<table>
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<th>Time</th>
<th>Room 1</th>
<th>Room 4</th>
<th>Room 13</th>
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<tr>
<td>09:00 - 09:20</td>
<td>EuMIC/EuMC01 ARMMS RF and Microwave Society Selected Papers</td>
<td>EuMC01 Waveguide and SIW Components</td>
<td>EuMIC/EuMC02 RF MEMS Components and Packaging</td>
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<td>Chair: Dominic Fitzpatrick, PoweRFul Microwave Co-Chair: Steve Nightingale, Cobham Antenna Systems</td>
<td>Chair: Shokrollah Karimian, CERN Co-Chair: Luca Perregrini, University of Pavia</td>
<td>Chair: Stepan Lucyszyn, Imperial College London Co-Chair: Kamal K Samanta, AMWT Ltd</td>
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<tr>
<td>09:20 - 09:40</td>
<td>EuMIC/EuMC01-01 Submillimetre Rectangular Waveguides based on SU-8 Photoresist Micromachining Technology</td>
<td>EuMC01-01 Wideband Probe-Type Waveguide-to-Microstrip Transition for V-Band Applications</td>
<td>EuMIC/EuMC02-01 High-Q Tuneable Filter with a Novel Tuning Structure</td>
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<td>09:40 - 10:00</td>
<td>EuMIC/EuMC01-02 Challenges of Wearable Antenna Design</td>
<td>EuMC01-02 Rectangular Waveguide-to-Coplanar Waveguide Transitions at U-Band using E-Plane Probe and Wire Bonding</td>
<td>EuMIC/EuMC02-02 Advances in MEMS Switches for RF Test Applications</td>
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<td>S. Dunmarr, TRI, Toshiba Research Europe, Bristol, United Kingdom</td>
<td>Y. Dong, I.K. Johansen, V. Zhurbenko, P.J. Hanberg, Technical University of Denmark, Kgs. Lyngby, Denmark</td>
<td>T. Moran¹, K. Keime², T. Miller³, 'National Instruments, Santa Rosa, United States, 'Menlo Microsystems, Niskayuna, United States, 'GE Global Research, Niskayuna, United States</td>
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<td>10:00 - 10:20</td>
<td>EuMIC/EuMC01-03 Broadband Push-Pull Power Amplifier Design at Microwave Frequencies</td>
<td>EuMC01-03 Design of Substrate Integrated Waveguide Structures based on Stop-Band Response FSSs (SBFSS-SIW)</td>
<td>EuMIC/EuMC02-03 Development of a DC to K-Band Ultra Long On-Life RF MEMS Switch with Integrated Driver Circuitry</td>
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<td>R. H. Smith¹, S.C. Cripps², 'Plextek RFI, Chesterford, United Kingdom, 'Cardiff University, Cardiff, United Kingdom</td>
<td>N. Esparza, P. Alcón, L. Herrán, F. Las-Heras, University of Oviedo, Gijón, Spain</td>
<td>E. Carty¹, P. Fitzgerald¹, P. McDaid¹, B. Stenson¹, R. Goggin², 'Analog Devices, Limerick, Ireland, 'Analog Devices, Cork, Ireland</td>
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<tr>
<td>10:20 - 10:40</td>
<td>EuMIC/EuMC01-04 Understanding the 3 Level Doherty</td>
<td>EuMC01-04 A Study on the Broadband Transitions between Microstrip Line and Post-Wall Waveguide in E-band</td>
<td>EuMIC/EuMC02-04 High-Q Zero Level Packaged RF-MEMS Switched Capacitor Arrays</td>
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<td>M. J. Roberts, Slipstream Engineering Design Ltd, Shipley, United Kingdom</td>
<td>Y. Uemichi, O. Nakaga, K. Nakamura, K. Han, R. Hosono, N. Guan, Fujikura Ltd, Sakura, Japan</td>
<td>K. Nadaud¹, P. Roubeau¹, L. Zhang¹, R. Stefanin¹, A. Potrier², P. Blondy², 'XILM, UMR CNRS 7252, Limoges, France, 'AriMems, Limoges, France</td>
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<tr>
<td>10:40 - 11:00</td>
<td>EuMIC/EuMC01-05 Beyond RF Ablation: Other Uses for RF Within the Body</td>
<td>EuMC01-05 Passive Monolithic Microwave Multisensor Based on N Coupled Substrate Integrated Resonators for Environmental Detection</td>
<td>EuMIC/EuMC02-05 Thin Film Wafer Level Encapsulated RF-MEMS Switch for D-Band Applications</td>
</tr>
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<td></td>
<td>O. Murphy¹, M. R. Bahmanyar², C. N. McLennan², C. Tounazou², M. Yocouba³, 'Analog Devices, Cork, Ireland, 'Imperial College, London, United Kingdom, 'Harefield Hospital, Harefield, United Kingdom</td>
<td>M. Nobby, P. H. Rasolombohanginijato³, N. Y. Sama³, F. Dominguez³, D. Deslandes³, 'Université du Québec a Trois-Rivières, Trois-Rivières, Canada, 'Université du Québec a Montréal, Montreal, Canada</td>
<td>S. Tolunay Wipf¹, A. Göritz¹, M. Wietstruck¹, C. Wipf², T. Tillack¹, A. Mail³, M. Kaynak¹³, 'HP, Frankfurt (Oder), Germany, 'Technische Universität Berlin, Berlin, Germany, 'Sabanci University, Istanbul, Turkey</td>
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</tbody>
</table>

¹Analog Devices, Cork, Ireland, ²Imperial College, London, United Kingdom, ³Harefield Hospital, Harefield, United Kingdom
EuMW01
EuMW/EuMC Opening Session
Chair: Andrew Gibson, EuMW 2016 General Chair
Co-Chair: Ian Hunter, EuMC 2016 Chair

