meeting (AT-AP-RASC). Gran Canaria, Spain, May 29th – June 3rd, 2022.

943. J. Caripidis, M.Carvalho, and J. L. Volakis, "Deployable Low-Profile Ultra-Wideband Tightly Coupled Dipole Reflectarray Antennas" URSI Atlantic Radio Science Meeting (AT-AP-RASC). Gran Canaria, Spain, May 29th – June 3rd, 2022.
944. M. Nichols, S. B. Venkatakrishnan, V. Manohar, and J. L. Volakis, "Milimeter-Wave Tightly Coupled Dipole Arrays on a Ball Grid Array Package". IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
945. M. R. Rahman, S. B. Venkatakrishnan, and J. L. Volakis, "Wideband Self Interference Cancellation (SIC) RF Front End for Simultaneous Transmit and Receive (STAR) Radios. IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
946. M. Gutierrez-Hernandez, and J.L. Volakis, "Machine Learning Evaluation of Passive Wireless Neurosensing Recorder for Biopotentials Recognition". IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
947. R. Islam, M. Carvalho, S. B. Venkatakrishnan, and J. L. Volakis, "Monolithic Integration of an Ultra-Wideband Tightly Coupled Dipole Array (TCDA) with 20:1 Bandwidth (2 To 40 GHz) with 45 Volumetric Scanning". IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
948. M. Anastasiadis, S. Bhardwaj, and J.L.Volakis, "Design and Particle-In-Cell Modeling of Solid-State Travelling Wave Amplifier at 330 GHz". IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
949. M.M. Hossain, M. Carvalho, S. B. Venkatakrishnan, and J.L. Volakis, "UHF/VHF Tightly coupled Dipole Array for CubeSat Constellations Based on Synthetic Aperture Concepts". IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
950. J. Willis, S. B. Venkatakrishnan, and J.L Volakis, "Fast Angle of Arrival Estimation on Rotating Platforms through Machine Learning". IEEE AP- S/URSI 2022. Denver, Colorado, July 10-July 15th, 2022.
951. J. Caripidis, M. Carvalho, Md. Rakibul Islam, and J. L. Volakis, "Deployable Tightly Coupled Dipole Reflectarray for Small Satellites", in IEEE Antenna and Propagation Symposium, Denver, CO, July 2022
952. P. Gaire, P., Jaiswal, V., Volakis, J., Pulugurtha, M. R., &; Shubhendu Bhardwaj. Reconfigurable Antennas and FSS with Magnetically-Tunable Multiferroic Components. IEEE ECTC 2022.
953. T. Valera, S. B. Venkatakrishnan, A. Madanayake, J. L. Volakis,, "Reconfigurable Intelligent Surfaces for Adaptive Nulling and Beam Steering Using 1-bit Topology, " 2023 USNC-URSI meeting, Jan 10-14, 2023, Boulder, CO.
954. J. Caripidis Troccola, S. B. Venkatakrishnan, J. L. Volakis, "Deployable 18:1 Low-Profile Ultra-Wideband Tightly Coupled Dipole Array with Corporate Feed Network," 2023 USNC-URSI meeting, Jan 10-14, 2023, Boulder, CO.
955. Md R. Islam, S. Bojja Venkatakrishanan, G. Mitchel, J. L. Volakis, "3D Printable, Ultra-Wideband, Tightly Coupled Dipole Array (TCDA) with 20:1 Bandwidth (2 to 40 GHz) with 45◦ Scanning," USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.

