MONDAY

Room 10

EuMIC01
Si-based Transceiver Building Blocks
Chair: Norihau Suematsu, Tohoku University
Co-Chair: Andrea Suriani, Thales Alenia

EuMIC02
High Efficiency and Linear Power Amplifiers
Chair: Franco Giannini, University of Rome Tor Vergata
Co-Chair: Frank van Vliet, TNO

EuMIC03
Novel Characterisation Techniques for Microwave Devices
Chair: Carlos Camacho-Penalosa, Universidad de Malaga
Co-Chair: Raymond Quérel, University of Limoges

Room 11

EuMIC01-01
Reconfigurable 4 Channel Carrier Aggregation Receiver using Harmonic Recombination Technique
S. Lee, D. Jeong, H. Jin, B. Kim, Pohang University of Science and Technology, Pohang, Republic of Korea

EuMIC02-01
Wideband 3 Way Doherty RFIC with 12 dB Back-Off Power Range
J. Bledoux, NXP, Toulouse, France

EuMIC03-01
Linearity Characterization of GaN HEMT Technologies Through Innovative Multi-Tone Load-Pull Measurements
S. Kahil1, S. Laurent1, R. Quérel1, J. Sombrin1, D. Florian1, V. Brunel1, C. Teysandi2, XLIM, Limoges, France, 1United Monolithic Semiconductors, Villebon-sur-Yvette, France

Room 12

EuMIC01-02
Integrated Circuit Field Canceller System Suitable for Highly Integrated Connectivity Transceivers
Z. E. Aboueh1, R. Herberholz2, N. Dubash3, A. Croxall1, A. Aktar1, J. Koehler1, L. Briones1, Qualcomm Atheros, Inc., Tempe, United States, 1Qualcomm Technologies International, Ltd., Cambridge, United Kingdom

EuMIC02-02
An Efficient W-Band InP DHBT Digital Power Amplifier
A. Wentzel, M. Hossain, D. Stoppel, N. Weimann, V. Krozer, W. Heinrich, Ferdinand-Braun-Institut, Leibniz-Institut fuer Hochfestfreizechnik, Berlin, Germany

EuMIC03-02
Low-Frequency Time-Domain Characterization for Fast and Reliable Evaluation of Microwave Transistor Performance
G. Bosi1, A. Raffo2, V. Vadalà3, F. Trevià1, G. Vannini1, D. Congi1, O. Sen2, E. Özbay1, University of Ferrara, Ferrara, Italy, 1Bilkent University, Ankara, Turkey

9:00 - 9:20

EuMIC01-03
A 25 to 45 GHz SiGe Receiver MMIC
L. E. Milner1, J. T. Harvey2, M. E. Parker1, L. T. Hall1, M. C. Rodrigues2, M. C. Heimlich1, S. J. Mahon1, Defence Science and Technology Group, Edinburgh, Australia, 1Macquarie University, Sydney, Australia, 2Macquarie University, Australia

EuMIC02-03
Predistortion- and Development-Platform for Multi-Input RF Power Amplifiers
P. Singerl1, T. Magesacher2, M. Mataln1, Infineon Technologies Austria AG, Villach, Austria, 1Infineon Technologies Austria AG, Villach, Austria

EuMIC03-03
Short Pulse Thermal Response of HBTs
K. Yazawa1, D. Kendig1, A. Xiong1, C. Churbonniaud2, T. Gasseling3, A. Shaikour1, Microsanj LLC., Santa Clara, United States, 1AMCAD Engineering, Limoges, France, 2Purdue University, West Lafayette, United States

9:20 - 9:40

EuMIC01-04
A Wideband Low Noise SiGe Medium Power Amplifier for X-Band Phased Array Applications
C. Caliskan1, I. Kalyoncu1, E. Ozeren1, M. Kaynak1, Y. Cebaluz2, Sabanci University, Istanbul, Turkey, 1HHP Microelectronics, Frankfurt (Oder), Germany

EuMIC02-04
Characterization and Modeling of Frequency Dispersion in RF LDMOS Transistors
P. H. Aaen1, L. Zhang2, K. Kim2, University of Surrey Guildford, United Kingdom, 1University of Surrey Guildford, United Kingdom, 2NXP, Chandler, United States

