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EuMIC01 : EuMIC Opening Session

Chair: François Deborgies, ESA-ESTEC, The Netherlands and Domine Leenaerts, NXP Semiconductors, The Netherlands

Co-Chair: Stefan Heinen, RWTH Aachen University, Germany and Christian Fager, Chalmers University of Technology, Sweden

10:50-12:30, Monday 11 January 2021, Polar

- (NA) **C Breaking the Mold: Using SiGe Technology in Ways That Were Never Envisioned**
John D. Cressler, Georgia Tech, USA






- (NA) **C Photonic Integrated Circuits for Microwave Applications**
Alwyn Seeds, University College London, UK

EuMIC02: D-Band to H-Band Amplifiers

Chair: Michael Schlechtweg, Fraunhofer IAF, Germany

Co-Chair: Herbert Zirath, Chalmers University of Technology, Sweden

08:30-10:10, Monday 11 January 2021, Mission 1






- 1  **C** **A 200mW D-Band Power Amplifier with 17.8% PAE in 250-nm InP HBT Technology**
*Ahmed S.H. Ahmed¹, Munkyo Seo², Ali A. Farid¹, Miguel Urteaga³,
James F. Buckwalter¹, Mark J.W. Rodwell¹*
*¹University of California at Santa Barbara, USA; ²Sungkyunkwan University, Korea;
³Teledyne Scientific & Imaging, USA*
- 5  **C** **G-Band Power Amplifiers in 130nm InP Technology**
Mingquan Bao¹, Vessen Vassilev², David Gustafsson¹, Herbert Zirath¹
¹Ericsson, Sweden; ²Chalmers University of Technology, Sweden
- 9  **C** **Full H-Band LNA in 35nm mHEMT Technology with Constant Current Bias Control**
Rainer Weber, A. Leuther, Roger Lozar, Hermann Massler, Fraunhofer IAF, Germany
- 13  **C** **A Full D-Band Low Noise Amplifier in 130nm SiGe BiCMOS Using Zero-Ohm Transmission Lines**
*Tim Maiwald¹, Julian Potschka¹, Katharina Kolb¹, Marco Dietz¹, Klaus Aufinger²,
Akshay Visweswaran³, Robert Weigel¹*
¹FAU Erlangen-Nürnberg, Germany; ²Infineon Technologies, Germany; ³imec, Belgium
- 17  **C** **Design of a 240-GHz LNA in 0.13 μ m SiGe BiCMOS Technology**
*Md. Najmussadat¹, Raju Ahamed¹, Mikko Varonen², Dristy Parveg², Yehia Tawfik¹,
Kari A.I. Halonen¹*
¹Aalto University, Finland; ²VTT Technical Research Centre of Finland, Finland

EuMIC03: GaN MMIC Power Amplifiers

Chair: Franco Giannini, Università di Roma "Tor Vergata", Italy

Co-Chair: Patrick Schuh, HENSOLDT Sensors, Germany

08:30-10:10, Monday 11 January 2021, Mission 2






- 21  **C** **Single-Chip 100-Watt S-Band Power Amplifier in 0.25 μ m GaN HEMT MMIC Technology**
G. van der Bent¹, A.P. de Hek¹, Frank E. van Vliet¹, Z. Ouarch²
¹TNO, The Netherlands; ²United Monolithic Semiconductors, France
- 25  **C** **34dBm GaN Doherty Power Amplifier for Ka-Band Satellite Downlink**
Anna Piacibello¹, Rocco Giofrè², Roberto Quaglia³, Vittorio Camarchia¹
¹Politecnico di Torino, Italy; ²Università di Roma "Tor Vergata", Italy; ³Cardiff University, UK
- 29  **C** **A GaN-on-Si MMIC Power Amplifier with 10W Output Power and 35% Efficiency for Ka-Band Satellite Downlink**
Paolo Colantonio, Rocco Giofrè, Università di Roma "Tor Vergata", Italy
- 33  **C** **Ka-Band 4W GaN/Si MMIC Power Amplifier for CW Radar Applications**
Chiara Ramella¹, Corrado Florian², Elisa Cipriani³, Marco Pirola¹, Franco Giannini³, Paolo Colantonio³
¹Politecnico di Torino, Italy; ²Università di Bologna, Italy; ³Università di Roma "Tor Vergata", Italy
- 37  **C** **Real-Time, In-Circuit Temperature Sensing of an X-Band GaN Power Amplifier**
Simon J. Mahon, Olivia Ell, Leigh E. Milner, Evgeny Kuxa, Anthony E. Parker, Melissa C. Gorman, Michael C. Heimlich, Macquarie University, Australia

