

Programme for 2018 12th European Conference on Antennas and Propagation (EUCAP)

Programme Overview Key

T01 - Cellular Networks & 5G		T04 - Connected objects		T07 - Defence & Security		T10 - Software Tools & Instruments				Keynote Speakers
T02 - Ultra-High Data Rate Communications		T05 - Biomedical		T08 - Positioning, Localization & Tracking		T11 - Future Applications				Invited Speakers
T03 - Wireless Networks		T06 - Radar Systems		T09 - Space Applications		T12 - Scientific/Industrial Workshops		CS		Convened Session

Time	Oral Sessions: Room 7	Oral Sessions: Room 12	Oral Sessions: Room 17	Oral Sessions: Room 16	Oral Sessions: Room 15	Oral Sessions: Room 14	Oral Sessions: Room 13	Oral Sessions: Room 6	Oral Sessions: Room 4	Oral Sessions: Room 3	Oral Sessions: Room 2	Oral Sessions: Room 1	Oral Sessions: Capital Lounge Room 2
Monday 9 April													
9:00 - 10:00	Opening Session												
10:00 - 10:40	Professor Sir John Pendry												
10:40 - 11:10	Refreshment Break (Capital Suite Foyer)												
11:10 - 12:30	Professor Baoyan Duan Dr Nick Easton												
12:30 - 13:30	Lunch (Capital Suite Foyer)												
13:30 - 15:30	MM-wave antennas for mobile communications	Antennas for wireless LAN	EM theory and applications	Scattering, diffraction and radar cross section	Antenna-in-Package (AiP) technology for millimetre-wave and 5G applications	Antennas for ultra high data rate communications - 1	Propagation theory and measurements	Propagation for location based devices	Environmental effects on radio propagation	Computational methods	RF absorbing techniques for defence & security	Antennas and propagation for biomedical applications -1	
15:30 - 16:00	Refreshment Break (Capital Suite Foyer)												
16:00 - 18:00	COST CA15104 IRACON session on mm wave and THz channel modelling CS	MIMO and array antennas for wireless LAN	Metasurface materials and techniques	Frequeny and polarisation selective surfaces for radar systems	5G testbeds, measurements, challenges, and standardisations	Antennas and propagation modeling for inter- and intra-chip wireless communications CS	Antennas for wireless connectivity	Positioning and tracking applications	Antenna design and optimization for space applications - 1	Measurement techniques	Imaging techniques and algorithms	Antennas and propagation for biomedical applications-2	
18:00 - 19:30	Welcome Reception and Exhibition Opening (Capital Hall)												

Tuesday 10 April													
9:00 - 10:40	5G and mmWave device measurement challenges CS	Reconfigurable antennas for compact devices CS	Recent advances in asian antennas and propagation research CS	Antennas for radar systems-1	UAV-based antenna and field measurements (AMTA)	IET session on channel sounding campaigns CS	New technologies and materials for wearable antennas for Wireless Personal Area Networks (WPANs) and Wireless Sensor Networks (WSNs) CS	Antennas for positioning	Antenna needs and solutions for future space missions CS	Fundamental challenges and novel methodologies in the next-generation computational electromagnetics CS	Antennas for defence & security	Imaging and diagnosing with microwaves – new findings covering dielectric studies, imaging algorithms and patient studies: COST Action TD1301, MiMed CS	
10:40 - 11:10	Refreshment Break Sponsored by Apple (Capital Hall)												

11:10 - 12:50	5G and mmWave device measurement challenges CS	Reconfigurable antennas for compact devices CS	Recent advances in asian antennas and propagation research CS	Antennas for radar systems-2	UAV-based antenna and field measurements (AMTA)	IET session on channel sounding campaigns CS	New technologies and materials for wearable antennas for Wireless Personal Area Networks (WPANs) and Wireless Sensor Networks (WSNs) CS	GNSS antennas and antenna systems CS	Antenna needs and solutions for future space missions CS	Fundamental challenges and novel methodologies in the next-generation computational electromagnetics CS	Some latest development on MIMO and mm-wave applications	Imaging and diagnosing with microwaves – new findings covering dielectric studies, imaging algorithms and patient studies: COST Action TD1301, MiMed CS	
12:50 - 13:30	Lunch (Capital Hall)												
13:30 - 15:00	Poster Session (Capital Hall)												
15:00 - 16:00	Professor Ozlem Kilic	Professor Reiner Thomä											
	Dr Wei Hong	Professor Matthias Pätzold											
16:00 - 16:30	Refreshment Break Sponsored by Apple (Capital Hall)												
16:30 - 18:10	Radio propagation channel - 1	Adaptive and array antennas	Antenna designs and concepts for wireless Communications	Antennas for radar systems-3	IDS How Simcenter 3D can contribute to the efficient Electromagnetic engineering of complex platforms	Antennas for ultra high data rate communications - 2	Innovative Small Antennas CS	Propagation in aeronautics CS	AMTA session on satellite and aerospace antenna measurements CS	Antenna and array modelling	Multi-antenna concepts and communication techniques in cooperative ITS systems: From Theory to Application	Electromagnetic systems for Ambient Assisted Living (AAL) application CS	

Wednesday 11 April													
9:00 - 10:40	Higher geometrical symmetries for periodic structures CS	AMTA session on 5G Antenna Measurements CS	Antenna array beamsteering techniques	Radar localisation and sensing	Modeling and design tools for small antennas state-of-the-art and future perspectives CS	Silicon-based integrated antennas for mm-wave wireless communications CS	Propagation channels for wide-sense vehicle-to-X communications CS	MM-wave & THz antennas	Antenna design and optimization for space applications -2	Inverse problems: theory, techniques, and applications CS	Advances in antenna design and analysis using characteristic modes CS	Academic and industrial advances in microwave medical technologies within European COST Action TD1301 - MiMed CS	Statistical methods and uncertainty quantification in antennas and propagation
10:40 - 11:10	Refreshment Break Sponsored by Apple (Capital Hall)												
11:10 - 12:50	Higher geometrical symmetries for periodic structures CS	Propagation for wireless LAN	Design methods for new EM devices	Imaging , sensing and radar antennas	Modeling and design tools for small antennas: state-of-the-art and future perspectives	Silicon-based integrated antennas for mm-wave wireless communications CS	Propagation channels for wide-sense vehicle-to-X communications CS	Satellite reflector systems	Space aperture antennas	Inverse problems: theory, techniques, and applications CS	Advances in antenna design and analysis using characteristic modes CS	Academic and industrial advances in microwave medical technologies within European COST Action TD1301 - MiMed CS	Statistical methods and uncertainty quantification in antennas and propagation
12:50 - 13:30	Lunch (Capital Hall)												
13:30 - 15:00	Poster Session (Capital Hall)												

15:00 - 16:00	Professor Tian Hong Loh	Professor Cyril Luxey											
	Professor Mahta Moghaddam	Dr Felix Miranda											
16:00 - 16:30	Refreshment Break Sponsored by Apple (Capital Hall)												
16:30 - 18:10	Radio propagation channel - 2	MIMO antennas for 5G communications	Additive manufacturing; an electromagnetic perspective CS	AMTA session on antenna characterisation challenges in today's automotive industry CS	ANSYS Antenna Placement and Coupling	Antenna and propagation for high data rate communications	Wireless connectivity and IoT	Electromagnetic methods for direct and inverse scattering involving stratified media CS	Multibeam Antennas for Space Applications CS	Numerical techniques	Special material antennas and devices	Imaging and propagation for biomedical applications	
19:30 - 22:30	Conference Dinner (National Maritime Museum)												

Thursday 12 April													
9:00 - 10:40	OTA characterization of antennas and wireless devices	Channel modelling in railway environments towards 5G applications	Advances in theory and computation of characteristic modes CS	Emerging technologies for radar systems - 1	COST CA15104 (IRACON): Measurements and simulations in channel modelling in wireless body area networks CS	Advanced technologies for wideband antennas and arrays CS	Antennas for IoT applications CS	Advances in modelling design and implementation of reflectarrays and periodic structures CS	Propagation aspects in remote sensing CS	Novel antennas and material measurements	Reconfigurable antennas and arrays CS	Dielectric properties of biological tissues: achieving accurate data as the basis for novel medical device development CS	
	CS	CS	CS		CS	CS	CS	CS	CS		CS	CS	
10:40 - 11:10	Refreshment Break Sponsored by Apple (Capital Hall)												
11:10 - 12:50	OTA characterization of antennas and wireless devices	Channel modelling in railway environments towards 5G applications	Novel manufacturing techniques for antennas and microwave devices	Emerging technologies for radar systems - 2		COST CA15104 (IRACON) session on frequency dependency modelling of radio channels CS	Antennas for IoT applications CS	Advances in modelling design and implementation of reflectarrays and periodic structures CS	Antenna Design and signal processing for high sensitivity astronomical receivers CS	AMTA session on post processing techniques in antenna measurements CS	Reconfigurable antennas and arrays CS	Dielectric properties of biological tissues: achieving accurate data as the basis for novel medical device development CS	
	CS	CS				CS	CS	CS	CS	CS	CS	CS	
12:50 - 13:30	Lunch (Capital Hall)												
13:30 - 15:00	Poster Session including Best Paper Finalists (Capital Hall)												
15:00 - 16:00	Steve Nichols	Professor Trevor Bird											
	Professor Francesca Vipiana	Professor Naoki Shinohara											
16:00 - 16:30	Refreshment Break Sponsored by Apple (Capital Hall)												

16:30 - 18:10	Radio propagation channel - 3	MM-wave propagation and measurements	Novel antenna design techniques	Millimeter wave antennas for radar systems	Keysight Over the air mmWave measurements	Mobile base-station antennas	Design and modelling for wireless connectivity	New optimization and realization of UWB feed technologies for future radio telescopes	Antennas and devices for space applications	Nano engineering flagship	Beamforming techniques for information and power transmission – a joint COST IRACON and COST WiPE session	Cellular communication technologies	
19:30 - 22:30	Social Dinners (Multiple Locations)												

Friday 13 April													
9:00 - 10:40	New developments of mm-Wave GAP wave technology	Measurement techniques and applications	Techniques for RF energy harvesting and wireless power transfer	Forum for exchange between grant holders	IRACON Workshop on propagation and channel modelling challenges for 5G and beyond inclusive radio communications	MIMO performance evaluation -1	Antenna arrays -1	Smart antennas for satellite communications	Satellite propagation - 1	Satellite on the move user terminal antennas	New antenna systems involving application of metamaterials and metasurfaces	Antennas for future applications	
	CS							CS			CS		
10:40 - 11:00	Refreshment Break (Capital Suite)												
11:00 - 12:20	Antenna design and analysis	Beam steering technologies	Channel measurements and model verifications	Forum for exchange between grant holders	IRACON Workshop on propagation and channel modelling challenges for 5G and beyond inclusive radio communications	MIMO performance evaluation -2	Antenna arrays -2	Space array antennas	Satellite propagation - 2	Satellite on the move user terminal antennas	Metasurface materials and techniques	On and off body communications	
12:20 - 13:00	Closing Ceremony (Room 7)												

Friday 13 April - Short Courses 14:00-17:30

Time	Oral Sessions: Room 7	Oral Sessions: Room 12	Oral Sessions: Room 17	Oral Sessions: Room 16	Oral Sessions: Room 15	Oral Sessions: Room 14	Oral Sessions: Room 13	Oral Sessions: Room 6	Oral Sessions: Room 4	Oral Sessions: Room 3	Oral Sessions: Room 2	Oral Sessions: Room 1
14:00 - 15:30			SC01 Multibeam antennas and beamforming networks	SC03 User antennas for internet everywhere via satellites	SC05 Learning multiple antenna schemes without the maths! Present and future technologies	SC06 Modern antenna array analysis and design: Network theory, mutual coupling, and array signal processing	SC09 Terahertz communications: Ultra-broadband transceivers, antennas and propagation	SC10 Gap waveguides for mmWave antenna systems and electronic packaging	SC11 Far-Field wireless power transmission: RF, signal and system designs	SC12 Additive manufacturing for microwave components	SC13 Ground plane boosters: Antenna design for wireless devices	SC14 Characteristic modes are useful, really!
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Monday 9 April 2018

Monday 9 April 2018, 09:00 – 10:00

Opening Session

Room: Room 7 and 12

Chairs: Yang Hao (Queen Mary University of London, United Kingdom) and Tony Brown (Manchester University, United Kingdom)

Monday 9 April 2018, 10:00 – 10:40

Invited Keynote 1

Room: Room 7 and 12

Chair: Cyril Mangenot (EurAAP Chair)

10:00

Controlling THz Radiation with Graphene

Professor Sir John Pendry, Imperial College London, United Kingdom

Monday 9 April 2018, 11:10 – 12:30

Invited Keynote 2 and 3

Room: Room 7 and 12

Chairs: Professor Yi Huang (University of Liverpool, United Kingdom) and Professor Anja K. Skrivervik (EPFL, Switzerland)

11:10

On Innovation, Simulation, Mode Experiments and Engineering of the Five Hundred Meters Aperture Spherical Radio Telescope (FAST)

Professor Baoyan Duan, Xidian University, P.R.China

11:50

Future Challenges in Antennas and Propagation for Defence and Security

Dr Nick Easton, BAE Systems, United Kingdom

Monday 9 April 2018, 13:30 – 15:30

T01-1: MM-Wave Antennas for Mobile Communications

Cellular Networks & 5G | Regular Session | Antenna

Room: Room 7

Chairs: Dr Zhirun Hu (Manchester University, United Kingdom) and Professor Jian Yang (Chalmers University of Technology) Sweden

13:30	<p>T01-1.1 A Planar Dual-Polarized Ultra-Wideband Millimeter-Wave Array Antenna Sadeqh Mansouri Moghaddam, Jian Yang and Andrés Alayon Glazunov (Chalmers University of Technology, Sweden)</p>
13:50	<p>T01-1.2 Millimetre-Wave Beam Steerable Leaky-Wave Antenna for 5G Systems Muhammad Saqib Rabbani, Alexandros Feresidis and James Churm (University of Birmingham, United Kingdom)</p>
14:10	<p>T01-1.3 High Gain Compact 57-66 GHz Antenna Array for Backhaul & Access Communications Imran Aziz (Uppsala University, Sweden and Mirpur University of Science and Technology, Pakistan); Robin Dahlbäck and Erik Öjefors (Sivers IMA, Sweden); Anders Rydberg and Dragos Dancila (Uppsala University, Sweden)</p>
14:30	<p>T01-1.4 Effective Beam-Scanning Efficiency of Millimeter-Wave Subarrays for 5G User Equipment Application Bo Xu (KTH Royal Institute of Technology and Ericsson AB, Sweden); Zhinong Ying (SONY Mobile Communications AB, Sweden); Mats Gustafsson (Lund University, Sweden); Sailing He (KTH Royal Institute of Technology, Sweden)</p>
14:50	<p>T01-1.5 Wideband Millimeter-Wave End-Fire Magneto-Electric Dipole Antenna Fed by Substrate Integrated Coaxial Line Jiexi Yin, Qi Wu, Chen Yu, Haiming Wang and Wei Hong (Southeast University, P.R. China)</p>
15:10	<p>T01-1.6 A Millimeter Wave Transparent Transmitarray Antenna Using Meshed Double Circle Rings Elements Guang Liu (Université de Nantes, France and Chinese Academy of Sciences, P.R.China); Kien Pham, David González-Ovejero and Ronan Sauleau (Université de Rennes, France); Eduardo Motta Cruz (Université de Nantes, France)</p>
<p>T03–1: Antennas for Wireless LAN Wireless Networks Regular Session Antennas Room: Room 12 Chairs: Dr Qian Xu (Nanjing University of Aeronautics and Astronautics, P.R China) and Professor Daniel N Aloï (Oakland University, USA)</p>	
13:30	<p>T03-1.1 Ultra-Miniature Dual-Band Antenna Based on Subwavelength Resonators on LiNbO3 Substrate Andriy Serebryannikov and Guy Vandebosch (Katholieke Universiteit Leuven, Belgium); Mutlu Gokkavas, Funda Tamara Gundogdu and Ekmel Ozbay (Bilkent University, Turkey); Alexander Vasylichenko (Sofitto NV, Belgium)</p>
13:50	<p>T03-1.2 TCM-Based Miniaturization Progress of a Square Microstrip Patch Antenna Yanqun Liu, Xiaoxing Yin, Shun Li Li and Hongxin Zhao (Southeast University, P.R. China)</p>

14:10	T03-1.3 A Filtering Monopole Antenna with Quasi-CPW Structure Lehu Wen, Steven Gao, Benito Sanz-Izquierdo and Qi Luo (University of Kent, United Kingdom); Min Zhang and Wenchao Xiao (Wuhan Maritime Communication Research Ins, P.R.China); Yingzeng Yin (Xidian University, P.R.China)
14:30	T03-1.4 Impact of Multilayer Stack-ups on Bond Wire Antennas at Millimetre-wave Frequencies Ivan Ndip, Flynn Brandenburger and Martin Hempel (Fraunhofer IZM, Germany); Martin Schneider-Ramelow and Klaus-Dieter Lang (Fraunhofer IZM & Technische Universität Berlin, Germany); Max Huhn (BIOTRONIK SE & Co. KG, Germany)
14:50	T03-1.5 Impact of Source Antenna Beamwidth on Antenna Measurement Accuracy at DSRC Frequencies Ehab M Rahman and Daniel N Aloï (Oakland University, USA)
15:10	T03-1.6 Design of a Dual-band Wearable Planar Inverted F Antenna Based on Characteristic Mode Theory Sen Yan, Xiaomu Hu, Jiahao Zhang, Linghui Kong and Guy Vandenbosch (Katholieke Universiteit Leuven (KU Leuven), Belgium)
T11-1: EM Theory and Applications Future applications Regular Session Antennas Room: Room 17 Chairs: Professor Stefano Maci (University of Siena, Italy) and Dr Tim Brown (University of Surrey, United Kingdom)	
13:30	T11-1.1 Tailoring Near and Far Electromagnetic Fields Through Optimization Benjamin Vial and Yang Hao (Queen Mary University of London, United Kingdom)
13:50	T11-1.2 Closed Form Basis Function Fourier Spectra for Dispersion Calculation of Metasurfaces Made by Circular and Elliptical Ring Patches Santi Concetto Pavone, Marco Faenzi, Enrica Martini, Matteo Albani and Stefano Maci (University of Siena, Italy)
14:10	T11-1.3 Correction for Transition Boundary Conditions to Consider Scattering by a Chiral Infinite Slab Nezahat Güneç Tuncel (University of Cukurova, Turkey); A. Hamit Serbest (Cukurova University, Turkey)
14:30	T11-1.4 Demonstration of Superdirectivity for PCB Split Ring Dimers Jiaruo Yan, Andrea I Vallecchi, Christopher Stevens and Ekaterina Shamonina (University of Oxford, United Kingdom) and Anna Radkovskaya (M.V.Lomonosov Moscow State University, Russia)

14:50	T11-1.5 Numerical Design and Investigation of Plasmonic Lenses for Maximum Power Focusing Sadri Guler, Cem Sur and Ozgur Ergul (Middle East Technical University, Turkey)
15:10	T11-1.6 On the Theory of Propagation of Electromagnetic Waves in a Regular Waveguide Filled with Multi Periodic Modulated Medium Eduard Gevorkyan (Plekhanov Russian University of Economics, Russia)
T06-1: Scattering, Diffraction and Radar Cross Section Radar Systems Regular Session Propagation Room: Room 16 Chairs: Professor Agostino Monorchio (University of Pisa and CNIT, Italy) and Steve Boyes (DSTL, UK)	
13:30	T06-1.1 Characteristic of Spatial Distributed Field on Marine Environment with Multi-Ships and Wakes Min Zhang and Jinxing Li (Xidian University, P.R. China)
13:50	T06-1.2 Doppler Spectral Characteristics from Dynamic Mixed Sea Waves Ding Nie and Min Zhang (Xidian University, P.R. China)
14:10	T06-1.3 Active Cancellation of Bistatic Scattering of Large Aircraft Using Conformal 4-Port Magnetic Antenna Audrey I Semenikhin, Diana Semenikhina, Yury V Yukhanov and Artem I Chernokolpakov (Southern Federal University, Russia)
14:30	T06-1.4 Fast RCS Prediction of Electrically Large Targets Coated with Radar Absorbing Materials Michele Borgese, Filippo Costa and Agostino Monorchio (University of Pisa and CNIT, Italy)
14:50	T06-1.5 Coding Diffuse Surface for RCS Suppression Mohammad Akbari, Fereshteh Samadi, Marjan jalali Moghadam and Abdel R. Sebak (Concordia University, Canada)
T02-1: Antennas for Ultra High Data Rate Communications – 1 Ultra-High Data Rate Communications Regular Session Antennas Room: Room 14 Chairs: Professor Anja K. Skrivervik (EPFL, Switzerland) and Carolina Tienda Herrero (Airbus, UK)	

13:30	T02-1.1 Millimeter-Wave Circularly-Polarized Substrate-Integrated Planar Discrete Lens Kossaila Medrar, Loic Marnat and Laurent Dussopt (CEA Leti, France)
13:50	T02-1.2 Dielectric Slab Waveguide Based Millimeter-Wave Leaky-Wave Antennas Utpal Dey and Jan Hesselbarth (University of Stuttgart and IHF - Institute of Radio Frequency Technology, Germany)
14:10	T02-1.3 Low-Permittivity Elliptical Lens Fed by a Resonant Leaky-Wave Antenna for Wideband Wireless Communications Darwin Blanco Montero, Marta Arias and Nuria Llombart (Delft University of Technology, The Netherlands)
14:30	T02-1.4 140 GHz Linear to Circular Polarization Converter Based on Modified Cross Slot Frequency Selective Surface with High Selectivity Hong Bin Wang and Yu Jian Cheng (UESTC, P.R. China)
14:50	T02-1.5 140 GHz Planar Gap Waveguide Array Antenna for Line of Sight (LOS) MIMO Backhaul Links Ashraf Uz Zaman, Sofia Rahiminejad, Thomas Eriksson, Sadia Farjana and Peter Enoksson (Chalmers University of Technology, Sweden)
15:10	T02-1.6 Ultra-Wide Band Diversity Antenna for Omnidirectional Coverage Maxime Volery, Tatjana Asenov and Anja K. Skrivervik (EPFL, Switzerland)
T04-1: Propagation Theory and Measurements Connected objects Regular Session Propagation Room: Room 13 Chairs: Professor Hendrik Rogier (Ghent University, Belgium) and Professor R. S. Thoma (Technische Universität Ilmenau, Germany)	
13:30	T04-1.1 Measurement and Characterization of Dual-Band LoRa Communication in the Antarctic Patrick Van Torre, Johnny Gaelens, Jo Verhaevert and Hendrik Rogier (Ghent University, Belgium)
13:50	T04-1.2 Measured Delay and Doppler Profiles of Overtaking Vehicles at 60 GHz Erich Zochmann, Sebastian Caban, Martin Lerch, Stefan Pratschner and Gerald Artner (Institute of Telecommunications, Austria); Christoph F. Mecklenbrauker and Markus Rupp (Institute of Telecommunications, Austria and TU Brno, Czech Republic); Jiri Blumenstein and Ales Proke (TU Brno, Czech Republic); Markus Hofer, David L'oschenbrand and Thomas Zemen (Austrian Institute of Technology, Austria); Seun Sangodoyin and Andreas F. Molisch (University of Southern California, USA)

14:10	<p>T04-1.3 Wireless Transmission in Ventilation (HVAC) Ducts for the Internet of Things and Smarter Buildings: Proof of Concept and Specific Antenna Design G. Villemaud, F. Hutu, P. Belloche and F. Kninech (University of Lyon, France)</p>
14:30	<p>T04-1.4 Compressive Spatial Channel Sounding M. Ibrahim, F. Romer, M. K"aske, S. Semper, R. S. Thoma and G. Del Galdo (Technische Universität Ilmenau, Germany); W. Al-Aqqad (Technische Universität Ilmenau, Germany and Prince Sultan University, Saudi Arabia)</p>
14:50	<p>T04-1.5 Universal Ionosonde for Diagnostics of Ionospheric HF Radio Channels and its Application in Estimation of Channel Availability Dmitry Ivanov, V. A. Ivanov, Aleksey Elsukov, N. V. Ryabova, R. R. Belgibaev and Vladimir Ovchinnikov (Volga State University of Technology, Russia)</p>
15:10	<p>T04-1.6 Studying Frequency Dispersion in Transionospheric Radio Paths Using the Estimates of the Total Electron Content Dmitry Ivanov, V. A. Ivanov, N. V. Ryabova, Vladimir Ovchinnikov and Aleksey Kislitsin (Volga State University of Technology, Russia); M. I. Ryabova (Bauman Moscow State Technical University, Russia)</p>
<p>T08-1: Propagation For Location Based Devices Positioning, Localization & Tracking Regular Session Propagation Room: Room 6 Chairs: Professor Lars Jonsson (KTH Royal Institute of Technology, Sweden) and Chaoyun Song (University of Liverpool, United Kingdom)</p>	
13:30	<p>T08-1.1 TDoA-based Outdoor Positioning in a Public LoRa Network Nico Podevijn, Jens Trogh, Abdulkadir Karaagac, Jetmir Haxhibeqiri, Jeroen Hoebeke, Luc Martens, David Plets and Wout Joseph (Ghent University-IMEC, Belgium); Pieter Suanet (Aucxis, Belgium); Kim Hendrikse (Private, Belgium)</p>
13:50	<p>T08-1.2 Analysis of Ionospheric GPS TEC Measurements During Total Solar Eclipse over American Region on August 21 2017 Teddy M. Surco Espejo and Emanuel Costa (Pontificia Universidade Catolica Do Rio De Janeiro, Brazil)</p>
14:10	<p>T08-1.3 Measurements and Model for the Satellite-to-Aircraft Channel in L-Band Thomas Jost and Wei Wang (German Aerospace Center (DLR), Germany); Martin Schwinzerl and Michael Schonhuber (Joanneum Research, Austria); Fernando Pérez-Fontán (University of Vigo, Spain); Nicolas Floury (ESA, The Netherlands)</p>
14:30	<p>T08-1.4 Comparison of Theoretical Scintillation Spectra with Equatorial GNSS Data Aurelien Galmiche and Vincent Fabbro (ONERA, France); Laurent Féral (Laboratoire LAPLACE, France); Sebastien Rougerie (CNES, France)</p>

14:50	<p>T08-1.5 RSS-Based Direction-of-Arrival Estimation with Increased Accuracy for Arbitrary Elevation Angles Using ESPAR Antennas Mateusz Rzymowski and Lukasz Kulas (Gdansk University of Technology, Poland)</p>
15:10	<p>T08-1.6 Efficient RF Coverage Prediction Through a Fully Discrete, GPU-Parallelized Ray-Launching Model Vittorio Degli-Esposti, Enrico M. Vitucci, Franco Fuschini and Marina Barbiroli (University of Bologna, Italy); Jonathan S. Lu and Jerome A. Blaha (Polaris Wireless, USA); Henry Bertoni (NYU Tandon School of Engineering, USA)</p>
<p>T09-1: Environmental Effects on Radio Propagation Space Applications Regular Session Propagation Room: Room 4 Chairs: Professor Costas Constantinou (University of Birmingham, United Kingdom) and Michael Zemba (NASA, USA)</p>	
13:30	<p>T09-1.1 Rain Attenuation at Low Elevation Angles: A Step Towards a LEO Time Series Generator Luciano M Tomaz and Carlo Capsoni (Politecnico di Milano, Italy)</p>
13:50	<p>T09-1.2 Alphasat Experiment in Madrid: Modeling Considerations on Fade and Inter-Fade Durations Domingo Pimienta-del-Valle, Jose M Riera and Pedro Garcia-del-Pino (Universidad Politecnica de Madrid, Spain); Gustavo Siles (Universidad Privada Boliviana, Bolivia)</p>
14:10	<p>T09-1.3 Three Years of Atmospheric Characterization at Ka/Q-band with the NASA/POLIMI Alphasat Receiver in Milan, Italy Michael Zemba and James Nessel (NASA, USA); Carlo Riva and Lorenzo Luini (Politecnico di Milano, Italy)</p>
14:30	<p>T09-1.4 Short Term Satellite Channel Characteristics Forecast Using Numerical Weather Prediction Data Félix Cuervo and Michael Schonhuber (Joanneum Research, Austria); Fernando Las-Heras (Universidad de Oviedo, Spain); Jose M Riera, Domingo Pimienta-del-Valle and Pedro Garcia-del-Pino (Universidad Politecnica de Madrid, Spain); Antonio Martellucci (European Space Agency, The Netherlands)</p>
14:50	<p>T09-1.5 Predicting Mean Radiative Temperature at Millimeter Wavelengths in Continental Climate Areas Marianna Biscarini, Luca Milani and Frank S. Marzano (Sapienza University of Rome, Italy); Klaide De Sanctis (HIMET, Italy); Mario Montopoli (ISAC CNR, Italy); Saverio Di Fabio (CETEMPS, Italy); George Brost (Air Force Research Laboratory, USA)</p>
15:10	<p>T09-1.6 Impact of Adverse Weather Conditions on Multi-Layer Radomes Installed in Arctic Regions Andrea Martellosio and Marco Pasian (University of Pavia, Italy); Filippo Concaro and Pier Mario Besso (European Space Agency, Germany)</p>

T10-1: Computational Methods

Software Tools & Instruments | Regular Session | Antennas

Room: Room 3

Chairs: Yong Wang (Remcom Inc., USA) and Francesco D'Agostino (University of Salerno, Italy)

13:30**T10-1.1****Hybrid Simulations with Measurements as Improved Technique to Obtain the Complex Antenna Responses on Structures**Adrien Beaudiot, Cyrille Menudier and Cyril Decroze (University of Limoges, France);
Cyrille Le Meins and William Hubert (Thales Communications and Security, France)**13:50****T10-1.2****Stable TD-EFIE Discretized with Implicit Runge-Kutta Methods**Alexandre Dély (IMT Atlantique, France); Francesco Andriulli (Polytecnico di Torino, Italy);
Kristof Cools (University of Nottingham, United Kingdom)**14:10****T10-1.3****Vector Spherical Wave Expansion with Optimal Sampling Scheme**Salma Mirhadi (Iran University of Science and Technology, Iran); Iman Aryanian (Iran
Telecommunication Research Center, Iran)**14:30****T10-1.4****Implementation of FDTD Waveguide Port Based on Virtual Domain**

Xi Chao Bo, Jian Feng Zhang and Tie Jun Cui (Southeast University, P.R. China)

14:50**T10-1.5****An Efficient Domain Cascading Approach for Linear Discontinuous Galerkin Schemes**

Doganay Dogan and Mustafa Kuzuoglu (Middle East Technical University, Turkey)

15:10**T10-1.6****Towards Performance Optimisation of the FDTD Method via Matrix Casting Approach**

Maksims Abalenkovs (The University of Manchester, United Kingdom)

T07-1: RF Absorbing Techniques for Defence & Security

Defence & Security | Regular Session | Measurement

Room: Room 2

Chairs: Michael Foegelle (ETS-Lindgren, USA) and Professor Agostino Monorchio (University of Pisa, Italy)

13:30**T07-1.1****An Absorptive Frequency-Selective Reflector Based on Miniaturized Square-Loop Resonator**

Hao Huang and Zhongxiang Shen (Nanyang Technological University, Singapore)

13:50	<p>T07-1.2 An Ultra-thin Triple-band Metamaterial Absorber with Equivalent Circuit Analysis Xianliang Zeng, Linxi Zhang, Guobin Wan, Meng Gao and Bin Hu (Northwestern Polytechnical University, P.R. China)</p>
14:10	<p>T07-1.3 Hybrid Physical Optics-Ray Tracing Method for the RCS Calculation of Electrically Large Objects Covered with Radar Absorbing Materials Pierpaolo Usai, Michele Borgese, Filippo Costa and Agostino Monorchio (University of Pisa, Italy)</p>
14:30	<p>T07-1.4 Retrieving the Constitutive Parameters of Metal-Backed Radar Absorbing Material by Phase Unwrapping Method Bin Fu, Xin Ma and Guobin Wan (Northwestern Polytechnical University, P.R. China)</p>
14:50	<p>T07-1.5 A Broadband Metamaterial Based Radar Absorber Threswar Beeharry, Riad Yahiaoui and Habiba Ouslimani (Université Paris Ouest Nanterre La Défense, France); Kamardine Selemanni (CMN, France)</p>
15:10	<p>T07-1.6 Uneven-Layered Metamaterial Tile for Ultra-wideband RCS Reduction Jianxun Su, Jinbo Liu and Zengrui Li (Communication University of China, P.R. China); Shan Zhao (Beijing Institute of Graphic Communication, P.R. China)</p>
<p>T05-1: Antennas and Propagation for Biomedical Applications -1 Biomedical Regular Session Antennas and Propagation Room: Room1 Chairs: Dr Jiafeng Zhou (University of Liverpool, United Kingdom) and Dr Albert Sabban (Ort Braude College, Israel)</p>	
13:30	<p>T05-1.1 New Wideband Wearable Notch Antennas for Energy Harvesting Applications Albert Sabban (Ort Braude College, Israel)</p>
13:50	<p>T05-1.2 Waveform Matching Based Real-time Ablation Monitoring for Microwave Breast Cancer Ablation Kazuki Kanazawa and Shouhei Kidera (The University of Electro-Communications, Japan)</p>
14:10	<p>T05-1.3 Convex Lenses Horn Antenna Microwave Hyperthermia Scheme Maha Abdel-Haleem, Sabah M Ahmed and Mohammed Abo-Zahhad (Egypt-Japan University of Science and Technology, Egypt); Tamer Gaber Aboelnaga (ERI, Egypt)</p>

14:30	<p>T05-1.4 New Approach for the Design of UWB Monopoles with Directive Radiation for BAN Applications Hamza Benchakroun and Zakaria Mahlaoui (Universitat Politècnica de València and National School of Applied Sciences, Morocco); Marta Cabedo-Fabrés and Miguel Ferrando-Bataller (Universitat Politècnica de València, Spain); Adnane Latif (Cadi Ayyad University, Morocco)</p>
14:50	<p>T05-1.5 Thin Cavity-Backed Slot Antenna for Deeply Implantable Devices Longfang Zou, Mohammad Reza Bahmanyar and Christopher McLeod (Imperial College London, United Kingdom)</p>
15:10	<p>T05-1.6 Dosimetric Comparison Using the Human Models Reconstructed by Precise Segmentation, Tissue Simplification and Template Based Registration Congsheng Li and Tongning Wu (CATR, P.R. China); Xiaobang Sun (Dalian University of Technology, P.R. China)</p>

Monday 9 April 2018, 16:00 – 18:00

CS25: COST CA15104 IRACON Session on MM Wave and THz Channel Modelling

Cellular Networks & 5G | Convened Session | Propagation

Room: Room 7

Chairs: Professor Claude Oestges (UC Louvain, Belgium) and Reiner S. Thomä (Technische Universität Ilmenau, Germany)

16:00	<p>CS25.1 Modeling of Intra-Cluster Multipaths for 60 GHz Fading Channels Naveed Iqbal and Jian Luo (Huawei Technologies, Germany); Diego Dupleich, Christian Schneider, Robert Müller, Stephan Häfner, Giovanni Del Galdo and Reiner S. Thomä (Ilmenau University of Technology, Germany)</p>
16:20	<p>CS25.2 Comparing Radio Propagation Channels Between 28 and 140 GHz Bands in a Shopping Mall Sinh Nguyen, Jan Järveläinen, Aki Karttunen and Katsuyuki Haneda (Aalto University, Finland); Jyri Putkonen (Nokia Bell Labs, Finland)</p>
16:40	<p>CS25.3 Frequency Dependence of Penetration Through Gaps into Buildings at mmWave Tim Brown (University of Surrey, United Kingdom); Pat Chambers (Heriot Watt University, United Kingdom); Ruhan Xie (University of Surrey, United Kingdom)</p>
17:00	<p>CS25.4 Clutter Loss Measurements in Suburban Environment at 26 GHz and 40 GHz Belen Montenegro-Villacieros, Jean Marc Chareau, James Bishop, Philippe Viaud, Tiziano P Pinato and Marco Basso (European Commission, Italy)</p>

17:20	<p>CS25.5 3GPP Channel Model Developments for 5G NR Requirements and Testing Moray Rumney (KeysightTechnologies, United Kingdom); Pekka Kyösti and Lassi Hentila (Keysight Technologies, Finland)</p>
17:40	<p>CS25.6 Channel Characterization at THz Frequencies for High Data Rate Indoor Communications Sana Salous, Xavier Raimundo, Maryam Hajji, Andreas Klein, Claudio Balocco and Andrew Gallant (Durham University, United Kingdom)</p>
<p>T03-2: MIMO and Array Antennas for Wireless LAN Wireless Networks Regular Session Antennas Room: Room 12 Chairs: Professor Wout Joseph (Ghent University, Belgium) and Professor Mohammad S. Sharawi (King Fahd University of Petroleum and Minerals, Saudi Arabia)</p>	
16:00	<p>T03-2.1 Measurement-based Analysis of Dense Multipath Components in a Large Industrial Warehouse Brecht Hanssens, Sunil Raut Kshetri, Emmeric Tanghe, David Plets, Jeroen Hoebeke, Abdulkadir Karaagac, Jetmir Haxhibeqiri, Luc Martens and Wout Joseph (Ghent University, Belgium); Davy P. Gaillot and Martine Liénard (University of Lille, France); Claude Oestges (Universit ´e Catholique de Louvain, Belgium)</p>
16:20	<p>T03-2.2 Dense Multipath Component Polarization and Wall Attenuation at 1.35 GHz in an Office Environment Emmeric Tanghe, Nico Podevijn, Luc Martens and Wout Joseph (Ghent University, Belgium); Pierre Laly, Davy P. Gaillot and Martine Liénard (University of Lille, France); Stijn Denis, Noori BniLam, Ben Bellekens, R. Berkvens and M. Weyn (University of Antwerp, Belgium)</p>
16:40	<p>T03-2.3 A Wideband Multi-Beam Yagi Based MIMO Antenna System with Multiple Parasitic Directors Syed Jehangir and Mousa Hussein (UAE University, United Arab Emirates); Rifaqat Hussain and Mohammad S. Sharawi (King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia)</p>
17:00	<p>T03-2.4 Antenna Micro-Diversity Systems Hidden Underneath the Car Roof for Vehicle-to-X Applications Miguel Angel Bueno Diez and Stefan Lindenmeier (Universität der Bundeswehr, Germany)</p>
17:20	<p>T03-2.5 Fractal Antenna of MIMO System WLAN Wojciech Krzysztofik (Wroclaw University of Technology, Poland); Thanh Cao (Vinh University, Vietnam)</p>
17:40	<p>T03-2.6 Compact Planar Four Element Dual Band-Notched UWB MIMO Antenna for Personal Area Network Applications Deepika Sipal, Mahesh P Abegaonkar and Shibani K Koul (Indian Institute of Technology Delhi, India)</p>

T11-2: Metasurface Materials and Techniques

Future applications | Regular Session | Propagation

Room: Room 17

Chairs: Professor Richard Ziolkowski (University of Technology Sydney, Australia) and Professor Sergei Tretyakov (Aalto University, Finland)

16:00 **T11-2.1**
Compound Reflection Metagrating for Wideband Backscattering Reduction
Bakhtiyar Orazbayev (EPFL, Switzerland); Pablo Rodríguez-Ulibarri and Miguel Beruete (Universidad Publica de Navarra, Spain)

16:20 **T11-2.2**
Concept of an Asymmetric Metasurface Absorber
Xuchen Wang, Ana Diaz-Rubio, Viktor Asadchy and Sergei Tretyakov (Aalto University, Finland)

16:40 **T11-2.3**
Design of a Metasurface Covered Slotted Waveguide Antenna
Javier Chocarro, Jose M. Perez, Ramon Gonzalo and Iñigo Ederra (Universidad Pública de Navarra, Spain)

17:00 **T11-2.4**
A Reflecting Focusing Dielectric Metasurface
Andrey Sayanskiy, Mikhail Odit, Polina Kapitanova and Pavel Belov (ITMO University, Russia); Viktor Asadchy (Aalto University, Finland)

17:20 **T11-2.5**
On the use of the Source Reconstruction Method for Metasurface Design
Trevor Brown, Chaitanya Narendra and Puyan Mojabi (University of Manitoba, Canada)

17:40 **T11-2.6**
Design and Analysis of a Wide Angle Impedance Matching Metasurface for Wideband Antenna Arrays
Alpha Bah, Richard Ziolkowski, Pei-Yuan Quin and Y Jay Guo (University of Technology Sydney, Australia)

T06-2: Frequency and Polarisation Selective Surfaces for Radar Systems

Radar Systems | Regular Session | Propagation

Room: Room 16

Chairs: Professor Fan Yang (Tsinghua University, P.R. China) and Professor Eva Rajo-Iglesias (University Carlos III of Madrid, Spain)

16:00 **T06-2.1**
Ultra-Wideband Harmonic-Suppressed Bandpass/stop Frequency-Selective Surface Based on L-C Lumped Elements
Ahmed Abdelmottaleb Omar and Zhongxiang Shen (Nanyang Technological University, Singapore)

16:20	<p>T06-2.2 Evaluation of Carbon-Fiber-Reinforced Plastics for Automotive Radar Applications Patrick Hoerner (University of Applied Sciences, Germany); Niels Koch (Audi AG, Germany)</p>
16:40	<p>T06-2.3 Microwave Absorber Using Single-Layer FSS with Wideband Operation Above the X-band Hamza Ahmad, Muhammad Umar Khan and Farooq A. Tahir (National University of Sciences and Technology, Pakistan); Rifaqat Hussain and Mohammad S. Sharawi (KFUPM, Saudi Arabia)</p>
17:00	<p>T06-2.4 Equivalent Circuit Model for Cross-Shaped Frequency Selective Surface Absorbing Material Wei Zhang, Jian-ying Li, YangXiao Qi, Rui Xu and Feng Liu (Northwestern Polytechnical University, P.R. China)</p>
17:20	<p>T06-2.5 Low-pass Frequency Selective Surface for a Dual-band Gyro-multiplier Characterized by THz-TDS Xiaoming Liu (Anhui Normal University, P.R. China); Jun Zhou (University of Electronic Science and Technology of China, P.R.China); Cuiwei Tang and Junsheng Yu (Beijing University of Posts and Telecommunications, P.R. China); Xiang Li and Xiaodong Chen (Queen Mary University of London, United Kingdom)</p>
17:40	<p>T06-2.6 Broadband Experimental Validation of the Near Field Focusing Pattern of Frequency Selective Absorber Based Kinetic Inductance Detectors Shahab Oddin Dabironezare, Erio Gandini and Nuria LLombart (TNO, The Netherlands); Juha Hassel, Leif Grönberg, Hannu Sipola and Visa Vesterinen (VTT Technical Research Center of Finland, Finland)</p>
<p>CS38: Antennas and Propagation Modeling for Inter- and Intra-Chip Wireless Communications Ultra-High Data Rate Communications Convened Session Antennas and Propagation Room: Room 14 Chairs: Dr Franco Fuschini (University of Bologna, Italy) and Professor Thomas Kürner (Technische Universität Braunschweig, Germany)</p>	
16:00	<p>CS38.1 Modeling of THz Chip-to-Chip Wireless Channels in Metal Enclosures Alenka Zajic and Prateek Juyal (Georgia Institute of Technology, USA)</p>
16:20	<p>CS38.2 Interference Study for THz Intra-Device Communication Systems with Multiple Links Thomas Kürner and Alexander Fricke (TU Braunschweig, Germany)</p>
16:40	<p>CS38.3 Example Antenna and Link Performance for Wireless Network on Chip Applications William Rayess and David W Matolak (University of South Carolina, USA)</p>

