

**2019 IEEE International Symposium on  
Antennas and Propagation  
and  
URSI-USNC National Radio Science Meeting**

7-12 July 2019 • Atlanta, Georgia, U.S.A.



Awards Presentation  
Wednesday, July 10, 2019



**IEEE**



## PROGRAM

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6:00 PM	IEEE Awards Presentation Introductions and Welcome <i>Koichi Ito, AP-S President</i> <i>Mahta Moghaddam, AP-S President-Elect</i> <i>Kathleen Melde, Chair, AP-S Awards Committee</i>
6:10 PM	IEEE Electromagnetics Award <i>Presenter Toshio Fukuda, IEEE President-Elect</i>
6:25 PM	IEEE Fellows
6:30 PM	AP-S Field Awards
6:40 PM	Paper Awards
6:50 PM	AP Society Recognition
6:55 PM	AP-S Outstanding Chapter Awards <i>Presenter Ajay K. Poddar</i>
7:00 PM	Raj Mittra Travel Grant Awards <i>Presenter Raj Mittra</i>
7:02 PM	Student Paper Competition Awards <i>Presenter Michael Newkirk</i>
7:05 PM	AP-S Student Design Contest <i>Presenter Marta Martinez</i>
7:10 PM	TICRA Foundation Travel Grants <i>Presenter Dorthe Friberg</i>
7:15 PM	Concluding Remarks

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## 2019 IEEE AP-S FELLOWS

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### **Max Ammann**

*for contributions to compact antennas for wideband wireless applications*

### **Olav Breinbjerg**

*for leadership in spherical near-field antenna measurements*

### **Qing-Xin Chu**

*for contributions to compact wideband antennas*

### **Tayeb Denidni**

*for contributions to frequency selective surfaces and their application to reconfigurable antennas*

### **Dejan Filipovic**

*for contributions to frequency-independent and wideband antennas*

### **Christophe Fumeaux**

*for contributions to resonant dielectric-loaded antennas*

### **Steven Gao**

*for contributions to low-cost pattern-reconfigurable and broadband printed antennas*

### **Derek McNamara**

*for contributions to antenna synthesis and engineering*

### **Xianming Qing**

*for contributions to antennas for radio frequency identification systems*

### **Fan Yang**

*for contributions to surface electromagnetics for antennas*

## 2019 IEEE FELLOWS EVALUATED BY OTHER IEEE SOCIETIES

### **Lin Zhong**

*for contributions to the development of energy-efficient driver circuits  
for organic light-emitting diodes*

### **Lijun Jiang**

*for contributions to broadband computational electromagnetic  
methods*

### **Pierre Blondy**

*for contributions to radio frequency micro electromechanical systems*

### **Richard Campbell**

*for contributions to millimeter and terahertz wafer-probe technology*

### **Nitin Jain**

*for leadership in the development of physics-based models for mm-  
wave System-on-Chip ICs*

### **Mona Jarrahi**

*for contributions to terahertz technology and microwave photonics*

### **Yuanxun Wang**

*for contributions to time-varying and nonlinear electromagnetic  
devices and systems*

## DISTINGUISHED ACHIEVEMENT AWARD

### George V. Eleftheriades, University of Toronto

*"For pioneering contributions to metamaterials and metasurfaces, and their applications to antennas and sub-diffraction imaging".*



**George V. Eleftheriades** (S'86–M'88–SM'02–F'06) earned the M.S.E.E. and Ph.D. degrees in electrical engineering from the University of Michigan, Ann Arbor, MI, USA, in 1989 and 1993, respectively. From 1994 to 1997, he was with the Swiss Federal Institute of Technology, Lausanne, Switzerland. Currently, he is a Professor in the Department of Electrical and Computer Engineering at the University of Toronto, ON, Canada, where he holds the Canada Research/Velma M. Rogers Graham Chair in Nano- and Micro-Structured Electromagnetic Materials. He is a recognized international authority and pioneer in the area of metamaterials. These

are man-made materials which have electromagnetic properties not found in nature. He introduced a method for synthesizing metamaterials using loaded transmission lines. Together with his graduate students, he provided the first experimental evidence of imaging beyond the diffraction limit and pioneered several novel antennas and microwave components using these transmission-line based metamaterials. His research has impacted the field by demonstrating the unique electromagnetic properties of metamaterials; used in lenses, antennas, and other microwave and optical components to drive innovation in fields such as wireless and satellite communications, defence, medical imaging, microscopy, and automotive radar. Presently, he is leading a group of graduate students and researchers in the areas of electromagnetic and optical metamaterials, and metasurfaces, antennas and components for broadband wireless communications, novel antenna beam-steering techniques, far-field super-resolution imaging, radars, plasmonic and nanoscale optical components, and fundamental electromagnetic theory.