11:20 - 11:50 Welcome Addresses
Opening of the European Microwave Week 2016
Andrew Gibson, EuMW 2016 General Chair
EuMA Welcome Address
Wolfgang Heinrich, EuMA President
Greetings from IEEE MTT-S
Ke Wu, IEEE MTT-S President
Opening of the European Microwave Conference 2016
Ian Hunter, EuMC 2016 Chair

11:50 - 12:20
Awards Ceremony
Alexander Yarovoy, EuMA Awards Chair
EuMA Distinguished Service Award
EuMA Outstanding Career Award

12:20 - 13:00
Keynote Speech
Quantum Flexible Payloads for Telecoms Satellites
By Glyn Thomas, Payload Director of Airbus

The role of satellites in the communications value chain is rapidly changing. The traditional model of using simple bent pipe satellites for broadcasting TV channels via wide coverage beams to hundreds of millions of satellites subscribers is under threat by the provision of on demand over the top services such as Netflix and NowTV. However this threat is also an opportunity. The demand for mobile data using “bring your own devices” in the domains on Aeronautical and Maritime via local WiFi networks supplied by satellite links is exponentially exploding. This wind of change is pulling a tremendous amount of innovation into the design of communications satellite payloads. This innovation is enabled by state of the art RF and Microwave technologies including:

- Active Antennas, using T/R modules in Ku and Ka bands with GaN SSPA
- State of the art beamforming networks both analogue and digital
- State of the art flexible filtering and routing approaches both analogue and digital.

The key note speaker will address these winds of change and how what has historically be a conservative cautious industry is rising to the challenge of a changing world and new means of consumption of information / data.
EuMC Poster01-01
Compact Single-band Planar Crossover Based on Coupled Lines
W. Feng, T. Zhang, W. Che, Nanjing University of Science & Technology, Nanjing, China

EuMC Poster01-02
90-Degree Broadband Asymmetrical Open-Short-Stub Phase Shifter with Inductance Compensation
M. Wei, P. Gjurovski, R. Negra, RWTH Aachen University, Aachen, Germany

EuMC Poster01-03
Resonant Properties of Mismatched Ring Circuits
S. Raabe, C. Monka, S. Frankie, R. Caspar, J. Schoebel, Technische Universität Braunschweig, Braunschweig, Germany

EuMC Poster01-04
Ultra Broadband Planar Transmission Line Transformers with Ferrite-based Bandwidth Extension
Z. Zhang, G. Boeck1, 1Berlin Institute of Technology, Berlin, Germany, 2Leibniz-Institut für Hochfrequenztechnik, Berlin, Germany

EuMC Poster01-05
Real-Valued Discrete-Time Impulse Response Representation of Bandpass S-parameters
Y. Wang, A. Zhu, T. J. Brazil, University College Dublin, Dublin, Ireland

EuMC Poster01-06
Compact Low Phase-Noise MEMS-based RF Oscillator on a Dedicated Silicon-Ceramic Composite Substrate

EuMC Poster01-07
Ferroelectric Varactor on Diamond for Elevated Power Microwave Applications
A. B. Kazys, A. K. Mikhalylov, Saint-Petersburg State Electrotechnical University, Saint-Petersburg, Russian Federation

EuMC Poster01-08
Design of BST-on-Si Composite FBARs for Switchable BAW Filter Application
M. Zolfaghari Koohi, S. Lee, A. Mortszawi, University of Michigan, Ann Arbor, United States

EuMC Poster01-09
Gain Improved Stacked Antenna Tuned using Ferromagnetic and Ferroelectrics Films
Y. Malallah1, K. Alfansoon1, D. Verkatesh1, C. Chinnasamy1, M. Marinos1, H. Gundel1, A. Danyush1, 1Drexel University, Philadelphia, United States, 2Electron Energy Corporation (EEC), Landsville, United States, 3Université de Nantes, Nantes, France

EuMC Poster01-10
RF Solderless Vertical Interconnection for 3D Module Integration
A. Bentini, G. De Santis, M. Barbocci, Elettronica SpA, Rome, Italy

EuMC Poster01-11
L-band SiGe HBT Active Differential Equalizers with Variable Inclination and Position of the Positive or Negative Gain Slopes
Y. Itoh, H. Takagi, Shonan Institute of Technology, Fujisawa, Japan

EuMC Poster01-12
Broadband High Linearity IQ Modulator for Direct Conversion Transmitters
N. Yahav1, A. Elendowicz1, 1Broadcom, Herzliya, Israel

EuMC Poster01-13
A Broadband Frequency Ramp Generator for Very Fast Network Analysis Based on a Fractional-N Phase Locked Loop
M. Mailach1, D. Gryl1, R. Storch1, T. Masch1, 1Ruhr-University Bochum, Bochum, Germany, 2KROHNE Innovation GmbH, Duisburg, Germany

EuMC Poster01-14
Inductorless Wideband LNA with Improved Input Matching using Feedforward Technique
P. H. Bousseaud, M. A. Khan, R. Negra, RWTH Aachen University, Aachen, Germany

EuMC Poster01-15
Front-End MMICs for Broadband High Throughput Satellite Systems Utilizing V and Q-band
D. Neillon, N. Chiang, R. Remba, J. J. Sowers, SSL, Palo Alto, United States

EuMC Poster01-16
Millimetre-Wave Six-Port QPSK Modulators for High Data-Rate Wireless Communications
B. Zouggar, C. Hannachi, E. Moldovan, S. Tatu, Institut National de la Recherche Scientifique, Montreal, Canada

EuMC Poster01-17
Graphical Approach to Analysis and Design of Gain-Boosted Near-I-max Feedback Amplifiers
Y. Ito, S. Amakawa, Hiroshima University, Higashihiroshima, Japan