17:00	CS38.4 Antenna Concepts for Board-To-Board Communication Ronny Hahnel, Patrick Seiler, Bernhard Klein, Xiaozhou Wang, Michael Jennings and Dirk Plettemeier (Dresden University of Technology, Germany)
17:20	CS38.5 On-chip Wireless Optical Communication Through Plasmonic Nanoantennas Giovanna Calo, Michele Bozzetti and Vincenzo Petruzzelli (Politecnico di Bari, Italy); Gaetano Bellanca and Ali Emre Kaplan (University of Ferrara, Italy); Franco Fuschini, Marina Barbiroli and Paolo Bassi (Università di Bologna, Italy)
17:40	CS38.6 On-Chip Antennas for Inter-Chip Wireless Interconnections: Challenges and Opportunities Rounak Singh Narde, Naseef Mansoor, Amlan Ganguly and Jayanti Venkataraman (Rochester Institute of Technology, USA)
T04-2: Antennas for Wireless Connectivity Connected objects Regular Session Antennas Room: Room 13 Chairs: Dr Shangbin Wu (Samsung R&D Institute, United Kingdom) and Professor Christophe Roblin (Telecom ParisTech and LTCI - Institut Mines-Télécom, France)	
16:00	T04-2.1 Microstrip Antenna for IoT/WLAN Applications in Smart Homes at 17GHz Tiago Varum (Instituto de Telecomunicações, Portugal); Michael Duarte and João Matos (Instituto de Telecomunicações and Universidade de Aveiro, Portugal); Pedro Tavares Pinho (Instituto de Telecomunicações and Instituto Superior de Engenharia de Lisboa, Portugal)
16:20	T04-2.2 An UWB Coplanar Waveguide Fed Integrated IFA Design for Wearable Communications Jinxin Du and Christophe Roblin (Telecom ParisTech and LTCI - Institut Mines-Télécom, France)
16:40	T04-2.3 Dual-Band Dual-Polarized Stacked Rectenna for RF Energy Harvesting at 1.85 and 2.45 GHz Hichem Mahfoudi and Mohamed Tellache (University of Sciences and Technology Houari Boumediene, Algeria); Hakim Takhedmit (Paris-Est Marne-la-Vallée University, France)
17:00	T04-2.4 Genetic Algorithm Assisted Hybrid Beamforming for Wireless Fronthaul Shangbin Wu (Samsung R&D Institute, United Kingdom)
17:20	T04-2.5 Textile-based UHF RFID Patch Antenna with H-slot Andrej Galoić, Branimir Ivšić, Davor Bonefačić and Juraj Bartolić (University of Zagreb, Croatia)

17:40	T04-2.6 Performance Assessment of a Small UHF RFID Tag on Metallic Objects of Different Sizes Sergio López-Soriano and Josep Parrón (Universitat Autònoma de Barcelona, Spain)
18:00	T04-2.7 A Broadband Planar Rhombus Monopole Antenna for 28 GHz Millimeter-Wave Communications Farooq A. Tahir and Hidayat Ullah (National University of Sciences and Technology, Pakistan)
T08-2: Positioning and Tracking Applications Positioning, Localization & Tracking Regular Session Propagation Room: Room 6 Chairs: Professor Jan Steckel (University of Antwerp, Belgium) and Professor Agostino Monorchio (University of Pisa, Italy)	
16:00	T08-2.1 A Compact Dual-Wideband Automotive Ring Antenna for GNSS L1- and L2-Band Sebastian Matthie and Stefan Lindenmeier (Universität der Bundeswehr München, Germany)
16:20	T08-2.2 Low-cost Hardware Platform for Angle of Arrival Estimation Using Compressive Sensing Jan Steckel, Dennis Laurijssen, Anthony Schenck, Noori BniLam and Maarten Weyn (University of Antwerp, Belgium)
16:40	T08-2.3 Software-Defined Radio System for Tracking Application Clément Campo (ISL and Universtiy of Poitiers, France); Loic Bernard and Sébastien Hengy (ISL, France); Hervé Boeglen and Jean-Marie Paillot (University of Poitiers, France)
17:00	T08-2.4 UWB Printed Monopole Antennas for Application in Detection of Partial Discharges Josiel Cruz, Raimundo Freire, Alexandre Serres, George Xavier and Luiz Nobrega (Universtiy of Campina Grande, Brazil); Joabson Nogueira de Carvalho (Federal Institute of Education, Brazil)
17:20	T08-2.5 Experimental Evaluation of Localization Accuracy of Multiple Subjects Using Multiple Receiving Stations Nobuyuki Shiraki, Dai Sasakawa, Shoichi Iizuka and Naoki Honma (Iwate University, Japan); Takeshi Nakayama (Panasonic Corporation, Japan)
17:40	T08-2.6 Wireless Detection of Moving Chipless Tags Made of Metamaterial Resonators Filippo Costa, Michele Borgese, Antonio Gentile, Simone Genovesi, Luca Buoncristiani, Francesco Alessio Dicandia, Davide Bianchi, Agostino Monorchio and Giuliano Manara (University of Pisa, Italy)

T09-2: Antenna Design and Optimization for Space Applications - 1

Space Applications | Regular Session | Antennas

Room: Room 4

Chairs: Professor Ronan Sauleau (University of Rennes 1, France) and Professor Yahia Antar (Royal Military College of Canada, Canada)

16:00	T09-2.1 Coherent Fourier Optics Analysis of Large Format Lens Based Focal Plane Arrays Shahab Oddin Dabironezare, Giorgio Carluccio, Andrea Neto and Nuria Lombart (Delft University of Technology, The Netherlands)
16:20	T09-2.2 Multi-Frequency GNSS Dielectric Resonator Antenna with In-Band Filtering Slobodan Jović and Michel Clénet (Defence R&D Canada and Royal Military College of Canada, Canada); Yahia Antar (Royal Military College of Canada, Canada)
16:40	T09-2.3 Comparison of Optimization Procedures for the Design of Continuous Parallel Plate Waveguide Multiple Beam Lens Antennas François Doucet and Ronan Sauleau (University of Rennes 1, France); Nelson Fonseca (European Space Agency, The Netherlands); Etienne Girard and Hervé Legay (Thalès Alenia Space, France)
17:00	T09-2.4 Hybrid Beamforming with Reduced Grating Lobes for Satellite Applications Vincent Tugend and Andrew Thain (Airbus Defence and Space, France)
17:20	T09-2.5 Preliminary Configuration Design of Mesh Antennas Using Integrated Structural-electromagnetic Method Yali Zong, Lu-Yang Ji and Shuangxi Zhang (Northwestern Polytechnical University, P.R. China); Congsi Wang (Xidian University, P.R. China)
17:40	T09-2.6 A Low-Profile Dielectric Dome Antenna for Wide-Scanning Applications Erio Gandini, Stefania Monni, Fabrizio Silvestri and Giampiero Gerini (TNO, The Netherlands); Alice Benini, Enrica Martini and Stefano Maci (University of Siena, Italy); Maria Carolina Vigano (VIASAT, Switzerland); Giovanni Toso (European Space Agency, The Netherlands)

T10-2: Measurement Techniques

Software Tools & Instruments | Regular Session | Measurement

Room: Room 3

Chairs: Professor Roger Appleby (Roger Appleby MMW Consulting Ltd, United Kingdom) and Professor Jorge Costa (Instituto de Telecomunicacoes /ISCTE-IUL, Portugal)

16:00	T10-2.1 A Cost-Effective Set-up for Time Modulated Array Measurement Using Software Defined Radio Mohammad Hossein Mazaheri, Mohammad Reza Amjadian, Hossein Khalili, Mahmood Akbari and Mohammad Fakharzadeh (Sharif University of Technology, Iran)
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16:20	<p>T10-2.2 Nonconvex Phaseless Near-Field Far-Field Transformation for Electrically Large Problems Alexander Paulus, Josef Knapp and Thomas F. Eibert (Technical University of Munich, Germany)</p>
16:40	<p>T10-2.3 A Scatterometer Operating at Millimetre and Sub-Millimetre Wave Wavelengths Roger Appleby (Roger Appleby MMW Consulting Ltd, United Kingdom); Richard Wylde and Stuart Froud (Thomas Keating Ltd, United Kingdom); Cecilia Cappellin and Per Nielsen (TICRA, Denmark); Phil Atkin (Pixel Analytics, United Kingdom); Elena Saenz (ESA/ESTEC, The Netherlands)</p>
17:00	<p>T10-2.4 A Computational and Experimental Investigation of Lambda/2 and Lambda/4 Sampling Step in Phaseless Planar Near-Field Measurements at 60GHz Javier Fernández Álvarez and Olav Breinbjerg (Technical University of Denmark, Denmark)</p>
17:20	<p>T10-2.5 Compressive Sensing Approach for Fast Antenna Far Field Characterization Benjamin Fuchs and Laurent Le Coq (University of Rennes 1, France); Sébastien Rondineau (University of Brasilia, Brazil); Marco Donald Migliore (University of Cassino e Lazio Meridionale, Italy)</p>
17:40	<p>T10-2.6 A Truncation Criterion in Planar near Field Techniques Maria Antonia Maisto, Raffaele Solimene and Rocco Pierri (Università della Campania Luigi Vanvitelli, Italy)</p>
<p>T07-2: Imaging Techniques and Algorithms Defence & Security Regular Session Propagation Room: Room 2 Chairs: Dr Rob Donnan (Queen Mary University of London, United Kingdom) and Yijun Feng (Nanjing University, China)</p>	
16:00	<p>T07-2.1 Multi-Beam Quasi-Optical System Design for a Real Time Radar Imager at 340 GHz Erio Gandini and Nuria Llombart (Technical University of Delft, The Netherlands); Duncan Robertson, David Macfarlane, Robert Hunter and Scott Cassidy (University of St Andrews, United Kingdom); Tomas Bryllert (Wasa Millimeter Wave AB, Sweden); Mattias Ferndahl (GotMIC AB, Sweden); Hannu Lindström, Jussi Tenhunen and Hannu Vasama (VTT Technical Research Centre of Finland Ltd, Finland); Jouni Huopana, Timo Selkälä and Antti-Jussi Vuotikka (Global Boiler Works Oy, Finland)</p>
16:20	<p>T07-2.2 Wideband Single Pixel Radiometer in 28 nm CMOS Technology for Low-Cost Imaging Applications Sven van Berkel, Satoshi Malotaux, Daniele Cavallo, Marco Spirito, Andrea Neto and Nuria Llombart (Delft University of Technology, The Netherlands)</p>
16:40	<p>T07-2.3 The Design of High-Responsivity Millimeter Wave Imager Using Vanadium Dioxide Microbolometers Shangyi Chen, Behnam Ghassemiparvin and Nima Ghalichechian (The Ohio State University, USA)</p>

17:00	<p>T07-2.4 3D Printed Compressive Horn Antenna for High-Sensing-Capacity Millimeter-Wave Imaging Ali Molaei, Juan Heredia-Juesas, Luis Tirado, Weite Zhang, Anthony Bisulco, Ashkan Ghanbarzade and Jose Martinez Lorenzo (Northeastern University, USA); Alexander Zhu (Wayland High School, USA); Diego Cachay (Boston Latin School, USA)</p>
17:20	<p>T07-2.5 A Modified Contrast Source Inversion Method for the Synthesis of Innovative Dielectric Devices Roberta Palmeri, Martina Teresa Bevacqua, Andrea Francesco Morabito and Tommaso Isernia (University of Reggio Calabria, Italy)</p>
17:40	<p>T07-2.6 Suppressing Ghost Images for Synthetic Aperture THz Imaging with Large Sampling Spacing Shaoqing Hu, Min Zhou, Xiaodong Chen and Yasir Alfadhli (Queen Mary University of London, United Kingdom)</p>
<p>T05-2: Antennas and Propagation for Biomedical Applications-2 Biomedical Regular Session Antennas and Propagation Room: Room1 Chairs: Dr Mohammad Ojaroudi (University of Limoges, France) and Dr Akram Alomainy (Queen Mary University of London, United Kingdom)</p>	
16:00	<p>T05-2.1 Efficient and Full-Wave Electromagnetic Analysis of MRI Antennas Using the Array Scanning Method Jose Ignacio Echeveste, Denis Tihon and Christophe Craeye (Université Catholique de Louvain, Belgium); Marc Dubois, Redha Abdeddaim and Stefan Enoch (Aix Marseille University, France)</p>
16:20	<p>T05-2.2 Interdigital Based EBG: Compact and Polarization Stable for MBAN and Wi-Fi Dinesh Rano (Indraprastha Institute of Information Technology, India); Mohammad Hashmi (Indraprastha Institute of Information Technology, India and Nazarbayev University, Kazakhstan)</p>
16:40	<p>T05-2.3 A New Approach of Multi-Parameter UWB Antenna Modeling Based on Knowledge-Based Artificial Neural Network Mohammad Ojaroudi, Stéphane Bila and François Torres (University of Limoges, France)</p>
17:00	<p>T05-2.4 Decoupling of Dual-Tuned MRI Coils by Using Distributed Magnetic Traps Nunzia Fontana (Consorzio Nazionale Interuniversitario per le Telecomunicazioni, Italy); Filippo Costa and Danilo Brizi (University of Pisa, Italy); Gianluigi Tiberi (Fondazione Imago 7, Italy); Angelo Galante and Marcello Alecci (University of L'Aquila, Istituto Nazionale di Fisica Nucleare and Istituto SPIN-CNR, Italy); Agostino Monorchio (Consorzio Nazionale Interuniversitario per le Telecomunicazioni and University of Pisa, Italy)</p>
17:20	<p>T05-2.5 High Sensitivity Inkjet-Printed Terahertz Metallic Hole Array Sensor Ahmed Aziz, Syeda Fizzah Jilani, Akram Alomainy and Khalid Z Rajab (Queen Mary University of London, United Kingdom)</p>

17:40

T05-2.6

Penetration Depth Evaluation of Split Ring Resonator Sensor Using In-Vivo Microwave Reflectivity and Ultrasound Measurements

Syaiful Redzwan Mohd Shah, Jacob Velander, Mauricio D Perez, Noor Badariah Asan, and Robin Augustine (Uppsala University, Sweden); Parul Mathur and Dhanesh G. Kurup (Amrita Univerity, India); Taco Blokhuis (University Medical Center Maastricht, The Netherlands)

Tuesday 10 April 2018

Tuesday 10 April 2018, 09:00 – 10:40

CS07: 5G and mmWave Device Measurement Challenges

Cellular Networks & 5G | Convened Session | Measurement

Room: Room 7

Chairs: Professor Tian Hong Loh (National Physical Laboratory, United Kingdom) and Janet O'Neil (ETS-Lindgren, USA)

09:00	CS07.1 Antenna Measurement Based on Very Near Field Scanning Feng Zhou, Kai Cheng, Jing-lu Sun and Xiu-hua Yuan (China Academy of Information and Communication Technology, P.R. China); Hai-man Zhang (Beijing University of Posts and Telecommunication, P.R. China)
09:20	CS07.2 5G and mmWave Device Measurement Challenges Michael Foegelle (ETS-Lindgren, USA)
09:40	CS07.3 Single Layer PCB Broadband Circular Polarisation Millimetre Wave Massive MIMO Array Qian Xu, Lei Xing, Min Wang and Hui Gan (Nanjing University of Aeronautics and Astronautics, P.R. China); Yi Huang and Manoj Stanley (The University of Liverpool, United Kingdom); Tian-Hong Loh (National Physical Laboratory, United Kingdom)
10:00	CS07.4 Design of Hook Type Dipole Phased Array with Anti-Metal Structure for 5G Mobile Terminals Ruixin Wang, Siting Zhu, Na Tian and Zheng Liu (China Academy of Information and Communication Technology, P.R. China); Yan Zhang and Ting Yu (Beihang University, P.R. China)
10:20	CS07.5 Efficient Measurement of Aircraft Quality Factor for Evaluation and Prototyping of Wireless Systems Dennis Lewis (Boeing, USA); Jason Bommer (ANSYS, USA); Genevieve Hankins (Riverside Research, USA)

CS27: Reconfigurable Antennas for Compact Devices

Connected objects | Convened Session | Antennas

Room: Room 12

Chairs: Dr Leonardo Lizzi (University of Cote d'Azur, France) and Professor Joseph Costantine (American University of Beirut, Lebanon)

09:00	CS27.1 A Multiple Elevational Beam Switching Antenna for Unmanned Aerial Vehicle Application Pei-Yuan Qin, Shu-Lin Chen and Y. Jay Guo (University of Technology, Australia); Lu-Yang Ji (Northwestern Polytechnical University, P.R. China); Yiannis Vardaxoglou (Loughborough University, United Kingdom)
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09:20	<p>CS27.2 Optical Switching of GeTe Phase Change Material: Application to a Frequency Agile Millimeter-Waves Patch Antenna Laure Huitema, Jehison Leon Valdes and Aurelian Crunteanu (Xlim Laboratory, France); Hang Wong (City University of Hong Kong, Hong Kong)</p>
09:40	<p>CS27.3 A Pattern Reconfigurable Microstrip Antenna for Future Automotive Applications Jerzy Kowalewski, Jonathan Mayer, Tobias Mahler and Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)</p>
10:00	<p>CS27.4 A Cognitive Radio Simulator for Mobile Autonomous Reconfigurable Antennas Youssef Tawk, Ahmad El-Amine and Sandy Saab (Notre Dame University, Lebanon); Joseph Costantine (American University of Beirut, Lebanon); Christos Christodoulou (University of New Mexico, USA)</p>
10:20	<p>CS27.5 Frequency Reconfigurable Dual Narrow Band Antenna matched on the Low Band LTE FDD Physical Layer Serge Bories, Francois Sarrazin and Alexandre Giry (CEA LETI, France)</p>
<p>CS01: Recent Advances in Asian Antennas and Propagation Research Future applications Convened Session Antennas and Propagation Room: Room 17 Chairs: Professor Jaehoon Choi (Hanyang University, Korea) and Professor Ronan Sauleau (IETR, Université de Rennes 1, France)</p>	
09:00	<p>CS01.1 Investigations on the Terahertz Beam Scanning Antennas with a Wide Scanning Range Zhang-Cheng Hao, Jixin Chen, Wei Hong and Jianfeng Zhai (Southeast University, P.R. China)</p>
09:20	<p>CS01.2 Digital Beamforming Receiver for Analog Phased Array by Rotating Element Phase Tasuku Kuriyama, Takashi Maruyama, Kazunari Kihira, Toru Fukasawa and Naofumi Yoneda (Mitsubishi Electric Corporation, Japan)</p>
09:40	<p>CS01.3 Recent Breakthroughs in Reconfigurable Antennas at the University of Technology Sydney Y. Jay Guo, Peiyuan Qin, Shu-Lin Chen and Wei Lin (University of Technology, Australia); Richard Ziolkowski (University of Technology Sydney, Australia and University of Arizona, USA)</p>
10:00	<p>CS01.4 Translational Research into Metasurface-based Antennas Zhi Ning Chen (National University of Singapore, Singapore)</p>

10:20	<p>CS01.5 Development of Advanced Receiving Antennas for Satellite Broadcasting Masafumi Nagasaka, Atsushi Iwasaki, Susumu Nakazawa and Shoji Tanaka (NHK, Japan)</p>
<p>T06-3: Antennas for Radar Systems-1 Radar Systems Regular Session Antennas Room: Room 16 Chairs: Jiafeng Zhou (University of Liverpool, United Kingdom) and Professor Payam Nayeri (Colorado School of Mines, USA)</p>	
09:00	<p>T06-3.1 Phase Management for Extended Scan Range Antenna Arrays Based on Rotman Lens Enrico Tolin (Politecnico di Torino, Italy and IMST GmbH, Germany); Francesca Vipiana (Politecnico di Torino, Italy); Oliver Litschke (IMST GmbH, Germany)</p>
09:20	<p>T06-3.2 Deterministic Synthesis of Complex Shaped-Beam Radiation Patterns Using Conformal Aperiodic Antenna Arrays Diego Caratelli (The Antenna Company, The Netherlands); Giovanni Toso (European Space Agency, The Netherlands)</p>
09:40	<p>T06-3.3 Uniform Arrays with Low Sidelobe Two-Way Antenna Patterns Randy Haupt and Payam Nayeri (Colorado School of Mines, USA)</p>
10:00	<p>T06-3.4 Implementation of a Correcting Coupling Mechanism to Mitigate Surface Wave in Phased Arrays Aurélien Ayissi Manga, Raphael Gillard and Renaud Loison (INSA Rennes, France); Isabelle LeRoy-Naneix and Christian Renard (Thales Airborne Systems, France)</p>
10:20	<p>T06-3.5 Compensation Method for Distorted Active Phased Array Antennas in Condition of Quantization Errors Based on Structural-Electromagnetic Coupling Yan Wang, Congsi Wang, Shuai Yuan, Haihua Li and Kang Ying (Xidian University, P.R. China); Wei Gao (University of New South Wales, Australia); Qian Xu (Chinese Academy of Sciences, P.R. China)</p>
<p>CS04: IET Session on Channel Sounding Campaigns Ultra-High Data Rate Communications Convened Session Propagation Room: Room 14 Chairs: Professor Sana Salous (Durham University, United Kingdom) and Peter Papazian (NIST, USA)</p>	
09:00	<p>CS04.1 Angle- And Delay-Dispersion Characteristics in a Hallway and Lobby at 60 GHz Ruoyu Sun, Peter Papazian, Jelena Senic, Camillo Gentile and Kate A. Remley (National Institute of Standards and Technology, USA)</p>

09:20	<p>CS04.2 The Development of the New ITU-R Model for Building Entry Loss Richard Rudd (Plum Consulting Ltd, United Kingdom); Jonas Medbo (Ericsson, Sweden); Fryderyk Lewicki (Orange Polska, Poland); Fabiano Chaves (Nokia Bell Labs, USA); Ignacio Rodriguez (Aalborg Universitet, Denmark)</p>
09:40	<p>CS04.3 Measurement-Based Beam Mis-Alignment Analysis of Millimeter-Wave Directional Beamforming in Large Indoor Environments Juyul Lee, Myung-Don Kim, Kyung-Won Kim and Jae-Joon Park (ETRI, Korea)</p>
10:00	<p>CS04.4 Measurement and Characterization of 28 GHz High-Speed Train Backhaul Channels in Rural Propagation Scenarios Mathis Schmieder, Michael Peter, Ramez Askar, Ivan Komsic and Wilhelm Keusgen (Fraunhofer Heinrich Hertz Institute, Germany)</p>
10:20	<p>CS04.5 Investigation of V2I Channel Transitions in Urban Environment Martin Käske, Daniel Czaniara, Christian Schneider, Reiner S. Thomä and Giovanni Del Galdo (Ilmenau University of Technology, Germany); Mate Boban and Jian Luo (Huawei Technologies, Germany)</p>
<p>CS22: New Technologies and Materials for Wearable Antennas for Wireless Personal Area Networks (WPANs) and Wireless Sensor Networks (WSNs) Connected objects Convened Session Antennas Room: Room 13 Chairs: Dr Simone Genovesi (University of Pisa, Italy) and Dr Dimitris Anagnostou (Heriot-Watt University, United Kingdom)</p>	
09:00	<p>CS22.1 Flexible Antennas for Wearable Applications: Recent Advances and Design Challenges Saad Alharbi and Asimina Kiourti (The Ohio State University, USA); Raed Shubair (Massachusetts Institute of Technology, USA)</p>
09:20	<p>CS22.2 Wearable Antennas Based on Graphite Paper and Conductive Polymer Shengjian Jammy Chen and Christophe Fumeaux (The University of Adelaide, Australia)</p>
09:40	<p>CS22.3 Textile-Integrated Electronics for Small Airplanes Miroslav Cupal, Jiri Drinovsky, Tomas Gotthans, Roman Hermany, Martin Kokolia, Jaroslav Lacik, Tomas Parizek, Jan Prasek, Zbynek Raida and Jan Spurek (Brno University of Technology, Czech Republic); Dita Kracalova, Zdenka Ledrova and Jiri Prochazka (SINTEX, Czech Republic); David Krutilek (Evektor, Czech Republic), Zdenek Reznicek (Design and Engineering, Czech Republic)</p>
10:00	<p>CS22.4 Robust Implementation of Flexible Wearable Antennas with PDMS-Embedded Conductive Fabric Roy B. V. B. Simorangkir and Karu Esselle (Macquarie University, Australia); Yang Yang (University of Technology Sydney, Australia)</p>

10:20	<p>CS22.5 Novel Compact Multiband Antennas for Biomedical Applications Zengdi Bao and Yong-Xin Guo (National University of Singapore, Singapore); Raj Mittra (Penn State University, USA and King Abdulaziz University, Saudi Arabia)</p>
<p>T08-3: Antennas for Positioning Positioning, Localization & Tracking Regular Session Antennas Room: Room 6 Chairs: Dr Robert J Watson (University of Bath, United Kingdom) and Professor David W Matolak (University of South Carolina, USA)</p>	
09:00	<p>T08-3.1 An Array Antenna for Low Power Localisation of GPS Interference Elizabeth Lloyd and Robert J Watson (University of Bath, United Kingdom)</p>
09:20	<p>T08-3.2 Metasurface-inspired Antenna in Cavity for GNSS Applications Laura Garcia-Gamez (University of Rennes and French-German Research Institute of Saint-Louis, France); Loic Bernard (French-German Research Institute of Saint-Louis, France); Ronan Sauleau, Sylvain Collardey and Kouros Mahdjoubi (University of Rennes, France)</p>
09:40	<p>T08-3.3 A Spherical Model of the Array Factor for Active Element Pattern Synthesis Ayichatou Gueye, Benoit Poussot, Florence Nadal and Geneviève Baudoin (Université Paris-Est, France)</p>
10:00	<p>T08-3.4 Measurements of UWB Pulse Propagation Along a Wind Turbine Blade at 1 to 20 GHz Johannes Hejselbæk, Igor Syrytsin and Patrick Eggers (Aalborg University, Denmark)</p>
10:20	<p>T08-3.5 OFDM Wideband DOA System for Detecting and Tracking Vehicles Applications Mohammed A. G. Al-Sadoon (Universtiy of Bradford, United Kingdom and Basra Universtiy college of Science and Technology, Iraq); Nazar Ali (University of Bradford, United Kingdom and Khalifa University, Abu Dhabi); Issa Elfergani and Jonathan Rodriguez (Instituto de Telecomunicações, Portugal); Rameez Asif, Stephen M R Jones, Jim M. Noras and Raed A Abd-Alhameed (University of Bradford, United Kingdom); Abdulkareim Zweid (Basra University College of Science and Technology, Iraq)</p>
<p>CS05: Antenna Needs and Solutions for Future Space Missions Space Applications Convened Session Antennas Room: Room 4 Chairs: Dr Mauro Ettore (University of Rennes 1, France) and Dr Hervé Legay (Thales Alenia Space, France)</p>	
09:00	<p>CS05.1 Fabrication of Four Panels of Parallel Plate Slot Arrays for a 100Kg-Class X-band SAR Satellite Jiro Hirokawa (Tokyo Institute of Technology, Japan); Prilando Rizki Akbar and Hirobumi Saito (Institute of Space and Astronautical Science-Japan Aerospace Exploration Agency, Japan); Budhaditya Pyne (University of Tokyo, Japan)</p>

09:20	<p>CS05.2 Challenges for Future Active Space Communication Array Antennas Dennis T. Schobert, Nelson Fonseca, Jean-Christophe Angevain, Peter de Maagt and Giovanni Toso (European Space Agency, The Netherlands)</p>
09:40	<p>CS05.3 Optimisation by Unit-Cell Rotation of Linear-To-Circular Polarising Reflectors for Multiple Primary Feeds Salvador Mercader-Pellicer, George Goussetis and Gabriela Medero (Heriot-Watt University, United Kingdom); Daniele Bresciani and Hervé Legay (Thales Alenia Space, France); Nelson Fonseca (European Space Agency, The Netherlands)</p>
10:00	<p>CS05.4 Metallic Metasurface Antennas for Space David González-Ovejero, Xavier Morvan, Ronan Sauleau and Mauro Ettore (Université de Rennes, France); Nacer Chahat and Goutam Chattopadhyay (California Institute of Technology, USA)</p>
10:20	<p>CS05.5 Antennas for Space Instruments from GHz to THz Goutam Chattopadhyay, Maria Alonso-delPino, Cecile Jung-Kubiak, Theodore Reck, Choonsup Lee, Nacer Chahat and Imran Mehdi (California Institute of Technology, USA); David González-Ovejero (Université de Rennes, France)</p>
<p>CS19: Fundamental Challenges and Novel Methodologies in the Next-Generation Computational Electromagnetics Software Tools & Instruments Convened Session Antennas Room: Room 3 Chairs: Professor Francesca Vipiana (Politecnico di Torino, Italy) and Professor Zhen Peng (University of New Mexico, USA)</p>	
09:00	<p>CS19.1 Improved Accuracy Combined Source and Magnetic Field Integral Equations with Low-Order Discretization Jonas Kornprobst and Thomas F. Eibert (Technische Universität München, Germany)</p>
09:20	<p>CS19.2 Reduction of Singular Surface Integrals to Non-Singular Line Integrals for Matrix Elements of Tensor and Vector Green Functions in Integral Equations Involving Non-Parallel Surface Elements Elizabeth Bleszynski, Marek Bleszynski and Thomas Jaroszewicz (Monopole Resesarch, USA)</p>
09:40	<p>CS19.3 Versatile and Accurate Electromagnetic Analysis of Piecewise Homogeneous Composite Objects Ivan Sekulic, Eduard Ubeda and Juan M. Rius (Universitat Politècnica de Catalunya, Spain)</p>
10:00	<p>CS19.4 Fast Spectral Iterative Technique for the Analysis of Planar Metasurface-type Structures Simon Hubert, Modeste Bodehou and Christophe Craeye (Université Catholique de Louvain, Belgium)</p>

10:20	<p>CS19.5 Some Recent Advances in the Development of Numerically Efficient Computational Electromagnetic Techniques Raj Mittra and Nathawut Homsup (University of Central Florida, USA); Kapil Sharma (Pennsylvania State University, USA), Rajarshi Bhattacharya (NIT, India)</p>
<p>T07-3: Antennas for Defence & Security Defence & Security Regular Session Antennas Room: Room 2 Chairs: Professor Yikai Chen (University of Electronic Science and Technology of China, P.R.China) and Zhipeng Wu (Manchester University, United Kingdom)</p>	
09:00	<p>T07-3.1 Design and Fabrication of Nonuniform Helical Antennas for Detection of Side-Channel Attacks in Computer Systems Sinan Adibelli and Alenka Zajic (Georgia Institute of Technology, USA); Ruzica Golubovic (Federal Office of Communications (OFCOM), Switzerland); Antonije Djordjevic and Dragan I. Olcan (University of Belgrade, Serbia)</p>
09:20	<p>T07-3.2 An Improved Directional Modulation Technique Based on Four-Dimensional Retrodirective Arrays Chao Sun, Shiwen Yang and Yikai Chen (University of Electronic Science and Technology of China, P.R. China)</p>
09:40	<p>T07-3.3 A Fully-Planar 6:1 Antenna Array Aperture John Logan and Rick Kindt (Naval Research Laboratory, USA)</p>
10:00	<p>T07-3.4 Smooth-Walled Spline-Profile Horn Feed to Enlarge Compact Antenna Test Range Quiet Zone Clive Parini, Rostyslav Dubrovka and Stuart F Gregson (Queen Mary University of London, United Kingdom); Christophe Granet (Lyrebird Antenna Research Pty Ltd, Australia); John Kot (Young and Kot Engineering Research, Australia)</p>
10:20	<p>T07-3.5 Miniaturized Switchless Pattern Reconfigurable Antenna Utilizing Spherical Modes Analysis Adam Narbudowicz and Max James Ammann (Dublin Institute of Technology, Ireland); Nicola Marchetti (The University of Dublin, Ireland)</p>
<p>CS10: Imaging and Diagnosing with Microwaves – New Findings Covering Dielectric Studies, Imaging Algorithms and Patient Studies: COST Action TD1301, MiMed Biomedical Convened Session Propagation Room: Room 1 Chairs: Dr Raquel Cruz Conceição (Universidade de Lisboa, Portugal) and Dr Angie Fasoula (MVG – Microwave Vision, France)</p>	
09:00	<p>CS10.1 Application of the DBIM-TwIST Algorithm to 3-D Microwave Tomography Data Ziwen Guo and Zhenzhuang Miao (King's College London, United Kingdom)</p>

09:20	<p>CS10.2 The Use of a Novel Microwave Radar Reconstruction Algorithm to Image Lesions in Realistic 3D Breast Phantoms Tyson Reimer Diego Rodriguez Herrera and Mario Solis Nepote (University of Manitoba, Canada); Stephen Pistorius (University of Manitoba and CancerCare Manitoba, Canada)</p>
09:40	<p>CS10.3 Demonstration of Dielectric Heterogeneity of Previously Assumed Homogeneous Tissues Examination of the Heart Saqib Salahuddin, Alessandra La Gioia, Atif Shahzad, Muhammad Adnan Elahi, Emily Porter and Martin O'Halloran (National University of Ireland, Ireland); Arun Kumar and David Kilroy (University College Dublin, Ireland)</p>
10:00	<p>CS10.4 Open-source Software for Microwave Radar-based Image Reconstruction Declan O'Loughlin, M. Adnan Elahi, Emily Porter, Atif Shahzad, Bárbara L. Oliveira, Martin Glavin, Edward Jones and Martin O'Halloran (National University of Ireland, Ireland)</p>
10:20	<p>CS10.5 Microwave Sensing of Human Hydration: Measurement Repeatability David Christopher Garrett, Sarah Thorson, Jeremie Bourqui and Elise Fear (University of Calgary, Canada)</p>

Tuesday 10 April 2018, 11:10 – 12:50

<p>CS07: 5G and mmWave Device Measurement Challenges Cellular Networks & 5G Convened Session Measurement Room: Room 7 Chairs: Professor Tian Hong Loh (National Physical Laboratory, United Kingdom) and Janet O'Neil (ETS-Lindgren, USA)</p>	
11:10	<p>CS07.6 A Parallel Channel Sounder for MM Wave Channel Measurement and Modeling Haowen Wang, Yunsong Gui, Zhongfei Cai, Yang Yang, Jianguo Xie (Shanghai Research Center for Wireless Communications, P.R. China)</p>
11:30	<p>CS07.7 Designing and Characterizing MATE, the Chalmers mm-Wave MIMO Testbed Koen Buisman and Thomas Eriksson (Chalmers University of Technology, Sweden)</p>
11:50	<p>CS07.8 The need for Spatial Channel Emulation to Evaluate mmWave UE and Base Station Performance Moray Rumney (KeysightTechnologies, United Kingdom); Pekka Kyösti and Jukka Kyröläinen (Keysight Technologies, Finland)</p>

12:10	<p>CS07.9 Prediction of SINR Using BER and EVM for Massive MIMO Applications Tim Brown (University of Surrey, United Kingdom); David Humphreys and Tian Hong Loh (National Physical Laboratory, United Kingdom); Martin Hudlička (Czech Metrology Institute, Czech Republic)</p>
12:30	<p>CS07.10 The Challenge of Electromagnetic Field Measurements for Modern 5G Devices Manuel Sierra-Castañer (Universidad Politécnica de Madrid, Spain)</p>
<p>CS27: Reconfigurable Antennas for Compact Devices Connected objects Convened Session Antennas Room: Room 12 Chairs: Dr Leonardo Lizzi (University of Cote d'Azur, France) and Professor Joseph Costantine (American University of Beirut, Lebanon)</p>	
11:10	<p>CS27.6 Pattern-Reconfigurable Mobile Terminal Antenna System for MIMO and Link Stabilization in LTE Igor Strytsin, Henrik Vesterager, Søren Nørgaard, Samantha Caporal del Barrio, Gert Pedersen and Lasse Thomsen (Aalborg University, Denmark)</p>
11:30	<p>CS27.7 Reconfigurable Multi-band Antenna for Miniature Tracking Terminal Rania Khalifeh, Leonardo Lizzi and Fabien Ferrero (Université Côte d'Azur, France)</p>
11:50	<p>CS27.8 Beam Switching Collocated Antennas for WLAN Systems Halim Boutayeb and Paul Watson (Huawei Technologies, Canada); Teyan Chen, Tao Wu and Jingjing Huang (Huawei Technologies, P.R. China)</p>
12:10	<p>CS27.9 A Compact Planar 60-GHz CPW-fed Pattern Reconfigurable Quasi-Yagi Antenna Yu-Chen Lo, Sung-Jung Wu, Nai-Chen Liu and Jenn-Hwan Tarn (National Chiao Tung University, Taiwan)</p>
12:30	<p>CS27.10 Frequency Reconfigurable Antenna with Integrated Band-pass Filters Jingya Deng, Si-Min Hou and Li-Xin Guo (Xidian University, P.R. China)</p>
<p>CS01: Recent Advances in Asian Antennas and Propagation Research Future applications Convened Session Antennas and Propagation Room: Room 17 Chairs: Professor Jaehoon Choi (Hanyang University, Korea) and Professor Ronan Sauleau (IETR, Université de Rennes 1, France)</p>	

11:10	CS01.6 Recent Development on Magneto-electric Dipole Antennas Kwai-Man Luk (City University of Hong Kong, P.R.China)
11:30	CS01.7 Recent Progress of Incidence Angle-Insensitive Broadband Metamaterial Absorbers Toan Trung Nguyen and Sungjoon Lim (Chung- Ang University, Korea)
11:50	CS01.8 Millimeter-wave 4X4 Butler Matrix for Feeding Circuit of Multi-beam Antenna Using Finline in Multilayer Substrate Kunio Sakakibara, Yuta Mizuno and Nobuyoshi Kikuma (Nagoya Institute of Technology, Japan); Kojiro Iwasa (Nippon Pillar Packing, Japan)
12:10	CS01.9 Dual-Band Shared-Aperture Array Antenna for Naval Radar Applications Gina Kwon (Agency for Defense Development, Korea); JoonYoung Park (Hanwha Systems, Korea); DongHwan Kim (Agency for Defense Development, Korea); Keum Cheol Hwang (Sungkyunkwan University, Korea)
12:30	CS01.10 A 2.5-D Ultra-Miniaturized FSS Structure with Stable Band-Stop Performance Da Li, Tian-Wu Li and Er-Ping Li (Zhejiang University, P.R. China)
T06-4: Antennas for Radar Systems-2 Radar Systems Regular Session Antenna Room: Room 16 Chairs: Professor Nima Ghalichechian (The Ohio State University, USA) and Dr Marco Pasian (University of Pavia, Italy)	
11:10	T06-4.1 W-Band True-Time Delay Phase Shifters Using Paraffin Microactuators Behnam Ghassemiparvin and Nima Ghalichechian (The Ohio State University, USA)
11:30	T06-4.2 Half Ellipsoid Luneburg GRIN Dielectric Lens Loaded Double Ridged Horn Antenna Karina Hoel (FFI and University of Oslo, Norway); Stein Kristoffersen (FFI, Norway); Maxim Ignatenko and Dejan Filipovic (University of Colorado Boulder, USA)
11:50	T06-4.3 Radiation Characteristics of EWE Antenna on Actual Ground for Landslides Prediction Based on Bistatic Radar System Using AM Radio Broadcasting Kousei Kumahara and Futoshi Kuroki (NIT, Kure College, Japan); Masanori Eguchi and Takeshi Yamakawa (Fuzzy Logic Systems Institute, Japan)

12:10	T06-4.4 Compact UWB Circularly Polarized Dielectric Rod Antenna Design Chi-Chih Chen (The Ohio State University, USA) and Gregory Wainwright (Sandia National Laboratory, USA)
12:30	T06-4.5 Optimization of a Multi-Receiver FMCW Radar for Snow Cover Monitoring Pedro Fidel Espin Lopez, Marco Pasian and Fabio Dell'Acqua (University of Pavia, Italy); Massimiliano Barbolini (University of Pavia and Flow-Ing S. R. L. La Spezia, Italy)
CS04: IET Session on Channel Sounding Campaigns Ultra-High Data Rate Communications Convened Session Propagation Room: Room 14 Chairs: Professor Sana Salous (Durham University, United Kingdom) and Peter Papazian (NIST, USA)	
11:10	CS04.6 The Development of the ITU-R Terrestrial Clutter Loss Model Jonas Medbo, Christina Larsson and Bengt-Erik Olsson (Ericsson Research, Sweden); Fabiano Chaves, István Z. Kovács and Preben Mogensen (Nokia Bell Labs, USA); Huan Cong Nguyen, Ignacio Rodriguez and T. B. Sørensen (Aalborg University, Denmark); Kyungtak Lee and JungSoo Woo (Samsung Electronics, Korea); Motoharu Sasaki and Wataru Yamada (NTT Access Network Service Systems Laboratories, Japan)
11:30	CS04.7 Multi-band Spatio-Temporal Characterization of a V2V Environment Under Blockage Diego Dupleich, Robert Müller, Sergii Skoblikov, Christian Schneider, Giovanni Del Galdo and Reiner S. Thomä (Ilmenau University of Technology, Germany); Mate Boban and Jian Luo (Huawei Technologies Duesseldorf GmbH, Germany)
11:50	CS04.8 Path Loss Characteristics from 2 to 66 GHz in Urban Macrocell Environments Based on Analysis Using ITU-R Site-General Models Motoharu Sasaki, Mitsuki Nakamura, Wataru Yamada, Naoki Kita and Yasushi Takatori (NTT Corporation, Japan); Minoru Inomata, Koshiro Kitao and Tetsuro Imai (NTT DOCOMO, INC., Japan)
12:10	CS04.9 Multi-band Outdoor Measurements in a Residential Environment for 5G Networks Sana Salous, Xavier Raimundo and Saied El-Faitori (Durham University, United Kingdom)
12:30	CS04.10 Dual-User Massive MIMO Measurements at 3.5GHz with Bi-Directional Angular Discrimination Anders Karstensen, Jesper Ø Nielsen, Patrick Eggers and Elisabeth de Carvalho (Aalborg University, Denmark); Martin Alm and Gerhard Steinbock (Huawei Technologies, Sweden)
CS22: New Technologies and Materials for Wearable Antennas for Wireless Personal Area Networks (WPANs) and Wireless Sensor Networks (WSNs) Connected objects Convened Session Antennas Room: Room 13 Chairs: Dr Simone Genovesi (University of Pisa, Italy) and Dr Dimitris Anagnostou (Heriot-Watt University, United Kingdom)	

11:10	<p>CS22.6 Design of A Compact and Low-Profile Wearable MIMO Antenna for Wireless Personal Area Networks Dingliang Wen and Yang Hao (Queen Mary University of London, United Kingdom); Hanyang Wang and Hai Zhou (Huawei Technology, United Kingdom)</p>
11:30	<p>CS22.7 Design and Integration of a Wearable Antenna System for On- And Off-Body Communication Based on 3D-MID Technology Lukas Berkelmann, Timo Martinelli, Aline Friedrich and Dirk Manteuffel (University of Hannover, Germany)</p>
11:50	<p>CS22.8 Epidermal Loop Antenna Design at 900 MHz for Biotelemetry Haitham Abu Damis, Nabil Khalid, Rashid Mirzavand, Hyun-Joong Chung and Pedram Mousavi (University of Alberta, Canada)</p>
12:10	<p>CS22.9 3D Printed Patch Antenna for Millimeter Wave 5G Wearable Applications Mariam Fawaz, Sungyun Jun, William Oakey, Ahmed Elibiary, Chun-Xu Mao and Benito Sanz-Izquierdo (University of Kent, United Kingdom); David Bird and Alan McClelland (CPI, United Kingdom)</p>
12:30	<p>CS22.10 Wearable Sensor for Communication with Implantable Devices Muhammad Ali Babar Abbasi (Queen's University Belfast (ECIT), United Kingdom); Abdul Quddious, Photos Vryonides and Symeon Nikolaou (Frederick Research Center, Cyprus); Marco A. Antoniadou (University of Cyprus, Cyprus)</p>
<p>CS29:GNSS Antennas and Antenna Systems Positioning, Localization & Tracking Convened Session Antennas Room: Room 6 Chairs: Dr Michel Clénet (Defence R&D Canada and Royal Military College of Canada, Canada) and Dr Loïc Bernard (French-German Research Institute of Saint-Louis, France)</p>	
11:10	<p>CS29.1 A Low-Profile Dual-Band Tunable AMC Structure for GNSS Antennas and its Performance Trade-Offs Mohamed Emara, Shulabh Gupta and Jim Wight (Carleton University, Canada); Julien Hautcoeur and Gyles Panther (Tallysman Wireless Inc., Canada)</p>
11:30	<p>CS29.2 All-GNSS-Band DRA Antenna for High-Precision Applications Stefano Caizzone, Mihaela Simona Ciciu, Wahid Elmarissi and Christoph Enneking (German Aerospace Center (DLR), Germany)</p>
11:50	<p>CS29.3 A Multi-Frequency and Multi-Constellation GNSS Antennas and Design Considerations Ning Yang (NovAtel Inc., Canada)</p>