EuMIC04: Receivers and LNAs

Chair: Julien Lintignat, XLIM (UMR 7252), France

Co-Chair: Ana Peláez, Televes, Spain

08:30-10:10, Monday 11 January 2021, Quest






- 41  **C** **A CMOS Wideband Low Noise Mixer for LTE Application**
Olim A. Hidayov¹, Sang-Gug Lee²
¹Analog Devices, Germany; ²KAIST, Korea
- 45  **C** **20-Gb/s 60-GHz OOK Receiver for High-Data-Rate Short-Range Wireless Communications**
Ali Ferschischi, Sami Ur Rehman, Vincent Rieß, Corrado Carta, Frank Ellinger, Technische Universität Dresden, Germany
- 49  **C** **An 8Gbps Adaptive Receiver for RF Over FSO in 28nm CMOS**
Fatemeh Aghlmand, Saransh Sharma, Azita Emami, Caltech, USA
- 53  **C** **A High-Gain SiGe BiCMOS LNA for 5G In-Band Full-Duplex Applications**
Tahsin Alper Ozkan¹, Abdurrahman Burak¹, Ilker Kalyoncu¹, Mehmet Kaynak², Yasar Gurbuz¹
¹Sabanci University, Turkey; ²IHP, Germany
- 57  **C** **A Ku Band MMIC Single Chip Frequency Converter for Telecom Satellite Applications**
Davide Resca¹, Francesco Scappaviva¹, Andrea Biondi¹, Luca Cariani¹, Francesco Vitulli²
¹MEC, Italy; ²Thales Alenia Space, Italy

EuMIC05: ICs for mmWave Beamforming Systems

Chair: Frank E. van Vliet, TNO, The Netherlands

Co-Chair: Pierre Busson, STMicroelectronics, USA

13:50-15:30, Monday 11 January 2021, Mission 1






- 61  **C** **A Downconversion Link for a 5G Repeater Using a Passive Power Adjustment Technique and Analog Predistortion**
Julian Potschka¹, Katharina Kolb¹, Tim Maiwald¹, Marco Dietz¹, Amelie Hagelauer¹, Klaus Aufinger², Robert Weigel¹
¹FAU Erlangen-Nürnberg, Germany; ²Infineon Technologies, Germany
- 65  **C** **A V-Band Vector Modulator Based Phase Shifter in BiCMOS 0.13 μ m SiGe Technology**
Kevin E. Drenkhahn¹, Ahmed Gadallah², Aniello Franzese², Christoph Wagner¹, Andrea Malignaggi²
¹Technische Universität Ilmenau, Germany; ²IHP, Germany
- 69  **C** **A 65nm CMOS SOI 4-Bit Digitally Controlled Variable Gain Amplifier for Ka-Band Beamforming**
Steeven Voisin¹, Vincent Knopik², Jeremie Forest¹, Eric Kerhervé¹
¹IMS (UMR 5218), France; ²STMicroelectronics, France
- 73  **C** **34-42GHz CMOS Transceiver Frontend for Versatile Arrays**
Sumeet Londhe¹, Noam Shmilovitz¹, Shay Avner¹, Noam Bar-Helmer², Samuel Jameson², Eran Socher¹
¹Tel Aviv University, Israel; ²Rafael, Israel
- 77  **C** **A 28GHz and 38GHz High-Gain Dual-Band LNA for 5G Wireless Systems in 22nm FD-SOI CMOS**
Xin Xu¹, Stefan Schumann¹, Ali Ferschischi¹, Wolfgang Finger², Corrado Carta¹, Frank Ellinger¹
¹Technische Universität Dresden, Germany; ²GLOBALFOUNDRIES, Germany