EuMC Poster01-18
Microwave Active Ring Resonator Based on Spin-Wave Delay Line
M. I. Martynov1, A. A. Nikitin1, 1A. B. Ustinov1, 2A. K. Kulinov1, 2Electrotechnical University “LETI”, St. Petersburg, Russian Federation, 3TtMmO University, St. Petersburg, Russian Federation

EuMC Poster01-19
Crystal Based Coplanar Waveguide Tuneable Crystal Based Coplanar Waveguide Tuneable Resonator Based on Spin-Wave Delay Line
N. Yahav1, A. Efendowicz1, 1Broadcom, Higashihiroshima, Japan

EuMC Poster01-20
Impedance Tuner using BST Varactors in Alumina-based IPD Technology
K. Wong, R. R. Mansour, University of Waterloo, Waterloo, Canada

EuMC Poster01-21
Experimental Proof-of-Principle of a Passive, Nearly Reciprocal, Transistor-Based Tuneable RF Inductance
S. Loracher, K. Blau, U. Stehr, R. Stephan, M. A. Hein, Technische Universität Ilmenau, Ilmenau, Germany

EuMC Poster01-22
Tuneable and Switchable Dual-Band BPF with Reconfigurable Selectivity and Bandwidth Control
N. Kumar, Y. K. Singh, Indian Institute of Technology Patna, Bihta, India

EuMC Poster01-23
Compact Harmonic Tuning Circuits for Class-F Amplifiers using Negative Order Resonance Modes of CRH Stub Lines
S. Tanaka, S. Koizumi, K. Saito, Shibaura Institute of Technology, Tokyo, Japan

EuMC Poster01-24
Joint Compensation of Modulator and Power Amplifier Nonlinearities Based on a Complex-Valued Volterra Model
C. Crespo-Cadenas, M. I. Madero-Ayora, J. Reina-Tochina, J.A. Becerra-Gonzalez, University of Seville, Seville, Spain

EuMC Poster01-25
Output Harmonic Optimisation of Dynamically Load-Modulated Power Amplifiers
K. Minnis1, G. T. Winkins1, A. Yamaoka2, K. Yamaguchi1, 1Toshiba Research Europe Limited, Bristol, United Kingdom, 2Toshiba Corporation, Kawasaki, Japan

EuMC Poster01-26
Parallel Combination of High-Efficiency Amplifiers with Spurious Rejection for Concurrent Multiband Operation
J. Enomoto, H. Nishizawa, R. Ishikawa, Y. Takayama, K. Honju, University of Electro-Communications, Chofu, Japan

EuMC Poster01-27
A Hybrid 50 W GaN-HEMT Ku-Band Power Amplifier
F. Rauchschle1, D. Maassen1, F. Ohnimus2, L. Scheun1, U. Dalsida2, G. Boeck1, 1Berlin Institute of Technology, Berlin, Germany, 2Leibniz-Institut für Höchstfrequenztechnik, Berlin, Germany

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### TUESDAY

#### EuMC Poster01 Session
Chair: Rob Sloan, University of Manchester
13:00 – 14:20
The authors are present for discussion from 13:00 – 14:20
The posters are on display from 13:00 – 14:20

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| **EuMC Poster01-28**  
Comparison of Filter Bank Multi-Carrier and Orthogonal Frequency-Division Multiplexing RFPA Linearisation Requirement  
K. N. Gbemreicaid, K. Morrisii, S. Ben Smida, M. Beachi, S. Walesii, M. Kyriacouii  
1University of Bristol, Bristol, United Kingdom, 2Roke Manor Research Limited, Romsey, Hampshire, United Kingdom | **EuMC Poster01-34**  
Frequency Sensitive Effect of Rectifying FET Terahertz Detectors  
A. G. Golentkov, F. F. Szov, I. O. Lyiuk  
Institute of Semiconductor Physics of Ukrainian NAS, Kyiv, Ukraine |
| **EuMC Poster01-29**  
The Two-Tone Model for Power Amplifier Modeling T.R. Cunha, E. M. Barradas, C. J. Pedro, Universidade de Aveiro - Instituto de Telecomunicacoes, Aveiro, Portugal | **EuMC Poster01-35**  
| **EuMC Poster01-30**  
160 W Peak High Linear Multilevel Outphasing Transmitter  
C. T. Ngheii, J. Guaniii, D. Maaussenii, A. F. Arenii, G. Boecki, R. Negraii, 4RWTH Aachen University, Aachen, Germany, 5Berlin Institute of Technology, Berlin, Germany | **EuMC Poster01-36**  
Reduced-Complexity E-Band VNA’s with Tethered Far-Reaching Reflectometers  
K. M. Noujelii, T. H. Roberts, Anritsu Company, Morgan Hill, United States |
| **EuMC Poster01-31**  
Phase Control in Photonic-Scheerd Phased Array Transmitters by Optical Homodyne Detection  
K. Kolpatekii, L. Häringii, A. Czylwikii, 4XLIM / United Monolithic Semiconductors, Brive La Gaillarde, France, 5XLIM, Brive La Gaillarde, France, 1-1-1 Umezono, Tsukuba, Japan, 2National Institute of Information and Communications Technology, Mitoyo, Japan | **EuMC Poster01-37**  
A Multi-Tone Load Pull Measurement System for On-Wafer Characterization of Microwave Power Transistors  
S. Laureti, S. Kahlpit, Q. Raymondii, S. Jacquesii, 1XILM, Brive La Gaillarde, France, 2XILM / United Monolithic Semiconductors, Brive La Gaillarde, France, 3XLIM, Limoges, France |
| **EuMC Poster01-32**  
Experimental Test of a W-band Gyro-TWA for Cloud Radar Application  
120° Accesses CPW Transmission Lines for TRL Calibration Standards in a Band of 20-67 GHz  
A. Usman Bechiri1ii, V. Didieri, Laboratoire Hubert Curien, Saint-Etienne, France, 1Universite Jean Monnet, Saint-Etienne, France |
| **EuMC Poster01-33**  
Novel Microwave Diode for Millimetre Waves on the Base of Asymmetrically-Doped Semiconductor Structure  
A. Szeiiediitii, S. Almontsii, J. Gradaskaisii, V. Grubiskii, A. Lucaii, A. Cerskii, Center for Physical Sciences and Technology, Vilnius, Lithuania | **EuMC Poster01-41**  
Frequency Detection Method with Transversal Filters  
K. Tajima, M. Hieda, Mitsubishi Electric Corp., Kamakura, Japan |
| **EuMC Poster01-34**  
Pipe Power Amplifier Modeling  
T. R. Cunha, E. M. Barradas, C. J. Pedro, Universidade de Aveiro - Instituto de Telecomunicacoes, Aveiro, Portugal | **EuMC Poster01-35**  
| **EuMC Poster01-36**  
Reduced-Complexity E-Band VNA’s with Tethered Far-Reaching Reflectometers  
K. M. Noujelii, T. H. Roberts, Anritsu Company, Morgan Hill, United States | **EuMC Poster01-37**  
A Multi-Tone Load Pull Measurement System for On-Wafer Characterization of Microwave Power Transistors  
S. Laureti, S. Kahlpit, Q. Raymondii, S. Jacquesii, 1XILM, Brive La Gaillarde, France, 2XILM / United Monolithic Semiconductors, Brive La Gaillarde, France, 3XLIM, Limoges, France |
| **EuMC Poster01-37**  
A Multi-Tone Load Pull Measurement System for On-Wafer Characterization of Microwave Power Transistors  
S. Laureti, S. Kahlpit, Q. Raymondii, S. Jacquesii, 1XILM, Brive La Gaillarde, France, 2XILM / United Monolithic Semiconductors, Brive La Gaillarde, France, 3XLIM, Limoges, France | **EuMC Poster01-38**  
120° Accesses CPW Transmission Lines for TRL Calibration Standards in a Band of 20-67 GHz  
A. Usman Bechiri1ii, V. Didieri, Laboratoire Hubert Curien, Saint-Etienne, France, 1Universite Jean Monnet, Saint-Etienne, France |