12:10	<p>CS29.4 Dual Circularly Polarized Antennas with Low Cross-Polarization for GNSS-R Applications Yan Jia (Nanjing University of Posts and Telecommunications, P.R.China); Gianluca Dassano and Patrizia Savi (Politecnico di Torino, Italy)</p>
12:30	<p>CS29.5 Wideband Crossed Dipoles Antenna for All GNSS Bands Using Wideband AMC Alshrafi Wasim, Vladimir Ekaterinichev and Dirk Heberling (RWTH Aachen University, Germany)</p>
<p>CS05: Antenna Needs and Solutions for Future Space Missions Space Applications Convened Session Antennas Room: Room 4 Chairs: Dr Mauro Ettore (University of Rennes 1, France) and Dr Hervé Legay (Thales Alenia Space, France)</p>	
11:10	<p>CS05.6 Enhancing Beam Congruence in Orthogonally Polarized Tx/Rx Offset Antenna Systems Using Reflectarrays Min Zhou, Tonny Rubæk and Stig Sørensen (TICRA, Denmark); Yves Demers and Eric Amyotte (MDA Corporation, Canada); Giovanni Toso (European Space Agency, The Netherlands)</p>
11:30	<p>CS05.7 A Systematic Circuit-Based Approach to Efficiently Realize Single- And Dual-Band Circular Polarizers Mehdi Hosseini and Sean V Hum (University of Toronto, Canada)</p>
11:50	<p>CS05.8 Ka-Band Metasurface Antenna for Data Downlink from LEO Satellites G. Minatti, F. Caminita and E. Martini (University of Siena, Italy); V. Martorelli and M. Bandinelli (IDS S.p.A, Italy); A. Benini and S. Maci (University of Siena, Italy); L. Le Coq, M. Ettore and R. Sauleau (Université de Rennes, France); R. Ravanelli, (Thales Alenia Space-Italia); M. Sabbadini, (Esa Estec, The Netherlands)</p>
12:10	<p>CS05.9 All-metal Dual Frequency RHCP High Gain Antenna for the Extreme Environments of a Europa Lander Nacer Chahat, Brant Cook and Polly Estabrook (California Institute of Technology, USA)</p>
12:30	<p>CS05.10 W-band Array Antenna for Radar Detection of Space Debris Eduardo Garcia-Marin, Jose Luis Masa-Campos and Pablo Sanchez-Olivares (Universidad Autonoma de Madrid, Spain)</p>
<p>CS19: Fundamental Challenges and Novel Methodologies in the Next-Generation Computational Electromagnetics Software Tools & Instruments Regular Session Antennas Room: Room 3 Chairs: Professor Francesca Vipiana (Politecnico di Torino, Italy) and Professor Zhen Peng (University of New Mexico, USA)</p>	

11:10	<p>CS19.6 Fully Numerical Evaluation of 6-D Reaction Integrals of Galerkin Interactions via Two Applications of the Divergence Theorem Javier Rivero (Istituto Superiore Mario Boella, Italy); Francesca Vipiana (Politecnico di Torino, Italy); Donald Wilton (University of Houston, USA); William Johnson (Private Consultant, USA)</p>
11:30	<p>CS19.7 Nonuniform Array Antenna Design Incorporating the Mutual Coupling Between Rectangular Aperture Antennas Zhengzheng Wang and Ioan E. Lager (Delft University of Technology, The Netherlands); Massimiliano Simeoni (European Space Agency, The Netherlands)</p>
11:50	<p>CS19.8 High Order Description of Complex Geometries for Integral Equation Methods in Electromagnetic Scattering Problems Felipe Vico-Bondía, Miguel Ferrando-Bataller, Eva Antonino-Daviu and Marta Cabedo-Fabrés (Universidad Politécnica de Valencia, Spain)</p>
12:10	<p>CS19.9 A Stochastic Green's Function Method for Wave Propagation in Chaotic Environments Zhen Peng, Shen Lin and Edl Schamiloglu (University of New Mexico, USA); Thomas Antonsen (University of Maryland, USA)</p>
12:30	<p>CS19.10 DDM-Assisted Analysis of Large Scale Radiating Structures Diego M. Solís (University of Vigo, Spain and University of Pennsylvania, USA); Víctor Martín, David Larios and Jose Manuel Taboada (Universidad de Extremadura, Spain); José Rodríguez and Fernando Obelleiro (University of Vigo, Spain)</p>
<p>T07-4: Some Latest Development on MIMO and mm-Wave Applications Defence & Security Regular Session Antennas Room: Room 2 Chairs: Professor Matteo Albani (University of Siena, Italy) and Dr Ashraf Uz Zaman (Chalmers University of Technology, Sweden)</p>	
11:10	<p>T07-4.1 A Dual PIFA Based MIMO and Tunable DGS MIMO Antenna System Rifaqat Hussain and Mohammad S. Sharawi (King Fahd University for Petroleum and Minerals, Saudi Arabia); Muhammad Umar Khan (National University of Sciences and Technology, Pakistan)</p>
11:30	<p>T07-4.2 Design Criteria of X-wave Launchers for Millimeter-Wave Applications Walter Fuscaldo, Davide Comite and Alessandro Galli (Sapienza University of Rome, Italy); Santi Concetto Pavone and Matteo Albani (University of Siena, Italy); Guido Valerio (Sorbonne Universités UPMC, France)</p>
11:50	<p>T07-4.3 A Compact Phase Shifter in Groove Gap Waveguide for Millimeter-Wave Applications Seyed Ali Razavi (Graduate University of Advanced Technology, Iran); Ashraf Uz Zaman (Chalmers University of Technology, Sweden)</p>

12:10	<p>T07-4.4 Near-Field Antenna Measurements Using a Lithium Niobate Photonic Probe Vince Rodriguez and Brett Walkenhorst (NSI-MI Technologies, USA); Jim Toney (SRICO, USA)</p>
12:30	<p>T07-4.5 Ray-based Predictions of the Outdoor-to-Indoor Massive MIMO Channel Mohammed Zahid Aslam, Yoann Corre and Gregory Gougeon (SIRADEL, France); Yves Lostanlen (SIRADEL, Canada)</p>
<p>CS10: Imaging and Diagnosing with Microwaves – New Findings Covering Dielectric Studies, Imaging Algorithms and Patient Studies: COST Action TD1301, MiMed Biomedical Convened Session Propagation Room: Room1 Chairs: Dr Raquel Cruz Conceição (Universidade de Lisboa, Portugal) and Dr Angie Fasoula (Microwave Vision Group, France)</p>	
11:10	<p>CS10.6 Towards an Experimental Validation of Microwave Imaging Monitoring of Thermal Ablation Treatments Rosa Scapaticci and Lorenzo Crocco (National Research Council of Italy, Italy); Gennaro G. Bellizzi (Mediterranea University of Reggio Calabria and National Research Council, Italy); Federica Perrelli and Marta Cavagnaro (Sapienza University of Rome, Italy); Vanni Lopresto and Rosanna Pinto (Casaccia Research Center, Italy)</p>
11:30	<p>CS10.7 Comparison of Regularization Techniques for Microwave Imaging of Brain Stroke Mina Bjelogrljic and Jean-Philippe Thiran (Ecole Polytechnique Fédérale de Lausanne, Switzerland); Benjamin Fuchs (University of Rennes 1, France); Michael Mattes (Technical University of Denmark, Denmark)</p>
11:50	<p>CS10.8 Three-Dimensional Sparse Microwave Imaging for Brain Stroke Monitoring Marija Nikolic (University of Belgrade, Serbia); Rosa Scapaticci and Lorenzo Crocco (CNR-National Research Council of Italy, Italy)</p>
12:10	<p>CS10.9 New In-vivo Estimation of Electrical Properties of Biological Tissues for Hyperthermia Treatment Planning Martina Teresa Bevacqua (University Mediterranea, Italy); Gennaro G Bellizzi, Lorenzo Crocco and Tommaso Isernia (Mediterranea University of Reggio Calabria and IREA - National Research Council, Italy)</p>
12:30	<p>CS10.10 Impact of Fibroblast Cell Density on the Material Parameters of Thin Artificial Human Skin in the Terahertz Band Rui Zhang, Ke Yang and Akram Alomainy (Queen Mary University of London, United Kingdom); Qammer H Abbasi (Queen Mary University of London and University of Glasgow, United Kingdom and Texas A&M University, Qatar); Khalid A. Qaraqe (Texas A&M University, Qatar)</p>

Tuesday 10 April 2018, 15:00 – 16:00

Invited Speakers Session

Room: Room 7

Chairs: Stuart Gregson (Queen Mary University of London, United Kingdom) and Dr Hanyang Wang (Huawei Technologies, P.R China)

15:00	Large Scale Electromagnetics: Overview and Future Direction Professor Ozlem Kilic, Catholic University of America, USA
15:30	Multibeam Array Antennas for 5G Massive MIMO Systems Dr Wei Hong, Southeast University, P.R. China

Invited Speakers Session

Room: Room 12

Chairs: Professor Sana Salous (University of Durham, United Kingdom) and Professor Dirk Manteuffel (Leibniz University of Hannover, Germany)

15:00	Cooperative Passive Coherent Location - a Vertical Radar Service in 5G? Professor Reiner Thomä, Ilmenau University of Technology, Germany
15:30	Non-stationary Mobile Radio Channels: Modelling, Analysis, and Applications Professor Matthias Pätzold, University of Agder, Norway

Tuesday 10 April 2018, 16:30 – 18:10**T01-5: Radio Propagation Channel - 1**

Cellular Networks & 5G | Regular Session | Propagation

Room: Room 7

Chairs: Professor Katsuyuki Haneda (Aalto University, Finland) and Professor Y. Jay Guo (University of Technology Sydney, Australia)

16:30	T01-5.1 Window and Wall Penetration Loss On-Site Measurements with Three Methods Aki Karttunen, Sinh Nguyen, Pasi Koivumäki and Katsuyuki Haneda (Aalto University, Finland); Tuomo Hentilä and Ari Asp (Tampere University of Technology, Finland); Arto Hujanen, Ismo Huhtinen, Matti Somersalo, Seppo Horsmanheimo and Jouko Aurinsalo (VTT Technical Research Centre of Finland, Finland)
16:50	T01-5.2 Propagation Graph Modeling of Time-Varying Radio Channels Kristoffer Stern, Andreas Fuglsig, Kasper Ramsgaard-Jensen and Troels Pedersen (Aalborg University, Denmark)
17:10	T01-5.3 Radio Propagation Prediction for High Frequency Bands Using Hybrid Method of Ray-Tracing and ER Model with Point Cloud of Urban Environments Minoru Inomata, Tetsuro Imai, Koshiro Kitao and Yukihiro Okumura (NTT DOCOMO, INC., Japan); Sasaki Motoharu and Yasushi Takatori (NTT Access Network Service Systems Laboratories, Japan)

17:30	<p>T01-5.4 Increased Reliability of Outdoor Millimeter-Wave Link Simulations by Leveraging Lidar Point Cloud Julien Stephan, Yoann Corre and Romain Charbonnier (SIRADEL, France); Yves Lostanlen (SIRADEL, Canada)</p>
17:50	<p>T01-5.5 26GHz Ray-Tracing Pathloss Prediction in Outdoor Scenario in Presence of Vegetation Francesco Mani, Enrico M. Vitucci, Marina Barbiroli, Franco Fuschini and Vittorio Degli-Esposti (University of Bologna, Italy); Mingming Gan, Chao Li, Jianyao Zhao and Zhimeng Zhong (Huawei Technologies Co., P.R. China)</p>
<p>T03-3: Adaptive and Array Antennas Wireless Networks Regular Session Antennas Room: Room 12 Chairs: Dr Tim Brown (University of Surrey, United Kingdom) and Professor Yuehe Ge (Huaqiao University, P.R China)</p>	
16:30	<p>T03-3.1 360-Degree Polarization Scanning with the Diversity of Boresight and Conical Patterns Switching Roy B. V. B. Simorangkir and Karu Esselle (Macquarie University, Australia); Mengze Li and Kaida Xu (Xiamen University, P.R. China); Yang Yang and Eryk Dutkiewicz (University of Technology Sydney, Australia)</p>
16:50	<p>T03-3.2 Beam-Switching Antenna Using a Novel Triangular Active Frequency Selective Surface Ghada Elzwawi, Hifa Elzuwawi and Tayeb A. Denidni (University of Quebec, Canada)</p>
17:10	<p>T03-3.3 Fabric Based Beam Steering Wearable Antenna Array Paul Czeresko, Nowrin Chamok and Mohammad Ali (University of South Carolina, USA)</p>
17:30	<p>T03-3.4 Radiation Pattern Reconfigurable Antenna Design Using Characteristic Modes Zakaria Mahlaoui (Cadi Ayyad University, Morocco and Universitat Politècnica de València, Spain); Eva Antonino-Daviu (Universitat Politècnica de València, Spain); Adnane Latif (Cadi Ayyad University, Morocco); Miguel Ferrando-Bataller (Universitat Politècnica de València, Spain)</p>
17:50	<p>T03-3.5 Compact Butler Network for 2D-Steered Array Marzieh SalarRahimi and Guy Vandenbosch (Katholieke Universiteit Leuven, Belgium)</p>
<p>T11-3: Antenna Designs and Concepts for Wireless Communications Future applications Regular Session Antennas Room: Room 17 Chairs: Dr James Kelly (University of Surrey, United Kingdom) and Professor Long Li (Xidian University, P.R China)</p>	

16:30	<p>T11-3.1 New Antenna Design Concept for Future Generation Wireless Communication Systems Giorgio Gottardi (University of Trento, Italy); Giacomo Oliveri (University of Trento, Italy and ELEDIA Research Center, France); Andrea Massa (University of Trento, Italy, ELEDIA Research Center, France and Universidad Carlos III de Madrid, Spain)</p>
16:50	<p>T11-3.2 On Performance of Hidden Car Roof Antennas Ifan Yousaf (Lunds University and Volvo Cars Corporation, Sweden); Buon Kiong Lau (Lund University, Sweden)</p>
17:10	<p>T11-3.3 A Wide Band Compact Size UHF Band Monopole Clustered with L and S Band Dipoles for Self-networking Communication in Handset Devices Jin Zhang, Shuai Zhang and Gert Frølund Pedersen (Aalborg University, Denmark)</p>
17:30	<p>T11-3.4 A New Quad-band Diversity Antenna with High Isolation Alaa H. Radhi, Rajagopal Nilavalan, Hamed Saffa Al-Raweshidy and Nur Ab Aziz (Brunel University, United Kingdom)</p>
17:50	<p>T11-3.5 Low-Profile Circularly-Polarized Filtering Antenna with Improved Bandwidth and Gain Chun-Xu Mao and Steven Gao (University of Kent, United Kingdom); Yi Wang (University of Greenwich, United Kingdom)</p>
<p>T06-5: Antennas for Radar Systems-3 Radar Systems Regular Session Antennas Room: Room 16 Chairs: Ke Wu (Polytechnique Montreal, Canada) and Professor Symon K. Podilchak (Heriot-Watt University, United Kingdom)</p>	
16:30	<p>T06-5.1 Simple Surface-Wave Launching by Parallel-Plate and Microstrip Feeding for Leaky-Wave Antennas and Other Planar Guided-Wave Applications Victoria Gómez-Guillamón Buendía and Symon K. Podilchak (Heriot-Watt University, United Kingdom)</p>
16:50	<p>T06-5.2 A Hybrid Antenna Element for Travelling Wave Dual-Plane Monopulse Slotted Waveguide Arrays Gokhan Gultepe and Doganay Dogan (Aselsan Inc and Middle East Technical University, Turkey); Ozlem Aydin Civi (Middle East Technical University, Turkey)</p>
17:10	<p>T06-5.3 Accurate and Simplified Network Model for Composite Right-Left Handed Transmission Line Yunhua Zhang, Ke Chen, Guo-Qiang Zhu and Si-yuan He (Wuhan University, P.R. China)</p>

17:30	<p>T06-5.4 Millimeter-Wave Substrate-Integrated Waveguide Based Leaky-Wave Antenna With Broadbeam Radiation at Broadside Miguel Poveda García and Jose-Luis Gómez-Tornero (Technical University of Cartagena, Spain); Symon K. Podilchak and George Goussetis (Heriot-Watt University, United Kingdom)</p>
17:50	<p>T06-5.5 Two-Dimensional Periodic Leaky-Wave Antenna for Oblique Frequency Scanning Amar Al-Bassam and Dirk Heberling (RWTH Aachen University, Germany); Christophe Caloz (Ecole Polytechnique de Montreal, Canada)</p>
<p>T02-2: Antennas for Ultra High Data Rate Communications - 2 Ultra-High Data Rate Communications Regular Session Antennas Room: Room 14 Chairs: Professor Jiro Hirokawa (Tokyo Institute of Technology, Japan) and Tim Drysdale (Open University, United Kingdom)</p>	
16:30	<p>T02-2.1 Generation of Three OAM Modes Through a 60-GHz Butler Matrix Fed RLSA Agnese Mazzinghi and Jiro Hirokawa (Tokyo Institute of Technology, Japan); Xin Xu, Ryotaro Ohashi and Angelo Freni (University of Florence, Italy)</p>
16:50	<p>T02-2.2 High Efficient and Wide Bandwidth Fresnel Lens Antenna at Millimeter-Wave Antoine Jouade, Mohamed Himdi and Olivier Lafond (Université de Rennes 1, France)</p>
17:10	<p>T02-2.3 Effects of the Feeding Structure on Low-THz Bull's Eye Antennas Despoina Kampouridou and Alexandros Feresidis (University of Birmingham, United Kingdom)</p>
17:30	<p>T02-2.4 24GHz Paper Based Inkjet Printed Quasi Yagi-Uda Antenna with New Bowtie Director Jose M Gonzalez-Perez (King Abdullah University of Science and Technology, Saudi Arabia and University of the Basque Country, Spain); Loic Marnat and Atif Shamim (King Abdullah University of Science and Technology, Saudi Arabia)</p>
17:50	<p>T02-2.5 Reduction of Orbital Angular Momentum Radio Beam Divergence Using a 3D Printed Planar Graded Index Lenses Ben Allen (University of Oxford and Network Rail, United Kingdom); Timothy Drysdale (The Open University, United Kingdom); Shiyu Zhang, William Whittow and J (Yiannis) Vardaxoglou (Loughborough University, United Kingdom); Alan Tennant (University of Sheffield, United Kingdom); Christopher Stevens, Justin P Coon and Dmitry Isakov (University of Oxford, United Kingdom)</p>
<p>CS15: Innovative Small Antennas Connected objects Convened Session Antennas Room: Room 13 Chairs: Dr Anu Lehtovuori (Aalto University, Finland) and Dr Adam Narbudowicz (Dublin Institute of Technology, Ireland)</p>	

16:30	<p>CS15.1 Circularly Polarized Electrically Small Antennas for Emerging Wireless Applications Wei Lin and Richard Ziolkowski (University of Technology Sydney, Australia); Ming-chun Tang (Chongqing University, P.R. China)</p>
16:50	<p>CS15.2 On Bandwidth Optimal Positioning of Embedded Antennas, a Case Study Lars Jonsson and Lei Wang (KTH Royal Institute of Technology, Sweden); Fabien Ferrero (University of Côte d'Azur, France)</p>
17:10	<p>CS15.3 Compact Antenna with Unidirectional Radiation Patterns Carlos Ramiro Peñafiel-Ojeda (Universitat Politècnica de València, Spain and Universidad Nacional de Chimborazo, Ecuador); Marta Cabedo-Fabrés, Eva Antonino-Daviu and Miguel Ferrando-Bataller (Universitat Politècnica de València, Spain)</p>
17:30	<p>CS15.4 Optimal Currents and Optimal Antennas Miloslav Capek and Lukas Jelinek (Czech Technical University in Prague, Czech Republic)</p>
17:50	<p>CS15.5 A Novel mm-Wave Phased Array for 180-Degree Coverage for 5G Smartphone Applications Manoj Stanley, Yi Huang, Ahmed Alieldin and Sumin Joseph (University of Liverpool, United Kingdom); Hanyang Wang and Hai Zhou (Huawei Technology, United Kingdom)</p>
<p>CS36: Propagation in Aeronautics Defence & Security Convened Session Propagation Room: Room 6 Chairs: Professor Uwe-Carsten Fiebig (German Aerospace Center (DLR), Germany) and Dr Fernando Perez-Fontán (University of Vigo, Spain)</p>	
16:30	<p>CS36.1 State Propagation Channel Model for 2 GHz UAV Links in Cluttered Environment Jan Zeleny, Milan Kvicera, Pavel Valtr and Pavel Pechac (Czech Technical University in Prague, Czech Republic); Fernando Pérez-Fontán (University of Vigo, Spain)</p>
16:50	<p>CS36.2 Validation of the Geometry-based Stochastic Channel Model for the Air-Ground Channel Nicolas Schneckenburger, Thomas Jost and Uwe-Carsten G. Fiebig (German Aerospace Center (DLR), Germany); Giovanni Del Galdo (Fraunhofer Institute for Integrated Circuits IIS & Ilmenau University of Technology, Germany); David W Matolak (University of South Carolina, USA)</p>
17:10	<p>CS36.3 Wide Band Propagation Measurements and Modelling for Low Altitude UAVs César Calvo Ramírez, Ana Gonzalez-Plaza, Cesar Briso and Antonio Perez Yuste (Technical University of Madrid, Spain)</p>

17:30	<p>CS36.4 Initial Ku-Band Air-Ground Channel Measurement Results David W Matolak and Albert Smith (University of South Carolina, USA); Kurt Shalkhauser and Steven Bretmersky (NASA Glenn Research Center, USA)</p>
17:50	<p>CS36.5 Cross-Channel Sounding for HF Geolocation: Concepts and Experimental Results Ankit Jain, Pascal Pagani, Rolland Fleury, Michel Ney and Patrice Pajusco (IMT Atlantique, France)</p>
<p>CS06: AMTA Session on Satellite and Aerospace Antenna Measurements Space Applications Convened Session Measurement Room: Room 4 Chairs: Dr Luca Salghetti Drioli (European Space Agency, The Netherlands) and Christian Hunscher (Airbus, Germany)</p>	
16:30	<p>CS06.1 NISAR L-Band and S-Band Instrument Antennas: Compatibility Test and Results Paolo Focardi, Joseph D. Vacchione and Jefferson A. Harrell (California Institute of Technology, USA)</p>
16:50	<p>CS06.2 Performance Data of a New, Large Compensated Compact Range for Antenna and Payload Testing of Future Spacecrafts Josef Migl, Carsten H Schmidt and Fritz Hartmann (Airbus Defence and Space GmbH, Germany)</p>
17:10	<p>CS06.3 Antenna Testing During the RADARSAT Constellation Mission Program Pierre Arsenault and Peter Allan (MDA, Canada)</p>
17:30	<p>CS06.4 MetOp SG Scatterometer Antenna Testing - Gain Reference Calibration and Golden Standard Measurement 2017 Olav Breinbjerg and Jeppe M. Bjørstorp (Technical University of Denmark, Denmark)</p>
17:50	<p>CS06.5 Verifying the Geometric Accuracy of Sentinel-1A and Sentinel-1B Using L0-Products Kersten Schmidt, Nuria Tous-Ramon, Jens Reimann and Marco Schwerdt (German Aerospace Center (DLR), Germany)</p>
<p>T10-3: Antenna and Array Modelling Software Tools & Instruments Regular Session Antennas Room: Room 3 Chairs: Dr Michael Foegelle (ETS-Lindgren, USA) and Stuart Gregson (Queen Mary University of London, United Kingdom)</p>	

16:30	<p>T10-3.1 Lens Antennas Focus Determination Using Full-Wave Simulation Patricio Gross (Universidad Nacional de La Plata and Universidad Nacional Arturo Jauretche, Argentina); Julieta Vernieri (Universidad Nacional de La Plata, Argentina); Felipe Vico-Bondía (Universidad Politécnica de Valencia, Spain); J. Alberto Bava (Universidad Nacional de La Plata and CIOp (CONICET – CIC), Argentina); Miguel Ferrando-Bataller (Universitat Politècnica de València, Spain and CIOp (CONICET – CIC), Argentina)</p>
16:50	<p>T10-3.2 An Application of Singularity Cancellation for Periodic Structures in Free Space Suleyman Adanir (ASELSAN, Turkey); Lale Alatan (Middle East Technical University, Turkey)</p>
17:10	<p>T10-3.3 On Feed Line Modifications for Compact Wideband Antenna Design Muhammad ul Haq and Slawomir Koziel (Reykjavik University, Iceland); Qingsha Cheng (Southern University of Science and Technology, P.R. China)</p>
17:30	<p>T10-3.4 Densely Convolved Slotted Cross Dipole Element FSS Arrays Badredin M Turki, Edward Parker, John Batchelor and Mohamad Ali Ziai (University of Kent, United Kingdom)</p>
17:50	<p>T10-3.5 Behavioural Modelling for Adaptive Array Systems Incorporating High-Power Amplifier Nonlinearities Tristan Goss (Defence Science and Technology Laboratory, United Kingdom); Peter Aaen (University of Surrey, United Kingdom)</p>
<p>CS42: Electromagnetic Systems for Ambient Assisted Living (AAL) Application Biomedical Convened Session Antennas Room: Room1 Chairs: Dr Paola Russo (Università Politecnica delle Marche, Italy) and Dr Sandra Dudley (London South Bank University, United Kingdom)</p>	
16:30	<p>CS42.1 Robust and Compact PDMS Antennas for Search and Rescue Operations and Emergency Communications Rahil Joshi, Constantin Constantinides and Symon K. Podilchak (Heriot-Watt University, United Kingdom); Muhammad Nazrin Ramli, Herwansyah bin Lago and Ping Jack Soh (Universiti Malaysia Perlis, Malaysia)</p>
16:50	<p>CS42.2 Epidermal Radio-Sensors for Wireless Detection of Physiological Parameters and Sense Augmentation Maria Cristina Caccami, Carolina Miozzi, Valentina Greco and Gaetano Marrocco (University of Rome, Italy)</p>
17:10	<p>CS42.3 Radar Doppler Technique to Estimate the Energy Expenditure of Human Physical Activities Paola Russo, Valentina Di Mattia, Alfredo De Leo and Graziano Cerri (Università Politecnica delle Marche, Italy); Giovanni Manfredi (SONDRA, Centrale-Supelec, France)</p>

17:30	<p>CS42.4 Remote Vital Sign Recognition Through Machine Learning Augmented UWB Soumya Prakash Rana, Maitreyee Dey, Robert Brown, Hafeez Siddiqui and Sandra Dudley (London South Bank University, United Kingdom)</p>
17:50	<p>CS42.5 RFID Monitoring for Assistive Technologies Beyond the Clinic John Batchelor, Robert Horne, Paul S Taylor and Mohamed I Sobhy (University of Kent, United Kingdom)</p>

Tuesday 10 April – 13:30 – 15:00– P1 Posters

Room: Capital Hall

A: Antennas

M: Measurements

O: Other subjects

P: Propagation

S: Simulations

P1.1 (A-T01)

K/Ka-Band Transmitarray Antennas Based on Polarization Twisted Unit-Cells

Kien Pham (University of Rennes 1 & IETR, France); Ronan Sauleau (University of Rennes 1, France); Erwan Fourn (INSA of Rennes and IETR, France); Fatimata Diaby and Antonio Clemente (Université Grenoble-Alpes and CEA-LETI Minatec, France); Laurent Dussopt (CEA, LETI, Minatec, France)

P1.2 (A-T01)

Compact Broadband Inverted-L Filtering Microstrip Antenna with Multiple-Mode Resonator

Tao Xu, Fei Liu, Hui Gan Hongwei Deng and Yonggang Zhou (Nanjing University of Aeronautics and Astronautics, P.R. China)

P1.3 (A-T01)

Compact L/S-Band Circularly Polarized Microstrip Antenna over Reactive Impedance Surface

Rongjie Ma, Qi Wu, Jiexi Yin, Chen Yu, Haiming Wang and Wei Hong (Southeast University, P.R. China)

P1.4 (A-T01)

A High-gain Wideband EBG Resonator Antenna for 60 GHz Unlicensed Frequency Band

Ali Lalbakhsh, Muhammad Usman Afzal and Karu Esselle (Macquarie University, Australia); Stephanie Smith (CSIRO, Australia)

P1.5 (A-T01)

MM-Wave Slot Array Antenna Backed by AMC Reflector for 5G Smartwatch Applications

Jihoon Bang, Youngtaek Hong and Jaehoon Choi (Hanyang University, Korea)

P1.6 (A-T01)

Influence of Antenna Mounting Location on the Radiation Pattern of an Automotive Antenna

Muhammad Ehtisham Asghar, Frank Wollenschläger, Aidin Asgharzadeh, Jasmeet Singh and Matthias Hein (Ilmenau University of Technology, Germany)

P1.7 (A-T01)

A Novel Electronically Wideband Steering System Using Rotman Lens for 5G Applications at 28 GHz

Mohamed Ahmed, Ronny Hahnel and Dirk Plettemeier (Dresden University of Technology, Germany)

P1.8 (A-T01)

About the Beam Cosines and the Radiation Efficiency of a Multiport Antenna Array

Frédéric Broydé and Evelyne Clavelier (Excem, France)

P1.9 (A-T01)

Dual Band Dual Mode Low Cross-Polarization Slot-Patch Antenna Fed by Microstrip Line

Yifan Yin and Ke Wu (Polytechnique Montreal (University of Montreal), Canada)

P1.10 (A-T01)

Novel Wideband Omnidirectional Monopole Antenna for Indoor Communication Environment

Chenfeng Li, Xiao Wei Zhu, Pengfei Liu and Chao Yu (Southeast University, P.R. China)

P1.11 (A-T01)

Linearly Polarized 64-Element Antenna Array for mm-Wave Mobile Backhaul Application

Marko Sonkki, Sami Myllymäki, Nuutti Tervo, Marko E Leinonen, Maciej Sobocinski Giuseppe Destino and Aarno Pärssinen (University of Oulu, Finland)

P1.12 (A-T01)

Wideband Low-Profile Transmitarray Antenna for Backhauling at 60 GHz

Maciej Smierzchalski and Antonio Clemente (Université Grenoble-Alpes and CEA-LETI Minatoc, France); Mathieu Huchard and Cyril Barbier (Radiall, France)

P1.13 (A-T01)

Implementation of Rotman Lens Beamformer for Relatively Flexible Multi-beam Radiation Control by Electrically Large Phased Arrays of Antennas

Chen-Yi Chang and Hsi-Tseng Chou (National Taiwan University, Taiwan)

P1.14 (A-T01)

Adaptive Continous Beam Steering in Quasi-optical Antenna Solutions

Mohammad Reza Dehghani Kodnoeih (Université de Nantes IETR & Radio Frequency Systems (RFS), France); Romain Negrier and Eduardo Motta Cruz (Université de Nantes IETR, France); Yoann Letestu (Radio Frequency Systems (RFS), France); Ronan Sauleau and Laurent Ferro-Famil (University of Rennes 1, France)

P1.15 (A-T01)

A Wideband CPW-fed Stepped Monopole Slot Antenna for 5G Communications

Farooq A. Tahir and Hidayat Ullah (National University of Science and Technology, Pakistan)

P1.16 (A-T02)

Link Characteristics of Directional Surface Wave Antenna Arrays

Prabhat Baniya and Kathleen Melde (University of Arizona, USA)

P1.17 (A-T02)

Design and Performance of a Flexible 60-GHz Rotman Lens-Based Array Beamformer

Ardavan Rahimian, Yasir Alfadhl and Akram Alomainy (Queen Mary University of London, United Kingdom)

P1.18 (A-T02)

Time-Domain Analysis of Classical Omnidirectional Axis-Displaced Dual-Reflector Antennas

Rafaela Carvalho, Fernando Moreira and Cássio Rego (Federal University of Minas Gerais, Brazil)

P1.19 (A-T02)

W-Band High-Gain Low Profile Circularly Polarized Magneto-Electric Dipole Antenna Array with Gap Waveguide Feeding Technology

Jianyin Cao, Yan Wang, Shanxlang Mou and Hao Wang (Nanjing University of Science and Technology, P.R. China); Jian Yang (Chalmers University of Technology, Sweden)

P1.20 (A-T02)

Printed-Circuit Monopole Antenna for Super-Wideband Applications

Alireza Seyfollahi and Jens Bornemann (University of Victoria, Canada)

P1.21 (A-T03)

An UWB Compact Microstrip Antenna for S Band, C Band and X Band Applications

Tapesh Bhandari and Sudeep Baudha (BITS Pilani, India)

P1.22 (A-T03)

Diversity Antenna Using Dipole/Monopole Modes with Simple Configuration

Shimpei Akimoto, Kengo Nishimoto, Yasuhiro Nishioka and Naofumi Yoneda (Mitsubishi Electric Corporation, Japan)

P1.23 (A-T03)

Compact Slot Array with Unidirectional Radiation for 5 GHz WiFi Applications

Jeen-Sheen Row and Yu-Hsin Wu (National Changhua University of Education, Taiwan)

P1.24 (A-T03)

A Dual-Band Circularly Polarized Slot Antenna Design for WLAN 2.4/5.2 GHz Operation

Chow-Yen-Desmond Sim and Yu-Feng Chen (Shenzhen University, P.R. China); Guan-Long Huang and Chih-Heng Lin (Feng Chia University, Taiwan)

P1.25 (A-T03)

Systematic Octopus-Shape Antenna Design with Circular Polarization by Characteristic Mode Theory

Mohammad Poordaraee, Homayoon Oraizi, Seyfollah Khajevandi and Farrokh Hojjat-Kashani (Iran University of Science and Technology, Iran)

P1.26 (A-T04)

Dual-Resonance NFC Antenna System for Mobile Phone with Metal Back Cover

Fuqiang Ai and Anping Zhao (Shenzhen Sunway Communication Co., Ltd, P.R. China)

P1.27 (A-T04)

Reconfigurable Circularly Polarized Cross-Dipole Antenna with a Near-Field Resonant Parasitic Element

Son Xuat Ta (Hanoi University of Science and Technology, Vietnam); Ikmo Park (Ajou University, Korea); Richard W. Ziolkowski (University of Arizona, USA and University of Sydney, Australia)

P1.28 (A-T04)

Internally Loaded Endfire Superdirective Array for Wideband Performance

Hussein Jaafar, Sylvain Collardey and Ala Sharaiha (Université de Rennes 1 & IETR, France)

P1.28.a (A-T10)

Phase Retrieval of Scalar Fields as a Low Number of Sequential Optimizations

Tommaso Isernia, Antonia Rita Laganà, Valeria Morabito and Andrea Francesco Morabito (University Mediterranea of Reggio Calabria, Italy)

P1.28.b (A-T11)

Exploiting the Aperture Antennas Theory in the Assessment of Orbital Angular Momentum Antennas Limitations in Far-Field Links

Andrea Francesco Morabito and Tommaso Isernia (University Mediterranea of Reggio Calabria, Italy)

P1.29 (A-T04)

Design of UHF RFID Tag Antenna for Automotive Tire

Nadir Sarsri and Mohamed Nabil Srfi (National School of Applied Sciences, Ibn Tofail University, Morocco); Sami Myllymäki (University of Oulu, Finland)

P1.30 (A-T04)

Design of a Monopolar Wire-Plate Antenna Loaded with Magneto-Dielectric Material

Lotfi Batel, Christophe Delaveaud and Jean-François Pintos (Université Grenoble-Alpes and CEA-LETI, France)

P1.31 (A-T05)**A Highly Sensitive Microwave Resonator for Non- Invasive Blood Glucose Level Detection**

Ayodunni Oloyo and Zhirun Hu (University of Manchester, United Kingdom)

P1.32 (A-T05)**Bacterial Detection by Using Micro Immunosensing Biomedical Cavity Resonator**

Dalia Elsheakh (Electronics Research Institute and ElTahrir St. Dokki Giza, Egypt); Hala Elsadekm and Esmat Abdallah (Electronics Research Institute, Egypt); Saad Moghannem (Doctor, Egypt); Waleed Elmazny (Holding Company for Biological Products and Vaccines (VACSERA), Egypt)

P1.33 (A-T05)**Compact Flexible UWB Antenna Using Polyimide Substrate**

Saba Rashid, Yizhi Wu and Yongsheng Ding (Donghua University, P.R. China); Muhammad Ali Babar Abbasi (Queen's University Belfast, United Kingdom)

P1.33.a (A-T05)**Dual-Band Dual-Polarized Textile Antenna for Location Tracking in AAL**

Ezzaty Faridah Nor Mohd Hussin, Ping Jack Soh, Azremi Abdullah Al-Hadi, Mohd Faizal Jamlos, Muhammad Nazrin Ramli and Herwansyah Lago (Universiti Malaysia Perlis, Malaysia); Niels Kuster (Swiss Federal Institute of Technology, Switzerland); Symon K. Podilchak (Heriot-Watt University, United Kingdom)

P1.34 (A-T06)**A Technique to Suppress Mutual Coupling in Densely Packed Antenna Arrays Using Metamaterial Supersubstrate**

Mohammad Alibakhshikenari and Ernesto Limiti (University of Rome Tor Vergata, Italy); Bal Virdee (London Metropolitan University, United Kingdom)

P1.36 (A-T06)**Design of a Low-Profile 3:1 Bandwidth Phased Antenna Array**

Fuguo Zhu (The 14th Research Institute, CETC, P.R. China); Jinping Zhang and Zhipeng Zhou (Nanjing Research Institute of Electronics Technology, P.R. China); Steven Gao (University of Kent, United Kingdom)

P1.37 (A-T06)**Monostatic RCS Enhancing Design Based on Retroreflective Antenna Array**

Wen-Jiao Liao, Wan-Rou Lin and Hsi-Tseng Chou (National Taiwan University, Taiwan)

P1.38 (A-T06)**Caustics, Plane Waves and Applications to Antennas**

Giuseppe Orlando (Thales Alenia Space Italia, Italy)

P1.39 (A-T06)**Surface Mounted Notch Element for AESA Applications**

Bengt Svensson and Jacob Samuelsson (Saab AB, Sweden)

P1.40 (A-T06)

Dielectric Material Characterization in the Frequency Range 68 - 92 GHz

Isam Alawneh, Jan Barowski and Ilona Rolfes (Ruhr University Bochum, Germany)

P1.41 (A-T07)

Auxiliary Elements Selection for Planar Array Sidelobe Cancellation Based on Genetic Algorithm

Wei Dong, Zhenhai Xu, Luo-Sheng-Bin Wang, Shun-Ping Xiao and Xinghua Liu (National University of Defense Technology, P.R. China)

P1.43 (A-T07)

A UHF Sea-Water Array Antenna for Maritime Wireless Communications

Xinhe Pan, Zhenxin Hu and Mingzhou Zheng (Huawei Technologies Co. Ltd., P.R. China); Zhen Ren and Qiaoyu Chen (Nanjing University of Science and Technology, P.R. China)

P1.45 (A-T07)

Wideband Dual-Circularly Polarised Feed for Compact Antenna Test Ranges with Low Cross Polarisation

Ignacio Montesinos-Ortego and Ana Rosa Ruiz (TTI Spain); Sergiy Pivnenko (Antenna Systems Solutions, Denmark)

P1.46 (A-T08)

3D Hodograph of Antenna Local Phase Center

Yu. I Choni (Kazaz National Research Technical University, Russia)

P1.47 (A-T08)

Compact GPS Antenna Array Using Meta Structure

Jae-Gon Lee and Jeong Hae Lee (Hongik University, Korea)

P1.48 (A-T08)

Accuracy of Harmonic Analysis Techniques for Direction of Arrival Estimation Using Time Modulated Arrays

Ben Clark and James A. Flint (Loughborough University, United Kingdom)

P1.50 (A-T09)

Design Procedures for Rectangular Patch Antennas

Giulia Buttazoni, Alessandro Cuttin and Roberto Vescovo (University of Trieste, Italy)

P1.51 (A-T09)

3D Printed Helix Antenna

Konstantin Lomakin, Tatiana Pavlenko, Mark SippelGerald Gold, Tobias Weidner Klaus Helmreich, Markus Ankenbrand and Jörg Franke (Friedrich-Alexander University, Germany)

P1.52 (A-T09)

A Posteriori Antenna Surface Rework: A Simple Technique to Correlate Distortions to Pattern Degradations

Annalisa Iacono and Steve McLaren (Airbus DS Ltd, United Kingdom)

P1.53 (A-T10)

Novel Miniaturized Circular Polarization Antenna with Elliptical Slots and Feed with Loaded Stubs

Adrian Bekasiewicz (Gdansk University of Technology, Poland); Slawomir Koziel (Reykjavik University, Iceland); Qingsha Cheng (SUSTC, P.R. China)

P1.54 (A-T10)

Design and Validation of Corporate Feeds for Low-Sidelobe Microstrip Linear Arrays

Stanislav Ogurtsov and Slawomir Koziel (Reykjavik University, Iceland); Qingsha Cheng and Yang Yu (SUSTC, P.R. China)

P1.55 (A-T10)

Design and Performance Analysis of an UWB Patch Antenna with Enhanced Bandwidth Characteristics

Mohamed Soliman and Ahmad Alahmadi (Taif University, Saudi Arabia); Majed Dwairi (Al-Balqa Applied University, Jordan)

P1.58 (A-T11)

Terahertz Dielectric Resonator Antenna Coupled to Graphene Plasmonic Dipole

Seyed Ehsan Hosseinijad, Mohammad Neshat and Reza Faraji-Dana (University of Tehran, Iran); Sergi Abadal, Eduard Alarcon and Albert Cabellos-Aparicio (Universitat Politècnica de Catalunya (UPC) and NaNoNetworking Center in Catalunya (N3Cat), Spain); Max C Lemme (RWTH Aachen University, Germany); Peter Haring Bolívar (The Institute of High Frequency and Quantum Electronics, University of Siegen, Germany)

P1.59 (A-T11)

Slotted Substrate Integrated Waveguide Antenna

Yasameen Azeez and P R Young (University of Kent, United Kingdom)

P1.60 (A-T11)

Design of Antipodal Tapered Slot Antenna Divided into Three Units

Akinori Matsui and Kuniaki Suto (Saitama Institute of Technology, Japan)

P1.62 (A-T11)

Circularly Polarized Mu-zero Resonance Antenna Array Having Wide Scanning Angle

Chang-Hyun Lee and Jeong-Hae Lee (Hongik University, Korea)

P1.63 (M-T01)

Comparative Channel Study of Ray Tracing and Measurement for an Indoor Scenario at 28 GHz

Jinnan Zhan, Jianhua Zhang, Xinzhuang Zhang and Pan Tang (Beijing University of Posts and Telecommunications, P.R. China); Lei Tian (Beijing University of Posts and Telecommunications & Wireless Technology Innovation Institute, P.R. China); Jianwu Dou (ZTE Corporation, P.R. China); He-Wen Wei (Southwest Electronics and Telecommunication Technology Research Institute, P.R. China)

China)

P1.64 (M-T01)

Non-Intrusive Characterization of 60GHz Antenna Array, Using Packet Measurements

Timothy Pelham, David Reyes, Mark Beach and Evangelos Mellios (University of Bristol, United Kingdom); Moray Rumney (KeysightTechnologies, United Kingdom)

P1.65 (M-T01)

Plane Wave Converter for 5G Massive MIMO Basestation Measurements

Corbett Rowell and Adam Tankielun (Rohde & Schwarz GmbH & Co. KG, Germany)

P1.66 (M-T01)

Assessment of Beamforming Capabilities of a 4-element Array in a Smartphone at 26 GHz

Fabien Ferrero and Tran Quang Khai Nguyen (University Nice Sophia Antipolis, CNRS, LEAT & CREMANT, France); Philippe Ratajczak (Orange Labs, France)

P1.67 (M-T09)

High-Frequency Characterization of EMI/EMC Ground Test Facility for the Measurements of Electric Propulsion Thruster Emissions