Prof. Eleftheriades served as an Associate Editor for the IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION (AP). He also served as a member of the IEEE AP-Society administrative committee (AdCom) from 2007 to 2012 and was an IEEE AP-S Distinguished Lecturer from 2004 to 2009. He served as the General Chair of the 2010 IEEE International Symposium on Antennas and Propagation held in Toronto, ON, Canada. Papers that he co-authored have received numerous awards such as the 2009 Best Paper Award from the IEEE MICROWAVE AND WIRELESS PROPAGATION LETTERS, twice the R. W. P. King Best Paper Award from the IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION (2008 and 2012), and the 2014 Piergiorgio Uslenghi Best Paper Award from the IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS. He received the Ontario Premier's Research Excellence Award and the University of Toronto's Gordon Slemon Award, both in 2001. In 2004 he received an E.W.R. Steacie Fellowship from the Natural Sciences and Engineering Research Council of Canada. In 2009, he was elected a Fellow of the Royal Society of Canada. He is the recipient of the 2008 IEEE Kiyo Tomiyasu Technical Field Award and the 2015 IEEE John Kraus Antenna Award. In 2018 he received the Research Leader Award from the Faculty of Applied Science and Engineering of the University of Toronto.

# CHEN-TO TAI DISTINGUISHED EDUCATOR AWARD

## Douglas H. Werner, The Pennsylvania State University

*"For exemplary achievements in higher education as an inspiring teacher and mentor, and for innovative contributions to advancing knowledge in electromagnetics."*



**Douglas H. Werner** received the B.S., M.S., and Ph.D. degrees in electrical engineering and the M.A. degree in mathematics from the Pennsylvania State University (Penn State), University Park, in 1983, 1985, 1989, and 1986, respectively. He holds the John L. and Genevieve H. McCain Chair Professorship in the Pennsylvania State University Department of Electrical Engineering. He is the director of the Computational Electromagnetics and Antennas Research Lab (CEARL: <http://cearl.ee.psu.edu/>) as well as a member of the Communications and Space Sciences Lab (CSSL). He is also a

faculty member of the Materials Research Institute (MRI) at Penn State. Prof. Werner was presented with the 1993 Applied Computational Electromagnetics Society (ACES) Best Paper Award and was also the recipient of a 1993 International Union of Radio Science (URSI) Young Scientist Award. In 1994, Prof. Werner received the Pennsylvania State University Applied Research Laboratory Outstanding Publication Award. He was a co-author (with one of his graduate students) of a paper published in the IEEE Transactions on Antennas and Propagation which received the 2006 R. W. P. King Award. He received the inaugural IEEE Antennas and Propagation Society Edward E. Altshuler Prize Paper Award and the Harold A. Wheeler Applications Prize Paper Award in 2011 and 2014 respectively. In 2018, he received the DoD Ordnance Technology Consortium (DOTC) Outstanding Technical Achievement Award. He also received the 2015 ACES Technical Achievement Award and the 2019 ACES Computational Electromagnetics Award. He was the recipient of a College of Engineering PSES Outstanding Research Award and Outstanding Teaching Award in March 2000 and March 2002, respectively. He was also presented with an IEEE Central Pennsylvania Section Millennium Medal. In March 2009, he received the PSES Premier Research Award. He is a Fellow of the IEEE, the IET, the OSA, and the ACES. He is also a Senior Member of the National Academy of Inventors (NAI).

Prof. Werner is a former Associate Editor of Radio Science, a former Editor of the IEEE Antennas and Propagation Magazine, an Editorial Board Member of Scientific Reports (a Nature subjournal), an Editorial Board Member for EPJ Applied Metamaterials, Editor for the IEEE Press Series on Electromagnetic Wave Theory & Applications, a member of URSI Commissions B and G, Eta Kappa Nu, Tau Beta Pi and Sigma Xi. He holds 20 patents, has published over 800 technical papers and proceedings articles, and is the author of 30 book chapters with several additional chapters currently in preparation. He has published several books including *Frontiers in Electromagnetics* (Piscataway, NJ: IEEE Press, 2000), *Genetic Algorithms in Electromagnetics* (Hoboken, NJ: Wiley/IEEE, 2007), *Transformation Electromagnetics and Metamaterials: Fundamental Principles and Applications* (London, UK: Springer, 2014), *Electromagnetics of Body*