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### TUESDAY

#### Room 7

**EuMC03**  
**IoT, UWB and Wireless Sensor Networks**  
Chair: Manos Tentzeris, Georgia Institute of Technology  
Co-Chair: Daniela Dragomirescu, LAAS-CNRS, Université de Toulouse

**EuMC03-01**  
**LF RFID Chequered Loop Antenna for Pebbles on the Beach Detection**  
A. M. Diet, M. Grzeskowiak, Y. Lu, M. Blandieri, A. Pozzebon, M. Benmouna, C. Censori, G. Lissorgues, F. Alves, G. Esposito, IEMN, Université de Lille, France, CNRS, LAAS, Université Toulouse III Paul Sabatier, France

**EuMC03-02**  
**Chipless Substrate Integrated Waveguide Tag using Time-Domain Reflectometry Technique for Millimetre-Wave Identification (MMID)**  
J. Li, T. Djerassi, F. Ren, K. Wu, Ecole Polytechnique de Montréal, Montreal, Canada

**EuMC03-03**  
**Wireless Passive Sensor Interrogation Technique Based on a Three-Dimensional Analysis**  
D. Henry, H. Aubert, P. Pons, LAAS-CNRS, Toulouse, France, Université de Toulouse INP, Toulouse, France

**EuMC03-04**  
**Measurement and Analysis of Radiated Emissions from Coupled UAV and Smart RFIC Objects**  
S. Wane, J. Bajon, J. Russer, P. Russer, H. Moschetta, Université de Toulouse INP, Toulouse, France, Université de Lyon, Lyon, France, University of Nottingham, Nottingham, United Kingdom, Moscow Aviation Institute, Moscow, Russian Federation

**EuMC03-05**  
**A 3D-Modulated Delay-Line Based Chipless TDR UWB RFID System with High Suppression of Multiple Reflections**  
M. Pöpperl, T. Frank, C. Mandel, R. Jakoby, M. Vossiek, Friedrich-Alexander-University Erlangen-Nürnberg, Erlangen, Germany, Technische Universität Darmstadt, Darmstadt, Germany

#### Room 8-11

**EuMIC19**  
**Millimetre-Wave Signal Generation**  
Chair: Michael Schlechtweg, Fraunhofer IAF  
Co-Chair: Shmuel Auster, Elta Systems Ltd.

**EuMIC19-01**  
**Wideband 148-188 GHz Push-Push VCO using Variable Inductance and Capacitance**  
J. Al-Eryani, H. Knapp, H. Li, J. Wursthorn, K. Aufinger, S. Majied, S. Boguth, R. Lachner, J. Boeck, L. Maurer, Universität der Bundeswehr München, Neuburg, Germany, Infineon Technologies AG, Neuburg, Germany

**EuMIC19-02**  
**Design of Voltage Controlled Oscillators (VCOs) in D-Band and their Phase Noise Measurements using Frequency Down-Conversion**  
U. Ali, A. Thiede, M. Bober, University of Paderborn, Paderborn, Germany

**EuMIC19-03**  
**Millimetre-Wave Linear Fast-Chirp Pulse Generator in 65-nm CMOS Technology**  
H. Matsumura, Y. Yagishita, I. Soga, Y. Kawano, T. Iwai, Fujitsu Laboratories Limited, Atsugi, Japan

**EuMIC19-04**  
**A 61 GHz Frequency Synthesizer in SiGe BiCMOS for 122 GHz FMCW Radar**  
A. Ergintav, X. Sun, F. Herzeli, H. J. Ng, G. Fischer, D. Kissinger, IHP, Frankfurt (Oder), Germany, 4HK Microsystem Integration Ltd., Hong Kong, China, Technische Universität Berlin, Berlin, Germany