Matteo Albani, Federico Puggelli and Alberto Toccafondi (University of Siena, Italy); Gianfranco Meniconi and Fabrizio Scortecci (Aerospazio Tecnologie s.r.l., Italy)

P1.69 (M-T09)

Imaging the Inner Structure of a Comet from Few Measurements in a Bistatic Scenario Case of a Scale Model

Christelle Eyraud and Jean-Michel Geffrin (Aix Marseille Université, CNRS, France); Alain Hérique (Université Grenoble Alpes, France); Wlodek Kofman (Université Grenoble Alpes, Space Research Centre, France)

P1.71 (M-T11)

Realization of FDA Using Variable-Period Time Modulated Technique

Jin-Dong Zhang, Wen Wu and Da-Gang Fang (Nanjing University of Science and Technology, P.R. China)

P1.72 (M-T11)

Dielectric Properties Measurement Based on Split Ring Resonator for Microfluidic Characterization

Amyrul Azuan Mohd Bahar, Zahriladha Zakaria, Azmi Awang Md Isa, Yosza Dasril and Rammah A. Alahnomi (Universiti Teknikal Malaysia Melaka (UTeM), Malaysia)

P1.73 (M-T11)

Results of Medium Wave HD Radio Mobile Reception Measurements in a Dense Urban Region

Elizabeth Verdugo, Luiz da Silva Mello and Marta Pudwell Chaves de Almeida (University of Rio de Janeiro, Brazil)

P1.74 (M-T11)

Design-Oriented Constrained Modeling of Antenna Structures

Slawomir Koziel and Ari Sigurdsson (Reykjavik University, Iceland)

P1.74.a (M-T11)

High Sensitivity Microwave Near-Field Sensors for Fluids Characterization

Ali Albishi (King Saud University, Kingdom of Saudi Arabia and University of Waterloo, Canada); Omar M Ramahi (University of Waterloo, Canada)

P1.75 (M-T11)

Experimental Evaluation of Patch Antennas with Ferrite Loaded Substrate at 5GHz Frequency Band

Evmorfili Andreou (NCSR Demokritos and National Technical University of Athens, Greece); Antonis A Alexandridis (NCSR Demokritos, Greece); George Fikioris (National Technical University of Athens, Greece)

P1.77 (O-T01)

Long-Term Spectrum Monitoring and Occupancy from 174 to 1000 MHz in Rural Western Montana

Erin Wiles and Kevin Negus (Montana Tech University, USA)

P1.78 (O-T01)

Design of a Benchtop RF Vector Parameter Analyzer

Zhengbo Jiang and Jianfeng Zhai (Southeast University, P.R. China); Ming Liu (Shanghai Transcom Instrument Technologies Co., Ltd, P.R. China)

P1.80 (O-T01)

A Novel Design Approach for NB-IoT Networks Using Hybrid Teaching-Learning Optimization

Sotirios Goudos (Aristotle University of Thessaloniki, Greece); Margot Deruyck, David Plets, Luc Martens and Wout Joseph (Ghent University, Belgium)

P1.81 (O-T04)

Considerations on Series Inductance and Inductively Coupled Loop Matching Circuits for UHF RFID Tags

S. Protat, J. Dubouil and J.-M. Laheurte (Université de Paris-Est, France); F. Gourari and S.M. Meriah (Université de Tlemcen, Algeria)

P1.82 (O-T04)

Study on Curved Barrier to Reduce Electromagnetic Interference from Solid Cables

Jaeyul Choo and Lee Dongjin (Korea Institute of Nuclear Safety, Korea)

P1.83 (O-T04)

A Compact Quad-Port Dual-Polarized Dipole Rectenna for Ambient RF Energy Harvesting

Shanpu Shen, Yujie Zhang, Chi-Yuk Chiu and Ross Murch (Hong Kong University of Science and Technology, P.R. China)

P1.84 (O-T04)

Enhanced Cooperative Spectrum Sensing in Hybrid Homogeneous-Heterogeneous Cognitive Radio Networks

Md Sipon Miah, Michael Schukat and Enda Barrett (National University of Ireland, Ireland)

P1.85 (O-T05)

Microwave Radar Imaging for Monitoring Dysphagia

Zhenhua Hu, Huihai Wang, Lin Sun, Rui Wu, Xiaofeng Zhang, and Fan Yang (ET Terahertz Science and Technology Co., Ltd, P.R. China)

P1.86 (O-T05)

Wireless Power Transfer: Exposure Assessment for Grounded and Ungrounded Human Body

Mohsen Koohestani, Mauro Ettore and Maxim Zhadobov (University of Rennes 1, France)

P1.88 (O-T06)

Signal-to-Noise Ratio Enhancement of High Frequency Ground Wave Radar Based on a Metamaterial-Based Transition Structure

Liang-Yu Ou Yang (National Chung-Shan Institute of Science & Technology, Taiwan); Shih-Yuan Chen (National Taiwan University, Taiwan)

P1.89 (O-T06)

High Power Non-Foster Circuit Class-J GaN HEMT Amplifier

Charles Akwuruoha and Zhirun Hu (University of Manchester, United Kingdom)

P1.91 (O-T06)

An Accurate Closed-Form Design for Microstrip Directional Couplers with Compensative Capacitances

Jin Ling (Nanjing Research Institute of Electronics Technology, P.R. China)

P1.92 (O-T06)

Multi-radar Coherently Combining Based on Clean Signal Reconstruction

Xinghua Liu, Zhenhai Xu, Luoshengbin Wang, Wei Dong and Shunping Xiao (National University of Defence Technology, P.R. China)

P1.94 (O-T07)

Design of a Simultaneous X/Ka-Band SATCOM-on-the-Move Terminal for Commercial and Military Applications with Monopulse Tracking in Both Bands

Christophe Granet (Lyrebird Antenna Research, Australia); John Kot (YK Engineering Research, Australia); John Ness and Glen Callaghan (EM Solutions, Australia)

P1.95 (O-T07)

Broadband Linear Polarization Conversion Metasurface Based on Grounded Vias

Fereshteh Samadi, Mohammad Akbari and Abdel R. Sebak (Concordia University, Canada); Reza Chaharmir (Communications Research Centre Canada, Canada)

P1.97 (O-T11)

Radiation Characteristics of Filamentary Sources in the Presence of Periodically Spaced Nonreciprocal Cylindrical Scatterers

Alexander Kudrin, Alexander Ivoninsky and Vasiliy Es'kin (University of Nizhny Novgorod, Russia)

P1.98 (O-T11)

Dual-polarized Frequency Selective Surface for SOTM Applications

Daniel Sanchez-Escuderos, Miguel Ferrando-Rocher, José Ignacio Herranz-Herruzo, Hon Ching Moy-Li and Alejandro Valero-Nogueira (Universidad Politécnica de Valencia, Spain)

P1.99 (O-T11)

Optimization and Analysis of Photoconductive Switch for Frequency Reconfigurable Antenna

Hansheng Su (Science and Technology on Space Physics Laboratory, P.R. China and Queen Mary, University of London, United Kingdom); Xiaodong Chen (Queen Mary, University of London, United Kingdom); Yanyang Chen and Bin Li (Science and Technology on Space Physics Laboratory, P.R. China)

P1.100 (O-T11)

Directional Modulation via Weighted Fractional Fourier Transform - A Way to Enhance Security

Feng Liu, Ling Wang and Jian Xie (Northwestern Polytechnical University, P.R. China)

P1.101 (P-T01)

Propagation Prediction Based on Time Domain Electric Field Integral Equation for Smoothly Irregular Terrains

Ruã Barbosa and Fernando Moreira (Federal University of Minas Gerais, Brazil)

P1.102 (P-T01)

Atmospheric Impact on the Performance of a 60GHz Point-To-Point Link for 5G Infrastructures

Nigel Linge, Rowani Odum, Steve Hill and Sabine Von Hunerbein (The University of Salford, United Kingdom); Patrick Linnebank (NEC Europe, The Netherlands); Andy Sutton and Dave Townend (BT Technology, Services and Operations, United Kingdom)

P1.103 (P-T01)

Propagation Models Tuning for Long Term Evolution and Long Term Evolution-Advanced Using Genetic Algorithms and Least Mean Square

Bruno Cavalcanti, Gustavo Cavalcante and Marcela T. G. Santos (IFPB - Instituto Federal de Educação, Brazil); Gabriel Moura Cantanhede, Adaildo Assunção and Laércio Martins de Mendonça (University of Rio Grande do Norte, Brazil)

P1.104 (P-T01)

A Rain Model for the Tropics Based on TRMM Data Fitted to DBSG3

Kevin S Paulson, Geraldine Rimven and Timothy Bellerby (University of Hull, United Kingdom)

P1.106 (P-T03)

Statistics of Rain Attenuation in Prague, Empirical Data and Numerical Predictions

Martin Grabner (Czech Metrology Institute, Czech Republic)

P1.107 (P-T04)

Channel Model in Urban Environment for Unmanned Aerial Vehicle Communications

Zhi Yang, Lai Zhou, Guangyue Zhao and Shidong Zhou (Tsinghua University, Canada)

P1.107.a (P-T04)

Artificial Neural Network Optimal Modelling of Received Signal Strength in Mobile Communications Using UAV Measurements

Sotirios Goudos (Aristotle University of Thessaloniki, Greece); George Tsoulos and Georgia E. Athanasiadou (University of Peloponnese, Greece)

P1.108 (P-T06)

Radio Wave Diffraction on Ledge-like Underlying Surface

Yekaterina Yungaitis (Chelyabinsk Radio Plant Polyot, Russia); Nikolay Voytovich, Aleksey Golovnin and Boris Zhdanov (South Ural State University, Russia)

P1.110 (P-T06)

Experimental and Numerical Studies on Scattering from Multiple Propellers of Small UAVs

Tamas Peto, Károly Marák, Sandor Bilicz and József Pávó (Budapest University of Technology and Economics, Hungary)

P1.110a (P-T06)

Calibration of the Simultaneous Polarimetric Radar Based on the Sampling Rate Compensation

Li Chao, Yong Yang, Li Yong-zhen and Wang Xue-song (National University of Defence Technology, P.R. China)

P1.111 (P-T10)

Establishing the Limits of Antenna Measurement in Fading Channels

Mohammed A. Almotery, Mohamed I Sobhy and John Batchelor (University of Kent, United Kingdom)

P1.112 (P-T10)

Retrieving of Significant Wave Height and Period from the Doppler Spectrum of Backscattered Microwave Signal

Maria Panfilova, Maria Ryabkova, Yuriy Titchenko and Vladimir Karaev (Institute of Applied Physics Russian Academy of Sciences, Russia)

P1.114 (P-T11)

A Superstrate Independent to the Linear Polarization Direction of an Incident Plane Wave with Transmittance Higher than 80%

Yin-Hua Yu, Zhi-Yuan Zong, Wen Wu and Da-Gang Fang (Nanjing University of Science and Technology, P.R. China)

P1.115 (P-T01)

Analytical Approximation of the Time-dependent Antenna Cross-correlation Green's Function

Debdeep Sarkar (Indian Institute of Technology, India and Royal Military College of Canada, Canada); Said Mikki (University of New Haven, USA); Kumar Vaibhav Srivastava (Indian Institute of Technology, India); Yahia Antar (Royal Military College of Canada, Canada)

P1.116 (S-T01)

Analytical Study of 5G Beamforming in the Reactive Near-Field Zone

Maryna Nesterova and Stuart Nicol (Aprel Inc., Canada)

P1.117 (S-T01)

Thermal Modeling of the Near-Field Exposure from Wireless 5G Devices

Andreas Christ (Consultant, Brazil); Davide Colombi (Ericsson Research, Sweden); Ken Joyner (Consultant, Australia)

P1.118 (S-T01)

Multi-antenna Configuration Modeling for Massive MIMO V2I

Andreas Pfadler, Christian Ballesteros, Jordi Romeu and Luis Jofre (Universitat Politecnica de Catalunya, Spain)

P1.119 (S-T10)

Low-Cost Multi-Objective Optimization of Antennas by Means of Generalized Pareto Ranking Bisection Algorithm

Sigmar Unnsteinsson (Reykjavik University, Iceland); Slawomir Koziel (Reykjavik University, Iceland and Gdansk University of Technology, Poland)

P1.120 (S-T10)

Using the Filter Diagonalization Method to Compute Modes of Dielectric Waveguides

David A. Rimel, Sergey Averkin, Carl A. Bauer, Adam V. Higuera, Ben M. Cowan, Jonathan D. A. Smith and Sveta Shasharina (Tech-X Corporation, USA); Gregory R. Werner (University of Colorado, USA); John R. Cary (Tech-X Corporation and University of Colorado, USA)

P1.121 (S-T10)

A New Sub-Entire-Domain Basis Function for the Accurate Analysis of Large-Scale Finite-Sized Periodic Structures with Connected-Cell

Tao Xiong, Wei Bing Lu and Wu Yang (SouthEast University, P.R. China)

P1.122 (S-T10)

EM Simulation Based on State of the Art CAD Data Conversion and Simplification Techniques

Patrick Soboll, Winfried Simon, Thorsten Liebig, David Schaefer and Matthias Geissler (IMST GmbH, Germany) Rainer Kronberger (Cologne University of Applied Sciences, Germany)

P1.123 (S-T10)

Linear Antenna Transient Analysis Using Running Fourier Transform and Page Spectrum

Anna Witenberg and Maciej Walkowiak (University of Science and Technology in Bydgoszcz, Poland); Katarzyna Jagodzińska (Koszalin University of Technology, Poland)

P1.124 (S-T10)

Hybrid Technique for Efficient and Accurate Analysis of the V2X Channel in Urban Traffic Scenarios

Jose-Luis García, Lorena Lozano, Ivan Gonzalez and Felipe Cátedra (Alcala University, Spain); Alvaro Somolinos (newFASANT, Spain)

P1.125 (S-T10)

Synthesis of Electromagnetic Equivalents of Composite Sheets by Multi-Objective Optimization of Anisotropic Band-Stop Filters

Martin Marek, Zbynek Raida and Petr Kadlec (Brno University of Technology, Czech Republic)

P1.126 (S-T11)

Accurate Scattering Matrix Reconstruction for Multi-Element Antennas - Application to Hybrid Arrays

Amel Maati, Cyrille Menudier, Marc Thevenot, François Torres and Thierry Monediere (XLIM-University of Limoges, France)

P1.127 (S-T11)

A Numerical Study for the Design of a New DD Coil Prototype for Dynamic Wireless Charging of Electric Vehicles

Rosanna Pinto, Vanni Lopresto and Antonino Genovese (ENEA, Italy)

P1.127a (A-T11)

The Generation of Circular Polarization in Cylindrical Dielectric Resonator Antenna Using an Arc Shaped Dielectric Element

Gaurav Varshney (National Institute of Technology Delhi, India); Shailza Gotra (Amity University, India); Vinay Pandey (NIT Delhi, India); Rajveer Singh Yaduvanshi (AIACR, India)

Wednesday 11 April 2018

Wednesday 11 April 2018 09:00 – 10:40

CS14: Higher Geometrical Symmetries for Periodic Structures

Cellular Networks & 5G | Convened Session | Antennas

Room: Room 7

Chairs: Dr Guido Valerio (Université Pierre et Marie Curie, France) and Dr Astrid Algaba Brazalez (Ericsson AB, Sweden)

09:00	CS14.1 Accurate and Low-Dispersive Control of Refractive Properties in Fully Metallic Waveguides Possessing Twist Symmetry Oskar Dahlberg and Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)
09:20	CS14.2 Engineering Modes of PT Symmetric Photonic Crystals Adam Mock (Central Michigan University, USA)
09:40	CS14.3 Glide-symmetric Holey Structures with Selected Bandgaps for Gap-waveguide Technology Pablo Padilla, Angel Palomares and Juan Valenzuela-Valdés (University of Granada, Spain); Antonio Alex-Amor and José-Manuel Fernández-González (Technical University of Madrid, Spain); Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)
10:00	CS14.4 A Two-Dimensional All Metal Luneburg Lens Using Glide-Symmetric Holey Metasurface Lars Manholm, Astrid Algaba Brazález and Martin Johansson (Ericsson Research, Ericsson AB, Sweden); Jingwei Miao and Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)
10:20	CS14.5 A Cost-effective D-band Multi-layer Rectangular Waveguide Transmission Line Based on Glide-Symmetric EBG Structure Abbas Vosoogh (Chalmers University of Technology, Sweden); Zhongxia Simon He and Herbert Zirath (Chalmers University of Technology, Sweden)

CS02: AMTA Session on 5G Antenna Measurements

Cellular Networks & 5G | Convened Session | Measurement

Room: Room 12

Chairs: Lars Jacob Foged (MVG, Microwavevision Group, Italy) and Dr Daniël Janse van Rensburg (NSI-MI, USA)

09:00	<p>CS02.1 Antenna Measurements at Millimeter Wavelengths - Overview Antti V Räisänen, Jianfang Zheng, Ville Viikari and Juha Ala-Laurinaho (Aalto University, Finland)</p>
09:20	<p>CS02.2 Characterization and Enhancement of the Environment for 5G Millimetre-wave Broadband Mobile Communications Aldo Petosa, Nicolas Gagnon, Cesar A Amaya, Ming Li, Shailesh Raut, Jonathan Ethier and Reza Chaharmir (Communications Research Centre Canada, Canada)</p>
09:40	<p>CS02.3 Analysis of Applicability of Radiated Two-Stage Test Method to 5G Radiated Performance Measurement Ya Jing, Hongwei Kong and Zhu Wen (Keysight Technologies, PR China); Moray Rumney (Keysight Technologies, United Kingdom)</p>
10:00	<p>CS02.4 Efficient Testing of Antennas for 5G mm-Wave Applications Andrea Giacomini, Alessandro Scannavini and Lars Foged (Microwave Vision Italy, Italy); Luc Duchesne, Nicolas Gross and Fabrice Herbiniere (MVG Industries, France)</p>
10:20	<p>CS02.5 Antenna Diagnosis and Power Density Calculation of 5G Millimeter-Wave Mobile Terminal Using Inverse Source Technique Bo Xu (Royal Institute of Technology and Ericsson AB, Sweden); Lucia Scialacqua, Alessandro Scannavini and Lars Foged (Microwave Vision Italy, Italy); Zhinong Ying and Thomas Bolin (Sony Mobile Communications, Sweden); Sailing He (Royal Institute of Technology, Sweden)</p>
<p>T11-4: Antenna Array Beamsteering Techniques Future Applications Regular Session Antennas Room: Room 17 Chairs: Professor Richard Ziolkowski (University of Technology Sydney, Australia) and Ioan E. Lager (Delft University of Technology, The Netherlands)</p>	
09:00	<p>T11-4.1 Wideband MM-wave Non-diffracting Airy Beam Forming Ravi Kadlimatti, Hemanth Gaddam and Patanjali Parimi (State University of New York, USA); Hugo Larocque, Ebrahim Karimi and Robert Boyd (University at Ottawa, USA)</p>
09:20	<p>T11-4.2 Connected Array for Radiated Power Enhancement of Pulsed Photoconductive Antennas Alessandro Garufo, Giorgio Carluccio, Andrea Neto and Nuria LLombart (Delft University of Technology, The Netherlands); Juan Bueno and Jochem Baselmans (SRON, The Netherlands); Joshua R Freeman, E Linfield and Alexander Davies (University of Leeds, United Kingdom)</p>
09:40	<p>T11-4.3 Four Dimensional Antenna Arrays for Wideband Transmit Beamforming Jixin Guo, Shiwen Yang and Yikai Chen (University of Electronic Science and Technology of China, P.R. China); Lorenzo Poli, Paolo Rocca and Andrea Massa (University of Trento, Italy)</p>

10:00	<p>T11-4.4 Code-Division Multiplexing Based Hardware Reduction for a Digital Beamforming Transmitter Array Zhengyu Peng (Mitsubishi Electric Research Laboratories, USA and Texas Tech University, USA); Kyeong Jin Kim, Pu Wang, Rui Ma and Bingnan Wang (Mitsubishi Electric Research Lab, USA); Kazunari Kihira and Toru Fukasawa (Mitsubishi Electric Corporation, Japan); Changzhi Li (Texas Tech University, USA)</p>
10:20	<p>T11-4.5 A Compact and Wideband Variable Microwave Phase Shifter for Phased Arrays and Diversity in S-Band Simon Senega and Stefan Lindenmeier (Universität der Bundeswehr, Germany)</p>
<p>T06-6: Radar Localisation and Sensing Radar Systems Regular Session Propagation Room: Room 16 Chairs: Professor Ozlem Aydin Civi (Middle East Technical University, Turkey) and Professor Herbert Aumann (University of Maine, USA)</p>	
09:00	<p>T06-6.1 Millimetre-Wave FMCW MIMO Radar System Development Using Broadband SIW Antennas Cristian Alistarh, Pascual Hilario Re, Thomas Ströeber, Samuel Rotenberg, Symon K. Podilchak, Carolina Mateo-Segura, Yan Pailhas, George Goussetis, Yves Petillot and John Thompson (University of Edinburgh, United Kingdom); Jaesup Lee (Samsung Electronics Co Ltd, Korea)</p>
09:20	<p>T06-6.2 A Single Antenna Radar Sensor with FMCW Radar Transceiver IC Kyungha Yoo (Kwangwoon University, Korea); Sang Gyun Kim (Silicon R&D, Korea); Yun Seong Eo (Kwangwoon University and Silicon R&D, Korea)</p>
09:40	<p>T06-6.3 A Sea-wave-dynamics Monitoring Radar Based on Propagation Characteristics of Echo Signals Nanxin Wang, Xuesong Cai and Xuefeng Yin (Tongji University, P.R. China); Antonio Perez Yuste (Technical University of Madrid, Spain); Yuanmiao Hu (Hangzhou Lanchang Technology Limited Company, P.R. China)</p>
10:00	<p>T06-6.4 TOA Estimation Algorithms Evaluated According ED-117 Minimum Operational Performance Specifications for Mode S Multilateration Systems Stephan Bernhart and Erich Leitgeb (Graz University of Technology, Austria); Gerhard A. Hofbauer and Ulrich Feichter (AviBit GmbH, Austria)</p>
10:20	<p>T06-6.5 Characteristic Mode Analysis of Reflectarray Unit Cell Yigit Haykir and Ozlem Aydin Civi (Middle East Technical University, Turkey)</p>
<p>CS37: Modeling and Design Tools for Small Antennas State-of-the-Art and Future Perspectives Software Tools & Instruments Convened Session Antennas Room: Room 15 Chairs: Professor Guy Vandenbosch (University of Leuven (KU Leuven), Belgium) and Francesca Mioc (Microwave Vision, Switzerland)</p>	

09:00	<p>CS37.1 Design Tools for Small Implantable Antennas Ismael Vico Trivino and Anja K. Skrivervik (EPFL, Switzerland); Marko Bosiljevac and Zvonimir Sipus (University of Zagreb, Croatia)</p>
09:20	<p>CS37.2 AToM: A Versatile MATLAB Tool for Antenna Synthesis Miloslav Capek, Pavel Hazdra, Viktor Adler, Michal Masek, Vit Losenicky, Martin Strambach and Milos Mazanek (Czech Technical University in Prague, Czech Republic); Petr Kadlec, Vladimir Sedenka and Martin Marek (Brno University of Technology, Czech Republic); Jaroslav Rymus (MECAS ESI, Czech Republic)</p>
09:40	<p>CS37.3 Advanced Measurement Post-processing by Equivalent Currents on Small 5G Antennas Lucia Scialacqua, Lars Foged, Alessandro Scannavini and Francesca Mioc (Microwave Vision Italy, Italy); Fabrice Herbinière (SATIMO Main Office, France); Bo Xu (KTH Royal Institute of Technology, Sweden); Zhinong Ying and Thomas Bolin (Sony Mobile Communications, Sweden)</p>
10:00	<p>CS37.4 Minimum Q-factor, Maximum Efficiency and Generalized Mode Expansions Mats Gustafsson (Lund University, Sweden)</p>
10:20	<p>CS37.5 Modeling and Design Tools for Small Antennas: State-of-the-Art and Future Perspectives Guy Vandenbosch (University of Leuven (KU Leuven), Belgium); Francesca Mioc (MVI, Italy)</p>
<p>CS34: Silicon-Based Integrated Antennas for mm-Wave Wireless Communications Ultra-High Data Rate Communications Convened Session Antennas Room: Room 14 Chairs: Professor Bart Smolders (Eindhoven University of Technology, The Netherlands)</p>	
09:00	<p>CS34.1 Circularly-polarized On-Chip Dielectric Resonator Antenna Julio Gonzalez Marin and Jan Hesselbarth (University of Stuttgart, Germany)</p>
09:20	<p>CS34.2 Wideband Substrate Integrated Waveguide Antenna for Next-Generation mmWave Wireless Systems Thomas Deckmyn, Hendrik Rogier, Dries Vande Ginste and Sam Agneessens (Ghent University, Belgium); Ad Reniers and A. B. Smolders (Eindhoven University of Technology, The Netherlands)</p>
09:40	<p>CS34.3 THz Packaging Solution for Low Cost Si-based 40 Gb/s Wireless Link System Elsa Lacombe (University of Nice Sophia Antipolis and STMicroelectronics, France); Frédéric Giancesello and Cedric Durand (STMicroelectronics, France); Cyril Luxey and Diane Titz (University Nice Sophia Antipolis, France); Jorge R. Costa and Carlos A Fernandes (Instituto de Telecomunicacoes and ISCTE-IUL, Portugal); Carlow Del-Rio Bocio (Universidad Publica e Navarr, Institute of Smart Cities, Spain); Guillaume</p>

	Ducournau (Lille University, France); Helko Gulan and Thomas Zwick (Karlsruhe Institute of Technology, Germany)
10:00	<p>CS34.4 Multibeam Antenna with a Passive Beamforming System in LTCC Technology for Mm-wave Systems-in-Package</p> <p>Francesco Foglia Manzillo, Maciej Smierzchalski, Mauro Ettorre and Ronan Sauleau (University of Rennes 1, France); Jouko Aurinsalo, Kari Kautio, Markku Lahti, Antti E. I. Lamminen and Jussi Säily (VTT Technical Research Centre of Finland, Finland)</p>
10:20	<p>CS34.5 Efficient Millimeter-Wave High Power Generation with Spatial Power-Combined Feeding Element</p> <p>Artem Roev, Rob Maaskant and Marianna Ivashina (Chalmers University of Technology, Sweden); Anders Höök (SAAB AB, Sweden)</p>
<p>CS17: Propagation Channels for Wide-Sense Vehicle-to-X Communications Connected Objects Convened Session Propagation Room: Room 13 Chairs: Dr Ke Guan (Beijing Jiaotong University, P.R. China) and Professor Uwe-Carsten Fiebig (German Aerospace Center, Germany)</p>	
09:00	<p>CS17.1 Comparison on Channel Characteristics at 3.5 GHz and 28 GHz</p> <p>Zhongyuan Wu, Jianhua Zhang, Lei Tian, Zhixue Hu and Tao Jiang (Beijing University of Posts and Telecommunications, P.R. China); Wei Li (Northern Illinois University, USA)</p>
09:20	<p>CS17.2 IEEE 802.11P Performance for Vehicle-to-Anything Connectivity in Urban Interference Channels</p> <p>Thomas Blazek and Christoph F Mecklenbräuker (TU Wien, Austria); Golsa Ghiaasi (Technical University of Vienna, Austria); Christian Backfrieder and Gerald Ostermayer (FH Upper, Austria)</p>
09:40	<p>CS17.3 An Online Supervised Calibration Scheme for Time-Varying MIMO Channel Measurement</p> <p>Haifeng Tan and Zhiyong Feng (Beijing University of Posts and Telecommunications, P.R. China); Zhongfei Cai, Yunsong Gui, Haowen Wang and Yang Yang (Shanghai Research Center for Wireless Communications, P.R. China)</p>
10:00	<p>CS17.4 Measurement Based Ultra-Wideband Channel Model for Mobile Communications in Tunnels</p> <p>Andrej Hrovat, Klemen Bregar and Tomaz Javornik (Jožef Stefan Institute, Slovenia)</p>
10:20	<p>CS17.5 MIMO System Performance Using Leaky Coaxial Cables in Confined Area</p> <p>Asad Saleem (Shanghai Institute for Advanced Communication and Data Science (SICS), P.R. China); Min Wang and Guoxin Zheng (Shanghai Institute for Advanced Communication and Data Science, Shanghai University, P.R. China);</p>

T09-5: MM-wave & THz Antennas

Space Applications | Regular Session | Antennas

Room: Room 6

Chairs: Dr Luca Salghetti Drioli (ESA, The Netherlands) and Professor Xiaodong Chen (Queen Mary University of London, United Kingdom)

09:00**T09-5.1****Ku-Band Grounded Dielectric Slab Based Asymmetric Bull's-Eye Antenna Fed by Monopole**

Unai Beaskoetxea and Alicia E Torres-García (Public University of Navarra, Spain); Miguel Beruete (Universidad Publica de Navarra, Spain)

09:20**T09-5.2****Integrated Beam-Scanning Antenna for Heterodyne Instruments at Submillimeter-Wave Frequencies for Martian Climatology Measurements**

Maria Alonso-delPino, Cecile Jung-Kubiak, Theodore Reck, Nathaniel Livesey, Leslie Tamppari and Goutam Chattopadhyay (Jet Propulsion Laboratory, USA); Nuria LLombart (Delft University of Technology, The Netherlands)

09:40**T09-5.3****An Incoherent Dual-Polarized Leaky Lens Antenna: Experimental Validation at 1.55 THz**

Ozan Yurduseven, Andrea Neto and Nuria LLombart (Delft University of Technology, The Netherlands); Juan Bueno, Jochem Baselmans and Stephen Yates (SRON, The Netherlands)

10:00**T09-5.4****Fourier Optics Based Analysis of Focal Plane Array of Distributed Absorbers**

Shahab Oddin Dabironezare, Giorgio Carluccio, Andrea Neto and Nuria LLombart (Delft University of Technology, The Netherlands); Angelo Freni (Università degli studi Firenze, Italy)

10:20**T09-5.5****3.5-THz Quantum-Cascade Laser Emission from Dual Diagonal Feedhorns**

Brian Ellison, O Auriacombe, T Rawlings, N Brewster, M Oldfield and L Li (STFC Rutherford Appleton Laboratory, United Kingdom); Elena Saenz (European Space Agency, The Netherlands); Alex Valavanis, Y Han, E. Linfield and Alexander Davies (University of Leeds, United Kingdom)

T09-3: Antenna Design and Optimization for Space Applications

Space Applications | Regular Session | Antennas

Room: Room 4

Chairs: Professor Yahia Antar (Royal Military College of Canada, Canada) and Professor Ronan Sauleau (University of Rennes 1, France)

09:00**T09-3.1****Physical Bounds of Metasurface Antennas**

Marco Faenzi and Stefano Maci (University of Siena, Italy); Gabriele Minatti and Enrica Martini (Wave Up Srl., Italy); Marco Sabbadini (Esa Estec, The Netherlands)

09:20**T09-3.2****Dispersion Analysis of Polar Glide Symmetry with Coaxial Rings**

Qiao Chen (KTH Royal Institute of Technology, Sweden and State Key Laboratory of Millimeter Wave, Southeast University, PR China); Guido Valerio (Sorbonne Universités UPMC, France); Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)

09:40	<p>T09-3.3 Very High Gain Low Profile Antennas for Satellite Communications in Ka Band Francesco Caminita, Enrica Martini and Gabriele Minatti (Wave Up Srl and University of Siena, Italy); Marco Sabbadini (ESA, The Netherlands); Fabrizio De Paolis (ESA, United Kingdom); Stefano Maci (University of Siena, Italy)</p>
10:00	<p>T09-3.4 A Fast Computational Algorithm to Evaluate Large Transmit-arrays Parinaz Naseri, Carlos A. Fernandes, Sergio Matos and Jorge R. Costa (Instituto de Telecomunicações, Portugal)</p>
10:20	<p>T09-3.5 Reflector Antenna Optimization Using One-Sided Least-Squares Anders Eltved and Martin Andersen (Technical University of Denmark, Denmark); Oscar Borries (TICRA, Denmark)</p>
<p>CS20: Inverse Problems: Theory, Techniques, and Applications Software Tools & Instruments Convened Session Propagation Room: Room 3 Chairs: Professor Paolo Rocca (DISI - ELEDIA Research Center, Italy) and Fan Yang (Tsinghua University, P.R.China)</p>	
09:00	<p>CS20.1 Compressive Sensing for Inverse Problems Nicola Anselmi, Massimo Donelli, Lorenzo Poli, Paolo Rocca and Federico Viani (University of Trento, Italy); Giacomo Oliveri and Andrea Massa (University of Trento, Italy and ELEDIA Research Center, Italy)</p>
09:20	<p>CS20.2 A Simple Technique to Find Landmines from Total Near-Field Measurements Adriana Brancaccio (Università di Napoli, Italy); Marco Donald Migliore (University of Cassino, Italy)</p>
09:40	<p>CS20.3 Inversion Approach to Super-resolution Imaging in Near-field Scanning Microwave Impedance Microscopy Zhun Wei, Rui Chen and Xudong Chen (National University of Singapore, Singapore)</p>
10:00	<p>CS20.4 Application of Supervised Descent Method to Nonlinear Inversion for Transient EM Data Rui Guo, Maokun Li, Fan Yang and Shenheng Xu (Tsinghua University, P.R. China); Fang Guangyou (Institute of Electronics, Chinese Academy of Sciences, P.R. China); Aria Abubakar (Schlumberger-Doll Research, USA)</p>
10:20	<p>CS20.5 The Finite Element-Boundary Integral Based Subspace Optimization Method for Solving Three-Dimensional Inverse Scattering Problems Rui Chen, Zhun Wei and Xudong Chen (National University of Singapore, Singapore)</p>

CS08: Advances in Antenna Design and Analysis Using Characteristic Modes

Future Applications | Convened Session | Antennas

Room: Room 2

Chairs: Dr Kurt Schab (North Carolina State University, USA) and Dr Eva Antonino Daviu (Universitat Politècnica de València, Spain)

09:00**CS08.1****Cardioid Type Pattern Optimization Using Characteristic Mode Analysis**

Rohani Bakar, Kazuki Kamiyama and Hiroyuki Arai (Yokohama National University, Japan)

09:20**CS08.2****Characteristic Mode Theory for Practical HF Antenna Design**

Sai Ho Yeung and Chao-Fu Wang (National University of Singapore, Singapore)

09:40**CS08.3****Design of a High-Gain Millimeter-Wave Antenna Using Characteristic Modes**

Daniel Santillán-Haro (Universidad Politecnica de Valencia, Spain and Universidad Nacional de Chimborazo, Ecuador); Eva Antonino-Daviu, Daniel Sanchez-Escuderos and Miguel Ferrando-Bataller (Universitat Politècnica de València, Spain)

10:00**CS08.4****Characteristic Modes Analysis for the Design of CubeSat Antennas**

Francesco Alessio Dicandia, Simone Genovesi and Agostino Monorchio (University of Pisa and CNIT, Italy)

10:20**CS08.5****Modal Decomposition of Transients in Direct Antenna Modulation Systems**

Kurt Schab and Jacob Adams (North Carolina State University, USA)

CS13: Academic and Industrial Advances in Microwave Medical Technologies within European COST Action TD1301 – MiMed

Biomedical | Convened Session | Antennas

Room: Room1

Chairs: Dr Lorenzo Crocco (CNR-IREA, National Research Council of Italy, Italy) and Panagiotis Kosmas (King's College London, United Kingdom)

09:00**CS13.1****Elaborated Breast Phantoms and Experimental Benchmarking of a Microwave Breast Imaging System Before First Clinical Study**

Angie Fasoula, Luc Duchesne, Jean-Gaël Bernard and Guillaume Robin (MVG Industries, France)

09:20**CS13.2****Tackling Hypertension Via Adrenal Ablation - The Development of Novel Immunohistochemical Ablation Biomarkers**

Padraig Donlon, Michael Denny, Atif Shahzad, Jimmy Eaton-Evans and Martin O'Halloran (National University of Ireland, Galway, Ireland); Punit Prakash (Kansas State University, USA); Giuseppe Ruvio (Dublin Institute of Technology, Ireland)

09:40	CS13.3 Enhancing Quantitative Microwave Holography in Tissue Imaging Daniel Tajik, Aaron Pitcher, Natalia Nikolova and John Bandler (McMaster University, Canada); Denys Shumakov (Health Canada, Canada)
10:00	CS13.4 Optimized Antenna Array layout in a Microwave Imaging Aystem for Brain Stroke Monitoring Rosa Scapaticci and Lorenzo Crocco (CNR - National Research Council of Italy, Italy); Jorge Tobon Vasquez, Giovanna Turvani, Gianluca Dassano, Mario Roberto Casu and Francesca Vipiana (Politecnico di Torino, Italy); Nadine Joachimowicz and Bernard Duchene (CentraleSupelec, France)
10:20	CS13.5 Dielectric Properties of Breast: A Review Lourdes Farrugia, Charles Sammut and Julian Bonello (University of Malta, Malta)

Wednesday 11 April 2018 11:10 – 12:50

CS14: Higher Geometrical Symmetries for Periodic Structures

Cellular Networks & 5G | Convened Session | Antennas

Room: Room 7

Chairs: Dr Guido Valerio (Université Pierre et Marie Curie, France) and Dr Astrid Algaba Brazalez (Ericsson AB, Sweden)

11:10	CS14.6 A Floquet-Expansion Approach for the Study of Glide-Symmetric Metasurfaces Guido Valerio (Sorbonne Universités UPMC, France); Fatemeh Ghasemifard and Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden); Zvonimir Sipus (University of Zagreb, Croatia)
11:30	CS14.7 Analytical Equivalent Models of Artificial Dielectric Layers with Arbitrary Inter-Layer Shifts Daniele Cavallo (Delft University of Technology, The Netherlands)
11:50	CS14.8 Higher Mode Propagation in Periodic Patch Structures with Two-Dimensional Glide Symmetries Qingbi Liao and Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)
12:10	CS14.9 Time-modulated Periodic Systems with PT Symmetry Adam Mock (Central Michigan University, USA)

12:30	<p>CS14.10 Expanding Microwave Absorption Bandwidth with Metasurface Salisbury Screen Ziheng Zhou, Ke Chen, Junming Zhao and Yijun Feng (Nanjing University, P.R. China); Yue Li (Tsinghua University, P.R. China)</p>
<p>T03-4: Propagation for Wireless LAN Wireless Networks Regular Session Propagation Room: Room 12 Chairs: Professor Tony Brown (Manchester University, United Kingdom) and Steve Boyers (DSTL, United Kingdom)</p>	
11:10	<p>T03-4.1 A Multi-wall and Multi-frequency Home Environment Path Loss Characterization and Modeling Marc Kacou and Valery Guillet (Orange Labs, France); Gheorghe Zaharia and Ghais El Zein (IETR-INSA Rennes, France)</p>
11:30	<p>T03-4.2 Effect of Line of Sight in Clustering Distribution of Signal Contribution at 5.8 GHz Indoor Environments Jenifer Campero and Iñigo Cuiñas (University of Vigo, Spain)</p>
11:50	<p>T03-4.3 Inter-Link Interference Measurement of Indoor Dense Millimeter-Wave WLANs Kun Zeng, Yu Ziming, Jia He and Guangjian Wang (Huawei Technologies Co Ltd, P.R. China); Yan Xin and Wen Tong (Huawei Technologies Canada Co Ltd, Canada)</p>
12:10	<p>T03-4.4 Modeling the Power Angular Profile of Dense Multipath Components Using Multiple Clusters Brecht Hanssens, Emmeric Tanghe, Wout Joseph and Luc Martens (Ghent University, Belgium); Kentaro Saito and Jun-ichi Takada (Tokyo Institute of Technology, Japan); Claude Oestges (Université Catholique de Louvain, Belgium)</p>
12:30	<p>T03-4.5 Analysis of Rain Rate Estimations in Tropical Regions Using a 5 GHz Microwave Link Boris Ramos, Alfredo Núñez and Sucre Cando (Escuela Superior Politécnica del Litoral (ESPOL), Ecuador); Michele D'Amico (Politecnico di Milano, Italy)</p>
<p>T11-5: Design Methods for New EM Devices Future Applications Regular Session Antennas Room: Room 17 Chairs: Dr Henry Giddens (Queen Mary University of London, United Kingdom) and Rob Lewis (BAE Systems, United Kingdom)</p>	
11:10	<p>T11-5.1 Novel Ridge Gap Waveguide Configuration Supporting TEM Propagation with Lower Loss and Better Isolation Nima Bayat-Makou and Ahmed Kishk (Concordia University, Canada)</p>

11:30	<p>T11-5.2 Assessment on the Bandwidth of Artificial Magnetic Conductors for Antenna-on-Chip Applications Antonius Johannes van den Biggelaar, Ulf Johannsen and A B Smolders (Eindhoven University of Technology, The Netherlands)</p>
11:50	<p>T11-5.3 A Holistic Approach to the Design of Impedance Matched Perfect Absorbers Patrick Bradley (Dublin City University, Ireland and Queen Mary University, London); Conor Brennan (Dublin City University, Ireland); Max Munoz and Yang Hao (Queen Mary University, London)</p>
12:10	<p>T11-5.4 New Propagation Regimes of Symmetric Hybrid Waves in a Nonlinear Metal-Dielectric Waveguide Yury Shestopalov (University of Gävle, Sweden); Yury Smirnov and Eugene Smolkin (Penza State University, Russia)</p>
12:30	<p>T11-5.5 An Invisible Gradient-Index Lens with Negative Refractive Index Sergei P Skobelev (Radiophysika and Moscow Institute of Physics and Technology, Russia)</p>
<p>T06-7: Imaging, Sensing and Radar Antennas Radar Systems Regular Session Antennas Room: Room 16 Chairs: Professor Arismar Cerqueira S. Jr. (INATEL, Brazil) and Professor Herbert Aumann (University of Maine, USA)</p>	
11:10	<p>T06-7.1 On the Use of a Hybrid Monostatic-Bistatic Radar System for a 3D Standoff Imaging Lorena María Pérez Eijo, Borja Gonzalez-Valdes, Yolanda Rodriguez-Vaqueiro, Marcos Arias, Oscar Rubiños-López and Antonio Pino (University of Vigo, Spain)</p>
11:30	<p>T06-7.2 Time of Flight Sphere-Based Reconstruction Algorithm and Processing Techniques for Multi-Monostatic Portal-Based Scanners Kurt Jaisle and Carey Rappaport (Northeastern University, USA)</p>
11:50	<p>T06-7.3 Feasability of Compact Dual-Polarized Phased Antenna Array Radars Mariana G Pralon, Leandro Pralon, Bruno Pompeo and Gabriel Beltrão (CTEx, Brazil); Arismar Cerqueira S. Jr. (INATEL, Brazil); Edson Reis (BRADAR, Brazil); Reiner S. Thomä (Ilmenau University of Technology, Germany)</p>
12:10	<p>T06-7.4 Automotive Radar and Radome Calibration to Improve the Direction of Arrival Detection Performance Santi Buitrago, Sebastian Blanch Boris and Jordi Romeu (Universitat Politècnica de Catalunya, Spain)</p>