Area Networks: Antennas, Propagation, and RF Systems (Hoboken, NJ: Wiley/IEEE, 2016), and Broadband Metamaterials in Electromagnetics: Technology and Applications (Pan Stanford Publishing, 2017). He has also contributed chapters for several books including Electromagnetic Optimization by Genetic Algorithms (New York: Wiley Interscience, 1999), Soft Computing in Communications (New York: Springer, 2004), Antenna Engineering Handbook (New York: McGraw-Hill, 2007), Frontiers in Antennas: Next Generation Design and Engineering (New York: McGraw-Hill, 2011), Numerical Methods for Metamaterial Design (New York: Springer, 2013), Computational Electromagnetics (New York: Springer, 2014), Graphene Science Handbook: Nanostructure and Atomic Arrangement (Abingdon, Oxfordshire, UK: CRC Press, 2016), Handbook of Antenna Technologies (New York: Springer, 2016), and Transformation Wave Physics: Electromagnetics, Elastodynamics and Thermodynamics (Boca Raton, FL: CRC Press, 2016).

His research interests include computational electromagnetics (MoM, FEM, FEBI, FDTD, DGTD, CBFM, RCWA, GO, GTD/UTD, etc.) antenna theory and design, phased arrays (including ultra-wideband arrays), microwave devices, wireless and personal communication systems (including on-body networks), wearable and e-textile antennas, RFID tag antennas, conformal antennas, reconfigurable antennas, frequency selective surfaces, electromagnetic wave interactions with complex media, metamaterials, electromagnetic bandgap materials, zero and negative index materials, transformation optics, nanoscale electromagnetics (including nanoantennas), fractal and knot electrodynamics, and nature-inspired optimization techniques (genetic algorithms, clonal selection algorithms, particle swarm, wind driven optimization, and various other evolutionary programming schemes).

## JOHN KRAUS ANTENNA AWARD

### Daniel Sievenpiper, University of California, San Diego

*"For the creation and development of artificial impedance surfaces used in antenna design and scattering control"*



**Dan Sievenpiper** received his BS in 1994 and his PhD in 1999 from UCLA, where he studied photonic crystals and other periodic structures, and invented the high impedance electromagnetic surface. Dan joined HRL (the former Hughes Research Laboratories) in Malibu, CA in 1999. During the following 11 years, he and his team developed new electromagnetic structures, with an emphasis on small, conformal, tunable, and steerable antennas. Dan held a variety of technical and management positions at HRL including Director

of the Applied Electromagnetics Laboratory. He received the HRL Outstanding Inventor Award several times from 2000 to 2006. In 2008, he received the URSI Issac Koga Gold Medal, and also the IEEE Antennas and Propagation Society Piergiorgio Uslenghi Letters Prize Paper Award. In 2009 he was named as a Fellow of the IEEE, and then in 2010 he received the HRL best paper award.

Starting in 2010 Dan joined the faculty at UC San Diego, where his research has been focused on artificial media, periodic structures, the integration of active electronics with electromagnetic structures, and the interaction between electromagnetic waves and materials to enable new capabilities and applications. His current work spans from RF to optical frequencies, and includes topics such as electrically small and wearable antennas; anisotropic, nonlinear, and active artificial impedance surfaces; photonic and phononic topological insulators and chiral structures; the interaction between biological systems and electromagnetic fields and waves; and photo enhanced field emission devices.

During 2010-2012, Dan served on the IEEE AP-S Administrative Committee, and during 2010-2016, he served as an associate editor of IEEE Antennas and Wireless Propagation Letters. He also served as the chair of the IEEE AP-S Committee on New Technology Directions from 2013-2014, and as the general chair of the IEEE Antennas and Propagation Symposium and URSI Radio Science Meeting which was held in San Diego in 2017. He will serve as the vice chair of the UCSD ECE department starting in 2019. Dan currently has more than 70 issued patents and more than 150 publications.