EuMIC03-04
Characterization and Modeling of Frequency Dispersion in RF LDMOS Transistors
P. H. Aaen1, L. Zhang2, K. Kim2, University of Surrey Guildford, United Kingdom, 1University of Surrey Guildford, United Kingdom, 2NXP, Chandler, United States

10:00 - 10:20

EuMIC01-05
Quasi-Circulator Based Automotive Monostatic Transceiver with Integrated Leakage Canceller
M. Porranzl1, C. Wagner2, H. Jaeger2, A. Stelzer2, Johannes Kepler Universität Linz, Linz, Austria, 1Johannes Kepler Universität Linz, Linz, Austria, 2Danube Integrated Circuit Engineering, Linz, Austria

EuMIC02-05
Solid-State RF Power Amplifiers for ISM CW Applications Based on 100 V GaN Technology
G. Formicone1, J. Burger1, J. Custer1, G. Bosi2, A. Raffo2, G. Vannini2, Integra Technologies, Inc., El Segundo, United States, 1University of Ferrara, Ferrara, Italy

EuMIC03-05
Characterization of a High Power GaN Device for Class E PA Design with Non-Sinusoidal Stimulus
V. Camarchia1, E. Cipriani2, P. Colantonio3, M. Porra1, R. Quaglia1, L. Cabria4, N. Ayllon5, Politecnico di Torino, Turin, Italy, 1University of Rome Tor Vergata, Rome, Italy, 2Cardiff University, Cardiff, United Kingdom, 3TTI Norte, Santander, Spain, 4ESIA-ESTEC, Keplerlaan, Netherlands

10:20 - 10:40
EuMIC04
EuMIC Opening Session
Chair: Tom Brazil, EuMIC 2016 Chair
Co-Chair: Stepan Lucyszyn, EuMIC 2016 Co-Chair

11.20 – 11.40
Welcome Address
Opening of the European Microwave Integrated Circuits Conference 2016
Tom Brazil, EuMIC 2016 Chair

11.40 – 12.20
THz Transistors and On-Wafer Calibrations
Dylan Williams, National Institute of Standards and Technology, Boulder, CO, USA

Advances in microwave wafer probes and vector network analyzers have opened up a whole new world of discovery in microwave metrology, making possible accurate on-wafer measurements in printed transmission lines at microwave, millimetre-wave, sub-millimetre-wave, and even terahertz frequencies. Dr. Dylan Williams, winner of the 2013 IEEE Joseph F. Keithley Award in Instrumentation and Measurement and President Elect of the IEEE Microwave Theory and Techniques Society, will trace the history of on-wafer measurements, discuss the fundamental principles behind accurate on-wafer measurements, touch on important applications in transistor, device, and waveform measurement, and preview the bright future of a field that continues to grow in importance in electrical engineering.

12.20 – 13.00
MMICs – Custom or COTS?
Liam Devlin, Plextek RFI, Essex, UK

In recent years the availability of Commercial Off-The-Shelf (COTS) MMICs has increased significantly. Standard RF and microwave components addressing a wide range of functional blocks are now readily available, so it may seem unnecessary to consider developing custom MMICs. There are, however, occasions when a custom MMIC can be the best commercial option with the potential to offer cost savings, performance improvement, reduced component count, size reduction or even the means of implementing otherwise impractical functionality.

The speaker has many years of experience in developing both standard product and custom MMICs, and will draw on this to explain how to determine when a custom MMIC could be the best solution, illustrated with specific examples. He will then move on to describe the practicalities of using a commercial foundry to fabricate custom-designed MMICs, with guidelines on estimating unit cost and choosing the most appropriate foundry and process.
### EuMIC Poster01-01
**Integrated Microfluidic Channel with Wire-Bonded Structure**

F. Banu-Flato, A. Ald Mando, E. Eshghbadad, N. Mohd Noa, M. Mustaffa
1 Universiti Sains Malaysia (USM), Penang, Malaysia, 2 Universiti Sains Malaysia (USM), Nibong Tebal, Malaysia