**EuMIC19-05**  
**Transceiver MMICs for Street Surveillance Radar**  
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<td>THz Photonics Electronic Components and Systems</td>
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<td>Room 4</td>
<td>EuMC04/EuMC04</td>
<td>Components for Receivers</td>
<td>15:00 - 15:20</td>
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**EuMC04-01**
A Digitally Assisted Analog Cancellation System at RF Frequencies for Improving the Isolation Performance of a Ceramic Duplexer
H. Su, R. Farrell, National University of Ireland, Maynooth, Maynooth, Ireland

**EuMC04-02**
Compact Reconfigurable Industry-Level Ka-Band Switch Matrix Payload Module for Geostationary Satellite Operation
A. Ebert, J. Mueller, R. Stephan, D. Stoepe, T. Kaeser, W. Konrath, M. A. Hein, Technische Universität Ilmenau, Ilmenau, Germany, Tesat Spacecom GmbH, Backnang, United States

**EuMC04-03**
Millimetre-Wave Sourceless Receiver Embedded with DoA Estimation
R. Liu, Y. Zhao, K. Wu, Ecole Polytechnique de Montreal, Montreal, Canada

**EuMC04-04**
Active Imaging of Glass Fiber Reinforced Plastic using Millimetre Wave Radiometry
C. Vegas, B. Alderman, P. Huggard, J. Powell, K. Parow-Souchon, M. Firdaus, H. Liu, R. Skar, C. Duff, The University of Manchester, Manchester, United Kingdom, Teratech Components Ltd., Oxford, United Kingdom, STFC Rutherford Appleton Laboratory, Oxford, United Kingdom

**EuMC04-05**
Microwave Spectroscopy: Novel Cost-Effective Approach to Measure Drip Loss in Pork Loin
A. Mason, B. Abdulla, M. Muradov, O. Korostynska, A. Al-Shamma, K. Lunde, S. Bjarnadottir, A. Al-Shamma'a, K. Lunde, Aalto University, Helsinki, Finland, Liverpool John Moores University, Liverpool, United Kingdom, Animalia, Oslo, Norway

**EuMC04-06**
High Conversion Gain 100 GHz Photoreceiver Integrated with UTC-PD and PHEMT Amplifier for 92 GHz Carrier, 10.7 Gbps Photonic Wireless Communication
T. Umezawa, K. Kashima, A. Kanno, P. T. Dat, K. Nakahara, University of Tokyo, Tokyo, Japan, A. Kanno, National Institute of Information and Communications Technology, Tokyo, Japan, K. Nakahara, National Institute of Information and Communications Technology, Tokyo, Japan, A. Kanno, National Institute of Information and Communications Technology, Tokyo, Japan

**EuMC04-07**
Characterization of Sub-Thz Detection Array in 0.18 μm CMOS Technology
J. Chen, W. Liu, P. Yan, C. Jiu, D. Hou, W. Hong, Southeast University, Nanjing, China

**EuMC04-08**
A High Image Rejection E-Band Sub-Harmonic IQ Demodulator with Low Power Consumption in 90 nm CMOS Process
Y.T. Chou, Y. H. Lin, H. Wang, National Taiwan University, Taipei, Taiwan

**EuMC04-09**
Geometric VLBI Ultra Low Noise Broad-Band Receiver for 13 Meter VOGS Radiotelescopes

**EuMC04-10**
Self-Biasing Effects Induced by RF Step-Stress in Ka-Band LNAs based on InAlN/GaN HEMT Technology
J. Tartarin, S. Noe, S. Piotrovic, F. Delage, LAAS-CNRS and University of Toulouse (UPS), Toulouse, France, Thales Research Technology, III-V Lab, Palaiseau, France

**EuMC04-11**
Towards 400 Gb/s Integrated Transceivers Si-Based, Monolithically Technology – Enabler for Photonic BiCMOS Technology
Z. Iskandar, J. Alvarez, E. Bautista, E. Piston, V. Payul, A. Silligni, P. Pedeven, A. Ferrai, University of Grenoble Alpes, IMEP-LAHC Laboratory, Grenoble, France, University of Grenoble Alpes, CEA-LETI, Minatec Campus, Grenoble, France

**EuMC04-12**
A Millimetre-Wave Ultra-Widband Reflection-Type Phase Shifter in BiCMOS 55 nm Technology
Z. Iskandar, J. Alvarez, E. Bautista, E. Piston, V. Payul, A. Silligni, P. Pedeven, A. Ferrai, University of Grenoble Alpes, IMEP-LAHC Laboratory, Grenoble, France, University of Grenoble Alpes, CEA-LETI, Minatec Campus, Grenoble, France

**EuMC04-13**
Mixer Linearization using a Dynamic Bias Circuit with an Integrated Diode Linearizer
B. Shi, Institute for Infocomm Research, Singapore, Singapore
EuMIC/EuMC05
Multi-Functional Tuneable Filters for Wireless Applications
Chair: Mehmet Karaaslan, e2v Technologies
Co-Chair: Jose L. Alonso, Technical University of Madrid

EuMIC/EuMC06
Packaged and Integrated High-Power Amplifiers
Chair: Peter Aaren, University of Surrey
Co-Chair: Olof Bengtsson, FGH

EuMIC/EuMC07
Packaging and Multi-chip Modules
Chair: Pierre Blondy, XUM CNRS Universite de Limoges
Co-Chair: Fabio Coccetti, LAAS-CNRS

EuMIC/EuMC05-01
A Band-Switchable and Tuneable Nested Bandpass Filter with Continuous 0.4–3GHz Coverage
K. Motoi, K. Kunihiro, NEC, Kawasaki, Japan