## LOT SHAFAI MID-CAREER AWARD

### **Eva Antonino Daviu, Universitat Politècnica de València (Spain)**

*“For her contribution to the systematic design of antenna systems for practical applications using characteristic modes and promoting access of women to engineering”*



**Eva Antonino-Daviu** (M'00) received her M.S. and Ph.D. degrees in electrical engineering from Universitat Politècnica de València, Valencia, Spain, in 2002 and 2008, respectively. In 2005, she joined the Communications Department at Universitat Politècnica de València as Assistant Professor, and in 2012 she became Associate Professor at this University. In 2005 she joined the research center Institute of Telecommunications and Multimedia Applications (iTEAM) at Universitat Politècnica de València, with more

than 150 researchers, where she became Vice-Director of Research in 2016. She has stayed as a guest researcher at the Department of Antennas & EM Modelling of IMST, in Kamp-Lintfort, Germany, in 2005, and at the Laboratory of Electronics, Antennas and Telecommunications of the University of Nice Sophia-Antipolis (France), in 2018. Currently, she is performing a research internship at the ATHENA Group at Georgia Institute of Technology, where she is working on the use of additive manufacturing techniques for antenna design.

Her current research interests include characteristic modes (CM), small antennas, wideband and multi-band antenna design, MIMO and antenna design for mm-wave applications. She pioneered the application of characteristic modes to modern antenna design in 2003 and has since then proposed significant designs of antennas for different applications based on CM. In the last years, her research on CM is focusing on the design of electronic-integrated antennas for IoT devices and the use of inkjet-printing technologies. Eva Antonino-Daviu has published more than 35 papers in refereed journals and more than 150 papers in renowned conferences in the field of antennas and propagation, as well as 2 book chapters. Moreover, she has participated and led several national and international projects with both public and private funding.

Eva Antonino-Daviu is a member of the IEEE Society and a EurAAP delegate. She is a regular reviewer for IEEE Trans. on Antennas and Propagation, IEEE Antennas and Wireless Letters, IEEE Antennas and Propagation Magazine and IET Microwaves, Antennas and Propagation, and since 2005 she has participated very actively in the courses of the European School of Antennas (ESoA). Since 2018, she leads the EurAAP working group on Small Antennas, with more than 30 European institutions involved.

# HARRINGTON-MITTRA COMPUTATIONAL ELECTROMAGNETICS AWARD

## Chi Hou Chan, City University of Hong Kong

*“For fundamental contributions to fast solutions of integral equations using FFT with applications to scattering, antennas and interconnect structures in homogeneous and layered medium”*



**Chi Hou Chan** was born in Macao to a family revering knowledge more than anything in life as his late father’s formal education was cut short at 5th grade in WWII. The family moved to Hong Kong in 1965 when he was 6 years old. Chi went to the US for his tertiary education in 1978. He first attended City College of New York and then transferred to Ohio State University, Columbus, Ohio. After receiving his bachelor and master degrees in 1981 and 1982, respectively, he went to the University of Illinois at Urbana-Champaign to study under the tutelage of Professor Raj Mittra. He received his PhD in 1987.

From 1987 to 1989, Dr. Chan was a Visiting Assistant Professor in the Department of Electrical and Computer Engineering at the University of Illinois. From 1989 to 1998, he was a faculty member in the Department of Electrical Engineering at the University of Washington, Seattle, WA, USA. In 1996, he joined the Department of Electronic Engineering, City University of Hong Kong (CityU), and was promoted to Chair Professor of Electronic Engineering in 1998. From 1998 to 2009, he was first Associate Dean and then Dean of College of Science and Engineering. He also served as Acting Provost of the university from July 2009 to September 2010. He is currently the Director of State Key Laboratory of Terahertz and Millimeter Waves (City University of Hong Kong). His current research interests include computational electromagnetics, millimeter-wave circuits and antennas, and terahertz science and technology.

Dr. Chan received the U.S. National Science Foundation Presidential Young Investigator Award in 1991 and the Joint Research Fund for Hong Kong and Macao Young Scholars, National Science Fund for Distinguished Young Scholars, China, in 2004. He received Outstanding Teacher Awards from the Department of Electronic Engineering, CityU in 1998, 1999, 2000, and 2006. Students supervised by Professor Chan also received numerous awards including the third and first prizes of the IEEE Microwave Theory and Techniques Society International Microwave Symposium (MTT-IMS) Student Paper Competition in 2003 and 2004, respectively, IEEE MTT Graduate Fellowship (2004) and Undergraduate/Pre-Graduate Fellowship (2004, 2007, 2008 and 2017), and 2007 Fulbright Science and Technology Fellowship.