### EuMIC Poster01-07
**Load Pull Circles Analysis Method for Applying the Outphasing Technique in Power Amplifier Design**

Y. Jato-Llano, A. Herrera-Guardado, F. C. Huin
1 University of Cantabria, Santander, Spain, 2 ACCD Semiconductors Inc., Louveciennes, France

### EuMIC Poster01-08
**Common-Denominator Modelling for Stability Analysis of Electronic Circuits**

A. Cooman, F. Ferrari, Y. Rolain, G. Vandresteen
1 Université du Luxembourg, Luxembourg, Belgium, 2 University of Antwerp, Antwerp, Belgium

### EuMIC Poster01-09
**Accurate FEM-based nMOS Switch Modelling Technique for RF Applications**

F. Gacim, P. Descamps, N. Jordan
1 NXP Semiconductors / LAMIPS, Caen, France, 2 LAMIPS, Commun Laboratory

### EuMIC Poster01-10
**A New Current Dependent Gate Charge Model for GaN HFET Devices**

J. G. Leckey, MACOM Technology Solutions, Belfast, United Kingdom

### EuMIC Poster01-11
**Controlling the Characteristics of Nanomechanical Resonators**

A. Y. Nimets, K. Schuenemann, D. M. Giannini
1 Technical University Hamburg-Nusse, Germany, 2 NXP-CRISMAT, Caen, France

### EuMIC Poster01-12
**A Low-Cost 180 nm BICMOS Technology with Horizontal Current Bipolar Transistor (HCBT) for Wireless Communication ICs**

J. Zilak, M. Korčič, H. Michizuki, S. Monta, T. Suligoi
1 University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia, 2 Asahi Kasei Microdevices Co., Nobeoka, Japan

### EuMIC Poster01-13
**A K-Band High-Gain Down-Converter Mixer using Cross Couple Pair Active Load**

Y. Chang, H. Wu, H. Lu, National Taiwan University, Taipei, Taiwan

### EuMIC Poster01-14
**A 6–46 GHz, High Output Power Distributed Frequency Doubler using Stacked FETS in 0.25um GaAs pHEMT**

T. Nguyen, A. Pham, K. Fuji
1 University of California, Davis, Davis, United States, 2 IMCOM Technology Solutions, Santa Clara, United States

### EuMIC Poster01-15
**Results from a Prototype 6GSp Digital-to-Analogue Converter with Greater than 7 GHz Analogue Bandwidth**

A. Glascott-Jones, M. Stackler, N. Chantier, R. Pilard
1 e2v, St Egreve, France

### EuMIC Poster01-16
**A 0.61 THz Radiating Source with Greater than 7 GHz Analogue Converter**

J. Zilak, M. Korčič, H. Michizuki, S. Monta, T. Suligoi
1 University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia, 2 Asahi Kasei Microdevices Co., Nobeoka, Japan

### EuMIC Poster01-17
**A 154-165 GHz LNA and Receiver in CMOS 65 nm Technology**

J. Elkind, E. Socher, Tel-Aviv University, Israel

### EuMIC Poster01-18
**A 49 to 64 GHz Frequency Doubler using Active CS-Based Gm-Boosted Technique in 90 nm CMOS Process**