12:30	<p>T06-7.5 A Technique for Measuring the RCS of Free-Flying Honeybees with a 24 GHz CW Doppler Radar Herbert Aumann (University of Maine, USA); Kristan Tuttle (MIT Lincoln Laboratory, USA)</p>
<p>CS34: Silicon-Based Integrated Antennas for mm-Wave Wireless Communications Ultra-High Data Rate Communications Convened Session Antennas Room: Room 14 Chairs: Professor Bart Smolders (Eindhoven University of Technology, The Netherlands) and Professor Guy Vandenbosch (University of Leuven (KU Leuven), Belgium)</p>	
11:10	<p>CS34.6 Partially Molded Antenna-in-Package Concept for 122 GHz SiGe Radar Sensor Akanksha Bhutani, Jochen Schäfer and Thomas Zwick (Karlsruhe Institute of Technology, Germany); Benjamin Goettel (Wellenzahl Radar- und Sensortechnik GmbH & Co KG, Germany)</p>
11:30	<p>CS34.7 Antenna-on-Chip Integration in Mainstream Silicon Semiconductor Technologies Ulf Johannsen and A B Smolders (Eindhoven University of Technology, The Netherlands)</p>
11:50	<p>CS34.8 Challenges of Millimeter-Wave Active Antenna Systems in 5G Ulf Gustavsson, Martin Johansson, Fredrik Athley and Ali Zaidi (Ericsson AB, Sweden)</p>
12:10	<p>CS34.9 A High-Efficiency Broadband WR3 Bond Wire On-Chip Antenna Daniel Müller, Jochen Schäfer, Andreas Lipp and Thomas Zwick (Karlsruhe Institute of Technology, Germany); Arnulf Leuther (Fraunhofer Institute for Applied Solid State Physics, Germany); Ingmar Kallfass (University of Stuttgart, Germany)</p>
12:30	<p>CS34.10 Reconfigurable Antennas for Ultra Low-Power Radio Platforms Based on System-on-Chip Simone Ciccia (Politecnico di Torino and Istituto Superiore Mario Boella, Italy); Giorgio Giordanengo (Istituto Superiore Mario Boella, Italy); Giuseppe Vecchi (Politecnico di Torino, Italy)</p>
<p>CS17: Propagation Channels for Wide-Sense Vehicle-to-X Communications Connected Objects Convened Session Propagation Room: Room 13 Chairs: Dr Ke Guan (Beijing Jiaotong University, P.R. China) and Professor Uwe-Carsten Fiebig (German Aerospace Center (DLR), Germany)</p>	
11:10	<p>CS17.6 Vehicle-to-Vehicle Channel Characteristics in Municipal Lake Scenarios at 5.9 GHz Kun Yang (Super Radio AS, Norway); Fuxing Chang, Wei Chen, Changzhen Li and Junyi Yu (Wuhan University of Technology, P.R. China)</p>

11:30	<p>CS17.7 Detection and Localization of Non-Cooperative Road Users Based on Propagation Measurements at C-Band Martin Schmidhammer, Fabian de Ponte Müller, Stephan Sand and Ibrahim Rashdan (German Aerospace Center (DLR), Germany)</p>
11:50	<p>CS17.8 Ray-Tracing Simulations and Millimeter Wave Massive MIMO Performance Evaluation for Rail Traffic Scenarios Yichuan Lin, Ke Guan, Danping He and Zhangdui Zhong (Beijing Jiaotong University, P.R. China); Li Tian and Jianwu Dou (ZTE Corporation, P.R.China)</p>
12:10	<p>CS17.9 Channel Modeling for Low-Altitude UAV in Suburban Environments Based on Ray Tracer Xi Chu and Xuefeng Yin (Tongji University, P.R.China); Cesar Briso (Technical University of Madrid, Spain); Danping He (Beijing Jiaotong University, P.R. China); Xuefeng Yin (Beijing Jiaotong University, P.R. China); Jianwu Dou (ZTE Corporation, P.R. China)</p>
12:30	<p>CS17.10 Wideband Vehicle to Pedestrian Propagation Channel Characterization and Modeling Gloria Makhoul (CEA-LETI and Universite Grenoble-Alpes, France and Université Catholique de Louvain, Belgium); Raffaele D'Errico (CEA-LETI and Universite Grenoble-Alpes, France); Claude Oestges (Université Catholique de Louvain, Belgium)</p>
<p>T09-6: Satellite Reflector Systems Space Applications Regular Session Antennas Room: Room 6 Chairs: Dr Tao Huang (Oxford Space Systems, United Kingdom) and Peter de Maagt (ESA, The Netherlands)</p>	
11:10	<p>T09-6.1 Planar Metasurface for Reconfigurable Reflector Antennas Badreddine Ratni and Shah Nawaz Burokur (Univ Paris Nanterre, France); André de Lustrac (Université Paris-Sud, France); Gérard-Pascal Piau (Airbus, France)</p>
11:30	<p>T09-6.2 Large Deployable Antennas Benchmark for Contoured Beam Mission in C Band Jakob Rosenkrantz de Lasson, Min Zhou and Cecilia Cappellin (TICRA, Denmark)</p>
11:50	<p>T09-6.3 Uncertainty Quantification for Reflector Antennas Oscar Borries, Erik Jørgensen, Peter Meincke, Niels Vesterdal, Michael Palvig and Tonny Rubæk (TICRA, Denmark)</p>
12:10	<p>T09-6.4 Compact Dielectric Filled Septum Polarizer Feeder for a Dual Pol MTS Antenna Amagoia Tellechea, Juan Carlos Iriarte, Jorge Teniente, Iñigo Ederra and Ramon Gonzalo (Public University of Navarra, Spain)</p>

12:30	<p>T09-6.5 High-Gain Reflector Feed for Multibeam Coverage Ronis T. Maximidis and A. B. Smolders (Eindhoven University of Technology, The Netherlands); Diego Caratelli (The Antenna Company, The Netherlands); Giovanni Toso (European Space Agency, The Netherlands)</p>
<p>T09-4: Space Aperture Antennas Space Applications Regular Session Antennas Room: Room 4 Chairs: Dr Cecilia Cappellin (TICRA, Demark)</p>	
11:10	<p>T09-4.1 Circularly Polarized Fabry-Perot Antenna Fed by an Arbitrarily-Rotated Source Antoine Calleau, Ronan Sauleau and Mauro Ettore (Universite de Rennes 1, France); María García-Vigueras (IETR-INSA Rennes, France); Hervé Legay (Thalès Alenia Space, France)</p>
11:30	<p>T09-4.2 Compact Frequency Reconfigurable Magneto-Electric Crossed Dipole in VHF Band Abdul sattar Kaddour, Serge Bories and Christophe Delaveaud (CEA, France); Anthony Bellion (CNES, France)</p>
11:50	<p>T09-4.3 Additive Manufacturing of Ku Band Horn Antennas for Telecommunications Space Applications Yann Cailloce, Philippe Hourlay and Florent Lebrun (Thalès Alenia Space, France); Baptiste Palacin (CNES, France)</p>
12:10	<p>T09-4.4 3D-Metal-Printed 60 GHz Offset Dual-Reflector Antenna with Integrated Conical Feed Horn and Circular-to-Rectangular Waveguide Transition Ruben Tena Sanchez, Olav Breinbjerg and Oleksiy S. Kim (Technical University of Denmark, Denmark)</p>
12:30	<p>T09-4.5 Large Aperture Metal-Mesh Lenses for THz Astronomy Paul Moseley and Peter Ade (Cardiff University, United Kingdom); Giorgio Savini (University College London, United Kingdom)</p>
<p>CS20: Inverse Problems: Theory, Techniques, and Applications Software Tools & Instruments Convened Session Propagation Room: Room 3 Chairs: Professor Paolo Rocca (DISI - ELEDIA Research Center, Italy) and Ioan E. Lager (Delft University of Technology, The Netherlands)</p>	
11:10	<p>CS20.6 Model Based Inversion Strategy Dedicated to Non-destructive Testing Applications Christophe Reboud, Roberto Miorelli, Florian Le Bourdais, Xavier Artusi and Pierre Calmon (CEA LIST, France)</p>

11:30	<p>CS20.7 Exploiting the Orthogonality Sampling Method to Design Virtual Scattering Experiments Martina Teresa Bevacqua, Roberta Palmeri and Tommaso Isernia (University of Reggio Calabria, Italy); Lorenzo Crocco (CNR - National Research Council of Italy, Italy)</p>
11:50	<p>CS20.8 High Capacity and Efficiency Optimization of Compressive Antennas for Imaging Applications Jose Martinez-Lorenzo and Richard Obermeier (Northeastern University, USA)</p>
12:10	<p>CS20.9 Comparison of Bowtie Slot and Rectangular Waveguide-Based Antennas for Microwave Medical Imaging Ilja Merunka (Czech Technical University in Prague, Czech Republic); Jan Vrba, Ondrej Fiser, Jr. and David Vrba (ELEDIA Czech Technical University, Prague and Faculty of Biomedical Engineering, Czech Republic)</p>
12:30	<p>CS20.10 Experimental Validation of a Novel Multistatic Toroidal Reflector Nearfield Imaging System for Concealed Threat Detection Mohammad Hossein Nemati, Carey Rappaport, Spiros Mantzavinos, Dan. Busuioc, Nicholas Pelepchan, Thurston Brevett and Jacob Londa (Northeastern University, USA)</p>
<p>CS08: Advances in Antenna Design and Analysis Using Characteristic Modes Future Applications Regular Session Antennas Room: Room 2 Chairs: Dr Kurt Schab (North Carolina State University, USA) and Dr Eva Antonino Daviu (Universitat Politècnica de València, Spain)</p>	
11:10	<p>CS08.6 Impact of Capacitive Coupling Element Design on Antenna Bandwidth Hanieh Aliakbari and Buon Kiong Lau (Lund University, Sweden)</p>
11:30	<p>CS08.7 Modal Efficiency of Dipole Arrays Above Ground Pavel Hazdra, Tomas Lonsky and Jan Kracek (Czech Technical University in Prague, Czech Republic)</p>
11:50	<p>CS08.8 Stored Energy Evaluation of Metamaterials Based on Theory of Characteristic Mode Chukwuka Ozuem, Divitha Seetharamdoo, M. Hassanein Rabah and Hedi Sakli (IFSTTAR & University Lille 1, France)</p>
12:10	<p>CS08.9 Sorting the Characteristic Modes of PEC Objects not Electrically Small Hamad Alroughani (Penn State University, USA); Derek McNamara (University of Ottawa, Canada)</p>

12:30	<p>CS08.10 Antenna System Design for Multicopter UAVs Utilizing Characteristic Modes Zhichao Li, Safieddin Safavi-Naeini and William Melek (University of Waterloo, Canada); George Shaker (University of Waterloo and Spark Tech Labs, Canada); Raj Mittra (University of Central Florida, USA)</p>
<p>CS13: Academic and Industrial Advances in Microwave Medical Technologies within European COST Action TD1301 – MiMed Biomedical Convened Session Antennas Room: Room1 Chairs: Dr Lorenzo Crocco (CNR-IREA, National Research Council of Italy, Italy) and Panagiotis Kosmas (King's College London, United Kingdom)</p>	
11:10	<p>CS13.6 Recent Advancements in Time-Domain Breast Health Screening: Observations on the Phantom Stability and Wearable Hardware Lena Kranold, Mariana Perez Santa Maria, Mark Coates and Milica Popović (McGill University, Canada)</p>
11:30	<p>CS13.7 Advanced Physical Phantoms for Evaluation of Medical Antennas and Devices Koichi Ito (Chiba University, Japan)</p>
11:50	<p>CS13.8 Preliminary Investigations for Reliable Temperature Dependent UWB Dielectric Spectroscopy of Tissues and Tissue Mimicking Phantom Materials Sebastian Ley, Marko Helbig and Jürgen Sachs (Technische Universität Ilmenau, Germany); Ondrej Fiser, Jr. and Ilja Merunka and Jan Vrba (Czech Technical University, Czech Republic)</p>
12:10	<p>CS13.9 Phantom Study of a Flat-Faceted Air-Based Microwave Breast Imaging System Joe LoVetri, Mohammad Asefi, Ian Jeffrey, Kevin Brown, Nicholas Geddert and Nasim Abdollahi (University of Manitoba, Canada)</p>
12:30	<p>CS13.10 FDTD Based Simulation Study of a Classification Based Haemorrhagic Stroke Detector Andreas Fhager, Stefan Candefjord and Mikael Persson (Chalmers University of Technology, Sweden)</p>

Wednesday 11 April 2018 15:00 – 16:00

Invited Speakers Session

Room: Room 7
 Chairs: Professor Koichi Ito (Chiba University, Japan) and Professor John Batchelor (University of Kent, United Kingdom)

15:00	Metrology for 5G and Emerging Wireless Technologies Professor Tian Hong Loh, NPL, United Kingdom
15:30	Medical Thermal Therapy and Monitoring Using Advanced Inverse Scattering Techniques Professor Mahta Moghaddam, University of Southern California, USA
Invited Speakers Session Room: Room 12 Chairs: Professor J (Yiannis) C Vardaxoglou (Loughborough University, United Kingdom)	
15:00	Mm-Wave Antenna-System Designs Dedicated to High-Data Rate Communications Professor Cyril Luxey, University of Nice, France
15:30	Advanced Communications Technologies in Support of NASA Mission Dr Felix Miranda, NASA, USA

Wednesday 11 April 2018 16:30 – 18:10

T01-6: Radio Propagation Channel - 2 Cellular Networks & 5G Regular Session Propagation Room: Room 7 Chairs: Professor Zhipeng Wu (Manchester University, United Kingdom) and Professor Xiaoming Chen (Xi'an Jiaotong University, P.R. China)	
16:30	T01-6.1 A Set of Propagation Models for Site-Specific Predictions Henrik Asplund, Martin Johansson, Magnus Lundevall and Niklas Jalden (Ericsson Research, Ericsson AB, Sweden)
16:50	T01-6.2 Polarimetric Wideband Directional Channel Measurement and Analysis for Outdoor Small Cell Scenarios at 32 GHz and 39 GHz Mohsen Khalily, Mir Ghorraishi and Sohail Taheri, Sohail Payami, Rahim Tafazolli (University of Surrey, United Kingdom)
17:10	T01-6.3 Path Loss Model Modification for Various Gains and Directions of Antennas Jan M. Kelner and Cezary Ziólkowski (Military University of Technology, Poland)
17:30	T01-6.4 Broadband Mm-Wave OFDM Communications in Doubly Selective Channel: Performance Evaluation Using Measured Mm-Wave Channel Xiaoming Chen, Shitao Zhu, Jianxing Li, Ying Zhang and Anxue Zhang (Xi'an Jiaotong University, P.R. China); Wei Fan and Gert Pedersen (Aalborg University, Denmark)

17:50	<p>T01-6.5 Propagation Measurements for Device-to-Device Communication in Forest Terrain Johannes Hejselbæk, Jesper Ø Nielsen, Wei Fan and Gert Pedersen (Aalborg University, Denmark); Christian Drewes (Intel Mobile Communications, Germany)</p>
<p>T01-3: MIMO Antennas for 5G Communications Cellular Networks & 5G Regular Session Propagation Room: Room 12 Chairs: Dr Hassan Tariq Chattha (Islamic University of Madinah, Saudi Arabia) and Professor Xiaowei Zhu (Southeast University, P.R. China)</p>	
16:30	<p>T01-3.1 Compact Folded Fresnel Zone Plate Lens Antenna for 5G Point-to-Point Communications Mohammad Reza Dehghani Kodnoeih (Université de Nantes, France); Yoann Letestu and André Doll (RFS, France); Ronan Sauleau (University of Rennes 1, France); Eduardo Motta Cruz (Université de Nantes, France)</p>
16:50	<p>T01-3.2 A Two-Port Dual-Polarized Ring Antenna for Massive MIMO Kushmanda Saurav and Yahia Antar (Royal Military College of Canada, Canada); Nazih Khaddaj Mallat (Al Ain University of Science and Technology, United Arab Emirates)</p>
17:10	<p>T01-3.3 Compact Quadruple Band MIMO Antenna for 5G Mobile Applications Xueliang Shi, Ming Zhang, Huailin Wen and Jun Wang (Huawei Technologies Co. Ltd, P.R. China)</p>
17:30	<p>T01-3.4 28 GHz Waveguide Antennas with Fan-Shaped Patterns for Base Stations MIMO Applications Andrey Mozharovskiy, Sergey Churkin, Alexey Artemenko and Roman Maslennikov (Radio Gigabit LLC and InfiNet Wireless, Russia)</p>
17:50	<p>T01-3.5 Influence of On-Wafer Probes in Mm-Wave Antenna Measurements Qiang Liu, Ad Reniers, Ulf Johannsen, Martijn van Beurden and A. B. Smolders (Eindhoven University of Technology, The Netherlands)</p>
<p>CS41: Additive Manufacturing; an Electromagnetic Perspective Future Applications Convened Session Measurement Room: Room 17 Chairs: Professor Hao Xin (University of Arizona, USA) and Patrick Bradley (Dublin City University, Ireland)</p>	
16:30	<p>CS41.1 3D Printed Index Modulated Dielectric Medium in Partially Reflecting Surface for Beam Steering Badreddine Ratni and Shah Nawaz Burokur (Univ Paris Nanterre, France); André de Lustrac (Univ Paris Nanterre and Université Paris-Sud, France); Gérard-Pascal Piau (Airbus, France); Ourdia Kessi Sayad (Université Paris-Sud, France)</p>

16:50	<p>CS41.2 Microwave Metamaterials and Devices Made by Fused Deposition 3D Printing of a Highly Conductive Copper-Based Filament Steven Cummer and Yangbo Xie (Duke University, USA); Shengrong Ye and Allen Gray (Multi3D, LLC, USA); John Barrett (Lockheed Martin, USA); Benjamin Wiley (Duke University, USA)</p>
17:10	<p>CS41.3 3D-printed Optical Devices with Refractive Index Control for Microwave Applications Dmitry Isakov, Yingwei Wu, Ben Allen, Christopher Stevens and Patrick Grant (University of Oxford, United Kingdom)</p>
17:30	<p>CS41.4 Enabling Extrusion Based Additive Manufacturing for RF Applications: Challenges and Opportunities Shiyu Zhang, Darren Cadman, William Whittow and J (Yiannis) Vardaxoglou (Loughborough University, United Kingdom)</p>
17:50	<p>CS41.5 A W-Band Slotted Waveguide Array Antenna Based on 3D Printing Technology Adnan Kantemur, Yashika Sharma, Jinpil Tak and Hao Xin (University of Arizona, USA)</p>
<p>CS03: AMTA Session on Antenna Characterisation Challenges in Today's Automotive Industry Radar Systems Convened Session Measurement Room: Room 16 Chairs: Professor Dirk Heberling (RWTH Aachen University, Germany) and Janet O'Neil (ETS-Lindgren, USA)</p>	
16:30	<p>CS03.1 Simulation of V2V Blind Corner Communication Using Measured Vehicular Antenna Pattern Thomas Kopacz and Dirk Heberling (RWTH Aachen University, Germany)</p>
16:50	<p>CS03.2 Theory and Validation of Reduced Complexity Translated-SWE Algorithm with Applications to Automotive Measurements with Minimum Sampling Francesco Saccardi, Francesca Mioc and Lars Foged (Microwave Vision Italy, Italy); Per Iversen (Orbit/FR, USA)</p>
17:10	<p>CS03.3 Precision Phase Measurements of Automotive Antennas for Localization in Anechoic Chambers Frank Wollenschläger, Syed Naser Hasnain, Matthias Hein and Christian Bornkessel (Technische Universität Ilmenau, Germany)</p>
17:30	<p>CS03.4 Chambers for the Evaluation of Vehicle Mounted Antennas Garth D'Abreu, Zhong Chen and Zubiao Xiong (ETS-Lindgren, Inc., USA)</p>

17:50	<p>CS03.5 Vehicle-level Antenna Performance Analysis & Test in Intelligent Connected Vehicles</p> <p>Jianmei Lei, Qingwen Han and Min Chen (State Key Laboratory of Vehicle NVH and Safety Technology and Chongqing Engineering Research Center for Automotive EMC Development, P.R. China); Yang Xu (Chong Qing University, P.R. China); Xiaojiao Li, Rui Chen and Tao Chen (Chongqing Xibu Automobile Proving Ground Management Co. Ltd, P.R. China); Zhida Lai and Yangchun Gao (China Automotive Engineering Research Institute, P.R. China)</p>
<p>T02-3: Antenna and Propagation for High Data Rate Communications Ultra-High Data Rate Communications Regular Session Antennas and Propagation Room: Room 14 Chairs: Professor Antti V. Räsänen (Aalto University, Finland) and Dr Ioan E. Lager (Delft University of Technology, The Netherlands)</p>	
16:30	<p>T02-3.1 Roll-to-Roll Reverse Offset Printing of Millimeter-wave Transmission Lines and Antennas on Flexible Substrates</p> <p>Jianfang Zheng, Juha Ala-Laurinaho and Antti V. Räsänen (Aalto University, Finland); Asko Sneek, Tapio Makela and Ari Alastalo (VTT Technical Research Centre of Finland, Finland)</p>
16:50	<p>T02-3.2 A Flat Dual-Polarized Continuous Transverse Stub Antenna Array Based on Substrate Integrated Waveguide</p> <p>Tian Lou, Xuexia Yang, Lin Li and Elobied Abubaker (Shanghai University, P.R. China)</p>
17:10	<p>T02-3.3 Broadband Circularly-Polarized Slotted Waveguide Array Antenna with Low Axial Ratio</p> <p>Hong-Tao Zhang, Wei Wang, Mou-Ping Jin and Yong-Qing Zou (No. 38 Research Institute of CETC, P.R. China)</p>
17:30	<p>T02-3.4 Simplified Molecular Absorption Loss Model for 275 - 400 Gigahertz Frequency Band</p> <p>Joonas Kokkonen, Janne Lehtomäki and Markku Juntti (University of Oulu, Finland)</p>
17:50	<p>T02-3.5 Modified Kirchhoff Diffraction of Pulsed EM Waves Radiated from a Slot-Excited Fabry-Pérot Resonator Antenna</p> <p>Martin Štumpf (Brno University of Technology, Czech Republic); Guy Vandenbosch (Katholieke Universiteit Leuven (KU Leuven), Belgium); Ioan E. Lager (Delft University of Technology, The Netherlands)</p>
<p>T04-3 Wireless Connectivity and IoT Connected Objects Regular Session Antennas Room: Room 13 Chairs: Professor Vincent Fusco (Queen's University Belfast, United Kingdom) and Professor Jan Steckel (University of Antwerp and Flanders Make Strategic Research Centre, Belgium)</p>	
16:30	<p>T04-3.1 Distributed OFDM Transmitter Scheme for Internet of Things</p> <p>Yuan Ding (Heriot-Watt University, United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom); Junqing Zhang (University of Liverpool, United Kingdom)</p>

16:50	T04-3.2 Statistical Study of Coupling in Randomly Distributed Dipole Sets Imad Adjali, Ayichatou Gueye, Benoit Poussot, Laheurte Jean Marc, Shermila Mostarshedi and Florence Nadal (Université Paris-Est, France)
17:10	T04-3.3 Semi-Platform Tolerant 20-Bit Chipless RFID Tag Composed of Dipole Array Closely Coupled to Plate Milan Polivka, Milan Svanda, Jaroslav Havlíček and Jan Macháč (Czech Technical University in Prague, Czech Republic)
17:30	T04-3.4 Feasibility of an RFID-based Transcutaneous Wireless Communication for the Control of Upper-limb Myoelectric Prosthesis Gaetano Marrocco, Carolina Miozzi, Giovanni Saggio and Silvia Guido (University of Rome Tor Vergata, Italy); Emanuele Gruppioni (INAIL Centro Protesi, Italy)
17:50	T04-3.5 Synchronization of Multiple Independent Sub-Array Antennas for IoT Applications Noori BniLam and Maarten Weyn (Universtiy of Antwerp, Belgium); Jan Steckel (University of Antwerp and Flanders Make Strategic Research Centre, Belgium)
CS40: Electromagnetic Methods for Direct and Inverse Scattering Involving Stratified Media Defence & Security Convened Session Propagation Room: Room 6 Chairs: Professor Matteo Pastorino (University of Genoa, Italy) and Professor Giuseppe Schettini (Roma Tre University, Italy)	
16:30	CS40.1 A Numerical Analysis of the Two-Dimensional Green's Function for Elliptically Stratified Media Alessandro Fedeli, Matteo Pastorino, Mirco Raffetto and Andrea Randazzo (University of Genoa, Italy)
16:50	CS40.2 Realization of True Logic Gates Using Coupled Photonic Crystal Waveguides Based on Bandgap Transmission Phenomenon Vakhtang Jandieri and Daniel Erni (University of Duisburg-Essen, Germany); Ramaz Khomeriki (Tbilisi State University, Georgia)
17:10	CS40.3 Through-the-Wall Short-Range Sensing by Bessel Beams Sources Sandra Costanzo, Giuseppe Di Massa, Antonio Raffo and Antonio Borgia (University of Calabria, Italy)
17:30	CS40.4 Scattering and Transmission of Pulsed Electromagnetic Waves with the CWA Cristina Ponti, Massimo Santarsiero and Giuseppe Schettini (Roma Tre University, Italy)

17:50	<p>CS40.5 A Kirchhoff Scattering Model for Millimetre Wavelength Wireless Links Lawrence Sayer, Alberto Loaiza Freire, Andrew Nix and Evangelos Mellios (University of Bristol, United Kingdom)</p>
<p>CS16: Multibeam Antennas for Space Applications Space Applications Convened Session Antennas Room: Room 4 Chairs: Eric Amyotte (MDA Corporation, Canada) and Peter Webster (Airbus, United Kingdom)</p>	
16:30	<p>CS16.1 Statistical Assessments of High Throughput Satellite Performance Markus Gross, Javier Trujillo and Carlos Vieira (SES, Luxembourg)</p>
16:50	<p>CS16.2 Multibeam Reflector Antennas for Space Applications: Current Trends and Future Perspectives in Europe Jean-Christophe Angevain, Nelson Fonseca, Dennis T. Schobert, Giovanni Toso, Peter de Maagt and Cyril Mangenot (European Space Agency, The Netherlands)</p>
17:10	<p>CS16.3 Feed Development for Multispot Beam Antennas Christian Hartwanger, Ralf Gehring, Un Pyo Hong, Michael Kilian, Michael Schneider and Alexander Sommer (Airbus Defence and Space, Germany)</p>
17:30	<p>CS16.4 The QUANTUM ELSA+ Active Multibeam Receive Antenna Rafael Caballero, Eduardo Gonzalez, M Bustamante, S Arenas, D Pena, F Pacheco, J Rodriguez and P Rubiales (Airbus DS, Spain); A Martin, A Gualo, A Le Pera, I Roberts, G Tomlinson, S Amos and H French (PTCAN, Spain); J P Roux and A Martin-Polegre (ESA-ESTEC, The Netherlands); E Granell (Airbus, United Kingdom)</p>
17:50	<p>CS16.5 Flexibility in Multi-Beam Satellite Antennas Requirements, Challenges and Solutions Hector T. Fenech and Sonya Amos (Eutelsat, France)</p>
<p>T10-4: Numerical Techniques Software Tools & Instruments Regular Session Antennas Room: Room 3 Chairs: Yong Wang (Remcom Inc., USA) and Francisco Mesa (University of Sevilla, Spain)</p>	
16:30	<p>T10-4.1 Circuit-Model Approach for Polarizing Surfaces Based on Stacked Meander-Line Gratings Carlos Molero Jiménez and María García-Vigueras (IETR-INSA Rennes, France); Raúl Rodríguez-Berral and Francisco Mesa (University of Seville, Spain)</p>

16:50	T10-4.2 Combined EM Solver and Equivalent Circuit Approach to Deal with Slot-like Stacked FSSs Francisco Mesa, Alejandro Javier Martinez-Ros, Raúl Rodríguez-Berral and Francisco Medina (University of Sevilla, Spain)
17:10	T10-4.3 An Eigenmode Method with Improved Accuracy for Guided Waves Yong Wang and Scott Langdon (Remcom Inc., USA)
17:30	T10-4.4 Modal Tracking Based on Group Theory Michal Masek, Miloslav Capek and Lukas Jelinek (Czech Technical University in Prague, Czech Republic)
17:50	T10-4.5 Error Control in MLFMA with Multiple-Precision Arithmetic Mert Kalfa and Vakur Erturk (Bilkent University, Turkey); Ozgur Ergul (Middle East Technical University, Turkey)
T11-6: Special Material Antennas and Devices Future Applications Regular Session Antennas Room: Room 2 Chairs: Xu-Cheng Wang (Aalto University, Finland) and Francesco Verni (Politecnico di Torino, Italy)	
16:30	T11-6.1 Bulk Ferroelectric Materials for Reconfigurable Antenna Applications Henry Giddens, Hangfeng Zhang, Chuying Yu and Yang Hao (Queen Mary University of London, United Kingdom)
16:50	T11-6.2 A Gain and Bandwidth Enhancement for SIW Cavity Array Antenna Jun Xiao, Zihang Qi, Xiuping Li and Hua Zhu (Beijing University of Post Telecommunications, P.R. China)
17:10	T11-6.3 Liquid-crystal Reconfigurable Lens-Enhanced Millimeter-Wave Phased Array Senglee Foo (Huawei Technologies Canada, Canada)
17:30	T11-6.4 Polarization Control of Bulk Acoustic Wave-Mediated Multiferroic Antennas Based on Thickness Shear Modes Rui-Fu Xu and Shih-Yuan Chen (National Taiwan University, Taiwan); Sidhant Tiwari and Robert Candler (University of California, USA)

17:50	<p>T11-6.5 All-metallic Epsilon-near-zero Graded-index Converging Lens at Terahertz Frequencies Victor Pacheco-Peña (Universidad Publica de Navarra, Spain and University of Pennsylvania, USA); Nader Engheta (University of Pennsylvania, USA); Sergei Kuznetsov (Novosibirsk State University and Institute of Semiconductor Physics, Russia); Alexandr Gentselev (Budker Institute of Nuclear Physics, Russia); Miguel Beruete (Universidad Publica de Navarra, Spain)</p>
<p>T05-3 Imaging and Propagation for Biomedical Applications Biomedical Regular Session Propagation Room: Room1 Chairs: Dr Shouhei Kidera (University of Electro-Communications, Japan) and Professor Robin Augustine (Uppsala University, Sweden)</p>	
16:30	<p>T05-3.1 Boundary Extraction Enhanced Inverse Scattering Method for Microwave Mammography Kazuki Noritake and Shouhei Kidera (University of Electro-Communications, Japan)</p>
16:50	<p>T05-3.2 A Liquid with Tuneable Dielectric Properties for Wideband Microwave Sensing of Biological Targets Dallan Byrne, Ian Craddock and David Gibbins (University of Bristol, United Kingdom); Tommy Henriksson (EMTensor, United Kingdom)</p>
17:10	<p>T05-3.3 Enhancing the Sensitivity of Harmonic Motion Microwave Doppler Imaging Using Main Signal Cancellation Circuit Ümit İrgin (Middle East Technical University and ASELSAN, Turkey); Can Baris Top (ASELSAN, Turkey); Damla Alptekin and Nevzat Gençer (Middle East Technical University, Turkey)</p>
17:30	<p>T05-3.4 Exploitation of Frequency Diversity in GPR Imaging Through an Innovative Constrained-BCS Method Marco Salucci and Angelo Gelmini (University of Trento, Italy); Giacomo Oliveri (University of Trento and ELEDIA Research Center, Italy); Andrea Massa (University of Trento and ELEDIA Research Center, Italy and Universidad Carol III de Madrid, Spain)</p>
17:50	<p>T05-3.5 Multi-Functional Phantom Model to Validate Microwave Sensors for Health Monitoring Applications Jacob Velandar, Syaiful Redzwan Mohd Shah, Mauricio D Perez, Noor Badariah Asan and Robin Augustine (Uppsala University, Sweden); Taco Blokhuis (University Medical Center Maastricht, The Netherlands)</p>

Wednesday 11 April 2018 13:30 – 15:00, P2 Posters

Room: Capital Hall

A: Antennas

M: Measurements

O: Other subjects

P: Propagation

S: Simulations

P2.2 (A-T01)

A Low-Profile 2D Tilted-Beam Resonant Cavity Antenna

Shufeng Zheng, Yapeng Li, Luyu Zhao, Wei Hu and Yuanming Cai (Xidian University, P.R. China); Steven Gao, Qi Luo and Chao Gu (University of Kent, United Kingdom)

P2.3 (A-T01)

Optimization of the VSWR of Reconfigurable Antennas with a Coupled Multielement Concept

H Alzein, J Milbrandt, C Menudier, M Thevenot and T Monediere (Univeristy of Limoges, France)

P2.4 (A-T01)

A Bespoke Lens for a Slot Log-Spiral Excitation

Mahsa Ebrahimpouri and Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)

P2.5 (A-T01)

A Compact Substrate Integrated Waveguide Cavity Backed Antenna with Stable Radiation Patterns for Dual-Band Applications

Mohammad Mahdi Honari, Hossein Saghlatoon and Pedram Mousavi (University of Alberta, Canada), Rashid Mirzavand, (University of Alberta, Canada and Amirkabir University of Technology, Iran)

P2.6 (A-T01)

Design of a Phased-Array Antenna for 5G Base Station Applications in the 3.4-3.8 GHz Band

Robbert Schulpen, Ulf Johannsen and Bart Smolders (Eindhoven University of Technology, The Netherlands); Sergio Pires (Ampleon Netherlands BV, The Netherlands)

P2.7 (A-T01)

Compact Printed Log-Periodic Dipole Arrays Fed by SIW Horn

Qiao Chen (KTH Royal Institute of Technology, Sweden and Southeast University, P.R. China); Xiaoxing Yin (Southeast University, P.R. China); Lei Wang (KTH Royal Institute of Technology, Sweden and Hamburg University of Technology, Germany)

P2.8 (A-T01)

High Isolation Spiral Antenna Configurations for Full-Duplex Communications

Prafulla Deo and Dariush Mirshekar-Syahkal (University of Essex, United Kingdom); Gan Zheng (Loughborough University, United Kingdom)

P2.9 (A-T01)

A Low-Complexity Array of Directly Phase Modulating Antennas

Stephen Henthorn, Kenneth Lee Ford and Timothy O'Farrell (University of Sheffield, United Kingdom)

P2.10 (A-T01)

Optimal Synthesis of Wideband Planar Phased Arrays with Maximum Bandwidth

Le Trong Phuoc Bui, Mohammad Adbul Hannan, Nicola Anselmi, Lorenzo Poli and Paolo Rocca (University of Trento, Italy)

P2.11 (A-T01)

A Wideband Beam-Tilted Dual-Polarized Slot Antenna Array for the Millimeter-Wave Communications

Zhijiao Chen, Mengjing He, Limei Qi, Yuan Yao and Junsheng Yu (Beijing University of Posts and Telecommunications, P.R.China); Xiaodong Chen (Queen Mary University of London, United Kingdom)

P2.12 (A-T01)

Broadband Antenna Design for New Mobile Communication Systems

Sergio Martin-Anton and Daniel Segovia-Vargas (Universidad Carlos III de Madrid, Spain)

P2.13 (A-T01)

A Wide Beam Dipole Antenna in the E- and H-Plane with a Novel Structure

Guangwei Yang, Jian-ying Li, YangXiao Qi, Jiangjun Yang and Rui X (Northwestern Polytechnical University, P.R.China)

P2.14 (A-T01)

Layered Patch Antenna Structure for Gain Enhancement of 4 × 4 System

Yun Sik Kim and Dong-Ho Cho (Korea Advanced Institute of Science and Technology, Korea)

P2.15 (A-T01)

A High-Gain Low Coupling 8-Port MIMO Antenna Array Working at 28 GHz with Compact Size

Dazhi Piao, Junping Song, Hailong Yu and Yajin Wang (Communication University of China, P.R.China)

P2.17 (A-T01)

Integration of a Non-Resonant Antenna in a Smartphone for Multiband Operation

Aurora Andújar (Fractus Antennas, Spain); Jaume Anguera (Fractus Antennas and Universitat Ramon Llull, Spain)

P2.18 (A-T01)

A Wideband High-Gain and High-Efficiency Slot Array Antenna Based on Groove Gap Waveguide

Ali Farahbakhsh (Kerman Graduate University of Advanced Technology, Iran); Davood Zarifi (University of Kashan, Iran); Ashraf Uz Zaman (Chalmers University of Technology, Sweden)

P2.18.a (A-T01)

A Two-Stage Optimization Technique for Multiband Antenna Design

Yen-Sheng Chen (National Taipei University of Technology, Taiwan)

P2.19 (A-T02)

A 60-GHz CMOS Quasi-Yagi Antenna with Enhanced Radiation Properties

Kamel Sultan, Haythem Abdullah and Esmat Abdallah (Electronics Research Institute, Egypt); Mohamed Basha (University of Waterloo, Egypt) Hadia El-Hennawy (Ain Shams University, Egypt)

P2.20 (A-T02)

Far-Field Radiation Properties of Impedance-Loaded Loop Antennas from Rf to Optical Frequencies

Jogender Nagar and Douglas H Werner (The Pennsylvania State University, USA); Arnold McKinley (University College London, United Kingdom)

P2.22 (A-T02)

Automatic Design of a Rhcp Linear Slot Array in Substrate Integrated Waveguide

Santi Concetto Pavone and Matteo Albani (University of Siena, Italy); Massimiliano Casaletti (Sorbonne Universités UPMC, France)

P2.23 (A-T02)

Circularly Polarized Brick-Wall Nantenna Array for Optical Communications

Mai Sallam (The American University in Cairo, Egypt, KU Leuven, Belgium and Ahram Canadian University, Egypt); Guy Vandenbosch and Georges Gielen (KU Leuven, Belgium); Ezzeldin Soliman (The American University in Cairo, Egypt)

P2.24 (A-T03)

An Integrated Dual-Band Wireless LAN Antenna for Full Metal Chassis Tablet with a Sound-Flow Enhancement Slot

Kai-Cheng Chi (National Taiwan University and Taiwan & Hewlett Packard Incorporation, Taiwan); Shih-Yuan Chen and Powen Hsu (National Taiwan University, Taiwan)

P2.27 (A-T03)

Frequency Tunable Miniaturized Quarter-Mode SIW Antenna Based on CRLH-TL

Shi Chunyue, Yonggang Zhou and Ming Yu (Nanjing University of Aeronautics and Astronautics, P.R.China); Steven Gao (University of Kent, United Kingdom); Geyi Wen (Nanjing University of Information Science and Technology, P.R.China)

P2.28 (A-T03)

A Printed 4x4 MIMO Antenna With High Isolation for WLAN Application

Sonika Biswal and Sushrut Das (Indian Institute of Technology (ISM), India)

P2.29 (A-T03)

Compact Dual-Band Bow-Tie MIMO Antennas with Fragment-Type Isolation Structure

Diqun Lu, Lu Wang, Yijun Du and Xiaopo Wu (University of Science and Technology of China, P.R. China); Gang Wang (University of Science and Technology of China and Chinese Academy of Science, P.R. China)

P2.30 (A-T05)

Permittivity Sensors in CMOS Technology

Harshitha Thippur Shivamurthy, Andrea Neto and Marco Spirito (Delft University of Technology, The Netherlands)

P2.31 (A-T05)

Ultra High Figure-of-Merit Mushroom Nanoantenna Array for Refractive Index Sensing

Nada Belal, Mohamed Serry and Ezzeldin Soliman (The American University in Cairo, Egypt); Gaurav Jayaswal and Atif Shamim (King Abdullah University of Science and Technology, Saudi Arabia)

P2.32 (A-T05)

New Analytical Model for the Characterisation of Printed Spiral Coils for Wireless Power Transfer

Sadeque Khan, Sumanth Pavuluri and Marc Desmulliez (Heriot Watt University, United Kingdom)

P2.33 (A-T05)

Compact Yagi Antenna Utilizing Mu-Negative Metamaterial Loading of Director Element

Sasan Ahdi Rezaeieh and Amin Abbosh (The University of Queensland, Australia); Marco A. Antoniadis (University of Cyprus, Cyprus)

P2.34 (A-T05)

A Novel On-Chip Loop Antenna at 2.4 GHz for Short Distance Communication

Archana S and Bhaskar Manickam (National Institute of Technology, India)

P2.35 (A-T05)

A Flexible 2.45 GHz Rectenna Using Electrically Small Loop Antenna

Khaled Aljaloud (University College London, United Kingdom); Kin-Fai Tong (King Saud University, Saudi Arabia)

P2.36 (A-T05)

Equivalent Circuit Model for Patch Loaded Coaxial Sensors in CMOS Technology

Harshitha Thippur Shivamurthy and Andrea Neto (Delft University of Technology, The Netherlands)

P2.36.a (A-T05)

Flexible Dual-Band AMC-Backed PDMS Antenna with Fluidic Metal for WBAN and WLAN

Muhammad Nazrin Ramli, Ping Jack Soh, Mohd Faizal Jamlos, Azremi Abdullah Al-Hadi, Mohn Firdaus Ibrahim and Herwansyah Lago (Universiti Malaysia Perlis, Malaysia); Sharul Kamal A. Rahim (Universiti Teknologi Malaysia, Malaysia); Niels Kuster (Swiss Federal Institute of Technology, Switzerland)

P2.37 (A-T06)

I-Shaped Resonator (ISR) Phase Shifter for Beam Steering Waveguide Antennas

Amirhossein Ghasemi and Jean-Jacques Laurin (Ecole Polytechnique de Montrea, Canada)

P2.38 (A-T06)

A Wideband Reconfigurable Reflectarray Antenna Using Single-Layer Varactor-loaded Split Patch Elements

Guang Liu, Hongjian Wang, Di Zhu and Xiaolong Dong (National Space Science Center, P.R. China); Fei Xue (National Space Science Center and University of Chinese Academy of Sciences, P.R. China)

P2.39 (A-T06)

Compact Omnidirectional Circularly Polarized Antenna

Chao-Yong Liu and Qing-Xin Chu (South China University of Technology, P.R. China)

P2.40 (A-T06)

Design of UWB Antennas Integrating Geopolymer Material

Houda Nadir, Michèle Lalande, E Martinod, N Feix, O Tantot, A Gharzouni and S Roddignol (University of Limoges, France); V Bertrand (CISTEME, France)

P2.41 (A-T06)

Combining Linear Boro Arrays into Complex Planar Arrays to Achieve High Gain and Efficiency Printed Antenna Arrays

Boro Miloje Reljic (IEEE Member, United Kingdom); Aleksa Zejak and Zoran Golubicic (RT-RK, Serbia); Slobodan Simic (MA, Serbia)

P2.42 (A-T06)

Investigation of Mutual Coupling in Vivaldi Antenna Arrays Installed in Airborne Radomes

Ana Vukovic, Phillip Sewell and Trevor Benson (University of Nottingham, United Kingdom)

P2.43 (A-T06)

Ad-hoc Feed System for Enhanced Features Convex Conformal Reflectarray

Michele Beccaria and Gianluca Dassano (Politecnico di Torino, Italy); Giuseppe Addamo, Oscar A. Peverini and Giuseppe Virone (Consiglio Nazionale delle Ricerche, Italy); Paola Pirinoli and Mario Orefice (Politecnico di Torino and Consiglio Nazionale delle Ricerche, Italy); Diego Manfredi (IIT, Italy); Flaviana Calignano (DIGEP, Italy)

P2.44 (A-T06)

Agile Method for Antenna Polarization Characterization Based on Amplitude Measurements

María Vera-Isasa, Veronica Santalla del Rio, Isabel Expósito and Brais Sánchez-Rama (University of Vigo, Spain)

P2.45 (A-T06)

Deconvolution of Antennas with Long Ringdown Time for Improved Range Resolution

Zhong Chen and Zubiao Xiong (ETS-Lindgren, Inc., USA)

P2.47 (A-T08)

Electronically Reconfigurable Microstrip Array Antenna with Reflective Phase Shifters at Ku Band

Eduardo Garcia-Marin, Pablo Sanchez-Olivares, Javier Herranz-Alpanseque, Alejandro Juan Martín Trueba, Jose Luis Masa-Campos and Juan Córcoles (Universidad Autónoma de Madrid, Spain)

P2.49 (A-T08)

Dual-Circularly Polarized Patch Antenna Using Simple Isolation Techniques and Its Array Application

Paul Le Bihan and María García-Vigueras (Institut d'Electronique et de Télécommunications de Rennes, France); Yelzhas Zhaksylyk (University College of Southeast Norway, Norway); Pascual Hilario Re, Symon K. Podilchak and George Goussetis (Heriot-Watt University, United Kingdom)

P2.50 (A-T09)

Beam-Steering Ka-Band Phase Rotation Cells-Based Transmit-Array for Circular-Polarization

Parinaz Naseri and Carlos A. Fernandes (Instituto de Telecomunicações, Instituto Superior Técnico, Portugal); Sergio Matos and Jorge R. Costa (Instituto de Telecomunicações and ISCTE-IUL, Portugal)

P2.51 (A-T09)

High Gain K-Band Patch Antenna for Low Earth Orbit Interlink Between Nanosatellites