EuMIC/EuMC06-01
A Packaged Hybrid Doherty PA for Microwave Links
D. Gustafsson, K. Andersson, A. Leidenhed, A. Rhodin, T. Wegeland, Ericsson AB, Gothenburg, Sweden

EuMIC/EuMC07-01
Dielectric Material Characterization of High Frequency Printed Circuit Board Laminates and an Analysis of their Transmission Line High Frequency Losses
B. Curran, C. Tschoban, A. Ippich, H. Kroener, I. Ndp, K. Lang, A. Fraunhofer - IZM, Berlin, Germany, Isola GmbH, Düren, Germany

EuMIC/EuMC05-02
Hairpin Bandpass Filter With Tuneable Center Frequency and Tuneable Bandwidth Based on Screen Printed Ferroelectric Varactors
C. Schuster, A. Wiens, M. Schüller, C. Kohler, J. Binder, R. Jakoby, TU Darmstadt, Darmstadt, Germany, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

EuMIC/EuMC06-02
A 2.6 GHz Band 78 W Doherty Power Amplifier with GaN HEMT Unit-Cell Structure Robust for Layout-Dependent Loop Oscillation
S. Imai, S. Watanabe, Y. Komatsuzaki, H. Okazaki, S. Shinjo, K. Yamanaka, Y. Sakaki, H. Katayama, A. Irie, Mitsubishi Electric Corporation, Tokyo, Japan, Mitsubishi Electric Corporation, Ofuna, Japan

EuMIC/EuMC07-02
Technology Platform for Millimetre-wave Applications Metallic-nanowire-Membrane (MnM)
M. V. Pelegrini, J. M. Pinheiro, L. A. Gomes, F. Podevin, P. Ferrari, A. L. Serrano, University of São Paulo, São Paulo, Brazil, Université Grenoble Alpes, Grenoble, France

EuMIC/EuMC05-03
An Integrated Tuneable Electrical-Balance Filter with 60 dB Stopband Attenuation and 1.75–3.7 GHz Stopband Tuning Range
B. van Liempd, B. Hershberg, P. Wambacq, J. C. Craninckx, IMEC, Leuven, Belgium, Vrije Universiteit Brussel, Brussels, Belgium

EuMIC/EuMC06-03
Linearity Enhancement in CMOS Power Amplifier Design by using Varactor-Embedded Output Matching Network
C. Zhai, K. K. M. Cheng, The Chinese University of Hong Kong, Shatin, Hong Kong

EuMIC/EuMC07-03
Differential Wideband Interconnects for Organic Millimetre-Wave Chip Packages - An Effort to Design an All-Purpose RF Chip Package
F. X. Röhrl, J. Jakob, W. Bogner, D. Hageneder, S. Zorn, THD Technische Hochschule Deggendorf, Deggendorf, Germany, Rohe und Schwarz GmbH & Co. KG, Teisnach, Germany

EuMIC/EuMC05-04
Dual-Mode-Resonator-Based Pseudo-Elliptic Filters with Tuneable Response
A. B. Alotman-Alhamzawi, F. Gentili, S. W. Sattie, W. Bösch, Graz University of Technology, Graz, Austria

EuMIC/EuMC06-04
A 20 W and Broadband Two-stage LDMOS Power Amplifier with High-Q Cu Integrated Passive Device for Multi-Band and Multi-Standard Applications
M. Vaseem, S. M. McKincher, A. Shamim, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia

EuMIC/EuMC06-05
High Performance Plastic Packaged 100 W L-band Quasi-MMIC HPA
D. Boure, P. Sir, M. Caradisi, J. P. Vacl, UMS, Villebon-sur-Yvette, France

EuMIC/EuMC07-05
3D Inkjet Printed Radio Frequency Inductors and Capacitors
M. Vaseem, G. McKenzie, A. Shamim, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia
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<th>Room 7</th>
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<td><strong>EuMC05</strong></td>
<td><strong>EuMC06</strong></td>
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<td><strong>Millimetre-Wave Antennas</strong></td>
<td><strong>Metamaterial Circuits and Modelling</strong></td>
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<td>Chair: Lorenz-Peter Schmidt, University of Erlangen</td>
<td>Chair: Ferran Martin, Universitat Autonoma de Barcelona</td>
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<td>Co-Chair: Ioan Lager, Delft University of Technology</td>
<td>Co-Chair: Amr M.E. Safwat, Ain Sahms University</td>
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| 16:40 - 17:00 | 17:00 - 17:20 |
| **EuMC05-01** | **EuMC06-01** |
| Compact Inkjet-Printed Broadband Filters with Triple Bandnotch for Wireless Applications | Analytical Modeling of Non-Symmetric and Non-Uniform Compound GRATINGS |
| W. Ahmad1, C. Zlebic2, D. Budimir3 | C. Molero, R. Rodriguez-Berral, F. Mesa, F. Medina, University of Sevilla, Seville, Spain |
| 1University of Westminster, London, United Kingdom, 2University of Novi Sad, Novi Sad, Yugoslavia |

| 17:00 - 17:20 | 17:20 - 17:40 |
| **EuMC05-02** | **EuMC06-02** |
| S. Morris, A. R. Chandran, N. Timmons, J. Morrison, Letterkenny Institute of Technology, Letterkenny, Ireland | P. Velez, J. Selga, J. Bonache, F. Martin, Universitat Autonoma of Barcelona, Bellaterra, Spain |

| 17:20 - 17:40 | 10:00 - 10:20 |
| **EuMC05-03** | **EuMC06-03** |
| Inkjet Printed and Folded LTE Antenna for Vehicular Application | A New RF Interference Cancellation using A Novel 3-Pole Bandstop Resonator Designed using Tapped CRLH T-Line Model |
| B. Sanz-Izquierdo, S. Jun, J. Heirons, T. B. Baydu, University of Kent, Canterbury, United Kingdom | S.A. Ibrahim, R. Farrell, Maynooth University, Maynooth, Ireland |