G. Chen, H. Chang, Y. Liu, Y. Hsin, National Central University, Zhongli, Taiwan

### EuMIC Poster01-19
**Miniature Fully-Integrated 2.5 and 3.5 GHz LDMOS Power Amplifiers in 40-nm CMOS Technology**

M. Wu, T. Chang, J. Cheng, J. Tsai, T. Huang, National Taiwan Normal University, Taipei, Taiwan

### EuMIC Poster01-20
**NARMA Based Novel Closed Loop Digital Predistortion using Penrose-Moore Inverse Technique**

M. Deeepak Nair, R. Giorfio, P. Caltanito, F. Giannini, University of Roma Tor Vergata, Roma, Italy

### EuMIC Poster01-21
**A 21 dBm 60 GHz SiGe Power Amplifier using Modified Wilkinson Combiner**

R. Ben Yishay, D. Elad, IBM Haifa Research Lab, Haifa, Israel

### EuMIC Poster01-22
**High Linearity Fully Integrated Class-0 Power Amplifier in Standard 65 nm CMOS Technology**

M. Wei, R. Nega, RWTH Aachen University, Aachen, Germany
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<th>Room 7</th>
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<td><strong>EuMIC05</strong></td>
<td><strong>EuMIC06</strong></td>
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<td><strong>GaN Devices</strong></td>
<td><strong>Millimetre-Wave Low Noise Amplifiers</strong></td>
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<td>Chair: Frank E. van Vliet, TNO</td>
<td>Chair: Manfred Berroth, Universität Stuttgart</td>
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<td>Co-Chair: Didier Floriot, UMS</td>
<td>Co-Chair: Didier Belot, CEA-LETI</td>
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### EuMIC05-01
**Quest for Vacuum Tubes’ Replacement: 150V UHF GaN Radar Transistors**
- G. Formicone, J. Buries, J. Coster, J. Walker, Integra Technologies, Inc., El Segundo, United States
- G. Formicone, J. Buries, J. Coster, J. Walker, Integra Technologies, Inc., El Segundo, United States

### EuMIC05-02
**Enhancement-Mode AlGaN/GaN FinFETs with High On/Off Performance in 100 nm Gate Length**
- Linz University of Technology, Linz, Austria

### EuMIC05-03
**Normally-Off AlGaN/GaN Recessed MOS-HEMTs on Normally-on Epitaxial Structures for Microwave Power Applications**
- University of Limoges, Limoges, France

### EuMIC05-04
**InAl(Ga)N/GaN/SiC Devices Delivering 5W/mm Output Power at 30 GHz**

### EuMIC06-01
**A Low Power High Gain Bandwidth E-Band LNA**
- K. Hadipour Alkherati, A. Stelter, DICE GmbH & Co KG, Linz, Austria
- Johannes Kepler University, Linz, Austria

### EuMIC06-02
**150 GHz GaAs Amplifiers in Commercially Available 0.1-µm GaAs PHEMT Process**
- A. Bessemoulin, M. C. Rodriguez, S. J. Mahon, A. E. Parker, M. C. Heinrich, MACOM, Sydney, Australia
- Macquarie University, Sydney, Australia

### EuMIC06-03
**Cryogenic Broadband Q-Band MMIC Low-Noise Amplifier**
- J. Teran Collantes, L. de la Fuente, B. Aja, E. Artal, University of Cantabria, Santander, Spain