EuMIC06: Advances in mmWave and High Power Technologies

Chair: Peter Magnee, NXP Semiconductors, The Netherlands

Co-Chair: Rüdiger Quay, Fraunhofer IAF, Germany

13:50-15:30, Monday 11 January 2021, Mission 2

- 81  **C** **Back Gate Impact on the Noise Performances of 22FDX Fully-Depleted SOI CMOS**
*Ousmane Magatte Kane¹, Luca Lucci¹, Pascal Scheiblin¹, Thierry Poiroux¹,
Jean-Charles Barbé¹, François Danneville²*
¹CEA-Leti, France; ²IEMN (UMR 8520), France
- 85  **C** **Design of III-V Vertical Nanowire MOSFETs for Near-Unilateral Millimeter-Wave Operation**
Stefan Andrić, Lars Ohlsson-Fhager, Lars-Erik Wernersson, Lund University, Sweden
- 89  **C** **DC and RF Characterization of Nano-Ridge HBT Technology Integrated on 300mm Si Substrates**
*S. Yadav, A. Vais, R.Y. ElKashlan, L. Witters, K. Vondkar, Y. Mols, A. Walke, H. Yu,
R. Alcotte, M. Ingels, P. Wambacq, R. Langer, B. Kunert, N. Waldron, B. Parvais, N. Collaert,
imec, Belgium*
- 93  **C** **Reconfigurable PCM GeTe-Based Latching 6-Bit Digital Switched Capacitor Bank**
Tejinder Singh, Raafat R. Mansour, University of Waterloo, Canada
- 97  **C** **A GaN/SiC UHF PA for Particle Accelerators with 100-145V Quasi-Static Drain Modulation**
Gabriele Formicone, James Custer, Integra Technologies, USA

EuMIC07: Oscillators and Switches

Chair: Vadim Issakov, OvG Universität Magdeburg, Germany

Co-Chair: Patrice Gamand, ALPHA-RLH, France

13:50-15:30, Monday 11 January 2021, Quest






- 101  **C** **Free-Running 2.4GHz Ring Oscillator-Based FSK TX/RX for Ultra-Small IoT Motes**
David C. Burnett, Filip Maksimovic, Brad Wheeler, Osama Khan, Ali M. Niknejad, Kristofer S.J. Pister, University of California at Berkeley, USA
- 105  **C** **Linearity Enhancement Method for a Wide-Band Digitally Controlled Oscillator**
Yun Fang¹, Zhong Tang¹, Xiao-Peng Yu¹, Zhiwei Xu¹, Hao Gao²
¹Zhejiang University, China; ²Technische Universiteit Eindhoven, The Netherlands
- 109  **C** **A 33% Tuning Range Cross-Coupled DCO with “Folded” Common Mode Resonator Covering Both 5G MMW Bands in 16-nm CMOS FinFet**
I. Gertman, R. Levinger, S. Bershansky, J. Kadry, G. Horovitz, Intel, Israel
- 113  **C** **A Non-Reflective T/R Switch with Leakage Cancellation Technique for 5G mmWave Application**
Yi-Tong Wang, Lin-Sheng Wu, Liang-Feng Qiu, Li-Yun Shi, Jun-Fa Mao, Shanghai Jiao Tong University, China
- 117  **C** **RF SPST Switch Based on Innovative Heterogeneous GaN/SOI Integration Technique**
Frederic Drillet, Jerome Loraine, Hassan Saleh, Imene Lahbib, Brice Grandchamp, Lucas Iogna-Prat, Insaf Lahbib, Ousmane Sow, Gregory Uren, X-FAB, France