Professor Chan was elected a Fellow of IEEE in 2002. His citation reads, “For contributions to computational electromagnetics”. He was conferred an Honorary University Fellow by the Open University of Hong Kong in 2016 and one of The President’s Awards by City University of Hong Kong in 2017.

# DONALD G. DUDLEY, JR. UNDERGRADUATE TEACHING AWARD

## Eng Leong Tan, Nanyang Technological University

*“For excellence in teaching, student mentoring, and the development of mobile technologies and computational methods for electromagnetics education”*



**Eng Leong Tan** received the B.Eng. (Electrical) degree with first class honors from the University of Malaya, Malaysia, and the Ph.D. degree in Electrical Engineering from Nanyang Technological University (NTU), Singapore. From 1991 to 1992, he was a Research Assistant at the University of Malaya. From 1991 to 1994, he worked part time at Commercial Network Corporations Sdn. Bhd., Malaysia. From 1999 to 2002, he was a Member of Technical Staff at the Institute for Infocomm Research, Singapore. Since 2002, he has been with the School of Electrical & Electronic Engineering, NTU, where he is currently an Associate Professor. His research interests include computational electromagnetics (CEM), RF/microwave circuit and antenna design.

Dr. Tan has published more than 110 journal papers and more than 70 conference papers. He and his students received numerous paper awards/prizes including 2019 Ulrich L. Rohde Innovative Conference Paper Award on Computational Techniques in Electromagnetics, First Prize in 2014 IEEE Region 10 Student Paper Contest, Best Paper in 2014 IEEE Singapore AP/MTT Chapter Best Student Paper Contest, etc. Under his inspiring mentoring, his teams of students won numerous awards/prizes for their projects in international, regional and local contests. These include First Prize in 2014 IEEE MTT-S Student Design Contest on Apps for Microwave Theory and Techniques, First Prize in 2013 IEEE AP-S Antenna Design Contest, Best team in Android Applications in 2012 Design Innovation Project Competition (NTU), Best team in Robotics in 2011 Design Innovation Project Competition (NTU), Most Efficient Solution Award in 2007 Engineering Invention 'N' Innovation Challenge (among ASEAN universities), First Prize in NTU College of Engineering Hackathon 2016 on Digital Economy & Services, etc.

Dr. Tan has been very active in IEEE activities for many years. He has served as committee member, Chair, and Past Chair for IEEE Singapore AP/MTT Chapter. He is the founding faculty mentor for AP-S and MTT-S Student Branch Chapters in Singapore. His service commitment and leadership has brought the chapter to win 2013 IEEE AP-S Best Chapter Award and 2014 IEEE MTT-S Outstanding Chapter Award. He is a member of IEEE AP-S Education Committee, and Membership and Benefits Committee, and the current Chair of IEEE Education Society Singapore Chapter. He has been actively involved in organizing many conferences, including General Chair of PIERS 2017 Singapore, TPC Chair of APCAP 2018 (Auckland) and 2015 (Bali), as well as various key committee roles in the conferences held in Singapore. He has convened/organized special sessions specifically on electromagnetics education in international conferences. He has been dedicating himself in teaching engineering electromagnetics and RF/microwave courses. Over the years, he has developed and utilized various software visualizations to help students' learning, from the early Flash animations, Matlab and commercial software simulations, to recent apps on mobile devices and 3-D displays incorporating novel CEM methods. In 2015, he was awarded Singapore Ministry of Education Tertiary Education Research Fund for project on interactive mobile apps supplementable with 3-D displays to enhance teaching and learning of electromagnetics. He was the IEEE AP-S Region 10 Distinguished Speaker 2015 and has been invited to deliver talks/demos on educational mobile apps and CEM methods at several cities in India, Japan and China. He is a Senior Member of IEEE and a Fellow of ASEAN Academy of Engineering and Technology.