### EuMIC06-04
**Cryogenic Low Noise MMIC Amplifiers for U-Band (40-60 GHz)**
- Aalto University, Aalto, Finland
- University of Manchester, Manchester, United Kingdom
- Northrop Grumman Corporation, Redondo Beach, United States
- California Institute of Technology, Pasadena, United States
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<th>EuMIC08</th>
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<td>EuMIC07-01 600 GHz Resistive Mixer</td>
<td>EuMIC08-01 Optical Receiver Amplifier</td>
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<td>S-MMICs with Integrated</td>
<td>with Adaptive Power and</td>
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<td>Multiplier-by-Six in 35 nm</td>
<td>Bandwidth for up to 30</td>
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<td>mHEMT Technology</td>
<td>Gbit/s in 28 nm CMOS</td>
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<td>R. Weber¹, U. J. Lewark¹, A.</td>
<td>L. Sziagyi, D. Schoeniger, R.</td>
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<td>Teissmann¹, H. Massler¹, A.</td>
<td>Henkes, F. Ellinger, Technische</td>
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<td>Leather¹, Fraunhofer-Institute</td>
<td>Universität Dresden, Dresden,</td>
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<td>for Applied Solid State Physics</td>
<td>Germany</td>
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<td>(IAF), Freiburg, Germany</td>
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<td>EuMIC07-02 Balanced G-Band Gm-</td>
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<td>Boosted Frequency Doubler in</td>
<td>EuMIC08-02 Integrated Dual-Band</td>
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<td>Transferred Substrate InP HBT</td>
<td>Transmitter for Vital Sign</td>
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<td>Technology</td>
<td>Detection Radar Applications</td>
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<td>T. K. Johansen¹, A. Thualfiqar²,</td>
<td>in 0.18-um CMOS</td>
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<td>N. Weimann¹, W. Heinrich⁵, V.</td>
<td>J. Cheng, Y. Lin, W. Lin, I. Tsai,</td>
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<td>Krozer⁵, Technical University of</td>
<td>H. Huang, H. Wang, National Taiwan</td>
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<td>Denmark, Kgs. Lyngby, Denmark,</td>
<td>Normal University, Taipei, Taiwan</td>
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<td>Ferdinand-Braun-Institut, Berlin,</td>
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<td>Germany</td>
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<td>14:40 - 15:00</td>
<td>EuMIC07-03 Ku-Band to F-Band Active</td>
<td>EuMIC08-03 Non-Invasive Highly</td>
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<td>Multiplier Chain in 65-nm CMOS</td>
<td>Integrated Transformer Power</td>
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<td>B. Khamaisi, E. Socher, Tel-Aviv</td>
<td>Detector for Self-</td>
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<td>University, Tel-Aviv, Israel</td>
<td>Healing PA in 130nm H9SOI-FEM</td>
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<td>CMOS Technology</td>
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<td>B. Moret¹, E. Kerhervé, V. Kroppi²,</td>
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<td>¹University of Bordeaux, IMS</td>
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<td>Laboratory, Talence, France,</td>
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<td>²STMicroelectronics, Crolles,</td>
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<td>15:00 - 15:20</td>
<td>EuMIC07-04 A 0.58-0.61 THz Single</td>
<td>EuMIC08-04 A 4-Bit Broadband CMOS</td>
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<td>On-Chip Antenna Transceiver</td>
<td>Phase Shifter using</td>
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<td>Based on Active x30 LO Chain on</td>
<td>Magnetically Coupled All-</td>
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<td>65nm CMOS</td>
<td>Pass Networks</td>
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<td>B. Khamaisi, S. Jameson, E.</td>
<td>J. Huang, H. Li, J. Fu, National</td>
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<td>Socher, Tel-Aviv University, Tel-</td>
<td>Central University, Jhongli, Taiwan</td>
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<td>Aviv, Israel</td>
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<td>15:20 - 15:40</td>
<td>EuMIC07-05 A 230 GHz Quadrupler</td>
<td>EuMIC08-05 MOSFET Divide-by-Four</td>
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<td></td>
<td>with 2 dBm Output Power in 90 nm</td>
<td>Frequency Divider with Injection</td>
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<td>SiGe BiCMOS Technology</td>
<td>Locking at Main-Gate and Back-Gate</td>
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<td>R. Ben Yishay, D. Elad, IBM</td>
<td>J. Wu, C. Tu, S. Chen, L. Tung,</td>
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<td>Haifa Research Lab, Haifa, Israel</td>
<td>National Chung Cheng University, Chia-Yi, Taiwan</td>
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MONDAY

EuMIC09
Doherty and Envelope Tracking Amplifier Solutions
Chair: Paolo Colantonio, University of Rome Tor Vergata
Co-Chair: Marc van Heijningen, TNO

EuMIC09-01
All Gallium Nitride Envelope-Tracking Multiband Power Amplifier using 200 MHz Switching Buck-Converter
T. Fujiwara¹, K. Mukaigawa², H. Nakamizo³, S. Shinjo¹, J. I. Yari⁴, H. Gheidi⁵, P. Asbeck¹, ¹Mitsubishi Electric Corporation, Kamakura, Japan, ²Maxxentrix Technologies, LLC, San Diego, United States, ³University of California, San Diego, San Diego, United States

EuMIC09-02
Optimized Peaking Amplifier of Doherty Amplifier using an Inductive Input Second Harmonic Load
S. Kim, J. Lee, K. Moon, Y. Park, D. Minn, B. Kim, Pohang University of Science and Technology, Pohang, Republic of Korea