| 10:00 - 10:20 | 17:40 - 18:00 |
| **EuMC05-04** | **EuMC06-04** |
| Design of Electrically Small Antennas with Inkjet-Printing Technology | Highly Miniaturized Wideband Negative Group Delay Circuit using Effective Negative Dielectric Permittivity Stopband Microstrip Lines |
| S. Genovesi, F. Costa, A. Monorchio, Universitá di Pisa, Pisa, Italy | H. Taher, R. Farrell, Maynooth University, Maynooth, Ireland |

| 17:40 - 18:00 | 18:00 - 18:20 |
| **EuMC05-05** | **EuMC06-05** |
| Design and Development of a Compact Wearable Dipole GPS Antenna | Proposal and Theoretical Design of THz Bandpass Filters using Metallic Photonic Crystal Resonators |
| S. Ismail1, A. Barton, P. Gaydecki, S. Kazimierczuk, N. Kazimierczuk1, University of Manchester, Manchester, United Kingdom, 2CERN, Geneva 23, Switzerland | C. Chen1, T. Aizawa1, S. Takeda2, Z. Ma3, 1Kanagawa University, Yokohama, Japan, 2Antenna Giken Co., Ltd, Saitama, Japan, 3Saitama University, Saitama, Japan |
EuMIC20

EuMIC Closing Session
Chair: Tom Brazil, EuMIC 2016 Chair
Co-Chair: Stepan Lucyszyn, EuMIC 2016 Co-Chair

16.40 – 17.20

Foundry Session
Chair: Massimo Comparini, Telespazio, Italy & France

Several key representatives of RF and microwave semiconductor foundries will give short presentations of their foundry capabilities with respect to the Impact of Advanced GaN and Silicon Technologies for Military and Space Applications. This includes details of current fully-released and commercially available processes and processes in development. There will also be opportunity for questions and answers during this interactive forum.

17.20 – 18.00

Balanced Microwaves
Steve C. Cripps, Cardiff University, UK

The “balanced” term has two very different interpretations at microwave frequencies. Differential circuits are widely used in low frequency electronics, offering many advantages particularly in enabling fully integrated circuit functions to be implemented. But the extension of differential balanced techniques into the GHz frequency regime continues to pose problems inasmuch as microwave transmission and measurement have always been implemented using unbalanced, or “grounded” signals. In an earlier era, a different kind of “balanced” microwave circuit received much attention and paid many bills. The quadrature balanced circuit has a different set of advantages but has been in a state of decline over the last couple of decades. Both approaches will be reviewed in this paper, and examples of broadband high efficiency RFPAs implemented in multi-layer (“LCP”) technology using both kinds of balanced configuration will be described. These results point to a pressing need for a mature and reliable multilayer integrated process that is still absent from the microwave designer’s toolbox.

18.00 – 18.10

EuMIC Awards Ceremony
Ali Rezazadeh, EuMW 2016 Awards Chair

EuMIC Prize
EuMIC Young Engineer Prize
GAAS Association Student Fellowships

18.10 – 18.20

Closing of EuMIC 2016
Tom Brazil, EuMIC 2016 Chair

Invitation to EuMIC 2017 in Nuremberg
Ingmar Kalffass, EuMIC 2017 Chair
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<td><strong>EuMC07</strong>&lt;br&gt;Lossy and Multi-Band Filters&lt;br&gt;Chair: Ian Hunter, University of Leeds&lt;br&gt;Co-Chair: Giuseppe Macchiarella, Politecnico di Milano</td>
<td><strong>EuMC08</strong>&lt;br&gt;Advanced 5G Technologies&lt;br&gt;Chair: Arne Jacob, Hamburg University of Technology&lt;br&gt;Co-Chair: Christian Person, Telecom Bretagne</td>
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<td><strong>EuMC07-01</strong>&lt;br&gt;Novel Lossy Microstrip Filter with Extracted-Pole Technique&lt;br&gt;Z. Zhou, J. Ni, J. Hong, Heriot-Watt University, Edinburgh, United Kingdom</td>
<td><strong>EuMC08-01</strong>&lt;br&gt;Massive MIMO for Energy-Efficient Communications&lt;br&gt;C. Desset, B. Debaillie, IMEC, Leuven, Belgium</td>
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<td><strong>EuMC07-02</strong>&lt;br&gt;Lossy Reflection Mode Dual-Band Bandstop Prototype Network Based On Hybrid Elliptic Filtering Function&lt;br&gt;S. Soeung, P. Wong, S. Cheab, Universiti Teknologi PETRONAS, Seri Iskandar, Malaysia</td>
<td><strong>EuMC08-02</strong>&lt;br&gt;RF System Requirement Analysis and Simulation Methods Towards 5G Radios using Massive MIMO&lt;br&gt;T. Tuovinen, N. Tervo, A. Pärssinen, Centre for Wireless Communications, University of Oulu, Oulu, Finland</td>
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<td><strong>EuMC07-03</strong>&lt;br&gt;Noununiform Scaling Technique for Parallel-Coupled Pairs Lossy Filters&lt;br&gt;L. Qiu1, L. Wu1, W. Yin1, J. Mao1, Shanghai Jiao Tong University, Shanghai, China, Zhejiang University, Hangzhou, China</td>
<td><strong>EuMC08-03</strong>&lt;br&gt;Signal Decomposition Technique for Enhanced Power Added Efficiency of OFDM Transmitters and its Application for MIMO Systems&lt;br&gt;Y. Shirato, M. Muraguchi, Graduate School of Engineering, Tokyo University of Science, Tokyo, Japan</td>
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<td><strong>EuMC07-04</strong>&lt;br&gt;A Fully Tuneable C-Band Reflectionless Bandstop Filter using L-Resonators&lt;br&gt;J. S. Chieh, J. Rowland, SPAWAR, San Diego, United States</td>
<td><strong>EuMC08-04</strong>&lt;br&gt;Robustness of Filter Bank Multicarrier Signals To Power Amplifier Nonlinearities&lt;br&gt;A. Valette1, M. Ariaudo1, S. Traverso1, I. Fjällkova1, Z. Zerioul1, Thales Communications and Security, Gennevilliers, France, ‘ETIS, UMR 8051/ENSIA, Université Cergy-Pontoise, CNRS, Cergy, France</td>
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<td><strong>EuMC07-05</strong>&lt;br&gt;Practical Realisation of Multiband Planar Filters Based on a Reactance Transform Method&lt;br&gt;R. H. Geschke, L. Nepaya, University of Cape Town, Cape Town, South Africa</td>
<td><strong>EuMC08-05</strong>&lt;br&gt;Pragmatic OAM with Polarization Multiplexing Transmission for future 5G Ultra-High Capacity Radio&lt;br&gt;E. Sasaki1, M. Hirabe1, T. Maru1, N. Zaim1, NEC Corporation, Nakahara-ku, Japan, NEC Corporation, Nakahara-Ku, Japan, NEC Europe Ltd, South Ruislip, United Kingdom</td>
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**TUESDAY**
### Tuesday