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## 2019 IEEE APS PAPER AWARDS

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### **SERGEI A. SCHELKUNOFF TRANSACTIONS PRIZE PAPER AWARD**

**Francisco S. Cuesta, Ihar A. Faniayev, Viktor S. Asadchy,  
and Sergei A. Tretyakov**

*"Planar broadband Huygens' metasurfaces for wave manipulations." IEEE Transactions on Antennas and Propagation 66, no. 12 (2018): 7117-7127.*

### **HAROLD A. WHEELER APPLICATIONS PRIZE PAPER AWARD**

**Kenneth W. Brown**

*"Far-Field Antenna Pattern Measurement Using Near-Field Thermal Imaging." IEEE Transactions on Antennas and Propagation 66, no. 3 (2018): 1488-1496.*

### **R. W. P. KING PAPER AWARD**

**Brandon W. Dowd and Rodolfo E. Diaz**

*"FDTD simulation of very large domains applied to radar propagation over the ocean." IEEE Transactions on Antennas and Propagation 66, no. 10 (2018): 5333-5348.*

### **PIERGIORGIO L. E. USLENGHI LETTERS PRIZE PAPER AWARD**

**Casimir Ehrenborg and Mats Gustafsson**

*"Fundamental bounds on MIMO antennas," IEEE Antennas and Wireless Propagation Letters 17, no. 1 (2018): 21-24.*

### **EDWARD E. ALTSCHULER AP-S MAGAZINE PRIZE PAPER AWARD**

**Rick W. Kindt and John T. Logan**

*"Benchmarking Ultrawideband Phased Antenna Arrays: Striving for Clearer and More Informative Reporting Practices." IEEE Antennas and Propagation Magazine 60, no. 3 (2018): 34-47.*

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## 2019 SOCIETY RECOGNITIONS

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#### **2018 President**

Weng Cho Chew

#### **Outgoing Adcom**

Tapan K. Sarkar (2014 President)

Zhongxiang Shen (Secretary)

Guido Lombardi

Eric L. Mokole

Parveen Wahid

Kin-Lu Wong

#### **2019 Symposium General Chair and Co-Chair**

John Papapolymerou

Manos Tentzeris

#### **2019 Technical Program Chairs**

Shanker Balasubramaniam

Andrew Peterson

# ANTENNAS AND PROPAGATION SOCIETY VOLUNTEERS

## COMPLETING THEIR TERMS

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### **Nominations Committee Chair**

Ahmed Kishk

### **Fellows Committee Chair**

Levent Gürel

### **Paper Awards Chair**

Shanker Balasubramaniam

### **SIGHT Committee Co-Chairs**

Meisong Tong

Ajay Poddar

### **Fellow Awards Committee Members**

#### **Completing Their Terms**

Levent Gürel (Chair)

Donald Wilton (Vice-Chair)

Gary Brown

Tie Jun Cui

Steven Franke

Susan Hagness

Ulrich Jakobus

Dan Jiao

Stuart Long

Ronald Marhefka

Andrew F. Peterson (Vice-Chair)

Lot Shafai

Ari Sihvola

Roberto Sorrentino

Warren Stutzman

### **Retiring Paper Awards Committee**

#### **Members**

Charles Rhoads

Kubilay Sertel

Filiberto Bilotti

Francesco Andriulli

Chan Chi Hou

### **Retiring Transactions Associate**

#### **Editors**

Francesco Andriulli

Ashwin Iyer

Ozlem Kilic

### **Retiring AWPL Associate Editors**

George Goussetis

Yongxin Guo

Debatosh Guha

Do-Hoon Kwon

Francesco Andriulli

Giandomenico Amendola

Tim Brown

### **Retiring Members for IEEE AP-S Technical Committee on Antenna Measurements**

Chi-Chih Chen

Jiro Hirokawa

Ed Szpindor

Buning Tian

Handong Wu

Xingfeng Wu

### **Retiring Member of Membership and Benefits Committee**

Shenheng Xu

### **Retiring Member of AP-S Constitution and Bylaws**

Robert Nevels

### **Retiring Members of IEEE AP-S Technical Committee on Antenna Measurements**

Chi-Chih Chen

Jiro Hirokawa

Ed Szpindor

Buning Tian

Handong Wu

**Retiring Members of AP-S Education  
Committee**

Anthony Martin  
Ludger Klinkenbusch  
Cynthia Furse (former Chair)  
Rick Ziolkowski  
John Volakis  
Giuseppe Vecchi  
Cyril Luxey  
Branislav Notaros  
Selvan Krishnasamy  
Sembiam Rengarajan  
You Chung Chung  
Nevin Altunyurt  
Sergey Makarov  
Ananda Sanagavarapu Mohan  
Michal Okoniewski  
Melinda Piket-May  
Rafael Rodriguez-Solis  
Sai Ananthanarayanan P.R.