EuMIC09-03
A Design Approach to Mitigate the Phase Distortion in GaN MMIC Doherty Power Amplifiers
R. Giofre, P. Colantonio, F. Giannini, University of Roma Tor Vergata, Roma, Italy

EuMIC09-04
Novel Output Combiner for Three-Way Doherty Power Amplifiers
R. Lehna, A. Bangert, University of Kassel, Kassel, Germany

EuMIC09-05
Optimization of Idle Current in Envelope Tracking Power Amplifier for Efficiency and Linearity
K. Moon, Y. Cho, J. Kim, B. Park, H. Jin, J. Shin, B. Kim, Pohang University of Science and Technology, Pohang, Republic of Korea

EuMIC10
Modelling of Thermal and Trapping Effects in HEMTs
Chair: Thomas Brazil, University College Dublin
Co-Chair: Christopher Duff, The University of Manchester

EuMIC10-01
Thermal Analysis of AlN/GaN/AlGaN HEMTs grown on Si and SiC Substrate through TCAD Simulations and Measurements
A. Sahoo¹, N. Subramani¹, J. Nallatamby¹, R. Sommet², R. Quere², N. Rolland², F. Medjdoub², ¹University of Limoges, Brive-La Gaillarde, France, ²University of Lille, Villeneuve d'Ascq, France

EuMIC10-02
Anomaly and Intrinsic Capacitance Behaviour over Temperature of AlGaN/GaN/Si and AlGaAs/GaAs HEMTs for Microwave Applications
M. A. Alim¹,²,³, A. A. Rezazadeh¹, C. Gaquiere², ¹University of Manchester, Manchester, United Kingdom, ²University of Lille, Lille, France, ³University of Chittagong, Chittagong, Bangladesh

EuMIC10-03
Characterization and Modeling of Traps and RF Frequency Dispersion in AlGaN/AlN/GaN HEMTs
H. Sánchez-Martín¹, O. García-Pérez², I. Iriarte-de-la-Torre³, S. Pérez¹, T. González¹, J. Mateos¹, P. Alfonso¹, N. Defrance², M. Leesac², V. Heol³, Y. Cardier¹, S. Renesseon¹, University of Salamanca, Salamanca, Spain, ¹ISEN, Villeneuve d'Ascq, France, ²CHREA, Valbonne, France

EuMIC10-04
Novel Approach to Trapping Effect Modeling based on Chalmers Model and Pulsed S-Parameter Measurements
P. Luo¹,², O. Bengtsson¹, M. Rudolph², ¹Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik, Berlin, Germany, ²Brandenburgische Technische Universität Cottbus-Senftenberg, Cottbus, Germany

EuMIC10-05
Characterization of Trapping in a GaN HEMT by Performing Isothermal Three-Stage Pulse Measurements
S. Albahrani¹, A. Parker¹, B. Schwitter¹, ¹Macquarie University, Sydney, Australia, ²MACOM Technology Solutions, Sydney, Australia
**MONDAY**

**EuMIC 2016**

**Room 7**

**EuMIC11**
Graphene & III-V Devices
Chair: Giovanni Ghione, Politecnico di Torino, DET
Co-Chair: Ingmar Kallfass, University of Stuttgart

**EuMIC11-01**
Graphene Field Effect Transistors on Flexible Substrate: Stable Process and High RF Performance
W. Wei1, E. Pallecchi1, M. Belhaj1, A. Centeno2,3, B. Alonso2, A. Zunzueta2, H. Hapy1
1Institute of Electronics, Microelectronics and Nanotechnology (IEMN), Villeneuve d’Ascq, France, 2Graphenea, Donostia, Spain

**EuMIC11-02**
Monolithic Integration of Vertical-Oriented Schottky Diode using 0.5 x 200 µm² 2 GaAs pHEMT for Microwave Limiter Applications
N. Haris1, P. B. Kyabaggu2, A. A. Rezazadeh1
1University of Manchester, Manchester, United Kingdom, 2Bukoola General Enterprises, Kampala, Uganda