#### Room 13

**EuMC09**  
Novel Electromagnetic Techniques for Microwave Components  
Chair: Henri Aubert, LAAS-CNRS  
Co-Chair: Sascha Meyne, Hamburg University of Technology

**EuMC09-01**  
Concept for Equivalent Dielectric Constant of On-Chip Passive Lines on Anisotropic Substrates  
P. I. Dankov, Sofia University, Sofia, Bulgaria

**EuMC09-02**  
A Virtual Lossy Dielectric Model with Composite Boundary Conditions for the Analysis of Substrate Integrated Waveguides  
C. A. Leal-Sevillano, J. A. Ruiz-Cruz, J. R. Montejo-Garay, J. M. Rebollar, Universidad Politécnica de Madrid, Madrid, Spain; Universidad Autónoma de Madrid, Madrid, Spain

**EuMC09-03**  
Modeling of Inhomogeneous and Lossy Components by the BI-RME Method and the Segmentation Technique  
S. Battistutta, M. Bozzi, M. Bressan, M. Pasian, L. Perregrini, University of Pavia, Pavia, Italy

**EuMC09-04**  
Equivalent Surface Impedance Based Mixed-Potential Integral Equation for 3-D Model of On-Chip Passive Components  
Y. Zhao, G. Xiao, F. Ling, J. Mao, Shanghai Jiao Tong University, Shanghai, China; Xpeedic Technology Inc., Bellevue, United States

**EuMC09-05**  
Rapid Adjoint-Based Design Optimization of Compact Microwave Structures using Multi-Fidelity Simulation Models  
S. Kozie, A. Bekasiwicevicz, Reykjavik University, Reykjavik, Iceland; Gdansk University of Technology, Gdansk, Poland

#### Room 14

**EuMC10**  
Digital Predistortion  
Chair: Georg Fischer, FAU  
Co-Chair: Nutapong Somjit, University of Leeds

**EuMC10-01**  
Digital Predistorter Model Derivation Based on Iterative Learning Control  
J. A. Chani-Cahuana, P. N. Landin, C. Fager, T. Eriksson, Chalmers University of Technology, Gothenburg, Sweden; Ericsson, Kumla, Sweden

**EuMC10-02**  
Comparison of Model Order Reduction Techniques for Digital Predistortion of Power Amplifiers  
P. L. Gilabert, G. Montoro, I. Wang, M. N. Ruiz, J. A. García, Universitat Politècnica de Catalunya, Castelldefels, Spain; Universidad de Cantabria, Santander, Spain

#### Room 15

**EuMC11**  
Passive Couplers and Dividers  
Chair: Alexandre Takacs, LAAS Tolouse  
Co-Chair: Vicente Boria, Universidad Politécnica de Valencia

**EuMC11-01**  
Compact Planar Ultra-Wideband Power Dividers with Frequency Range up to 67 GHz for Multichannel Receivers  
N. Drobotun, D. Yanchuk, E. Khorsilov, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russian Federation; MICRAN, Tomsk, Russian Federation

**EuMC11-02**  
Compact Lumped-Element 5-Way Wilkinson Power Divider with Broadband Operation  
Y. Okada, T. Kawai, A. Enokihara, University of Hyogo, Himeji, Japan

**EuMC11-03**  
28 GHz Wilkinson Power Divider with $\lambda/6$ Transmission Lines in 65 nm CMOS Technology  
H. Oh, J. Lim, E. Lee, S. Choi, C. Byeon, Chungnam National University, Daejeon, Republic of Korea; Samsung Digital Media & Communications R&D Center, Suwon, Republic of Korea

**EuMC11-04**  
Concept for the Implementation of Very High Directivity and Decade Bandwidth in Compact Microstrip Directional Couplers  
A. Alt, N. Schwerg, C. Wangler, D. Gruner, Cardiff University, Cardiff, United Kingdom; TRUMPF Huettinger GmbH, Freiburg, Germany; CERN, Geneva, Switzerland

**EuMC11-05**  
Novel Tight Coupling and High Directivity $\lambda/4$ Partially-Narrowed and Slotted Coupled Line and its Application  
M. Abe, Y. Tahara, H. Takeuchi, T. Osada, N. Yoneda, Mitsubishi Electric Corporation, Kamakura, Japan; Mitsubishi Electric Corporation, Kamakura, Japan; Mitsubishi Electric Corporation, Amagasaki, Japan