956. Melany Gutierrez-Hernandez, Carolina Moncion, Satheesh Bojja-Venkatakrishnan, John L. Volakis, “A Battery-less and Wireless Neural Recording System with Additive Manufacturing,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
957. Muhammad Mubasshir Hossain, Stavros Koulouridis, Satheesh Bojja Venkatakrishnan, John Volakis, “UHF/VHF Tightly Coupled Dipole Array for CubeSat-based Spaceborne Ice Sounding Radar,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
958. Jorge A. Caripidis Troccola, Satheesh B. Venkatakrishnan, John L. Volakis, “Deployable 18:1 Low-Profile Ultra-Wideband Tightly Coupled Dipole Array with Corporate Feed Network,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
959. Tatiana Valera, Satheesh B. Venkatakrishnan, Arjuna Madanayake, John L. Volakis, “Reconfigurable Intelligent Surfaces for Adaptive Nulling and Beam Steering Using 1-bit Topology,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
960. John Willis, Satheesh Venkatakrishnan, John Volakis, “Optimizing Machine Learning Algorithms for Dynamic Direction Finding,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
961. Kefayet Ullah, Satheesh Bojja Venkatakrishnan, John L. Volakis, “Solid-State Travelling Wave Amplifier at 100 GHz,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
962. Arnaldo Sans, John Willis, Wilfredo Rivas-Torres, John Volakis, Satheesh Venkatakrishnan, “RF-FE Analysis and Optimization of an UWB Spread Spectrum Transceiver,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
963. Dieff Vital, Pulak Bhushan, Pawan Gaire, Md Khadimul Islam, Shashikant Lahade, Vladimir Pozdin, John L. Volakis, Shekhar Bhansali, Shubhendu Bhardwaj, “A Wirelessly Powered Novel Smart Bandage for Chronic Wound Monitoring,” USNC-URSI National Radio Science Meeting (USNC-URSI), Boulder, CO, Jan 10-14, 2023.
964. Ghaleb Al Duhni, Pulugurtha Markondeyaraj, and John L. Volakis, “EMI Shielding Performance of Thin and Thick Graphene Films Placed Within Integrated Power Modules”, 4th International Symposiom 3D PEIM, Florida, Miami, February 1-3, 2023.
965. Jorge A. Caripidis Trocolla, Sweta Gupta, Maxence Carbalho, Satheesh Venkatakrishnan, P.M. Raj and J. L. Volakis, “Laminate-Embedded Multimodal Energy Harvester for Multilevel Power Supply”, 4th International Symposiom 3D PEIM, Florida, Miami, February 1-3, 2023.
966. Melany Gutierrez-Hernandez, Carolina Moncion, Satheesh Bojja-Venkatakrishnan, Jorge Riera Diaz, and John L. Volakis. “Machine Learning Algorithm for Recognition of Neurological Disorders Using a Multichannel Battery-free Wireless Brain Implant Recorder”, URSI International Symposium on Electromagnetic Theory, Vancouver, BC, Canada, 2023.
967. Md Rakibul Islam, Maxence Carvalho, Satheesh B. Venkatakrishanan, Gregory Mitchel, and John L. Volakis, “Millimeter-wave (mm-Wave) Tightly Coupled Dipole Array

(TCDA) with 20:1 Bandwidth and 45◦ Volumetric Scanning," URSI International Symposium on Electromagnetic Theory, Vancouver, CA, 2023.

968. Kefayet Ullah, Satheesh B. Venkatakrishanan, and John L. Volakis, "Experimental Validation of A RFSoC FPGA-based Single-Chip Digital-RF Radio", URSI International Symposium on Electromagnetic Theory, Vancouver, CA, 2023.

969. Jorge Caripidis and John L. Volakis, "Low-Loss Ultra-Wideband Feeding Network for Deployable Spaceborne Tightly Coupled Dipole Arrays". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
970. Raki Rahman and John L. Volakis, "Miniature Footprint of Multi-Stage Self Interference Cancellation in a STAR Radio". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
971. Melany Gutierrez and John L. Volakis, "Ultra High Sensitive Neural Recorder with Additive Manufacturing". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
972. Raki Islam and John L. Volakis, "Design and Fabrication of an Ultra Wideband Millimeter-wave Array with 20:1 (2-40 GHz) Bandwidth". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
973. Kefayet Ullah and John L. Volakis, "Single-Chip Realization of All-Digital Transmitter Using RFSoC FPGA". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
974. Michael Anastasiadis and John L. Volakis, "Planar mmWave Traveling Wave Amplifier on GaN/AIGaN Heterostructure". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
975. Mubbasshir Hossain and John L. Volakis, "Dual-band Antenna Array with Stacked Rotman Lens Feeding for Beamforming". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
976. John Willis and John L. Volakis, "Secure Non-Coherent Links Using Commercial Software-Defined Radios". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
977. Tatiana Valera and John L. Volakis, "Low Complexity, 1-Bit Wideband Phase Shifter for Millimeter Wave Reconfigurable Intelligent Surfaces". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
978. Ghaleb Al-duhni and John L. Volakis, "Dual-Band 3D Multiferroic Antenna Stack for Passive Telemetry Sensors". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
979. Arnaldo Sans and John L. Volakis, "Digital Twin Approach to overcome Hardware variations in Transceiver Designs". 2023 IEEE APS/URSI International Symposium, July 23-29, Portland, OR.
980. *A.* Madanayake, S. Bojja Venkatakrishnan, U. De Silva, Gr. Hellbourg, J. L. Volakis, T.S. Rappaport, "AI/ML Interference Cancellation used in Full-Duplex for Radio Astronomy RFI Control,*" 2023 IEEE International Conference on Microwaves, Communications, Antennas, Biomedical Engineering and Electronic Systems (COMCAS).* *https://www.comcas.org/*