**IEEE Std. 211-2018 - IEEE Standard  
Definitions of Terms for Radio Wave  
Propagation (Retiring)**

Vikass Monebhurrun  
David Michelson  
Gary Brown  
Nicholas Buris  
Gregory Durgin  
Francisco Falcone  
Everett Farr  
Michael Francis  
Ramakrishna Janaswamy  
Jeffrey Nanzer  
Michael Newkirk  
Yahya Rahmat-Samii  
Tapan Sarkar  
Warren Stutzman  
Steven Weiss

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**2019 RAJ MITTRA TRAVEL GRANT AWARD**

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**Dr. Wei Lin, Chancellor's Postdoctoral Research Fellow  
University of Technology Sydney**

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**2019 OUTSTANDING CHAPTER AWARDS**

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**1ST PLACE**

**North Jersey Chapter**

*Chair- Prof. Edip Niver  
Vice Chair- Ms. Anisha M. Apte*

**2ND PLACE**

**Poland Chapter**

*Chair-Dr. Wojtek Krzysztofik - Chair  
Vice Chair- Dr. Marian Wnuk- Vice Chair  
Secretary & Treasurer -Dr. Jerzy Michalski*

**3RD PLACE**

**Hong Kong Chapter**

*Chair- Dr. Kwok So  
Vice Chair-Dr. K. F. Chan  
Secretary-Dr. K. X. Wang*

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## **2019 STUDENT PAPER COMPETITION FINALISTS**

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Shaghayegh Soltani, Paul S. Taylor, John C. Batchelor, University of Kent, United Kingdom

Qianyi Li, Ting-Yen Shih, University of Idaho, United States

Xiuzhang Cai, Kamal Sarabandi, University of Michigan, United States

Chen Ding, Kwai-Man Luk, State Key Laboratory of Terahertz and Millimeter Waves, China

Tianjing Guo, Christos Argyropoulos, University of Nebraska-Lincoln, United States

Shuzhan Sun, Dan Jiao, Purdue University, United States

Xiaoyi Wang, Christophe Caloz, Polytechnique Montréal, Canada

Liran Biniashvili, Ariel Epstein, Technion - Israel Institute of Technology, Israel

Hossein Mehrpour Bernety, David Schurig, University of Utah, United States

Nasim Soufizadeh-Balaneji, David Rogers, Benjamin D. Braaten, North Dakota State University, United States

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## **2019 STUDENT DESIGN CONTEST FINALISTS**

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### **GUC - German University in Cairo (Egypt)**

Title: DIY antenna characterization system using universal UHF RFID hemispherical dome

Faculty Advisor: Hany Fathy Hammad

Members: Monica Wasfy William, Nada Khaled Sayed Abdelhadi, Samar Abdelatty Sayed Elmeadawy, Yasmine Abdalla Zaghoul

### **KnowAntenna - Universidade de Aveiro (Portugal)**

Title: DIY antenna characterization setup

Faculty Advisor: João Nuno Matos, Armando Rocha

Members: Lucas Leitão, Manuel Neves, Guilherme Maniezo, Tânia Ferreira, Francisco Pinto

### **Team ACE - Brigham Young University (USA)**

Title: Fast Antenna Pattern Measurements with Multipath Suppression

Faculty Advisor: Karl Warnick

Members: Enoch Boekweg, Travis Bonner, Sean Crawford, Jacob Holtom, Shelby Larsen

### **UNAL-APS- National University of Colombia (Colombia)**

Title: UNAL-APS- National University of Colombia (Colombia)

Faculty Advisor: John Jairo Pantoja Acosta

Members: Cristian Felipe Cadavid Insuasti, Sebastián Chavez Martínez, Julian Navarrete Rubio, Leonardo Pérez Levano, Nathaly Elisabeth Ruiz Solano

**UNM - University of New Mexico (USA)**

**Title: Novel and Instructive Antenna Measurement Method**

Faculty Advisor: Christos Christodoulou

Members: Ralph Gesner, Arjun Gupta, John Argyres, Daniel Feaster, Delaney Heileman

**WPS-UTRGV - University of Texas Rio Grande Valley (USA)**

**Title: Electromagnetic Metasurface for Wireless Power System**

Faculty Advisor: Nantakan Wongkasem

Members: Tito Espino, Luis de la Garza, Daniel Salazar

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**2019 TICRA FOUNDATION GRANTS**

Amir Boag, Tel-Aviv University

Samara Gharbieh, IETR-INSA Rennes

Camila Caroline Rodrigues de Albuquerque, Federal University of Campina Grande

Lisa Berretti, University of Florence