Paolo Squadrato, Shuai Zhang and Gert Pedersen (Aalborg University, Denmark)

P2.52 (A-T09)

Conical Surface Mount Short Horn for Circular Polarized Patch Antennas

Vignesh Shanmugam Bhaskar and Eng Leong Tan (Nanyang Technological University, Singapore)

P2.53 (A-T09)

Origami Folding Technique Using Flexible Substrate with Arrays of Vivaldi Antennas

Calvin Chun Hin Ng and Paul Robert Young (University of Kent, United Kingdom)

P2.54 (A-T09)

Ku-Band RF Aperture Assembly for Airborne SOTM

Ana Rosa Ruiz, Alberto Pellón, Ignacio Montesinos-Ortego and Manuel J Gonzalez (TTI, Spain)

P2.55 (A-T09)

Design Methodology for Single Layer Dual-Band Leaky Wave Antennas

Nausika Memeletzoglou and Eva Rajo Iglesias (University Carlos III of Madrid, Spain); Darwin Blanco Montero (TUDelft, Germany)

P2.56 (A-T09)

Single-feed Dual-wideband Monopolar Stacked Patch Antenna for Satellite Communication Application

Xiaojun Li, Shuo Liu and Shiwei Dong (China Academy of Space Technology, P.R. China)

P2.57 (A-T09)

Design of a Microstrip Multi-Patch End-Fired Antenna for Collision Avoiding System of Aircraft

Debajit De (National Institute of Technology, India); Prasanna Kumar Sahu (N.I.T. India)

P2.58 (A-T09)

Simultaneous s/ka Feed System and 7.5M Diameter Antenna Concept

Christophe Granet (Lyrebird Antenna Research Pty Ltd, Australia); John Kot (Young & Kot Engineering Research, Australia); John Ness and Glen Callaghan (EM Solutions Pty Ltd, Australia)

P2.59 (A-T09)

Design of a G-band 2x2 Pixel Sideband Separation Array Receiver with Integrated Local Oscillator

Xiang Chen and Yongning He (Xi'an Institute of Space Radio Technology, P.R.China); Zhenhua Chen (Nanjing University of information Science and Technology, P.R.China)

P2.60 (A-T09)

A Novel 1-Bit Reconfigurable Element for Wideband And Multi-Polarization Reflectarray

Yifeng Fan, Yongzhi Sun and Zhijian Li (Nanjing Institute of Electronic Equipment, P.R. China); Yunfei Yu (State Grid Corporation, P.R. China)

P2.61 (A-T09)

Wideband Cavity-Backed CubeSat Antenna in S Band

Miroslav Veljovic and Anja K. Skrivervik (EPFL, Switzerland)

P2.62 (A-T10)

Broadband Rectangular Waveguide Launcher Design Using Dual Source Excitation

Daniel Koch and Michael J Havrilla (Air Force Institute of Technology, USA)

P2.63 (A-T10)

Closed-to-Open Conversion of a mm-Wave Gaussian Horn Antenna

Giuseppe Torrisi, Gino Sorbello, Ornella Leonardi, Luigi Celona and Santo Gammino (INFN-LNS, Italy); Giorgio Mauro (Istituto Nazionale di Fisica Nucleare and Universit`a degli Studi Mediterranea di Reggio Calabria Salita Melissari, Italy); Giovanni Castorina and Bruno Spataro (Istituto Nazionale di Fisica Nucleare, Italy); Valery Dolgashev (SLAC National Accelerator Laboratory, USA)

P2.65 (A-T11)

Loop Antennas for Underwater Communications

Andrea Massaccesi and Paola Pirinoli (Politecnico di Torino, Italy)

P2.66 (A-T11)

Textile Wearable Antenna Sensors Based on Open Ring Resonators

Bahareh Moradi, Raul Fernandez-Garcia and Ignacio Gil (Universitat Politècnica de Catalunya, Spain)

P2.67 (A-T11)

User Identification Through Wearable Antenna Characteristics at 2.45 GHz

Waqar Saadat, Sumit Raurale, Gareth Conway and John McAllister (Queen's University Belfast, United Kingdom)

P2.68 (A-T11)

Isolation Enhancement Between Two Closely Spaced Rectangular Patches for MIMO Applications

Ali Hammoodi and Mariofanna Milanova (University of Arkansas at Little Rock, USA); Mustafa Bakr (Technical University Graz, Austria); Haider Khaleel Raad (Xavier University, USA)

P2.69 (A-T11)

Bandwidth Enhancement of Rectangular Dielectric Resonator Antenna Using Circular and Sector Slot Coupled Technique

Raed A Abd-Alhameed (University of Bradford, United Kingdom); Chemseddine Zebiri (Ferhat Abbas University of Setif, Algeria); Issa Elfergani (Instituto de Telecomunicações, Portugal); Mohamed Lashab (20 Aout 1955 University, Algeria); Ammar Ali (University of Bradford, United Kingdom); Jonathan Rodriguez (Instituto de Telecomunicações, Portugal); Majid Al Khambashi (Al-Zahra College for Women, Oman)

P2.70 (A-T11)

Discrete Page Spectrum in Analyzing Phenomena in Linear Antenna

Maciej Walkowiak and Anna Witenberg (UTP University of Science and Technology, Poland); Katarzyna Jagodzińska (Koszalin University of Technology, Poland)

P2.70a (A)

Unmanned Aerial System for Antenna Measurement (UASAM)

Maria Garcia-Fernandez, Yuri Alvarez-Lopez, Fernando Las Heras and Ana Arboleya-Arboleya (University of Vigo, Spain)

P2.71 (A-T11)

Feed Array Breadboard for Future Passive Microwave Radiometer Antennas

Cecilia Cappellin, Jakob Rosenkrantz de Lasson and Knud Pontoppidan (TICRA, Denmark); Oleg Lupikov and Marianna Ivashina (Chalmers University of Technology, Sweden); Niels Skou (Technical University of Denmark, Denmark); Benedetta Fiorelli (European Space Agency, The Netherlands)

P2.71.a (A-T11)

A Time-Domain Solution for Plane Wave Scattering by a PEC Half-Plane in Relativistic Translational Motion

Julio Nicolini (Ohio State University, USA); Guilherme S. Rosa and Flavio J. V. Hasselmann (Pontifícia Universidade Católica do Rio de Janeiro, Brazil)

P2.72 (M-T01)

Antenna Reflection Coefficient Measurement Using Bi-Directional Optical Fiber Link Transceiver Up to 40 GHz

Satoru Kurokawa and Masanobu Hirose (National Institute of Advanced Industrial Science and Technology, Japan)

P2.73 (M-T01)

Urban Mobile Channel Delay Spread Measurements at 700 MHz, 2.5 GHz e 3.5 GHz

Marcelo Molina Silva, Luiz da Silva Mello, Carlos Rodriguez Ron, Marta Almeida (PUC/RIO, Brazil); Pedro Gonzalez Castellanos (Federal Fluminense University, Brazil)

P2.74 (M-T02)

Penetration Loss Measurement at 300 GHz for Building Entry Loss Estimation

Hirokazu Sawada, Kentaro Ishizu, Fumihide Kojima, Keizo Inagaki, Hiroyo Ogawa, Katsumi Fujii, Akifumi Kasamatsu and Iwao Hosako (National Institute of Information & Communications Technology, Japan)

P2.77 (M-T09)

Concurrent Ka Band RF Measurement and Fish-eye Images for Land Mobile Satellite Propagation Channel

Sebastien Rougerie and Bouchra Benammar (CNES, France)

P2.78 (M-T09)

Time-Domain Detection of Passive Intermodulation and its Application in PIM Localization of Mesh Reflector Antennas

Wanzhao Cui and Xiang Chen (Xi'an Institute of Space Radio Technology, P.R. China)

P2.78.a (M-T11)

LTE Ground-to-Air Measurements for UAV-assisted Cellular Networks

Michael Batistatos, Georgia E. Athanasiadou, Dimitra Zarbouti, George Tsoulos and Nikos C. Sagias (University of Peloponnese, Greece)

P2.79 (O-T01)

Electronically Tunable Phase Shifter with Enhanced Phase Behaviour at Ku Band

Mohamed Taha El Khorassani, Miguel A. Vaquero, Angel Palomares, Juan Valenzuela-Valdés and Pablo Padilla (University of Granada, Spain); Naima Amar Touhami (Abdelmalek Essaadi University, Morocco)

P2.80 (O-T01)

On the Operating Principle of an LTE Handset Antenna with Multiple Closely-Located Radiators

Kimmo Rasilainen, Anu Lehtovuori and Ville Viikari (Aalto University, Finland)

P2.81 (O-T01)

A Mode for Predicting Passive Intermodulation Distortion in Microstrip Lines

Yun He, Qi Wang and Wanzhao Cui (Xi'an Institute of Space Radio Technology, P.R. China); Chunliang Lui (Xi'an Jiaotong University, P.R. China)

P2.82 (O-T01)

Simplified Spatial Division Analog Beamforming Based on Fourier Rotman Lens

Irina Munina and Pavel A. Turalchuk (St. Petesburg Electrotechnical University LETI, Russia); Dmitry Kozlov and Alexey Shitvov (Queen's University Belfast, United Kingdom)

P2.84 (O-T01)

Capacitive-Coupled Groove Gap Waveguide Filter

Morteza Rezaee (Hakim Sabzevari University, Iran); Ashraf Uz Zaman (Chalmers University of Technology, Sweden)

P2.85 (O-T01)

Linear LINC Transmitters Using Dual-polarized Power-Combining Antennas

Tresnawan Dian, A. B. Smolders and Peter Smulders and B. G. M. Ark (Eindhoven University of Technology, The Netherlands)

P2.86 (O-T01)

Polarization Diversity for UAV to Ground Links in Urban Environments

Eran Greenberg and Pascal Levy (RAFAEL, Israel)

P2.87 (O-T02)

Cellular Networks Backhauling Through Satellite: Performance Evaluation Using Alphasat Site Diversity Experiment in Greece

Anargyros J. Roumeliotis, Apostolos Z. Papafragkakis, Charilaos Kourogiorgas and Athanasios D. Panagopoulos (National Technical University of Athens, Greece)

P2.88 (O-T03)

Dual Band Frequency Selective Film Design for Indoor Wireless LAN Environment Improvement

In Gon Lee, Sung-Sil Cho, Sang-Hwa Lee and Ic Pyo Hong (Kongju National University, Korea)

P2.89 (O-T04)

On the Improvement of the Power Transfer Efficiency Between Radiating Apertures

Siyi Zhou and Mauro Ettore (Institut d'Électronique et de Télécommunications de Rennes, France)

P2.90 (O-T06)

Broad-band Efficient Linearly Polarization Conversion Ratio (PCR) Metasurfaces

Marjan jalali Moghadam, Mohammad Akbari and Abdel R. Sebak (Concordia University, Canada)

P2.91 (O-T06)

A Novel Metamaterial Element for Compressed Sensing Imaging System

Shuncheng Tian, Guangyao Liu and Long Li (Xidian University, P.R. China)

P2.92 (O-T06)

Polarization Scattering Matrix Estimation for Uniform Moving Target

Li Chao, Yong Yang, Li Yong-zhen and Wang Xue-song (National University of Defence Technology, P.R.China)

P2.93 (O-T06)

Range-Doppler Radar Signature Prediction of Wind Turbine Using SBR

Stefano M Canta, Robert A Kipp, Shawn Carpenter and Lars Eric Rickard Petersson (ANSYS, Inc., USA)

P2.94 (O-T06)

Electronically Switchable Notch Response for Wideband Bandpass Applications

Mohamad Ariffin Mutalib, Zahriladha Zakaria and Noor Azwan Shairi (Universiti Teknikal Malaysia Melaka, Malaysia)

P2.95 (O-T07)

A Radial Transmission Line Model for Mantle Cloaking with Impedance Metasurfaces

Giuseppe Labate, Barbara Cappello and Ladislau Matekovits (Politecnico di Torino, Italy)

P2.96 (O-T07)

Broadband Polarization Conversion Metasurface for RCS Reduction

Fereshteh Samadi, Mohammad Akbari and Abdel R. Sebak (Concordia University, Canada); Reza Chaharmir (Communications Research Centre Canada, Canada)

P2.97 (O-T08)

A Perturbation-Based Method to Model Electromagnetic Logging Sensors in Eccentric Boreholes via Conformal Transformation Optics

Guilherme S. Rosa and Jose R Bergmann (PUC-Rio, Brazil); Fernando Teixeira (The Ohio State University, USA); Marcela Novo (Federal University of Bahia, Brazil)

P2.99 (O-T08)

AOA/Range Estimation Method for UHF RFID Tags Located in Near-Field Region of Reader Antennas

Yassine Mohamedatni, Benbaghdad Mohammed and Belkacem Fergani (USTHB, Algeria); Jean-Marc Laheurte and Benoit Poussot (Université Paris-Est Marne-la-Vallée, France)

P2.100 (O-T11)

Broadband Superluminal Transmission Line with Non-Foster Negative Capacitor

Anna Niang (Université Paris Sud, France); André de Lustrac (UPL and Université Paris-Sud, France); Shah Nawaz Burokur (LEME, France)

P2.101 (O-T11)

Ultra-wide Stopband Low-pass Filter Using Spoof Surface Plasmon Polaritons

Wenxuan Tang, Hao Chi Zhang, Qiang Cheng, Jie Xu and Tie Jun Cui (Southeast University, P.R. China)

P2.102 (O-T11)

Design of a 4-Bit Spoof Surface Plasmon Polariton Phase Shifter for the Terahertz Band

Muhammed Unutmaz and Mehmet Unlu (Ankara Yildirim Beyazit University, Turkey)

P2.103 (O-T11)

A V-band Branch Guide 3-dB Coupler Based on Gap Waveguide for Use in Antenna Array

Davood Zarifi (University of Kashan, Iran); Ashraf Uz Zaman (Chalmers University of Technology, Sweden); Ali Farahbakhsh (Graduate University of Advanced Technology, Iran)

P2.105 (O-T04)

Passive RFID System for Object Shape Estimation

Guillermo Alvarez Narciandi, Jaime Laviada, Marcos Pino and Fernando Las-Heras (Universidad de Oviedo, Spain)

P2.106 (O-T04)

A Multi-resonant Circuit Based on Dual-band Matryoshka Resonator for Chipless RFID Tag

Hillner de Paiva Almeida Ferreira and Alexandre Serres (UFCEG, Brazil); Francisco Marcos Assis (Federal University of Campina Grande, Brazil); Joabson Nogueira de Carvalho (GTEMA-IFPB, Brazil)

P2.107 (P-T01)

26 GHz Indoor Wideband Directional Channel Measurement and Analysis in LoS and NLoS Scenarios

Mohsen Khalily, Sohail Taheri, Pei Xiao, Fariborz Entezami, Timothy Hill and Rahim Tafazolli (University of Surrey, United Kingdom)

P2.108 (P-T01)

Effect of Diffuse Scattering for Reflections and Diffractions in Ray Launching at 5.4GHz

Andres Navarro (Universidad Icesi, Colombia); Dinael Guevara and Marlon Lizarazo (Francisco de Paula Santander University, Colombia)

P2.109 (P-T04)

Persistent Q Anti-collision Algorithm for RFID

Xiaofang Jin and Chang Yu-xi (Communications University of China, China); Robert Michael Edwards and Zhan Wang (Loughborough University, United Kingdom)

P2.111 (P-T06)

Space-Frequency Propagator Method for Time-Reversal Imaging

Bin Hu, LinXi Zhang and Zuxun Song (Northwestern Polytechnical University, P. R. China)

P2.112 (P-T06)

Consideration of Diffraction Effect in Iterative Physical Optics Combining Physical Theory of Diffraction for Conducting Body

Hyunsoo Lee and Il-Suek Koh (Inha University, Korea)

P2.113 (P-T09)

Numerical Weather Prediction Models for the Estimate of Clear-Sky Attenuation Level in Alphasat Beacon Measurement

Laurent Quibus and Danielle Vanhoenacker-Janvier (Université catholique de Louvain, Belgium); Lorenzo Luini and Carlo Riva (Politecnico di Milano, Italy)

P2.114 (P-T09)

Classification of Rainfall Events and Evaluation of Drop Size Distributions Using a K-band Doppler Radar

Nicolás Gil-de-Vergara, Jose M Riera, Santiago Pérez-Peña and Ana Benarroch (Universidad Politécnica de Madrid, Spain); Jose Garcia-Rubia (Virginia International University, USA)

P2.115 (P-T09)

Cloud Attenuation Prediction Statistics for GEO and NGSO Satellite Communication Systems Operating at Q/V Band and Above

Athanasios D. Panagopoulos, Nikolaos Lyras and Charilaos Kourogorgas (National Technical University of Athens, Greece)

P2.116 (P-T09)

Annual Hourly Variability of Rain Attenuation and Rainfall Rate for Improved Earth-Space Links Design

Flávio Jorge and Armando Rocha (University of Aveiro and Instituto de Telecomunicações, Portugal); Carlo Riva (Politecnico di Milano, Italy)

P2.117 (S-T01)

A Comparative Study Between SSPE Methods and a HO-FDTD Algorithm for EM Propagation over Lossy Terrains

Diego Parada Rozo and Cássio Rego (Federal University of Minas Gerais, Brazil); Claudio Garcia Batista and Glaucio L. Ramos (Federal University of São João Del-Rei, Brazil)

P2.119 (S-T09)

Analysis of Microstrip Antennas on Multilayer Uniaxial Anisotropic Substrate with Discrete Mode Matching Method

Veenu Kamra and Achim Dreher (German Aerospace Center (DLR), Germany)

P2.121 (S-T10)

A Novel Technique for Improving the Accuracy of Antenna Gain Measurements in the Near-Field Zone

Liliana Anchidin and Razvan D. Tamas (Constanta Maritime University, Romania)

P2.122 (S-T10)

Application of MoM-based Waveguide Port Approach to the Analysis of EM Coupling Problems Related to Microwave Antennas

Faik G. Bogdanov (EMCoS and Georgian Technical University, Georgia); Anna Gheonjian (EMCoS Ltd., Georgia); Lily Svanidze, Diana Eremyan, Zviad Kutchadze and Roman Jobava (EMCoS and Javakhishvili Tbilisi State University, Georgia)

P2.123 (S-T10)

Adaptive Cross Approximation Algorithm Accelerated Inverse Equivalent Current Method for near Field Antenna Measurement

Yiling Wang and Zaiping Nie (University of Electronic Science and Technology of China, P. R. China)

P2.124 (S-T10)

A Boundary Element Tearing and Interconnecting Method Using Two Lagrange Multipliers

Kristof Cools (University of Nottingham, United Kingdom); Francesco Andriulli (Ecole Nationale Supérieure des Telecommunications de Bretagne, France)

P2.125 (S-T10)

Accelerating a Ray Launching Model Using GPU with CUDA

Zhuangzhuang Dai and Robert J Watson (University of Bath, United Kingdom)

P2.126 (S-T10)

Equivalent Circuit Modelling of Meta-atoms

Tom Whittaker, J (Yiannis) Vardaxoglou and William Whittow (Loughborough University, United Kingdom)

P2.127 (S-T10)

An Acceleration Method for Ray-Tracing Simulation Based on Channel Quasi-Stationarity Regions

Zhuangzhuang Cui, Zhangdui Zhong, Ke Guan and Danping He (Beijing Jiaotong University, P.R. China and Technische Universität Braunschweig, Germany)

Thursday 12 April 2018

Thursday 12 April 2018 09:00 – 10:40

CS23: OTA Characterization of Antennas and Wireless Devices

Cellular Networks & 5G | Convened Session | Measurement

Room: Room 7

Chairs: Dr Andrés Alayón Glazunov (Chalmers University of Technology, Sweden) and Dr Maria Becker (NIST, USA)

09:00	CS23.1 MIMO Device Performance Testing with the Wireless Cable Method Wei Fan, Fengchun Zhang and Gert Pedersen (Aalborg University, Denmark); Pekka Kyösti (Keysight Technologies and University of Oulu, Finland); Lassi Hentila (Keysight Technologies, Finland)
09:20	CS23.2 Spatial Channels for Wireless Over-the-Air Measurements in Reverberation Chambers Maria Becker, Robert Horansky, Damir Senic, Vincent Neylon and Kate A. Remley (National Institute of Standards and Technology, USA)
09:40	CS23.3 A Numerical Analysis of the Random-LOS Measurement Accuracy for Vehicle Applications Madeleine Schilliger Kildal, Andrés Alayon Glazunov (Chalmers University of Technology, Sweden); Jan Carlsson (Chalmers University of Technology and Provinn AB, Sweden)
10:00	CS23.4 Mitigation of Double-Rayleigh Fading when using Reverberation Chamber Cascaded with Channel Emulator John Kvarnstrand, Derek Skousen and Erik Silfverswärd (Bluetest AB, Sweden); Doug Reed and Alfonso Rodriguez-Herrera (Spirent Communications Inc., USA)
10:20	CS23.5 Characterization Challenges for Millimeter-wave Multi-Antenna 5G Devices Minu Jacob, Todd Marshall, Chris Coleman and Greg Vanwiggeren (Keysight Technologies, USA); Moray Rumney (Keysight Technologies, United Kingdom); Prasad Ramachandran (Keysight Technologies, Finland)

CS39: Channel Modelling in Railway Environments Towards 5G Applications

Cellular Networks & 5G | Convened Session | Propagation

Room: Room 12

Chairs: Dr Juan Moreno García-Loygorri and Professor Cesar Briso (Technical University of Madrid, Spain)

09:00**CS39.1****Validation of an LTE Backbone for Inter-Car Communications in Metro Environments**

Víctor Díez, Iñaki Val, Joseba García and Aitor Arriola (IK4-Ikerlan Technology Research Centre, Spain); Eneko Echeverria and Igor Lopez (CAF, Spain); Mikel Korta and Iker Zabala (CAF Power & Automation, Spain); Thomas Aubourg (Thales Communications and Security S.A.S, France); Tomáš Tichý (Unicontrols a. s., Czech Republic)

09:20**CS39.2****Field Trial of Millimeter-Wave-based MHN System for Vehicular Communications**

Junhyeong Kim (ETRI and KAIST, Korea); Hee Sang Chung, Gosan Noh, Bing Hui and Ilgyu Kim (ETRI, Korea); Youngmin Choi (Cleverlogic, Korea); Youngnam Han (KAIST, Korea)

09:40**CS39.3****Influences of Train Wagon Vibrations on the mmWave Wagon-to-Wagon Channel**

Mohammad Soliman, Emanuel Staudinger and Stephan Sand (German Aerospace Center (DLR), Germany); Youssef Dawoud (University of Ulm, Germany); Andreas Schuetz (RWTH Aachen University, Germany); Armin Dekorsy (University of Bremen, Germany)

10:00**CS39.4****Measurement Based Spatial Characteristics of MPCs in Train-to-Train Propagation**

Paul Unterhuber, Thomas Jost and Wei Wang (German Aerospace Center (DLR), Germany); Thomas Kürner (Technische Universität Braunschweig, Germany)

10:20**CS39.5****Intra-train Propagation Between 26-40 GHz for 5G Applications**

Juan Moreno Garcia-Loygorri, Cesar Briso, César Calvo, Florentino Jimenez and Vicente Gonzalez-Posadas (Universidad Politecnica de Madrid, ETSIS Telecomunicacion, Spain); Israel Arnedo and Mikel Laso (Public University of Navarre, Spain)

CS12: Advances in Theory and Computation of Characteristic Modes

Future Applications | Convened Session | Antennas

Room: Room 17

Chairs: Professor Hiroyuki Arai (Yokohama National University, Japan) and Dr Miloslav Capek (Czech Technical University in Prague, Czech Republic)

09:00**CS12.1****Characteristic Mode Analysis of Printed Circuit Board Antennas Using Volume-Surface Equation**

Qi Wu (Beihang University, P.R. China)

09:20	<p>CS12.2 Selective Excitation of Characteristic Modes on an Electrically Large Antenna for MIMO Applications Nikolai Peitzmeier and Dirk Manteuffel (University of Hannover, Germany)</p>
09:40	<p>CS12.3 Accurate Evaluation of Characteristic Modes Miloslav Capek, Vit Losenicky and Lukas Jelinek (Czech Technical University in Prague, Czech Republic); Doruk Tayli and Mats Gustafsson (Lund University, Sweden); Lamyae Akrou (University of Coimbra, Portugal)</p>
10:00	<p>CS12.4 Benchmark Problem Definition and Cross-Validation for Characteristic Mode Solvers Yikai Chen (University of Electronic Science and Technology of China, P.R. China); Kurt Schab (North Carolina State University, USA); Miloslav Capek and Michal Masek (Czech Technical University in Prague, Czech Republic); Buon Kiong Lau and Hanieh Aliakbari (Lund University, Sweden); Yigit Haykir (Middle East Technical University, Turkey); Qi Wu (Beihang University, P.R. China); Willem J Strydom (Altair Development S.A. (Pty) Ltd, South Africa); Nikolai Peitzmeier (Leibniz Universitaet Hannover, Germany); Milos M Jovicic (WIPL-D, Serbia); Simone Genovesi and Francesco Alessio Dicandia (University of Pisa, Italy)</p>
10:20	<p>CS12.5 Efficient Techniques for Characteristic Mode Analysis of Complex Structures Willem J Strydom and Ulrich Jakobus (Altair Development S.A. (Pty) Ltd, South Africa)</p>
<p>T06-8: Emerging Technologies for Radar Systems - 1 Radar Systems Regular Session Antennas Room: Room 16 Chairs: Professor Giovanni Leone (Università della Campania Luigi Vanvitelli, Italy) and Professor Herbert Aumann (University of Maine, USA)</p>	
09:00	<p>T06-8.1 Directivity Enhancement to Antipodal Vivaldi Antenna with Slot Edges Using Zero-Index Metamaterial for S-Band SAR Application Mark Clemente Arenas and Diego Penalzoza Aponte (INICTEL-UNI, Peru)</p>
09:20	<p>T06-8.2 First Step Towards a Comparison Between 3D Source Geometries for Conformal Antennas Giovanni Leone, Maria Antonia Maisto and Rocco Pierri (Università della Campania Luigi Vanvitelli, Italy)</p>

09:40	<p>T06-8.3 Nonradiating Sources, Cloaking Devices and Related Anapole Modes Giuseppe Labate and Ladislau Matekovits (Politecnico di Torino, Italy); Nikita Nemkov and Alexey Basharin (National University of Science and Technology (MISiS), Russia)</p>
10:00	<p>T06-8.4 Computer Tool for Simulating Frequency Modulated -Continuous Wave Radar Systems in Urban Traffic Scenes Alvaro Somolinos, Jose-Luis García, Lorena Lozano, Felipe Cátedra and Ivan Gonzalez (Universidad de Alcalá, Spain)</p>
10:20	<p>T06-8.5 Retrodirective Metasurface Operating Simultaneously at Multiple Incident Angles Mohammed Kalaagi and Divitha Seetharamdoo (Université Lille-Nord-de-France, France)</p>
<p>CS44:COST CA15104 (IRACON): Measurements and Simulations in Channel Modelling in Wireless Body Area Networks Biomedical Convened Session Propagation Room: Room 15 Chairs: Dr Slawomir J. Ambroziak (Gdansk University of Technology, Poland) and Dr Simon L. Cotton (Queen's University Belfast, United Kingdom)</p>	
09:00	<p>CS44.1 Body-worn Channel Characterization Unit for the 868 MHz Band Patrick Van Torre, Sam Agneessens, Jo Verhaevert and Hendrik Rogier (Ghent University, Belgium)</p>
09:20	<p>CS44.2 Preliminary Path-Loss Measurement of On-Body Wireless Body Area Network at 490 GHz Taichi Shichijoo and Takahiro Aoyagi (Tokyo Institute of Technology, Japan)</p>
09:40	<p>CS44.3 Fading Characteristics for Dynamic Body-to-Body Channels in Indoor and Outdoor Environments Kenan Turbic and Luis M. Correia (IST - University of Lisbon and INESC, Portugal); Slawomir J. Ambroziak (Gdansk University of Technology, Poland)</p>
10:00	<p>CS44.4 Full-Spectrum Phantoms for cm-Wave and Medical Wireless Communications Sergio Castelló-Palacios, Concepcion Garcia-Pardo, Alejandro Fornes-Leal, Narcis Cardona and Ana Valles-Lluch (Universitat Politècnica de València, Spain)</p>

10:20	<p>CS44.5 Fading Characterization of UE to Ceiling-Mounted Access Point Communications at 60 GHz Seong Ki Yoo, Simon Cotton, Young Jin Chun and William G. Scanlon (Queen's University Belfast, United Kingdom)</p>
<p>CS35: Advanced Technologies for Wideband Antennas and Arrays Ultra-High Data Rate Communications Convened Session Antennas Room: Room 14 Chairs: Hang Wong and Professor Kwai Man Luk (City University of Hong Kong, Hong Kong)</p>	
09:00	<p>CS35.1 Compact Wide-band MIMO Antenna with High Port Isolation Wen Jiang, Ying Liu, Yue Cui, Shuxi Gong and Binbin Wang (Xidian University, P.R. China)</p>
09:20	<p>CS35.2 Pattern Reconfigurable Techniques for LP and CP Antennas with the Broadside and Conical Beams Wei Lin and Richard Ziolkowski (University of Technology Sydney, Australia); Hang Wong (City University of Hong Kong, Hong Kong)</p>
09:40	<p>CS35.3 A Simple Wideband Slot Antenna Zhou Changfei and Lawrence Kwan Yeung (The University of Hong Kong, Hong Kong); Hang Wong (City University of Hong Kong, Hong Kong)</p>
10:00	<p>CS35.4 A Wideband Circularly Polarized Patch Antenna Yongmei Pan and Wanjun Yang (South China University of Technology, P.R. China)</p>
10:20	<p>CS35.5 Compact Butler Matrix for Wideband Beamforming Qiu Ping Chen, Shao Yong Zheng and Yunliang Long (Sun Yat-Sen University, P.R. China)</p>
<p>CS32: Antenna for IoT Applications Connected Objects Convened Session Antennas Room: Room 13 Chairs: Dr Yue Gao (Queen Mary University of London, United Kingdom) and Dr Fabien Ferrero (University of Nice Sophia Antipolis, France)</p>	
09:00	<p>CS32.1 Low Cost Antenna for IoT Deployment in Developing Country Fabien Ferrero (University Nice Sophia Antipolis, France); CongDuc Pham (University of Pau, France)</p>

09:20	<p>CS32.2 Coplanar Multiband Antenna on Flexible Substrate in Energy Harvesting System for IoT Applications Do Hanh Ngan Bui (Université de Grenoble-Alpes, France and INSA Lyon, France); Tan-Phu Vuong, Philippe Benech and Bruno Allard (Université de Grenoble-Alpes, France); Jacques Verdier (INSA Lyon, France); Gael Depres (Arjowiggins Creative Papers, France)</p>
09:40	<p>CS32.3 Miniaturization of a Circular Polarized Antenna Using Ferrite Materials Eric Arnaud, Laure Huitema and Thierry Monediere (Xlim Laboratory, France); Regis Chantalat (CISTEME, France); Anthony Bellion (CNES, France)</p>
10:00	<p>CS32.4 A Digitally Tuned Reconfigurable Semi-Bowtie Antenna for IoT Devices Fatima Al Zahraa Asadallah and Joseph Costantine (American University of Beirut, Lebanon); Youssef Tawk (Notre Dame University, USA)</p>
10:20	<p>CS32.5 On the Antenna for Long Range Low Power Geographical Monitoring IoT Network Yuanjun Shen, Linyu Cai, Yu Liu and Kin-Fai Tong (University College London, United Kingdom); Xuyang Ding, Xiangdong Qiu and Ying Liu (PowerChina Chengdu Engineering Co. Ltd., P.R. China)</p>
<p>CS24: Advances in Modelling Design and Implementation of Reflectarrays and Periodic Structures Space Applications Convened Session Antennas Room: Room 6 Chairs: Professor Manuel Arrebola (Universidad de Oviedo, Spain) and George Goussetis (Heriot-Watt University, United Kingdom)</p>	
09:00	<p>CS24.1 Support Vector Machines to Accelerate Reflectarray Analysis and Optimization Daniel R Prado (Universidad de Oviedo, Spain and Heriot-Watt University, United Kingdom); Jesús López-Fernández, Manuel Arrebola and Fernando Las-Heras (Universidad de Oviedo, Spain)</p>
09:20	<p>CS24.2 Innovative Synthesis of Reflectarrays Within the Non-Radiating Inverse Source Framework Angelo Gelmini, Marco Salucci and Andrea Massa (University of Trento, Italy); Giacomo Oliveri (University of Trento, Italy and ELEDIA Research Center, France)</p>
09:40	<p>CS24.3 Manufacturable Ultra-Thin Resistive FSS for Challenging EM Mobile Environments Siti Normi Zabri (Universiti Teknikal Malaysia Melaka, Malaysia); Robert Cahill, Gareth Conway, Niamh McGuigan, Dmitry E Zelenchuk and Raymond Dickie (Queens University Belfast, United Kingdom)</p>

10:00	<p>CS24.4 FSS Design and Manufacturing Challenges for Future Space Science Missions Raymond Dickie, Robert Cahill, Paul Baine and Vincent Fusco (Queens University Belfast, United Kingdom)</p>
10:20	<p>CS24.5 Optimisation by Unit-Cell Rotation of Linear-to-Circular Polarising Reflectors for Practical Primary Feeds Salvador Mercader-Pellicer, George Goussetis and Gabriela Medero (Heriot-Watt University, United Kingdom); Daniele Bresciani and Hervé Legay (Thalès Alenia Space, France); Nelson Fonseca (European Space Agency, The Netherlands)</p>
<p>CS30: Propagation Aspects in Remote Sensing Space Applications Convened Session Propagation Room: Room 4 Chairs: Dr Michael Schönhuber (Joanneum Research, Austria) and Dr Merhala Thurai-Rajasingam (Colorado State University, USA)</p>	
09:00	<p>CS30.1 Calibration and Use of Microwave Radiometers in Multiple-site EM Wave Propagation Experiments Lorenzo Luini and Carlo Riva (Politecnico di Milano and IEIT (CNR), Italy); Roberto Nebuloni and Mario Mauri (IEIT (CNR), Italy); James Nessel (NASA, USA); Alessandro Fanti (University of Cagliari, Italy)</p>
09:20	<p>CS30.2 Propagation Modeling for Radio Occultation Remote Sensing Charles-Antoine L'Hour (Université de Toulouse and Onera, France); Vincent Fabbro (ONERA, France); Alexandre Chabory (ENAC, France); Jerome Sokoloff (Université de Toulouse, France)</p>
09:40	<p>CS30.3 Characterisation of the Propagation Channel at Ka and Q/V Bands for Satellite Communication and Earth Observation Systems Laurent Castanet, Xavier Boulanger and Joel Lemorton (ONERA, France); Bouchra Benammar (Centre National d'Etudes Spatiales (CNES), France)</p>
10:00	<p>CS30.4 Examining the Use of Generalized Gamma Model to Represent the Full Rain Drop Size Distributions Merhala Thurai and Viswanathan Bringi (Colorado State University, USA)</p>
10:20	<p>CS30.5 Interference in Weather Radars Caused by Windparks: Scattering Model for Weather Radar Signal Processing Madhukar Chandra (TU-chemnitz, Germany); Frank Gekat (Selex ES GmbH, Germany)</p>
<p>T10-5: Novel Antennas and Material Measurements Software Tools & Instruments Regular Session Antennas and Measurement Room: Room 3 Chairs: Professor Clive Parini (Queen Mary University of London, United Kingdom) and Olav</p>	

Breinbjerg (Technical University of Denmark, Denmark)

09:00

T10-5.1

Detailed Design and RF Analysis of a Scatterometer for Material Characterization in the 50-750 GHz Range

Cecilia Cappellin and Per Nielsen (TICRA, Denmark); Roger Appleby (Roger Appleby MMW Consulting Ltd & InnovaSec Ltd, United Kingdom); Richard Wylde (St Andrews University, United Kingdom); Elena Saenz (European Space Agency, The Netherlands)

09:20

T10-5.2

Compensation of Radome Effects in Small Airborne Monopulse Arrays by Convex Optimization

Henrik Frid and Lars Jonsson (KTH Royal Institute of Technology, Sweden)

09:40

T10-5.3

Substrate Integrated Waveguide Groove Sensor Antenna for Permittivity Measurements

Hossein Saghlatoon, Mohammad Mahdi Honari, Rashid Mirzavand and Pedram Mousavi (University of Alberta, Canada)

10:00

T10-5.4

Efficient Uncertainty Evaluation of Vector Network Analyser Measurements Using Two-Tier Bayesian Analysis and Monte Carlo Method

Min Wang (National Physical Laboratory, United Kingdom and Nanjing University of Aeronautics and Astronautics, P.R. China); Tian Hong Loh (National Physical Laboratory, United Kingdom); Yongjiu Zhao, Qian Xu and Yonggang Zhou (Nanjing University of Aeronautics and Astronautics, P.R. China)

10:20

T10-5.5

Planar Sensors for Dielectric and Magnetic Materials Measurement: A Quantitative Sensitivity Comparison

L. A. Bronckers, M. J. R. A. van Rossum and A. B. Smolders (Eindhoven University of Technology, The Netherlands)

CS26: Reconfigurable Antennas and Arrays

Future applications | Convened Session | Antennas

Room: Room 2

Chairs: Professor Xun Gong (University of Central Florida, USA) and Professor Steven Gao (University of Kent, United Kingdom)

09:00

CS26.1

Wideband Polarization-Reconfigurable Antenna Based on Tightly Coupled Array Mechanism

Ying Liu, Liu Hu and Shuxi Gong (Xidian University, P.R. China)

09:20

CS26.2

Reconfigurable Half-Mode Substrate-Integrated Cavity Antenna Arrays

Nghia Nguyen-Trong (The University of Queensland, Australia); Christophe Fumeaux (The University of Adelaide, Australia)

09:40	<p>CS26.3 Frequency-Reconfigurable Pattern-Steerable Antenna Using Active Frequency Selective Surface Chao Gu, Steven Gao, Benito Sanz-Izquierdo and Edward Parker (University of Kent, United Kingdom); Geyi Wen (Nanjinh University, P.R.China); Zhiqun Cheng (Hangzhou Dianzi Universtiy, P.R.China)</p>
10:00	<p>CS26.4 28 GHz 5G Dual-Polarized End-fire Antenna with Electrically-Small Profile Junho Park and Wonbin Hong (Pohang University of Science & Technology, Korea); Dooseok Choi (Samsung Electronics, South Korea)</p>
10:20	<p>CS26.5 Gain Enhancement of Reconfigurable Conformal Antenna Array Ziheng Ding, Weile Yuan, Yifeng Chen, Ronghong Jin, Junping Geng and Xianling Liang (Shanghai Jiao Tong University, P.R. China)</p>
<p>CS33: Dielectric Properties of Biological Tissues: Achieving Accurate Data as the Basis for Novel Medical Device Development Biomedical Convened Session Measurement Room: Room1 Chairs: Dr Emily Porter (National University of Ireland, Ireland) and Dr Lourdes Farrugia (University of Malta, Malta)</p>	
09:00	<p>CS33.1 Breast Tumor Tissues Classification Using the Modified Cole-Cole Parameters with Machine Learning Technique Hang Song, Hikaru Sato, Tetsushi Koide and Takamaro Kikkawa (Hiroshima University, Japan); Koji Arihiro, Morihito Okada and Takayuki Kadoya (Hiroshima University Hospital, Japan)</p>
09:20	<p>CS33.2 Minimum Reporting Requirements for Dielectric Property Measurements of Biological Tissues Emily Porter, Alessandra La Gioia, Saqib Salahuddin, Atif Shahzad, Muhammad Adnan Elahi and Martin O'Halloran (National University of Ireland, Ireland)</p>
09:40	<p>CS33.3 Dielectric Properties of Biological Tissues: Achieving Accurate Data as the Basis for Novel Medical Device Development Andrew P Gregory (National Physical Laboratory, United Kingdom)</p>
10:00	<p>CS33.4 Dielectric Methodologies of Coaxial Sensors for Measurement of Biological Tissues Up to 100 GHz Kensuke Sasaki and Soichi Watanabe (NICT,Japan); Atsuhiko Nishikata (Tokyo Institute of Technology, Japan); Osamu Fujiwara (Nagoya Institute of Technology, Japan)</p>

10:20	<p>CS33.5 Quality Factor for the Measurement of Dielectric Properties of Biological Tissues Vanni Lopresto and Rosanna Pinto (ENEA, Italy); Laura Farina and Marta Cavagnaro (Sapienza University of Rome, Italy); Giuseppe Ruvio (National University of Ireland, Ireland); Luca Vannucci (Institute of Microbiology, Czech Academy of Sciences, Czech Republic)</p>
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Thursday 12 April 2018 11:10 – 12:50

<p>CS23: OTA Characterization of Antennas and Wireless Devices Cellular Networks & 5G Convened Session Measurement Room: Room 7 Chairs: Dr Andrés Alayón Glazunov (Chalmers University of Technology, Sweden) and Dr Maria Becker (NIST, USA)</p>	
11:10	<p>CS23.6 Emulating Dynamic Radio Channels for Radiated Testing of Massive MIMO Devices Pekka Kyösti (Keysight Technologies and University of Oulu, Finland); Lassi Hentila and Jukka Kyröläinen (Keysight Technologies Finland, Finland); Fengchun Zhang and Wei Fan (Aalborg University, Denmark); Matti Latva-aho (University of Oulu, Finland)</p>
11:30	<p>CS23.7 Massive MIMO Array Testing Using a Programmable Phase Matrix and Channel Emulator Doug Reed, Alfonso Rodriguez-Herrera and Jukka-Pekka Nuutinen (Spirent Communications, USA)</p>
11:50	<p>CS23.8 EIRP of User Equipment with Beam Forming Capabilities at 28 GHz Kun Zhao (KTH Royal Institute of Technology and Sony Mobile Communication AB, Sweden); Thomas Bolin, Olof Zander and Zhinong Ying (Sony Mobile Communications AB, Sweden)</p>
12:10	<p>CS23.9 Performance Testing of Massive MIMO Base Station with Multi-Probe Anechoic Chamber Setups Fengchun Zhang, Wei Fan, Yilin Ji and Gert Pedersen (Aalborg University, Denmark); Mattias Gustafsson, Tommi Jamsa and Gerhard Steinbock (Huawei Technologies Sweden AB, Sweden); Pekka Kyösti (Keysight Technologies and University of Oulu, Finland)</p>

12:30	<p>CS23.10 On Modeling OTA Channel Emulation Systems Mario Lorenz, Giovanni Del Galdo and Wim A. Th. Kotterman (Technische Universität Ilmenau, Germany)</p>
<p>CS39: Channel Modelling in Railway Environments Towards 5G Applications Cellular Networks & 5G Convened Session Propagation Room: Room 12 Chairs: Dr Juan Moreno García-Loygorri and Professor Cesar Briso (Technical University of Madrid, Spain)</p>	
11:10	<p>CS39.6 Spatial Mode Approaches to Enhancing Transport Communications Capacities Timothy Drysdale (The Open University, United Kingdom); Ben Allen and Justin P Coon (University of Oxford, United Kingdom)</p>
11:30	<p>CS39.7 Angular Spread Characteristics in High-speed Railway Scenarios in Millimeter-Wave Band Xue Lin, Bo Ai, Danping He, Ke Guan and Zhangdui Zhong (Beijing Jiaotong University and Beijing Engineering Research Center of High-speed Railway Broadband Mobile Communications, P.R.China); Chen Zhao (Beijing Jiaotong University, P.R.China)</p>
11:50	<p>CS39.8 Stochastic Channel Modeling for High-Speed Railway Viaduct Scenario at 93.2 GHz Longhe Wang, Bo Ai, Ke Guan, Danping He and Zhangdui Zhong (Beijing Jiaotong University and State Key Lab of Rail Traffic Control and Safety, P.R.China); Li Tian and Jianwu Dou (ZTE Corporation, P.R.China)</p>
12:10	<p>CS39.9 Radio-wave Penetration Modelling Through Composite Train Bodies and Heat-Absorbing Glazing Divitha Seetharamdoo, Charbel Amoussou and Yann Cocheril (IFSTTAR, France); Hassan Ghannoum (SNCF, France)</p>
12:30	<p>CS39.10 Analysis and Measurement of Penetration Loss for Train Wagons with Coated Vs Uncoated Windows Nima Jamaly, Damiano Scanferla, Carine Genoud and Hugo Lehmann (Swisscom, Switzerland)</p>
<p>T11-7: Novel Manufacturing Techniques For Antennas And Microwave Devices Future Applications Regular Session Antennas Room: Room 17 Chairs: Hans-Dieter Lang (HSR Hochschule für Technik Rapperswil, Switzerland) and Dr Makoto Nagai (National Astronomical Observatory of Japan, Japan)</p>	