**EuMIC11-03**
High-Performance Self-Aligned InAs MOSFETs with L-Shaped Ni-Epitaxial Alloyed Source/Drain Contact for Future Low-Power RF Applications
M. Ridaoui1,2, M. Pastorek1, A. F. Bruno-Djomkam1, N. Wichmann1, S. Bullier1, A. Jouad1, H. Maher1, IEMN, CNRS UMR 8520, Université de Lille 1, Villeneuve d’Ascq, France, 2LN2 CNRS UMI 3463, 3iT, Sherbrooke, Canada

**EuMIC11-04**
Frequency Limitations of the Nitride and Arsenide HEMTs
Y. V. Fedorov, S. V. Mikhailovich, Institute of Ultra-High Frequency Semiconductor Electronics of RAS, Moscow, Russian Federation

**Room 8**

**EuMIC12**
Millimetre-Wave Transceiver Components
Chair: Roei Ben Yishay, IBM Haifa Research Lab
Co-Chair: Herbert Zirath, Chalmers University

**EuMIC12-01**
A Wideband Fully Integrated SiGe Chipset for High Data Rate Communication at 240 GHz
N. Sarmah1, P. R. Vazquez2, J. Gryzb, W. Foerster1, B. Heinemann1, U. R. Pfeiffer1
1University of Wuppertal, Wuppertal, Germany, 2IHP GmbH, Im Technologiepark 25, Germany

**EuMIC12-02**
A 275 GHz Amplifier in 0.13µm SiGe
S. Malz1, P. Hillger1, B. Heinemann1, U. Pfeiffer1, Bergische Universität Wuppertal, Wuppertal, Germany, 2IHP Microelectronics, Frankfurt (Oder), Germany

**EuMIC12-03**
A 280 GHz Stacked-FET Power Amplifier Cell using 50 nm Metamorphic HEMT Technology
A. Amado Rey1, Y. Campos Roca1, C. Friesicke1, A. Tessmann1, R. Lozar1, S. Wagner1, A. Leuther1, M. Schlechtweg1, O. Ambacher1
1Fraunhofer IAF, Freiburg im Breisgau, Germany, 2University of Extremadura, Caceres, Spain

**EuMIC12-04**
A 300-GHz 64-QAM CMOS Transmitter with 21-Gb/s Maximum Per-Channel Data Rate
K. Takano, K. Katayama, S. Amakawa, T. Yoshida, M. Fujishima, Hiroshima University, Higashihiroshima, Japan

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<td>EuMIC13</td>
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<td>GaN Power Amplifiers</td>
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<td>A 2-GHz-band Low-Phase-Noise VCO IC with an LC Bias Circuit in 180-nm CMOS</td>
<td>Chair: Frank van den Bogaart, TNO</td>
<td>Chair: Teresa M. Martin-Guerrero, Universidad de Malaga</td>
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<td>Co-Chair: Eric Tournier, University of Toulouse - LAAS/CNRS</td>
<td>X. Xu, X. Yang, T. Yoshimasu, Waseda University, Kitakyushu-shi, Japan</td>
<td>Co-Chair: Emesto Limiti, University of Rome Tor Vergata</td>
<td>Co-Chair: Jean-Christophe Nallatamby, University of Limoges</td>
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<td>Stability Analysis and Demonstration of an X-band GaN Power Amplifier MMIC</td>
<td>Dual-Gate HEMT Parameter Extraction Based on 2.5D Multipport Simulation of Passive Structures</td>
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<td>M. van Heijningen', P. de Hek', F. E. van Vliet', 'TNO, Den Haag, Netherlands, JAMCAD Engineering, Limoges, France</td>
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<td>A 17.5-22.5 GHz Fractional-N Wideband Frequency Synthesizer in 65 nm CMOS Technology</td>
<td>On the Modeling of High Power FET Transistors</td>
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<td>A Compact Package of 8x8mm, Broadband, Two-stage GaN Power Amplifier</td>
<td>Compact Package of 8x8mm, Broadband, Two-stage GaN Power Amplifier</td>
<td>Development and Verification of a Scalable GaAs PHFET FEM Thermal Model</td>
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<td>An EM-based Approach to Model a Gallium Nitride HEMT in a Custom Common-Gate Configuration</td>
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