11:10	<p>T11-7.1 Investigation of the Influence of Build Orientation on the Surface Roughness of the 3D Metal Printed Horn Antenna Deepak Shamvedi and Paul O'Leary (Waterford Institute of Technology, Ireland); Cyril Danilenkoff and Ramesh Raghavendra (Waterford Institute of Technology, Ireland and SEAM Research Centre, Ireland)</p>
11:30	<p>T11-7.2 Progress in 3D Metal Printed Microwave Components - An Overview Deepak Shamvedi and Paul O'Leary (Waterford Institute of Technology, Ireland); Oliver McCarthy, Eoghan O' Donoghue and Ramesh Raghavendra (Waterford Institute of Technology, Ireland and SEAM, Ireland)</p>
11:50	<p>T11-7.3 Silver Metallization of 77 GHz 3D Printed Horn Antennas Koen Staelens, Arnaud Jammes and Edouard des Gayets (Jet Metal Technologies, France); Reinhard Feger, Thomas Lampersberger and Andreas Stelzer (Johannes Kepler University Linz, Austria)</p>
12:10	<p>T11-7.4 A 3-D Printed Compact Dual-Polarized Monopulse Feed-Horn Array Guan-Long Huang and Tao Yuan (Shenzhen University, P.R. China); Chow-Yen-Desmond Sim (Feng Chia University, Taiwan)</p>
12:30	<p>T11-7.5 Compact 3D-printed Variable-infill Antenna for Snow Cover Monitoring Pedro Fidel Espin Lopez and Marco Pasian (University of Pavia, Italy)</p>
<p>T06-9: Emerging Technologies for Radar Systems -2 Radar Systems Regular Session Antennas Room: Room 16 Chairs: Professor Hao Xin (The University of Arizona, USA) and Professor Il-Suek Koh (INHA University, Korea)</p>	
11:10	<p>T06-9.1 Accuracy Test of Iterative Physical Optics for Analyzing Scattering by Nonperfectly Conducting Bodies Using Impedance Boundary Jae-Won Rim and Il-Suek Koh (INHA University, Korea)</p>
11:30	<p>T06-9.2 Large Conformal Array Diagnostics by Fast Matrix Method Giuseppe Di Massa and Sandra Costanzo (University of Calabria, Italy)</p>

11:50	<p>T06-9.3 Mitigating Internal Resonances of the Magnetic-Field Integral Equation via Double-Layer Modeling Sadri Guler, Hande Ibili and Ozgur Ergul (Middle East Technical University, Turkey)</p>
12:10	<p>T06-9.4 Multistatic Radar for Continuous Wind Turbine Blades Inspection: Results from a Field Study Jochen Moll, Moritz Mälzer, Jonas Simon and Viktor Krozer (Goethe University Frankfurt, Germany); Dmitry Pozdniakov and Rahmi Salman (HF Systems Engineering GmbH and Co. KG, Germany); Manfred Dürr (Volta Windkraft GmbH, Germany); Michael Feulner, Herbert Friedmann, Andreas Nuber and Christian Kramer (Wölfel Engineering GmbH and Co. KG, Germany)</p>
12:30	<p>T06-9.5 A Statistical Model for Assessing the Effect of Position Error of Antenna Elements on Array RCS Shuai Yuan and Congsi Wang (Xidian University, P.R. China); Wei Gao (The University of New South Wales, Australia); Zhihai Wang (CETC No 38 Research Institute, P.R. China); Baofu Tang (Nanjing Research Institute of Electronics Technology, P.R. China); Shaoxi Wang (Northwestern Polytechnical University, P.R. China)</p>
<p>CS45: COST CA15104 (IRACON) Session on Frequency Dependency Modelling of Radio Channels Ultra-High Data Rate Communications Convened Session Propagation Room: Room 14 Chairs: Professor Sana Salous (Durham University, United Kingdom) and Professor Katsuyuki Haneda (Aalto University, Finland)</p>	
11:10	<p>CS45.1 Frequency Dependency Analysis of SHF Band Directional Propagation Channel in Indoor Environment Kentaro Saito, Panawit Hanpinitsak and Jun-ichi Takada (Tokyo Institute of Technology, Japan); Wei Fan and Gert Pedersen (Aalborg University, Denmark)</p>
11:30	<p>CS45.2 Characterization of sub-THz and mmWave Propagation Channel for Indoor Scenarios Raffaele D'Errico and Laura Pometcu (Minatec University, France)</p>
11:50	<p>CS45.3 Antenna Aperture Impact on Channel Delay Spread in an Urban Outdoor Scenario at 17 and 60 GHz Cheikh Diakhate (Université Paris-Saclay and Orange Labs, France); Jean-Marc Conrat (Orange Labs, France); Jean Christophe Cousin and Alain Sibille (Université Paris-Saclay, France)</p>
12:10	<p>CS45.4 On the Frequency Dependency of Radio Channel's Delay Spread: Analyses and Findings from mMAGIC Multi-frequency Channel Sounding Sinh Nguyen, Aki Karttunen and Katsuyuki Haneda (Aalto University, Finland); Jonas Medbo (Ericsson Research, Sweden); Michael Peter (Fraunhofer HHI, Germany); Aliou Bamba and Raffaele D'Errico (Minatec, University, France); Naveed Iqbal (Huawei Technologies, Germany); Cheikh Diakhate and Jean-Marc Conrat (Orange Labs, France)</p>

12:30	<p>CS45.5 Building Entry Loss for Traditional and Thermally Efficient Houses Between 0.4 and 73 GHz Sana Salous, Xavier Raimundo, Jack Towers and Adnan Cheema (Durham University, United Kingdom)</p>
<p>CS32: Antenna for IoT Applications Connected Objects Convened Session Antennas Room: Room 13 Chairs: Dr Yue Gao (Queen Mary University of London, United Kingdom) and Dr Fabien Ferrero (University Nice Sophia Antipolis, France)</p>	
11:10	<p>CS32.6 Embedded Antenna Design on LoRa Radio for IoT Applications Qianyun Zhang and Yue Gao (Queen Mary University of London, United Kingdom)</p>
11:30	<p>CS32.7 Investigation of Antenna on Glass for Telematics Applications Narimane Mislmani, Georgette Mrad and Remi Sarkis (Université Antonine, Lebanon)</p>
11:50	<p>CS32.8 Low-Cost Transfer Printing of Antennas for Smart Textiles Jonathan Atkinson, Yushi Cao, George Shaker and Irene Goldthorpe (University of Waterloo, Canada)</p>
12:10	<p>CS32.9 Design Guidelines for Printable Magnetic Shielding Films for NFC Tags on Metal Badredin M Turki and John Batchelor (University of Kent, United Kingdom)</p>
12:30	<p>CS32.10 Spatially Efficient Chipless RFID Tag Screen-printed on Flexible Substrate Sika Shrestha, Ramprakash Yerramilli and Nemai Karmakar (MONASH University, Australia)</p>
<p>CS24: Advances in Modelling Design and Implementation of Reflectarrays and Periodic Structures Space Applications Convened Session Antennas Room: Room 6 Chairs: Professor Manuel Arrebola (Universidad de Oviedo, Spain) and George Goussetis (Heriot-Watt University, United Kingdom)</p>	

11:10	<p>CS24.6 Reflectarray Synthesis on GPUs Amedeo Capozzoli, Claudio Curcio and Angelo Liseno (Università di Napoli Federico II, Italy)</p>
11:30	<p>CS24.7 Bifocal Technique Applied to Dual Transmitarray Antennas Eduardo Martinez-de-Rioja and Jose A. Encinar (Universidad Politecnica de Madrid, Spain); Antonio Pino and Borja Gonzalez-Valdes (University of Vigo, Spain); Sean V Hum (University of Toronto, Canada); Carolina Tienda (Airbus Defence and Space, United Kingdom); Giovanni Toso (European Space Agency, The Netherlands)</p>
11:50	<p>CS24.8 Design of High-Performance Antenna Systems with Quasi-Periodic Surfaces Min Zhou, Erik Jørgensen, Niels Vesterdal, Oscar Borries, Stig Sørensen and Peter Meincke (TICRA, Denmark); Massimiliano Simeoni and Giovanni Toso (European Space Agency, The Netherlands)</p>
12:10	<p>CS24.9 Experimental Evaluation of a High Gain Dual-Band Beam Steerable Transmit-Array Sergio Matos (Instituto Universitário de Lisboa, Portugal); Eduardo B. Lima and Carlos A. Fernandes (Instituto de Telecomunicações, Portugal); Jorge R. Costa (Instituto de Telecomunicações and ISCTE-IUL, Portugal); Nelson Fonseca (European Space Agency, The Netherlands)</p>
12:30	<p>CS24.10 Single Polarization Reflectarray Design Based on an Element with Seven Parallel Dipoles to Generate Independent Beams in Three Frequency Bands Rafael Florencio, Gerardo Perez-Palomino, Jose A. Encinar (Universidad Politecnica de Madrid, Spain); Rafael R. Boix (University of Seville, Spain)</p>
<p>CS31: Antenna Design and Signal Processing for High Sensitivity Astronomical Receivers Space Applications Convened Session Antennas Room: Room 4 Chairs: Professor Karl F. Warnick (Brigham Young University, USA) and Eloy de Lera Acedo (Cambridge University, United Kingdom)</p>	
11:10	<p>CS31.1 Exploring the Next Generation of Array Receivers and Signal Processing Systems for Radio Astronomy Grant Hampson, John Bunton, Andrew Brown, John Tuthill and Ron Beresford (CSIRO, Australia); Jan Geralt Bij de Vaate and Gijs Schoonderbeek (ASTRON, The Netherlands)</p>
11:30	<p>CS31.2 Commissioning Observations with the Focal L-band Array on the Green Bank Telescope (FLAG) Karl Warnick, M Ruzindana, B Jeffs, R Black and M Burnett (Brigham Young University, USA); E Pisano, D Lorimer, N Pingel and K Rajwade (West Virginia University, USA); R Prestage, S White, B Simon and L Hawkins (Green Bank Observatory, USA); W Shillue and D Roshi (National Radio Astronomy Observatory CDL, USA)</p>

11:50	<p>CS31.3 Efficient Analysis of a 3D Antenna Installed on a Finite Ground Plane Jean Cavillot, Ha Bui Van and Christophe Craeye (Université Catholique de Louvain & ICTEAM, Belgium); Hardie Pienaar and Eloy de Lera Acedo (University of Cambridge, United Kingdom)</p>
12:10	<p>CS31.4 A Large Phased Array Feed with CMOS Low-Noise Amplifiers Tom Burgess and Bruce Veidt (NRC Herzberg, Canada); Leonid Belostotski, Aaron Beaulieu, Eugene Zailer and James Haslett (University of Calgary, Canada)</p>
12:30	<p>CS31.5 Differential Phase Patterns of the LOFAR LBA Array Measured in Situ Fabio Paonessa, Giuseppe Virone and Stefania Matteoli (Consiglio Nazionale delle Ricerche, Italy); Pietro Bolli (Osservatorio Astrofisico di Arcetri, Italy); Giuseppe Pupillo (INAF IRA, Italy); Stefan J. Wijnholds (ASTRON, The Netherlands)</p>

<p>CS28: AMTA Session on Post Processing Techniques in Antenna Measurements Software Tools & Instruments Convened Session Measurement Room: Room 3 Chairs: Dr Sergiy Pivnenko (Antenna Systems Solutions, Spain) and Jeff Guerrieri (National Institute of Standards and Technology, USA)</p>	
11:10	<p>CS28.1 Accurate Determination of Radiation Patterns from Near-Field Measurements in Highly Reflective Environments Josef Knapp and Thomas F. Eibert (Technische Universität München, Germany)</p>
11:30	<p>CS28.2 A SVD Approach to Compensate Probe Positioning Errors in a Non-Conventional Plane-Rectangular Near-to-Far-Field Transformation Francesco D'Agostino, Flaminio Ferrara, Claudio Gennarelli, Rocco Guerriero and Massimo Migliozi (University of Salerno, Italy)</p>
11:50	<p>CS28.3 Full Probe Corrected Spherical near Field Measurement Technique Using Standard Wideband Antennas as Probes Francesco Saccardi, Andrea Giacomini and Lars Foged (Microwave Vision Italy, Italy); Luca Tancioni (ORBIT/FR Europe GmbH, Germany)</p>
12:10	<p>CS28.4 Evaluation of an Unmanned Aerial System for Antenna Diagnostics and Characterization María García Fernández, Yuri Álvarez and Fernando Las-Heras (Universidad de Oviedo, Spain)</p>

12:30	<p>CS28.5 Optimized near Field with an Optimized Controller Amedeo Capozzoli, Laura Celentano, Claudio Curcio, Angelo Liseno and Salvatore Savarese (Università di Napoli Federico II, Italy)</p>
<p>CS26: Reconfigurable Antennas and Arrays Future Applications Convened Session Antennas Room: Room 2 Chairs: Professor Xun Gong (University of Central Florida, USA) and Professor Steven Gao (University of Kent, United Kingdom)</p>	
11:10	<p>CS26.6 A Reconfigurable S/C-band Antenna Array with Full-Band Coverage and Dual Polarization Mahmoud Shirazi, Junyi Huang and Xun Gong (University of Central Florida, USA)</p>
11:30	<p>CS26.7 Evaluation of a Wideband Pattern-Reconfigurable Multiple Antenna System for Vehicular Applications Jerzy Kowalewski, Jonathan Mayer, Tobias Mahler and Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)</p>
11:50	<p>CS26.8 Reconfigurable Reflectarrays and Transmitarrays: From Antenna Designs to System Applications Fan Yang, Shenheng Xu, Xiaotian Pan, Xue Yang, Jun Luo, Min Wang, Yu Wang and Maokun Li (Tsinghua University, P.R. China)</p>
12:10	<p>CS26.9 5G Reconfigurable Antennas Qiang Bai, Lanxin Li, Sajid Asif, Ravinder Singh, Kenneth Lee Ford, Richard Langley and Timothy O'Farrell (University of Sheffield, United Kingdom)</p>
12:30	<p>CS26.10 Impact of Deficient Array Antenna Elements on Downlink Massive MIMO Performance in RIMP and Random-LOS Channels Andrés Alayon Glazunov (Chalmers University of Technology, Sweden)</p>
<p>CS33: Dielectric Properties of Biological Tissues: Achieving Accurate Data as the Basis for Novel Medical Device Development Biomedical Convened Session Measurement Room: Room1 Chairs: Dr Emily Porter (National University of Ireland, Ireland) and Dr Lourdes Farrugia (University of Malta, Malta)</p>	

11:10	<p>CS33.6 Effect of Network Analyzer Trace Noise on Dielectric Measurements with an Open-ended Coaxial Probe Mykolas Ragulskis, Manuel Kasper, Ferry Kienberger and Ivan Alic (Keysight Technologies, Austria); Alessandra La Gioia, Emily Porter and Martin O'Halloran (National University of Ireland, Ireland)</p>
11:30	<p>CS33.7 Advances in Multi-Target FOCO for Hyperthermia Treatment Planning: A Robustness Assessment Gennaro G. Bellizzi and Tommaso Isernia (Mediterranea University of Reggio Calabria and IREA - National Research Council, Italy); Tomas Drizdal, Gerard C. van Rhooen and Margarethus M. Paulides (Erasmus University Medical Center, The Netherlands); Lorenzo Crocco (CNR - National Research Council of Italy, Italy)</p>
11:50	<p>CS33.8 Dielectric Properties of Breast Tissues: Experimental Results Up to 50 GHz Simona Di Meo, Pedro Fidel Espin Lopez, Andrea Martellosio, Marco Pasian, Maurizio Bozzi, Luca Perregrini, Andrea Mazzanti and Francesco Svelto (University of Pavia, Italy); Paul Summers, Giuseppe Renne and Massimo Bellomi (European Institute of Oncology, Italy); Lorenzo Preda (University of Pavia, Italy)</p>
12:10	<p>CS33.9 Feasibility of Microwave Dielectric Sensing to Monitor Potassium Concentration in Blood Lijo Thomas, Martin O'Halloran, Atif Shahzad and Muhammad Adnan Elahi (National University of Ireland, Ireland)</p>
12:30	<p>CS33.10 Self-calibration Algorithms for Microwave Hyperthermia Antenna Arrays Massimiliano Zanolli, Mikael Persson and Hana Dobšiček Trefná (Chalmers University of Technology, Sweden)</p>

Thursday 12 April 2018 15:00 – 16:00

Invited Speakers Session

Room: Room 7

Chairs: Raj Mittra (University of Central Florida in Orlando, USA) and Professor Zhi Ning Chen (NUS, Singapore)

15:00	<p>Optimising RF Instrumentation for Challenging Measurements Steve Nichols, NSI-MI Technologies, United Kingdom</p>
15:30	<p>Efficient and Accurate Analysis of Real-Life Multi-Scale Antenna Problems via Integral Equations Professor Francesca Vipiana, Politecnico di Torino, Italy</p>

Invited Speakers Session

Room: Room 12

Chairs: Rob Lewis (BAE Systems, United Kingdom) and Professor Hisamatsu Nakano (Hosei University, Japan)

15:00 **Recent Advances in the Comprehension of Mutual Coupling in Antenna Arrays**

Professor Trevor Bird, CSIRO (retired), Australia

15:30 **RF-DC Conversion Efficiency of a Rectenna - Rectifying Antenna**

Professor Naoki Shinohara, University of Kyoto, Japan

Thursday 12 April 2018 16:30 – 18:10

T01 - 7: Radio Propagation Channel - 3

Cellular Networks & 5G | Regular Session | Propagation

Room: Room 7

Chairs: Dr Jonas Medbo (Ericsson, Sweden) and Professor Reiner S. Thomä (Technische Universität Ilmenau, Germany)

16:30 **T01-7.1**
Estimation and Characterization of Multipath Clusters in Urban Scenarios
Christian Schneider, Jonas Gedschold, Martin Käske, Reiner S. Thomä and Giovanni Del Galdo (Technische Universität Ilmenau, Germany)

16:50 **T01-7.2**
Location Variability Statistics Based on Mobile Measurements Below 6 GHz
Clare Allen, Frances Riddoch and Afzal Lodhi (Ofcom, United Kingdom)

17:10 **T01-7.3**
Elevation Angle Dependence of Building Entry Loss
Satyam Dwivedi, Jonas Medbo and Dennis Sundman (Ericsson, Sweden)

17:30 **T01-7.4**
Spatial Correlation of C-V2X Antennas Measured in the Virtual Road Simulation and Test Area
Philipp Berlt, Frank Wollenschläger, Christian Bornkessel and Matthias Hein (Ilmenau University of Technology, Germany)

17:50	<p>T01-7.5 Centimeter-Wave Path Loss and Beam Combining Gain Analysis for Belo Horizonte and Manaus Environments in Brazil Glaucio L. Ramos and Mateus H. B. Rezende (GAPEA and UFSJ/CEFET-MG, Brazil); Paulo Tibúrcio Pereira (GAPEA); Robson Domingos Vieira (Ektrum, Brazil); Alexandre Figueiredo Loureiro (IESB, Brazil); Cássio Rego (Federal University of Minas Gerais, Brazil)</p>
<p>T01-4: MM-wave Propagation and Measurements Cellular Networks & 5G Regular Session Propagation Room: Room 12 Chairs: Dr Pavel Valtr (Czech Technical University in Prague, Czech Republic) and Dr Mohsen Khalily (University of Surrey, United Kingdom)</p>	
16:30	<p>T01-4.1 Path Loss Measurements and Models at 28 GHz for 90% Indoor Coverage Dmitry Chizhik, Jinfeng Du and Reinaldo Valenzuela (Nokia Bell Labs, USA); Guillermo Castro and Mauricio Rodríguez (Pontificia Universidad Católica de Valparaíso, Chile); Rodolfo Feick (Universidad Técnica Federico Santa María, Chile)</p>
16:50	<p>T01-4.2 Millimeter-Wave Directional Path Loss Models in the 26 GHz, 32 GHz, and 39 GHz Bands for Small Cell 5G Cellular System Mohsen Khalily, Mir Ghoraishi, Sohail Taheri, Sohail Payami and Rahim Tafazolli (University of Surrey, United Kingdom)</p>
17:10	<p>T01-4.3 Comparison of Measured and Theoretically Predicted Rain Attenuation at 32 GHz and 38 GHz Pavel Valtr, Martin Fencel, Vojtech Bares and Pavel Pechac (Czech Technical University in Prague, Czech Republic)</p>
17:30	<p>T01-4.4 EM Wave Propagation Experiment at E Band and D Band for 5G Wireless Systems: Preliminary Results Lorenzo Luini and Carlo Riva (Politecnico di Milano, Italy); Giuseppe Roveda, Maurizio Zaffaroni and Mario Costa (Huawei Microwave Centre, Italy)</p>
17:50	<p>T01-4.5 Indoor Millimetre Wave Channel Measurements for 5G Wireless Systems Andrew C M Austin, Michael J Neve and Damla Guven (The University of Auckland, New Zealand)</p>
<p>T11-8: Novel Antenna Design Techniques Future Applications Regular Session Antennas Room: Room 17 Chairs: T Chaoyun Song (University of Liverpool, United Kingdom) and Ahmed Ashoor (University of Waterloo, Canada)</p>	

16:30	<p>T11-8.1 Analysis of Large Complex Metasurfaces Antennas with the Fast Synthetic Approach Francesco Vernì (Polytechnic University of Turin and Istituto Superiore Mario Boella, Italy); Marco Righero (Istituto Superiore Mario Boella, Italy); Giuseppe Vecchi (Politecnico di Torino, Italy)</p>
16:50	<p>T11-8.2 A High-Gain Shared-Aperture Dual-Band OAM Antenna with Parabolic Reflector Fan Qin, Jianjia Yi, Wenchi Cheng, Yi Liu and Hailin Zhang (Xidian University, P.R. China); Steven Gao (University of Kent, United Kingdom)</p>
17:10	<p>T11-8.3 Semidefinite Relaxation-Based Optimization of Yagi-Uda Array Antennas Hans-Dieter Lang and Costas D Sarris (University of Toronto, Canada)</p>
17:30	<p>T11-8.4 Antenna Effective Area for Spherical Waves Makoto Nagai (National Astronomical Observatory of Japan, Japan); Hiroaki Imada (Japan Aerospace Exploration Agency, Japan)</p>
17:50	<p>T11-8.5 Miniaturization of Circularly Polarized Ring Slot Antenna Etched on Finite Ground Plane Using Characteristic Modes Arka Bhattacharyya and Bhaskar Gupta (Jadavpur University, India)</p>
<p>T06-10: Millimeter Wave Antennas for Radar Systems Radar Systems Regular Session Antennas Propagation Room: Room 16 Chairs: Professor Costas Constantinou (University of Birmingham, United Kingdom) and Professor Il-Suek Koh (INHA University, Korea)</p>	
16:30	<p>T06-10.1 Hybrid Thin Film Multilayer Antenna for Automotive Radar at 77 GHz Osama Khan, Johannes Meyer, Klaus Baur and Saeed Arafat (Robert Bosch GmbH, Germany); Christian Waldschmidt (University of Ulm, Germany)</p>
16:50	<p>T06-10.2 Design of Filter-Horn Antenna Based on Groove Gap Waveguide Technology for V-Band Application Homayoon Oraizi, Amrollah Amini and Mahsa Hamedani (Iran University of Science and Technology, Iran); Davoud Zarifi (University of Kashan, Iran)</p>

17:10	<p>T06-10.3 Monopulse RLSA Antenna Based on a Gap Waveguide Butler Matrix with a Feeding Cavity at 94 GHz Adrián Tamayo-Domínguez, Yasar Kurdi, José-Manuel Fernández-González and Manuel Sierra-Castañer (Universidad Politécnica de Madrid, Spain)</p>
17:30	<p>T06-10.4 A Complex Low-RCS Antenna System for the Placement of mm-Wave Automotive Radars Behind Car Bumpers Claudia Vasanelli, Frank Bögelsack and Christian Waldschmidt (Ulm University, Germany)</p>
17:50	<p>T06-10.5 Low-THz Transmission Through Liquid Contaminants on Antenna Radome Fatemeh Norouzian, Rui Du, Emidio Marchetti, Marina S. Gashinova, Edward Hoare, Costas Constantinou, Peter Gardner and Mikhail Cherniakov (University of Birmingham, United Kingdom)</p>
<p>T01-2: Mobile Base-Station Antennas Cellular Networks & 5G Regular Session Antennas Room: Room 14 Chairs: Ahmed Alieldin (University of Liverpool, United Kingdom) and Professor Yejun He (Shenzhen University, P.R. China)</p>	
16:30	<p>T01-2.1 Design of Dual-Band Dual-Polarized Swastika-Shaped Antenna for Mobile Communication Base Stations Ahmed Alieldin, Yi Huang and Manoj Stanley (University of Liverpool, United Kingdom)</p>
16:50	<p>T01-2.2 A Wideband Base Station Antenna with Reduced Beam Squint Haihan Sun, Can Ding and Y. Jay Guo (University of Technology, Australia)</p>
17:10	<p>T01-2.3 A General Design and Optimization Method of Tightly-Coupled Cross-Dipoles for Base Station Can Ding, Haihan Sun and Y. Jay Guo (University of Technology, Australia); Rick Ziolkowski (The University of Arizona, USA)</p>
17:30	<p>T01-2.4 Base Station Antenna Array with Calibration Structure Jaakko Haarla, Anu Lehtovuori and Ville Viikari (Aalto University, Finland)</p>

17:50	<p>T01-2.5 A Compact Broadband Dual-Polarized Antenna Element for 2G/3G/4G Base Station Applications Yejun He, Wei Tian, Jian Qiao and Long Zhang (Shenzhen University, P.R. China)</p>
<p>T04-4 Design and Modelling for Wireless Connectivity Connected Objects Regular Session Propagation Room: Room 13 Chairs: Zhi Ning Chen (NUS, Singapore) and Dr Philipp Gentner (Kathrein-Werke, Germany)</p>	
16:30	<p>T04-4.1 Design and Optimization of A Two-Element Huygens Source Based Superdirective Array Alexandre Debar, Antonio Clemente and Christophe Delaveaud (University of Grenoble Alpes and CEA-LETI, France); Christopher Djoma, Patrick Potier and Pouliguen Philippe (DGA, France)</p>
16:50	<p>T04-4.2 Simulation Model for Chassis Antenna Cavities Made from Carbon Fiber Reinforced Polymer Gerald Artner, Robert Langwieser and Christoph F Mecklenbräuer (Vienna University of Technology, Austria) Philipp Gentner (Kathrein-Werke, Germany);</p>
17:10	<p>T04-4.3 Array-Antenna Decoupling Surface for A Circularly-Polarized Circular Array Ke-Li Wu and Zhen-Yuan Zhang (The Chinese University of Hong Kong, Hong Kong); Weixing Sheng (Nanjing University of Science and Technology, P.R. China)</p>
17:30	<p>T04-4.4 3D Coupled Resonators for Enhanced Filter Design Andrea I Vallecchi, Christopher Stevens and Ekaterina Shamonina (University of Oxford, United Kingdom)</p>
17:50	<p>T04-4.5 Novel Implementation for a Broadband Cavity-Backed Slot Fed in Transmission Configuration Alberto Hernández-Escobar, Elena Abdo-Sánchez and Carlos Camacho-Peñalosa (University of Málaga, Spain)</p>
<p>CS18:New Optimization and Realization of UWB Feed Technologies for Future Radio Telescopes Space Applications Convened Session Antennas Room: Room 6 Chairs: Professor Jian Yang (Chalmers University, Sweden) and Professor Sander Weinreb (California Institute of Technology, USA)</p>	

16:30	<p>CS18.1 BRAND: Ultra-Wideband Feed Development for the European VLBI Network - A Dielectrically Loaded Decade Bandwidth Quad-Ridge Flared Horn Jonas Flygare, Miroslav Pantaleev and Simon Olvhammar (Chalmers University of Technology, Sweden)</p>
16:50	<p>CS18.2 Optimization of the Quad-Ridged Horn for the Geodetic VGOS Station of the Yebes Observatory Félix Tercero, Óscar García-Pérez, Jose Manuel Serna, Samuel López-Ruiz and Beatriz Vaquero (IGN Spain, Spain); Rocio Sanchez-Montero (University of Alcala, Spain)</p>
17:10	<p>CS18.3 Design of an Asymmetrical Quadruple-ridge Flared Horn Feed: A Solution to Eliminate Polarization Discrepancy in the Offset Reflecting Systems Bin Dong (National Astronomical Observatories, Chinese Academy of Sciences, P.R. China); Jian Yang (Chalmers University of Technology, Sweden); Miroslav Pantaleev, Jonas Flygare and Bhushan Billade (Onsala Space Observatory and Chalmers University of Technology, Sweden)</p>
17:30	<p>CS18.4 EMI Modelling of an 80 kHz to 80 MHz Wideband Antenna and Low-Noise Amplifier for Radio Astronomy in Space Albert Jan Boonstra, Mark Ruiter, David S Prinsloo, Hans van der Marel, Michel Arts, Gert Kruithof and Michael Wise (ASTRON, The Netherlands); Heino Falcke and Marc Klein-Wolt (Radboud University, The Netherlands); Hanna Rothkaehl (Space Research Centre - Polish Academy of Sciences, Poland); Baptiste Cecconi, Moustapha Dekkali and Jinsong Ping (NAOC, P.R. China)</p>
17:50	<p>CS18.5 Cryogenic 1.2 to 116 GHz Receiver for Large Arrays Sander Weinreb (California Institute of Technology, USA); Hamdi Mani (ASU, USA); Weiye Zhong (CAS, China); Jonas Flygare and Bushan Billade (Chalmers Universtiy, Sweden); Ahmed Akgiray (Ozyegin University, Turkey); Li Dong (CETC, P.R.China)</p>
<p>T09-7: Antennas and Devices for Space Applications Space Applications Regular Session Antennas Room: Room 4 Chairs: Dr Akram Alomainy (Queen Mary University of London, United Kingdom) and Dr Luca Salghetti Drioli (ESA, The Netherlands)</p>	
16:30	<p>T09-7.1 Directional Coupler with 3 Input / 3 Output Square Waveguide Dual-Polarization Ports Antonio Morini, Marco Baldelli and Giuseppe Venanzoni (Università Politecnica delle Marche, Italy); Piero Angeletti, Daniele Petrolati and Giovanni Toso (European Space Agency, The Netherlands)</p>
16:50	<p>T09-7.2 Wideband High-Gain Circularly-Polarised Antenna Based on Fabry-Perot Concept and a Conical Horn Yuehe Ge and Kaiyuan Qin (Huaqiao University, P.R. China)</p>

17:10	<p>T09-7.3 A Modular Phased Array Transceiver with RF-MEMS SPDT Switches in a 0.25 Um SiGe BiCMOS Technology Tobias Chaloun and Wolfgang Menzel (University of Ulm, Germany); Mehmet Kaynak and Selin Tolunay Wipf (IHP, Germany); Filipe Tabarani and Hermann Schumacher (University of Ulm, Germany)</p>
17:30	<p>T09-7.4 Focused Superconducting Connected Array for Wideband Sub-mm Spectrometers Alejandro Pascual Laguna and Jochem Baselmans (Delft University of Technology and SRON, The Netherlands); Daniele Cavallo, Nuria Llombart and Andrea Neto (Delft University of Technology, The Netherlands)</p>
17:50	<p>T09-7.5 Ka-band Multibeam Antenna Development for VHTS Raffaele Di Bari and Alaa Abunjaileh (Airbus, United Kingdom); Benoit Albert (Airbus, France)</p>
<p>CS09: Beamforming Techniques for Information and Power Transmission – a Joint COST IRACON and COST WiPE Session Future applications Convened Session Propagation Room: Room 2 Chairs: Professor Vittorio Degli Esposti and Jonathan Pinto (BAE Systems, United Kingdom)</p>	
16:30	<p>CS09.1 Two-Step Angle-of-Arrival Estimation for Terahertz Communications Based on Correlation of Power-Angular Spectra in Frequency Bile Peng, Ke Guan, Sebastian Rey and Thomas Kürner (Technische Universität Braunschweig, Germany)</p>
16:50	<p>CS09.2 A Multi-Carrier Frequency Diverse Array Design Method for Wireless Power Transmission A-Min Yao, Nicola Anselmi and Paolo Rocca (University of Trento, Italy)</p>
17:10	<p>CS09.3 Investigation of Effective Range of Focused Gaussian Beam Compared to Focused Uniform Beam in Fresnel Region Seishiro Kojima and Naoki Shinohara (Kyoto University, Japan)</p>
17:30	<p>CS09.4 Far- and Near-Field Focused WPT Using (Sub) Arrays Huib J. Visser (IMEC Netherlands, The Netherlands)</p>

17:50	<p>CS09.5 Influence of System Aspects in Propagation Based Evaluation of Beam-forming at mm-Waves Diego Dupleich, Eric Schäfer, Giovanni Del Galdo and Reiner S. Thomä (Ilmenau University of Technology, Germany)</p>
<p>T01-15: Cellular Communication Technologies Cellular Networks & 5G Regular Session Antennas Room: Room1 Chairs: Kenneth Tong (University College London, United Kingdom) and Professor Q. X. Chu (South China University of Technology, P.R. China)</p>	
16:30	<p>T01-15.1 Three-Stage Self-Interference Cancellation for Small Form Factor Realization of In-Band Full Duplex Chunqing Zhang, Leo Laughlin, Mark Beach, Kevin A Morris and John Haine (University of Bristol, United Kingdom)</p>
16:50	<p>T01-15.2 Enhancing the Bandwidth in Transmitarray Antennas Using Tapered Transmission Line Matching Approach Andrea Massaccesi and Paola Pirinoli (Politecnico di Torino, Italy)</p>
17:10	<p>T01-15.3 A Fully Planar Substrate Integrated Probe-Based Wideband Orthomode Transducer Uros Jankovic (University of Westminster, United Kingdom); Djurdj Budimir (University of Westminster, United Kingdom and University of Belgrade, Serbia)</p>
17:30	<p>T01-15.4 Directional Modulation Design Based on Crossed-Dipole Arrays for Two Signals with Orthogonal Polarizations Bo Zhang, Wei Liu and Xiang Lan (University of Sheffield, United Kingdom)</p>
17:50	<p>T01-15.5 2-Bit Reconfigurable Circularly-Polarized Unit-Cell at Ka-band Fatimata Diaby, Luca Di Palma, Antonio Clemente and Laurent Dussopt (Université Grenoble-Alpes and CEA, France); Trung Kien Pham and Ronan Sauleau (University of Rennes 1, France); Erwan Fourn (INSA of Rennes, France)</p>

Thursday 12 April 2018 13:30 – 15:00, P3 Posters

Room: Capital Hall

A: Antennas

M: Measurements

O: Other subjects

P: Propagation

S: Simulations

P3.1 (A-T01)

Multiband Antenna Operation with a Non-Resonant Element Using a Reconfigurable Matching Network

Jaume Anguera, Aurora Andújar and José Leiva (Fractus Antennas and Universitat Ramon Llull, Spain); Cor Schepens and Roberto Gaddi (Cavedish Kinetics Inc, The Netherlands); Sungtek Kahng (Incheon National University, Korea)

P3.2 (A-T01)

A Low Cost Wide Band and Circularly Polarized Modified Half E-shaped Patch Antenna for 5G Mobile Communications

Sotirios Goudos, Traianos Yioultsis, Krystalia Dalidou and Katherine Siakavara (Aristotle University of Thessaloniki, Greece)

P3.3 (A-T01)

Investigation of User Effects on Mobile Phased Antenna Array from 5 to 6 GHz

Carla Di Paola, Igor Syrytsin, Shuai Zhang and Gert Pedersen (Aalborg University, Denmark)

P3.5 (A-T01)

A Compact Low Cost High Isolation Substrate Integrated Waveguide Fed Slot Antenna Array at 28 GHz Employing Beamforming and Beam Scanning for 5G Applications

Jamal Nasir, Mutee Rehman and Wasif Khan (Lahore University of Management Sciences, Pakistan); Ali Hashmi (National Univeristy of Sciences and Technology, Pakistan)

P3.6 (A-T01)

3D-Printed mm-Wave Corrugated Plate Antenna for 5G Communications

Shaker Alkaraki, Yue Gao and Clive Parini (Queen Mary University Of London, United Kingdom)

P3.7 (A-T01)

Microstrip Patch Antenna Arrays with Fan-Shaped 90 and 45-Degree Wide Radiation Patterns for 28 GHz MIMO Applications

Sergey Churkin, Andrey Mozharovskiy, Alexey Artemenko and Roman Maslennikov (Radio Gigabit LLC, Russia)

P3.9 (A-T01)

A Compact Vivaldi Antenna Array for 5G Channel Sounding Applications

Naser Ojaroudi Parchin and Raed Abd-Alhameed (Univeristy of Bradford, United Kingdom)

P3.10 (A-T01)**Anomalous Leaky-Mode Dispersion of Coupled-Cavity Wideband Leaky-Wave Antennas**

Miguel Poveda García, Raúl Guzmán Quirós and Jose-Luis Gómez-Tornero (Technical University of Cartagena, Spain); Samuel Rotenberg, Carolina Mateo-Segura and George Goussetis (Heriot-Watt University, United Kingdom)

P3.11 (A-T01)**On the Use of Focal-Plane Arrays in mm-Wave 5G Base Stations**

Amr Elsakka, Thomas Bressner, Antonius Johannes van den Biggelaar, Ali Al-Rawi, Ulf Johannsen, Marianna Ivashina and A. B. Smolders (Eindhoven University of Technology, The Netherlands)

P3.12 (A-T01)**Dual Band Antenna for Portable Consumer Devices**

Shruti Joshi, Sanket Deshpande and Sudeep Baudha (Birla Institute of Technology and Science, India)

P3.13 (A-T01)**Empty Substrate Integrated Waveguide-Fed MMW Aperture-Coupled Patch Antenna for 5G Applications**

Zia Ullah Khan, Syeda Fizzah Jilani and Akram Alomainy (Queen Mary University of London, United Kingdom); Angel Belenguer (Universidad de Castilla-La Mancha, Spain); Tian Hong Loh (National Physical Laboratory, United Kingdom)

P3.14 (A-T01)**High Gain Dual-Band Millimeter Wave Antenna Using Flexible PET Substrate**

Ali Ghavidel (Iran National Elite Foundation (INEF) and Iran Telecommunication Research Center (ITRC), Iran); Ali Araghi (Iran Telecommunication Research Center (ITRC), Iran); Sami Myllymaki and Marko Sonkki (University of Oulu, Finland)

P3.15 (A-T01)**Transparent and Flexible Y-Shaped Antenna for 5G Wireless Applications**

Sahariar Rahman, Shahed Alam, Majedul Haque, Nazmu Siddique and Md Hasanuzzaman Sagor (BRAC University, Bangladesh)

P3.16 (A-T01)**Dual-Port Dual-Band (28 / 38 GHz) SIW Leaky Wave Antenna for 5G Base Stations**

Reza Yazdani Mianroodi and Hadi Aliakbarian (KN Toosi University of Technology, Iran); Guy Vandenbosch (Katholieke Universiteit Leuven, Belgium)

P3.17 (A-T01)**Multiband Pattern-Reconfigurable PIFA for 5G MIMO Mobile Terminals**

Surentiran Padmanathan, Azremi Abdullah Al-Hadi, Ping Jack Soh, Faizal Jamlos and Sharul Kamal Abdul Rahim (Universiti Malaysia Perlis, Malaysia)

P3.18 (A-T02)

Subarray Design of a Single-Layer Corporate-Fed Dielectric-Filled Waveguide Slot Array Antenna

Baoquan Duan and Miao Zhang (Xiamen University, P.R. China); Jiro Hirokawa (Tokyo Institute of Technology, Japan); Qing Huo Liu (Duke University, USA)

P3.19 (A-T02)

Design of A Wideband Array Antenna Prototype with Gap Waveguide for W-Band Wireless Links

Jinlin Liu, Ashraf Uz Zaman and Jian Yang (Chalmers University of Technology, Sweden)

P3.20 (A-T02)

Inverted Microstrip Gap Waveguide Dual-Band Filter Integrated with Slot Antenna

Luis Inclan-Sanchez (University Carlos III of Madrid, Spain)

P3.22 (A-T02)

Impulse Response with Correlation Study of a Broadband Bended Wearable Monopole Antenna

Sherif R. Zahran (Arab Academy for Science, Technology and Maritime Transport, Egypt); Mahmoud Abdelrahman Abdalla (MTC, Egypt); Djuradj Budimir (University of Westminster, United Kingdom)

P3.23 (A-T03)

A Circularly Polarized Reconfigurable Dielectric Resonator Antenna

Zhe Chen and Hang Wong (City University of Hong Kong, Hong Kong)

P3.25 (A-T03)

A Smart and Low-cost Enhanced Antenna System for Industrial Wireless Broadband Communication

Moh Chuan Tan (University of Glasgow and RFNet Technologies Pte Ltd, Singapore); Minghui Li, Gammer H Abbasi and Muhammad Imran (University of Glasgow, United Kingdom)

P3.26 (A-T03)

Miniaturization of Quad Port Helical Antenna for Wireless 5G Massive MIMO Application

Fayez Hyjazie and Halim Boutayeb (Huawei Technologies Co. Ltd., Canada)

P3.27 (A-T04)

Utilizing Everyday Metallic Structures as UHF RFID Antennas

Paul Taylor and John Batchelor (University of Kent, United Kingdom)

P3.28 (A-T04)

Cylindrical Beam Sweeping Antenna Using a New Active FSS Structure

Muamba Mukendi Leingthone, Nadir Hakem and Taieb Elkarkraoui (Université du Québec en Abitibi-Témiscamingue, Canada)

P3.30 (A-T04)

UHF RFID Tag Antenna Design for Challenging Environment Surfaces

Abubakar Sharif, Jun Ouyang and Rui Long (University of Electronic Science and Technology China, P.R. China); Hassan Tariq Tariq Chattha (Islamic University Madinah, Saudi Arabia)

P3.31 (A-T05)

Microwave-based Non-invasive Blood Glucose Levels Monitoring Using Flexible UWB Antennas

Fengzhou Wang (University of Edinburgh, United Kingdom)

P3.32 (A-T05)

Calculating Physical Bounds for In-body Antennas

Casimir Ehrenborg and Mats Gustafsson (Lund University, Sweden)

P3.33 (A-T05)

Inkjet Printed RF Sensor Array for Lung Disease Detection

Muhammad Tayyab and Mohammad S. Sharawi (King Fahd University for Petroleum and Minerals (KFUPM), Saudi Arabia); Atif Shamim (King Abdullah University of Science and Technology, Saudi Arabia)

P3.34 (A-T06)

Comparative Study of Compressive Sensing Imaging in Different Array Configurations

Qiao Cheng, Akram Alomainy and Yang Hao (Queen Mary University of London, United Kingdom)

P3.35 (A-T06)

Antenna Properties of the Modified Luneburg Lens with Backward Radiation

Sergey Shabunin (Ural Federal University, Russia); Dmitry Denisov (Ural Institute of Communications and Computer Sciences, Russia)

P3.36 (A-T06)

Antenna Range Measurements for Airborne Remote Sensing Antennas

Bernd Gabler, Alicja Kość and Markus Limbach (German Aerospace Center (DLR), Germany)

P3.37 (A-T06)**Ice Influence on Wideband Dipole Antenna Characteristics**

Aleksey V. Ershov and Nikolay Voytovich (South Ural State University, Russia)

P3.38 (A-T06)**Monopoles Excited by an Umbrella-Shaped Transmission Line**

Toru Kawano (National Defense Academy, Japan); Hisamatsu Nakano (Hosei University, Japan)

P3.39 (A-T09)**Circularly Polarised Millimeter Wave Dielectric Resonator Reflectarray**

Shiyu Zhang and Syed Sheheryar Bukhari (Loughborough University, United Kingdom)

P3.40 (A-T09)**Controlling the Gain of Wide Band Open Quad Ridge Antennas**

German Cortes-Medellin (NSI-MI Technologies, USA)

P3.42 (A-T09)**High TRL Achieved for European Large Deployable Reflector Antennas**

Leri Datashvili (Large Space Structures (LSS) GmbH, Germany)

P3.43 (A-T09)**Design of Multiband Circularly Polarized Antenna Arrays for GNSS Applications**

Yuan Yao, Xuan Shao, Ying Li and Junsheng Yu (Beijing University of Posts and Telecommunications, P.R. China); Xiaodong Chen (Queen Mary University of London, United Kingdom)

P3.45 (A-T11)**Spatial Dispersion Analysis of Homogenized Metasurfaces for Terahertz Leaky-Wave Antennas**

Silvia Tofani, Walter Fuscaldo, Paolo Burghignoli and Alessandro Galli (Sapienza University of Rome, Italy); Dimitrios Zografopoulos (CNR-IMM, Italy); Paolo Baccarelli (Roma Tre University, Italy); Romeo Beccherelli (Consiglio Nazionale delle Ricerche, Italy)

P3.46 (A-T11)**All-textile Stripline for Wearable Applications: Practical Interconnection Implementation**

Aris Tsohis, Antonis A Alexandridis and Fotis Lazarakis (NCSR Demokritos, Greece); William Whittow and Yiannis Vardaxoglou (Loughborough University, United Kingdom)

P3.47 (A-T11)

A Novel Mobile Phone Antenna for Effectively Reducing Specific Absorption Rate

Yejun He, Kun Liang and Jun Li (Shenzhen University, P.R. China); Qammer H Abbasi (University of Glasgow, United Kingdom)

P3.48 (A-T11)

Impact of Surface Roughness on 3D Printed SLS Horn Antennas

Konstantin Lomakin, Tatiana Pavlenko, Mark Sippel, Gerald Gold, Klaus Helmreich, Markus Ankenbrand, Nikolaus Urban and Jörg Franke (FAU Erlangen-Nürnberg, Germany)

P3.49 (A-T11)

V-Band High-Gain Slot Antenna Using Single Layer Partially Reflective Surface

Hussien Attia (King Fahd University of Petroleum and Minerals, Saudi Arabia)

P3.50 (M-T04)

Microwave Measurements of High Dielectric Constant Ceramics by Powder Mixture Equations - A Further Study

Jyh Sheen and Yong-Lin Wang (National Formosa University, Taiwan)

P3.51 (M-T05)

Clinical Investigation of Breast Biopsies: Concurrent UWB Microwave Spectroscopy and Ultrasound Measurements

Stefanie Goram, Jochen Moll, Dennis Wörtge and Viktor Krozer (Goethe University Frankfurt, Germany); Frank Hübner, Babak Bazrafshan and Thomas Vogl (Goethe University Hospital Frankfurt am Main, Germany)

P3.52 (M-T08)

Analysis of GPS Reflected Signals Based on SNR Measurements: Land Versus Water

Rameez UR Rahman Lighari, Erkki T. Salonen, Markus Berg and Aarno Pärssinen (University of Oulu, Finland)

P3.53 (M-T10)

An Approach to the Compensation of Inaccuracies in Near-Field Antenna Measurements

Amur Khashimov (South Ural State University, Russia); R Salikhov (Chelyabinsk, Russian Federation)

P3.55 (M-T10)

Further Refining and Validation of RF Absorber Approximation Equations for Anechoic Chamber Predictions

Vince Rodriguez (NSI-MI Technologies, LLC. and IEEE-EMC, USA)

P3.56 (M-T11)

**A Supersonic Projectile - Embedded OFDM Channel Sounder. First Validation
Experimental Results**

Manuel Milla (University of Poitiers, France); Dirk Schmoltzi and Loic Bernard (ISL, France); Hervé Boeglen and Rodolphe Vauzelle (University of Poitiers XLIM Lab, France)

P3.59 (M, P-T08)

Clutter Analysis in a Time-Domain Millimeter-Wave Reflectometry Setup

Sebastian Heunisch, Lars Ohlsson and Lars-Erik Wernersson (Lund University, Sweden)

P3.60 (O-T01)

Parasitic Inductance Control of Mutli-Layer Ceramic Capacitors using Metamaterials

Tom Whittaker, William Whittow and Yiannis Vardaxoglou (Loughborough University, United Kingdom)

P3.61 (O-T01)

**The Universal Structure of a Segment of the Microstrip Transmission Line as a Basic
Element of Compact Microwave Devices**

Denis Letavin and Sergey Shabunin (Ural Federal University, Russia)

P3.62 (O-T01)

**Consideration of IEEE 802.11P and Proposed 5G for Holograms in Vehicular
Communication**

Merin Thomas, Robert Michael Edwards and Zhan Wang (Loughborough University, United Kingdom)

P3.63 (O-T01)

Compact Double-Frequency Microstrip Coupler

Denis Letavin and Sergey Shabunin (Ural Federal University, Russia)

P3.65 (O-T01)

**A Novel Single Layer Dual Linear Polarization Band-Pass Frequency Selective Surface
for Automotive Fully Coated Glass**

Mohamad Oussayran, Remi Sarkis and Tony Makdissy (Antonine University, Lebanon)

P3.66 (O-T05)

**Comparing a Time-Domain and Frequency-Domain Based Algorithm in Microwave
Tomography**

Tomas Rydholm, Andreas Fhager and Mikael Persson (Chalmers University of Technology, Sweden); Paul M Meaney (Dartmouth College, USA)

P3.67 (O-T05)

Prediction of Tumor Heatability in Microwave Hyperthermia Applicators

Pegah Takook, Erika Ek, Ellen Eskilsson, Hana Dobšíček Trefná and Mikael Persso (Chalmers University of Technology, Sweden)

P3.68 (O-T05)

Preliminary Study on Microwave Sensor for Bone Healing Follow-up after Cranial Surgery in Newborns

Mauricio D Perez, George Thomas, Syaiful Redzwan Mohd Shah, Jacob Velander, Noor Badariah Asan and Robin Augustine (Uppsala University, Sweden and National Technological University, Argentina); Parul Mathur (Amrita University, India); Mohammad Nasir and Daniel Nowinski (Akademiska Sjukhuset, Sweden); Dhanesh G. Kurup (Amrita University, Bengaluru Campus, India)

P3.69 (O-T05)

A Multimodal Ultrasound-Microwave Quantitative Imaging Technique for Breast Cancer

Joe LoVetri, Ian Jeffrey, Nasim Abdollahi and Pedram Mojabi (University of Manitoba, Canada); Elise Fear, Douglas Kurrant and Muhammad Omer (University of Calgary, Canada)

P3.70 (O-T06)

Further Analysis of Retrodirective Cross-Eye Jamming: Polarization Considerations

Jiazhi Ma, Longfei Shi, Gang Cui and Shunping Xiao (National University of Defense Technology, P.R. China)

P3.71 (O-T06)

High-accuracy Gaussian Process Modelling of Missile RCS with Cost-Based Preferential Training Data Selection

J. Pieter Jacobs and Warren du Plessis (University of Pretoria, South Africa)

P3.72 (O-T06)

A Linear Perturbation Model with Physical Optics Approximation to Recover Inhomogeneous Surface Impedance

Simon Loillier and Genevieve Maze-Merceu (CEA CESTA, France); Stéphane Méric and Renaud Loison (Institut of Electronic and Telecommunications of Rennes, France)

P3.73 (O-T06)

Increasing the Range of UWB Radars

Yury Shestopalov (University of Gävle, Sweden); Alexander Samokhin (Moscow Technological University, Russia); Boris Lagovsky (Moscow State Institute of Radio Engineering and Automation, Russia)

P3.74 (O-T09)

Ultralow Secondary Electron Yield Based on Graphene Nanostructures

Guibai Xie, Guanghui Miao, Jing Yang and Wanzhao Cui (China Academy of Space Technology, CAST, Xi'an, P.R. China); Rong Yang (Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, CAS, P.R. China) Jianli Xu (Shanghai High School, P.R. China)

P3.75 (O-T09)

Lightweight and Wide-Angle Metamaterial Absorbing Material Concept

Anne-Claire Lepage, Yenny Pinto, Olivier Rance and Xavier Begaud (Institut Mines-Telecom, Telecom ParisTech, France); Nicolas Capet (CNES, France)

P3.76 (O-T09)

The Observable Field for Multiple Plane Wave Incidence

Andrea Neto, Arturo Fiorellini Bernardis and Nuria LLombart (Delft University of Technology, The Netherlands); Angelo Freni (University of Florence, Italy)

P3.78 (O-T11)

Compact Broadband Electronically Controllable SIW Phase Shifter for 5G Phased Array Antennas

Bilal Malik, Viktor Doychinov and Ian Robertson (University of Leeds, United Kingdom)

P3.79 (O-T11)

Gait Speed Tracking System Using UWB Radar

Bernard Lau and Sahar Haider (University of Waterloo, Canada); Ameneh Boroomand (University of Tehran, Iran); George Shaker (University of Waterloo and Spark Tech Labs, Canada); Jennifer Boger (University of Waterloo and Research Institute for Aging, Canada)

P3.80 (O-T11)

Metasurfaces for Advanced Antenna Systems

Luigi La Spada and Yang Hao (Queen Mary University of London, United Kingdom)

P3.81 (O-T11)

Novel Transparency Effect in All-Dielectric Metamaterials Due to the Multipoles Annulment

Anar Ospanova (National University of Science and Technology MISiS and Ben-Gurion University, Russia); Alina Karabchevsky (Ben-Gurion University, Israel); Alexey A. Basharin (University of Science and Technology, Russia)

P3.82 (P-T01)

A Study on the Performance of Over-Roof-Top Propagation Models in Dense Urban Environment

Enrico M. Vitucci, Franco Fuschini, Marina Barbiroli, Marco Zoli and Vittorio Degli-Esposti (University of Bologna, Italy)

P3.82.a (P-T01)

Analysis of Wave Propagation in Plasmonic Holey Metasurfaces with Cylindrical Holes

Fatemeh Ghasemifard, Martin Norgren and Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden) and Guido Valerio (Sorbonne Universits, France)

P3.84 (P-T09)**Simulating the Reliability of Radio Links During Superior Solar Conjunctions**

Alan Stocker and David Siddle (University of Leicester, United Kingdom); Antonios Argyriou (University of Thessaly, Greece); Andrea Giorgetti, Enrico Paolini, Paolo Tortora and Aurel Zeqaj (University of Bologna, Italy); Javier De Vicente (European Space Agency, Italy); Ricard Abello and Mattia Mercolino (European Space Agency, Germany)

P3.85 (P-T09)**Experimental Optical Satellite Downlink Irradiance Statistics and Turbulence Conditions Estimation**

Nikolaos Lyras, Charilaos Kourogorgas and Athanasios D. Panagopoulos (National Technical University of Athens, Greece); Konstantinos Liolis (SES, Luxembourg); Zoran Sodnik (ESA, The Netherlands)

P3.86 (P-T09)**Propagation Campaign at Q-band and Ka-band Using the Alphasat and Ka-Sat Satellites**

Armando Rocha, Susana Mota and Flávio M. da Silva Jorge (University of Aveiro & Institute of Telecommunications, Portugal)

P3.86.a (P-T09)**Variability of the 0° Isotherm in the Iberian Peninsula**

Ana Benarroch and Jose M Riera (Universidad Politécnica de Madrid, Spain); Gustavo Siles (Universidad Privada Boliviana, Bolivia)

P3.87 (P-T11)**Experimental Platform for Through-The-Earth Communication**

Henrique Mendes, Adoniran Judson Braga, Josua Carreño, Luis Guilherme, Andre Noll Barreto, Leonardo Aguayo and Uzeda Garcia (Universidade de Brasília, Brazil)

P3.88 (P-T11)**Hybrid Material Based on Metamaterial for Absorption Improvement of Pyramidal Absorbers**

Laura Pometcu, Ala Sharaiha and Ratiba Benzerga (University of Rennes, France); Philippe Pouliguen (DGA, France)

P3.88.a (P-T11)**A W-band Solid-State Source with 2 Watts Continuous Wave Output Power**

Zhenhua Chen (Nanjing University of information Science & Technology, P.R. China); Xiang Chen (Institute of Space Radio Technology, P.R. China)

P3.89 (P-T11)**Waves in Randomly-Stratified Media: Generalities and Applications**

Valentin Freilikher (Bar-Ilan University, Israel); Yury Bliokh (Technion-Israel Institute of Technology, Israel); Yuriy V. Tarasov (Institute for Radiophysics and Electronics NASU, Kharkov, Ukraine); Franco Nori (Center for Emergent Matter Science (CEMS), RIKEN, Japan)

P3.90 (S-T01)**Network Model of a 5G MIMO Base Station Antenna in a Downlink Multi-User Scenario**

Navid Amani, Andrés Alayon Glazunov, Marianna Ivashin and Rob Maaskant (Chalmers University of Technology, Sweden)

P3.91 (S-T01)**Modeling Power Angle Spectrum and Antenna Pattern Directions in Multipath Propagation Environment**

Jan M. Kelner and Cezary Ziółkowski (Military University of Technology, Poland)

P3.92 (S-T02)**Near-to-Far-Field Transform Sample Reduction Through Statistical Analysis**

Franz Camilo (Universidade Federal de Minas Gerais - Brazil); Cássio Rego (Federal University of Minas Gerais, Brazil); Glaucio L. Ramos (Federal University of São João Del-Rei, Brazil)

P3.94 (S-T03)**Phase Sensitivity of the Projection Method for a Beam Tilting Deformed Array**

Francesco Rigobello, Giulia Mansutti, Antonio-D. Capobianco and Andrea Galtaross (University of Padova, Italy)

P3.95 (S-T05)**Simulation of Terahertz Intrabody Wireless Nano Sensor Networks in the Presence of Noise and Interference**

Ratna Indrawijaya (Technische Universität Braunschweig & Institut für Nachrichtentechnik, Germany); Thomas Kürner (Technische Universität Braunschweig, Germany)

P3.96 (S-T06)**FDTD Numerical Dispersion Relation in Spherical Coordinates**

Mohammed F Hadi and Atef Elsherbeni (Colorado School of Mines, USA); Ravi Bollimuntha and Melinda Piket-May (University of Colorado at Boulder, USA)

P3.97 (S-T06)**Simulation of Drone Micro-Doppler Signatures**

Youngwook Kim and Manroop Turna (California State University, Fresno, USA); Daegun Oh (DGIST, USA)

P3.98 (S-T09)**Method of Moments Applied to Quasi-Static Antennas in Media with Dielectric Anisotropy: Convergence Study**

Evgenii Shirokov (Institute of Applied Physics of the Russian Academy of Sciences, Russia)

P3.99 (S-T10)

Fractal-based 3D Model for Propagation in Vegetation at Millimeter-Wave Frequencies

Nuno R. Leonor and Manuel García Sánchez (Universidade de Vigo, Spain); Rafael F. S. Caldeirinha and Telmo R. Fernandes (Polytechnic Institute of Leiria and Instituto de Telecomunicação (IT), Portugal)

P3.100 (S-T10)

Emulation of Bent Thin-Wire in Cartesian FDTD Mesh by Using Electric Charge Correction on the Staircased Edges

Tarcísio Fonseca, Sandro Gonçalves, Marcio Afonso and Ursula Resende (Federal Center of Technological Education of Minas Gerais, Brazil)

P3.101 (S-T10)

Model for the Evaluation of the Loss Tangent of a Dielectric Material with a Scanning Split-Ring Resonator Probe

Andrea I Vallecchi, Dmitry Isakov, Christopher Stevens and Patrick Grant (University of Oxford, United Kingdom)

P3.102 (S-T10)

Higher-Order Basis Functions for an Enhanced Approximation of the Magnetic-Field Integral Equation

José Gil, Miguel González, Jesús García and Rafael Gómez (Universidad Politécnica de Madrid, Spain)

Friday 13 April 2018

Friday 13 April 2018 09:00-10:40

CS11: New Developments of mm-Wave GAP Wave Technology

Cellular Networks & 5G | Convened Session | Antennas

Room: Room 7

Chairs: Professor Jian Yang (Chalmers University, Sweden) and Professor Ahmed A. Kishk (Concordia University, Canada)

09:00	CS11.1 8 x 8 Single-Layer 30-GHz Antenna with a Combined Ridge-Groove Gap Waveguide Network Miguel Ferrando-Rocher, José Ignacio Herranz-Herruzo, Daniel Sanchez-Escuderos and Alejandro Valero-Nogueira (Universidad Politécnica de Valencia, Spain)
09:20	CS11.2 On the Use of a Metasurface Prism in Gap-waveguide Technology to Reduce the Dispersion of Leaky-wave Antennas Lei Wang (Hamburg University of Technology, Germany) Jose-Luis Gómez-Tornero (Polytechnic University of Cartagena, Spain); Eva Rajo-Iglesias (University Carlos III of Madrid, Spain); Oscar Quevedo-Teruel (KTH Royal Institute of Technology, Sweden)
09:40	CS11.3 Slot Array Fed by a Butler Matrix in Groove Gap Waveguide Technology at 25 GHz Felix Julian Gutierrez-Bernal (San Buenaventura University, Colombia); Eva Rajo-Iglesias (University Carlos III of Madrid, Spain)
10:00	CS11.4 Gap Waveguide Based 1-D Steerable Beam Antenna Concept for Millimeter-wave 5G Application Ashraf Uz Zaman (Chalmers University of Technology, Sweden); Thomas Emanuelsson (CTO, Sweden)
10:20	CS11.5 Developments Towards the Mass-Production of High-Gain GAP-based Planar Antennas for Radio Links Esperanza Alfonso, Abolfazl Haddadi, Stefan Carlsson, Thomas Emanuelsson and Johan Andren (Gapwaves AB, Gothenburg, Sweden)

T01-8: Measurement Techniques and Applications Cellular Networks & 5G Regular Session Measurement Room: Room 12 Chairs: Professor Michael Jensen (Brigham Young University, USA) and Professor Fernando Las-Heras (Universidad de Oviedo, Spain)	
09:00	T01-8.1 Statistical Measurement System Analysis of Over-The-Air Measurements of Antenna Array at 28 GHz Marko E Leinonen, Marko Sonkki and Aarno Pärssinen (University of Oulu, Finland)
09:20	T01-8.2 Moment Method Analysis of a Reconfigurable OTA Reverberation Chamber Benjamin Arnold and Michael Jensen (Brigham Young University, USA)
09:40	T01-8.3 The New Large Antenna Positioning System for Over-The-Air Testing at the National Institute of Standards and Technology Jeffrey Guerrieri, David Novotny, Josh Gordon, Alexandra Curtin and Michael Allman (National Institute of Standards and Technology, USA)
10:00	T01-8.4 Evaluation of Positioning Techniques for Millimeter-Wave Portable Scanners Jaime Laviada, Miguel Lopez-Portugues and Fernando Las-Heras (Universidad de Oviedo, Spain); Ana Arboleya (University of Nice-Sophia Antipolis, France)
10:20	T01-8.5 Over-the-Air MIMO Channel Emulation for Automotive LTE Radio Systems Using Software Defined Radio Andreas Schwind, Philipp Berlt, Mario Lorenz, Christian Schneider and Matthias A Hein (Ilmenau University of Technology, Germany)
T11-10: Techniques for RF Energy Harvesting and Wireless Power Transfer Future Applications Regular Session Propagation Room: Room 17 Chairs: Dr Santi Concetto Pavone (University of Siena, Italy) and Manoj Stanley (University of Liverpool, United Kingdom)	
09:00	T11-10.1 A Novel Dual-Polarized Millimeter-Wave Antenna Array with Harmonic Rejection for Wireless Power Transmission Sumin David Joseph, Yi Huang, Manoj Stanley, Chaoyun Song (University of Liverpool, United Kingdom) Shuohung Hsu (National Tsinghua University, Taiwan)

09:20	T11-10.2 A Wideband Rectenna Array for RF Energy Harvesting Applications Alberto Reyna and Luz Idalia Balderas (Autonomous University of Tamaulipas, Mexico); Marco Panduro (CICESE Research Center, Mexico)
09:40	T11-10.3 Polarization Independent Dual-Band RF Energy Harvester Mohamed El Badawe, Ali Albishi and Omar M Ramahi (University of Waterloo, Canada)
10:00	T11-10.4 Dual Polarized Metasurface for Microwave Energy Harvesting and Wireless Power Transfer Thamer Almoneef (Prince Sattam University, Saudi Arabia); Faruk Erkmen, Maged A. Al Dhaeebi and Omar M Ramahi (University of Waterloo, Canada)
10:20	T11-10.5 Multi-Polarization Planar Dipole Array Surface for Electromagnetic Energy Harvesting and Wireless Power Transfer Ahmed Ashoor and Omar Ramahi (University of Waterloo, Canada)
T01-10: MIMO Performance Evaluation -1 Cellular Networks & 5G Regular Session Measurement Room: Room 14 Chairs: Professor Ying Liu (Xidian University, P.R. China) and Professor Robert Staraj (Universite Cote d'Azur, LEAT, France)	
09:00	T01-10.1 On OTA Throughput Evaluation of 8X8 MIMO Handset Antennas Using 3D Channel Models Ali Hazmi, Antti O Karilainen, Ruiyuan Tian, Konstantin Sokolov and Zlatoljub Milosavljevic (Huawei Technologies, Finland)
09:20	T01-10.2 Study and Comparison for Different MIMO Antenna Performance Evaluation Methods Xueliang Shi, Ming Zhang, Huailin Wen and Jun Wang (Huawei Technologies Co. Ltd, P.R. China)
09:40	T01-10.3 Dynamic Range Impact on 3D MIMO Channel Characteristics in Rural-Macro Scenario at 3.5 GHz Weite Zhang, Lei Tian, Zhongyuan Wu (Beijing University of Posts and Telecommunications and Wireless Technology Innovation Institute, P.R. China); Jianhua Zhang (State Key Lab of Networking and Switching Technology, P.R. China); Yi Zheng (Beijing University, P.R. China); Jingmin Cao (National Key Laboratory of Science and Technology on Blind Signal, P. R. China); Jianhua Zhang (Beijing University of Posts and Telecommunications, P.R. China); Yi Zheng (China Mobile, P.R. China)

10:00	T01-10.4 MIMO Performance of Today's Metal-Covered Handset Joni Kurvinen, Anu Lehtovuori, Jari-Matti Hannula, Matti Hannula and Ville Viikari (Aalto University and School of Electrical Engineering, Finland)
10:20	T01-10.5 Influence of a Metallic Radiator on a Multiband LTE MIMO Antenna System Lamia Sadaoui, Georges Kossiavas and Robert Staraj (Universite Cote d'Azur, LEAT, France)
T01-13: Antenna Arrays -1 Cellular Networks & 5G Regular Session Antennas Room: Room 13 Chairs: Dr Hanyang Wang (Huawei Technologies, P.R. China) and Professor Kwai-Man Luk (City University of Hong Kong, P.R China)	
09:00	T01-13.1 High-Gain Series-Fed Phased Array Antenna for Wearable Wireless Applications Nowrin Chamok, Md Nazmul Alam and Mohammad Ali (University of South Carolina, USA)
09:20	T01-13.2 Dual-Band 5G Millimeter-Wave MIMO Antenna Array for Mobile Phone Application Anping Zhao and Fuqiang Ai (Shenzhen Sunway Communication Co, Ltd, P.R. China)
09:40	T01-13.3 Beam-Steerable Multi-Band Mm-Wave Bow-Tie Antenna Array for Mobile Terminals Rocio Rodriguez-Cano, Shuai Zhang and Gert Pedersen (Aalborg University, Denmark)
10:00	T01-13.4 A Millimeter-Wave Dual-Circularly-Polarized Microstrip Antenna Array with a Novel Single Feed Network Yue Zhao and Kwai-Man Luk (City University of Hong Kong, Hong Kong)
10:20	T01-13.5 A Printed Wideband Array Antenna with 45° Polarization for 5G Applications Qian Zhu and Chi Hou Chan (City University of Hong Kong, Hong Kong)
CS43: Smart Antennas for Satellite Communications Space Applications Convened Session Antennas Room: Room 6 Chairs: Professor Steven Gao (University of Kent, United Kingdom) and Professor Xuexia Yang	

(Shanghai University, P.R. China)

09:00

CS43.1

GaN-Integrated Beam-Switching High-Power Active Array for Satellite Communications

Qi Luo and Steven Gao (University of Kent, United Kingdom); Nuno Borges Carvalho (University of Aveiro/IT Aveiro, Portugal); Konstantin Osipov and Joachim Wuerfl (Ferdinand-Braun-Institut, Germany); Roger Vilaseca (TYRO Aero Space, Spain); Duc Pham-Minh (Airbus Defence and Space SAS, France); Arlindo Marque and Jose Pinto (Engenharia e Sistemas S.A., Portugal); Rodolfo Martins (Evoleo Technologies, Portugal)

09:20

CS43.2

Research Advances in Phased Array Antennas for Satellite Communications

Peng Chen and Wei Hong (Southeast University, P.R. China)

09:40

CS43.3

A Low-Cost Satellite-to-Satellite Link Using Meta-Lens

Huan Yi, Shi-Wei Qu (University of Electronic Science and Technology of China, P.R. China); Kung Bo Ng, Chun Kit Wong and Chi Hou Chan (City University of Hong Kong, Hong Kong)

10:00

CS43.4

A Compact Low-cost Direction Finding System for Unmanned Aerial Vehicles

Attiya Mahmood and Michael Jensen (Brigham Young University, USA); Rashid Mehmood (Wavetronix LLC, USA)

10:20

CS43.5

UHF and S-band Antenna Arrays for Nano-Satellite-Based Data-Relay

Juner M. Vieira, Eduardo Yoshimoto, Filipe Ferreira, Vinícius Pereira and Marcos V. T. Heckler (Federal University of Pampa, Brazil)

T09-8: Satellite Propagation

Space Applications | Regular Session | Propagation

Room: Room 4

Chairs: Dr Franz Teschl (Graz University of Technology, Austria) and Dr. Charilaos Kourogioras (STFC/RAL Space, United Kingdom)

09:00

T09-8.1

Predicting Near-Time Satellite Signal Attenuation at Ka-band Using Tropospheric Weather Forecast Model

Knut Grythe (SINTEF, Norway); Lars Erling Bråten (Norwegian Defence Research Establishment (FFI), Norway); Snorre Stavik Rønning (Norwegian Meteorological Institute, Norway); Terje Tjelta (UiO, Norway)

09:20	<p>T09-8.2 Channel Modelling for VHF Data Exchange System via Satellite Lars Erling Bråten, Vegard Arneson, Knut Svenes, Torkild Eriksen and Oystein Olsen (Norwegian Defence Research Establishment (FFI), Norway)</p>
09:40	<p>T09-8.3 Long-Term and Short-Term Atmospheric Impairments Forecasting for High Throughput Satellite Communication Systems Charilaos Kourogorgas, Apostolos Z. Papafragkakis and Athanasios D. Panagopoulos (National Technical University of Athens, Greece); Spiros Ventouras (STFC Rutherford Appleton Laboratory, United Kingdom)</p>
10:00	<p>T09-8.4 Ka-band Scintillation on Low-Elevation Satellite-Earth Links in the Arctic; Long-Term Measurements and Improved Modelling Martin Rytir (Norwegian Defence Research Establishment (FFI), Norway)</p>
10:20	<p>T09-8.5 Measurements and Statistical Characterization of a Dual-Polarized MIMO LMS Channel Nektarios Moraitis, Sotiria Stathopoulou and Konstantina Nikita (National Technical University of Athens and Institute of Communications and Computers Systems, Greece); Viktor Nikolaidis (University of Piraeus, Greece)</p>
<p>CS21: New Antenna Systems Involving Application of Metamaterials and Metasurfaces Future Applications Convened Session Antennas Room:Room 2 Chairs: Dr Lee Ford (University of Sheffield, United Kingdom) and Professor Hisamatsu Nakano (Hosei University, Japan)</p>	
09:00	<p>CS21.1 Perfect Anomalous Refraction with Metagratings Ariel Epstein and Oshri Rabinovich (Technion - Israel Institute of Technology, Israel)</p>
09:20	<p>CS21.2 Application of a Circularly Polarized Metaline to Beam-Steerable Antennas Hisamatsu Nakano, Tomoki Abe and Junji Yamauchi (Hosei University, Japan); Amit Mehta (Swansea University, United Kingdom)</p>
09:40	<p>CS21.3 A Novel Low-Profile Wideband Reconfigurable CP Antenna Array Shu-Lin Chen, Wei Lin, Peiyuan Qin and Y. Jay Guo (University of Technology Sydney, Australia); Richard Ziolkowski (University of Technology Sydney, Australia and University of Arizona, USA)</p>

10:00	<p>CS21.4 AMC-Backed Dipole Array Antenna for Beamforming Less Vulnerable to Nearby Metal Planes Sungtek Kahng, Dajung Han, Changhyeong Lee and Heejun Park (Incheon National University, Korea); Aurora Andújar (Fractus, Spain); Jaume Anguera (Fractus Antennas and Universitat Ramon Llull, Spain)</p>
10:20	<p>CS21.5 Dual-Band Self-Diplexed Modulated Metasurface Antennas Marco Faenzi and Stefano Maci (University of Siena, Italy); David González-Ovejero (Centre National de la Recherche Scientifique - CNRS, France); Francesco Caminita (Wave-Up SRL, Italy)</p>
<p>T05- 4 Antennas for Future Applications Biomedical Regular Session Antennas Room: Room1 Chairs: Professor Francesca Apollonio (Sapienza University of Rome, Italy) and Dr Walter Fuscaldo (Sapienza University of Rome, Italy)</p>	
09:00	<p>T05-4.1 An in Vivo Exposure-System for Wide-Band Electric Pulses Caterina Merla (ENEA SSPT Division of Health Protection Technologies, Italy); Francesca Apollonio and Alessandra Paffi (Sapienza University of Rome, Italy); P. Thomas Vernier (Franck Reidy Research Center for Bioelectronics, Old Dominion University, Italy); Micaela Liberti (ICEmB at Sapienza University of Rome, Italy)</p>
09:20	<p>T05-4.2 Flat Lenses Design by Closed-Form Ray Tracing Cristian Della Giovampaola (Wave Up srl and University of Siena, Italy); Mario Mencagli, Jr. and Stefano Maci (University of Siena, Italy); Giovanni Toso (European Space Agency, The Netherlands)</p>
09:40	<p>T05-4.3 Leaky Lens Antenna as Optically Pumped Pulsed THz Source Alessandro Garufo, Paolo Sberna, Giorgio Carluccio, Nuria LLombart and Andrea Neto (Delft University of Technology, The Netherlands); Juan Bueno (SRON Netherlands Institute for Space Research, The Netherlands); Joshua R Freeman, E. Linfield and Alexander Davies (University of Leeds, United Kingdom)</p>
10:00	<p>T05-4.4 Discrete Bowtie Plasmonic Nanoantenna Francisco J González and Javier Mendez (University of San Luis Potosi, Mexico); Gabriel Gonzalez (Catedras CONACYT, Mexico); Alexander Cuadrado and Javier Alda (Universidad Complutense de Madrid, Spain)</p>
10:20	<p>T05-4.5 Co-simulation Results of a 60 GHz CMOS LNA Integrated and Packaged in Gap Waveguide Technology Alhassan Aljarosha, A. B. Smolders, Marion Matters-Kammerer, Bindi Wang, Hao Gao and Rob Maaskant (Eindhoven University of Technology, The Netherlands)</p>

Friday 13 April 2018 11:00 – 12:20

T01-12: Antenna Design and Analysis

Cellular Networks & 5G | Regular Session | Antennas

Room: Room 7

Chairs: Professor Chi Hou Chan (City University of Hong Kong, P.R. China) and Dr Alexandros Feresidis (University of Birmingham, United Kingdom)

11:00	<p>T01-12.1 Design and Analysis of Conformal Antennas for Smart Glasses Wael Haydar and Sally AlSayah (Université Antonine, Lebanon); Remi Sarkis (Antonine University, Lebanon)</p>
11:20	<p>T01-12.2 Robust Design of Low Side Lobe Level Microstrip Antenna Array by Using Lossy Superstrate Yin-Hua Yu, Zhi-Yuan Zong, Wen Wu and Da-Gang Fang (Nanjing University of Science and Technology, P.R. China)</p>
11:40	<p>T01-12.3 Design of Millimetre Wave Phase Shifting Periodic Metasurfaces James Churm, Muhammad S Rabbani and Alexandros Feresidis (University of Birmingham, United Kingdom)</p>
12:00	<p>T01-12.4 Realizable Source That Radiates the Field of a Hertzian Dipole with Complex Source Point Thorkild Hansen (Seknion Inc, USA)</p>

T01-9: Beam Steering Technologies

Cellular Networks & 5G | Regular Session | Antennas

Room: Room 12

Chairs: Jonathan Pinto (BAE Systems, UK) and Gert Pedersen (Aalborg University, Denmark)

11:00	<p>T01-9.1 Receiver Array Thinning Using Digitally Assisted Mills Cross Muhammad Ali Babar Abbasi (Queen's University Belfast and The Institute of Electronics, Communications and Information Technology (ECIT), United Kingdom); Vincent Fusco (Queen's University Belfast, United Kingdom)</p>
11:20	<p>T01-9.2 Mechanical Beam Steering Circular Patch Antenna Igor da Costa, Hugo Filgueiras and Arismar Cerqueira S. Jr (National Institute of Telecommunications, Brazil); James Kelly (University of Surrey and Institute for Communication Systems (ICS), United Kingdom) Pei Xiao (University of Surrey, United Kingdom)</p>

11:40	T01-9.3 E-plane Beam Width Reconfigurable Dipole Antenna with Tunable Parasitic Strip Jin Zhang, Shuai Zhang and Gert Pedersen (Aalborg University, Denmark)
12:00	T01-9.4 Electronically Steerable Circularly Polarized Planar Antenna Soumya Sheel and Jacob Coetzee (Queensland University of Technology, Australia)
T11-11: Channel Measurements and Model Verifications Future Applications Regular Session Measurement Room: Room 17 Chairs: Chinthana Panagamuwa (Loughborough University, United Kingdom) and Jonathan Pinto (BAE Systems, United Kingdom)	
11:00	T11-11.1 Analysis of Fade Dynamics in Site Diversity System in Slovenia Arsim Kelmendi, Gorazd Kandus, Andrej Hrovat and Andrej Vilhar (Jozef Stefan Institute, Slovenia)
11:20	T11-11.2 Vehicle-to-Pedestrian Channel Characterization: Wideband Measurement Campaign and First Results Ibrahim Rashdan, Fabian de Ponte Müller, Wei Wang, Martin Schmidhammer and Stephan Sand (German Aerospace Center (DLR), Germany)
11:40	T11-11.3 A Novel Clustering Method Based on Density Peaks and Its Validation by Channel Measurement Hanqing Xue, Lei Tian, Yuxiang Zhang, Chao Wang and Jianhua Zhang (Beijing University of Posts and Telecommunications, P.R. China); Wei Li (Northern Illinois University, USA); He-Wen Wei (Southwest Electronics and Telecommunication Technology Research Institute, P.R. China)
12:00	T11-11.4 Static and Dynamic Millimeter-Wave Channel Measurements at 60 GHz in a Conference Room Vasillii Semkin, Sergey Andreev and Yevgeni Koucheryavy (Tampere University of Technology, Finland); Aki Karttunen (Aalto University, Finland); Jan Järveläinen (Aalto University and Premix Finland)
T01-11: MIMO Performance Evaluation -2 Cellular Networks & 5G Regular Session Measurement Room: Room 14 Chairs: Professor Said Mikki (University of New Haven, USA) and Kenneth Tong (University College London, United Kingdom)	

11:00	<p>T01-11.1 The Stochastic Electromagnetic Theory of Antenna-Antenna Cross-Correlation in MIMO Systems Said Mikki (University of New Haven, USA); Jocelyn Aulin (Huawei Technologies Sweden AB, Sweden)</p>
11:20	<p>T01-11.2 Evaluation of an Antenna Selection Strategy for Reduced Massive MIMO Complexity Frédéric Challita, Martine Liénard and Davy Gaillot (University of Lille, France) Maria-Teresa Martinez-Ingles (University Centre of Defence at the Spanish Air Force Academy, MDE-UPCT, Spain); Jose-Maria Molina-Garcia-Pardo (Universidad Politécnica de Cartagena, Spain)</p>
11:40	<p>T01-11.3 On Measurements of Availability Penalty Due to Antenna Separation in a 2X2 LOS-MIMO Link Lei Bao, Bengt-Erik Olsson and Jonas Hansryd (Ericsson AB, Sweden)</p>
12:00	<p>T01-11.4 Measurement-Based Massive MIMO Channel Characterization in Subway Station Qi Wang and Bo Ai, Ruisi He, Jianzhi Li, Bei Zhang, Mi Yang and Zhangdui Zhong (Beijing Jiaotong University, P.R. China)</p>
<p>T01-14: Antenna Arrays -2 Cellular Networks & 5G Regular Session Antennas Room: Room 13 Chairs: Professor Shuai Zhang (Aalborg University, Denmark) and Dr Peiyuan Qin (University of Technology Sydney, Australia)</p>	
11:00	<p>T01-14.1 Substrate-Insensitive Phased Array with Improved Circularly-Polarized Scan Angle for 5G Mobile Terminals Shuai Zhang, Igor Syrytsin and Gert Pedersen (Aalborg University, Denmark)</p>
11:20	<p>T01-14.2 Synthesis of Multiple Beam Linear Arrays with Uniform Amplitudes Yanki Aslan, Jan Puskely, Antoine Roederer and Alexander Yarovoy (TU Delft, The Netherlands)</p>
11:40	<p>T01-14.3 Finger Ring Phased Antenna Array for 5G IoT and Sensor Networks at 28 GHz Igor Syrytsin, Shuai Zhang and Gert Pedersen (Aalborg University, Denmark)</p>

12:00	<p>T01-14.4 SIW Based Antenna Array with Power Equalization in Elevation Plane for 5G Base Stations Jan Puskely, Yanki Aslan, Antoine Roederer and Alex Yarovoy (Delft University of Technology, The Netherlands)</p>
<p>T09-10: Space Array Antennas Space Applications Regular Session Antennas Room: Room 6 Chairs: Stuart Gregson (Queen Mary University of London, United Kingdom) and Giovanni Toso (ESA, The Netherlands)</p>	
11:00	<p>T09-10.1 Diamond Tiling Optimization for Hexagonal Shaped Phased Arrays Nicola Anselmi, Lorenzo Poli, Paolo Rocca and Andrea Massa (University of Trento, Italy)</p>
11:20	<p>T09-10.2 Compressive Sensing Approach to the Synthesis of Sparse Antenna Arrays Giulia Buttazzoni and Roberto Vescovo (University of Trieste, Italy)</p>
11:40	<p>T09-10.3 Space Qualification of a Circularly Polarised High-Power Ku-Band Feed Chain for Telecommunication Satellites Enrico Reiche, Philipp Kohl, Un Pyo Hong, Christian Hartwanger, Ralf Gehring and Michael Schneider (Airbus, Germany)</p>
12:00	<p>T09-10.4 Radiation Characteristics of Skewed Loaded Dipole Arrays Cristina Yepes, Ralph van Schelven, Daniele Cavallo and Andrea Neto (Delft University of Technology, The Netherlands); Erio Gandini (TNO, The Netherlands)</p>
<p>T09-9: Satellite Propagation Space Applications Regular Session Propagation Room: Room 4 Chairs: Dr Franz Teschl (Graz University of Technology, Austria) and Dr Charilaos Kourogorgas (STFC/RAL Space, United Kingdom)</p>	
11:00	<p>T09-9.1 European W-Band Propagation Campaign Development Alexios Costouri, George Goussetis and Savvas Kosmopoulo (Heriot-Watt University, United Kingdom); Richard Reeves (Science and Technology Facilities Council and RAL Space, United Kingdom); Spiros Ventouras (STFC Rutherford Appleton Laboratory, United Kingdom); J Mayock and S. Chan (RAL Space, STFC Rutherford Laboratory, United Kingdom); Pantelis-Daniel Arapoglou, Antonio Martellucci, and Václav Valenta (European Space Agency, The Netherlands)</p>

11:20	<p>T09-9.2 Capacity Evaluation of a Satellite-to-Indoor Narrowband Dual Polarized MIMO Channel Viktor Nikolaidis and Athanasios G. Kanatas (University of Piraeus, Greece); Nektarios Moraitis (National Technical University of Athens and Institute of Communications and Computers Systems, Greece); Demosthenes Vouyioukas (University of the Aegean, Greece)</p>
11:40	<p>T09-9.3 Reliability of Disdrometer-derived W-Band Attenuation Predictions Michael Schönhuber, Félix Cuervo, Nikola Knoll and Verena Mitterauer (Joanneum Research, Austria)</p>
12:00	<p>T09-9.4 Antenna and Propagation Aspects of a Future GNSS-Reflectometry Mission Franz Teschl and Manuela Wenger (Graz University of Technology, Austria); Andreas Dielacher (RUAG Space GmbH, Austria); Reinhard Teschl (Graz University of Technology, Austria)</p>
<p>T11-9 : Metasurface Materials and Techniques Future applications Regular Session Propagation Room: Room 2 Chairs: Pedro Fidel Espin Lopez (University of Pavia, Italy) and Deepak Shamvedi (Waterford Institute of Technology, Ireland)</p>	
11:00	<p>T11-9.1 Hexaferrite Substrate Versus Impedance Matching for Tuneable Patch Antenna Miniaturisation Oliver N James, Geoffrey Hilton and Mark Beach (University of Bristol, United Kingdom)</p>
11:20	<p>T11-9.2 Miniaturized Spoof Surface Plasmon Polaritons Transmission Line Zhixia Xu, Shunli Li, Hongxin Zhao and Xiaoxing Yin (Southeast University, P.R. China); Leilei Liu (Nanjing University of Posts and Telecommunications, P.R. China)</p>
11:40	<p>T11-9.3 Comparison of Near-Field Transforming Metasurfaces with Inhomogeneous and Anisotropic Lenses for Low-Profile Transmitarray Illumination Eric Whiting, Sawyer D Campbell, J. Daniel Binion, Pingjuan Werner and Douglas H Werner (Pennsylvania State University, USA)</p>
12:00	<p>T11-9.4 A Circularly Polarized Metasurface Antenna Seyyedeh Fahimeh Babazadeh, Mostafa Khanjarian, Vahid Nayyeri and Mohammad Soleimani (Iran University of Science and Technology, Iran); Mohamed El Badawe and Omar M Ramahi (University of Waterloo, Canada)</p>
<p>T01-16: On and Off Body Communications Cellular Networks & 5G Regular Session Antennas Room: Room 1 Chairs: Professor William Scanlon (Queen's University Belfast, United Kingdom) and Dr Guan-Long</p>	

Huang (Shenzhen University, P.R.China)

11:00

T01-16.1

A Multiple Antenna System Design for Wearable Device Using Theory of Characteristic Mode

Jiangcheng Chen, Markus Berg, Hamid Amin and Aarno Pärssinen (University of Oulu, Finland); Vesna Somero (Polar Electro Oy, Finland)

11:20

T01-16.2

On Body and on Body to off Body Communication in the 60 GHz Band for Health Monitoring Scenarios

Sana Salous and Hugo Parrott (Durham University, United Kingdom); Costas Constantinou (University of Birmingham, United Kingdom); Yuri Nechayev (Huawei Technologies, Russia)

11:40

T01-16.3

Multi-band Unbroken Metallic Rim Antenna with 3-D PIFA Branch for Smartwatch Wearable Device

Xianbo Cao, Wen Jiang Shuxi Gong and Peng Liu (Xidian University, P.R. China)

12:00

T01-16.4

The Influence of Elevation Angle on 60 GHz Near-Body Path Gain

Lei Zhang, Adrian D McKernan, Simon Cotton and William G. Scanlon (Queen's University Belfast, United Kingdom)