EuMIC08: ICs for Communication and Sensing

Chair: Herbert Zirath, Chalmers University of Technology, Sweden

Co-Chair: Ian Gresham, Anokiwave, USA

16:10-17:50, Monday 11 January 2021, Mission 1





- 121  **C** **A 1-to-4 SiGe BiCMOS Analog Demultiplexer Sampling Front-End for a 116 GBaud-Receiver**
Philipp Thomas, Tobias Tannert, Markus Grözing, Xuan-Quang Du, Manfred Berroth, Universität Stuttgart, Germany
- 125  **C** **An Analog Costas Loop MMIC in 130nm SiGe BiCMOS Technology for Receiver Synchronization of QPSK and BPSK Modulated Signals**
Eswara Rao Bammidi, Ingmar Kallfass, Universität Stuttgart, Germany
- 129  **C** **Design Considerations on the Realization of Signal Sources at mm-Waves**
L. Pantoli¹, H. Bello¹, G. Leuzzi¹, Herman Jalli Ng², Dietmar Kissinger³
¹Università dell'Aquila, Italy; ²IHP, Germany; ³Universität Ulm, Germany
- 133  **C** **A 95-135GHz Low Power Dicke Radiometer in SiGe BiCMOS Technology**
Roe Ben Yishay, Danny Elad, ON Semiconductor, Israel
- 137  **C** **E/W-Band CPW-Based Amplifier MMICs Fabricated in a 60nm GaN-on-Silicon Foundry Process**
Robert Malmqvist¹, Rolf Jonsson¹, Anders Bernland¹, Mingquan Bao², Rémy Leblanc³, Koen Buisman⁴, C. Fager⁴, Kristoffer Andersson²
¹FOI, Sweden; ²Ericsson, Sweden; ³OMMIC, France; ⁴Chalmers University of Technology, Sweden

EuMIC09: Advanced Solutions for Integrated Power Amplifiers

Chair: Joseph Staudinger, NXP Semiconductor, USA

Co-Chair: Paolo Colantonio, Università di Roma "Tor Vergata", Italy

16:10-17:50, Monday 11 January 2021, Mission 2






- 141  **C** **Design of a Compact Power Amplifier with 18.6dBm 60GHz 20.5% PAE in 22nm FD-SOI**
Mengqi Cui, Zoltán Tibenszky, Corrado Carta, Frank Ellinger, Technische Universität Dresden, Germany
- 145  **C** **Ka-Band Dual Input Stacked 22nm CMOS FDSOI Power Amplifier with Transformer-Based Power Combiner**
Jere Rusanen, Nuutti Tervo, Timo Rahkonen, Aarno Pärssinen, Janne P. Aikio, University of Oulu, Finland
- 149  **C** **A 28-GHz High Linearity and High Efficiency Class-F Power Amplifier in 90-nm CMOS Process for 5G Communications**
Bo-Ze Lu, Yunshan Wang, Zhi-Jia Huang, Kun-You Lin, Huei Wang, National Taiwan University, Taiwan
- 153  **C** **A 2GHz Compact 60W Fully Integrated 3-Way Doherty for Simultaneous Dual-Band Operation**
Marc Vigneau, Mariano Ercoli, Ampleon, France
- 157  **C** **A High-Linear Ka-Band Power Amplifier with Diode-Based Analogue Predistortion**
J. Zhao, A. Cooman, A. Shamsafar, M.W. Rousstia, D. Calzona, Sergio C. Pires, Ampleon, The Netherlands

EuMIC10: Nonlinear Modelling

Chair: Justin King, Trinity College Dublin, Ireland

Co-Chair: Valeria Vadalà, Università di Ferrara, Italy

16:10-17:50, Monday 11 January 2021, Quest






- 161  **C** **Advanced Modelling Techniques Enabling E-Band Power Amplifier Design for 5G Backhauling**
Valeria Vadalà¹, Antonio Raffo¹, Alberto Colzani², Matteo A. Fumagalli², Giuseppe Sivverini², Gianni Bosi¹, Giorgio Vannini¹
¹Università di Ferrara, Italy; ²SIAE MICROELETTRONICA, Italy
- 165  **C** **Simulating Drain Lag of GaN HEMTs with Physics-Based ASM Model**
Petros Beleniotis¹, Frank Schnieder², Matthias Rudolph¹
¹BTU, Germany; ²FBH, Germany
- 169  **C** **Modeling of InP DHBTs in a Transferred-Substrate Technology with Diamond Heat Spreader**
T.K. Johansen¹, Maruf Hossain², R. Doerner², Hady Yacoub², K. Nosaeva², T. Shivan², Wolfgang Heinrich², Viktor Krozer²
¹Technical University of Denmark, Denmark; ²FBH, Germany
- 173  **C** **Energy and Charge Conservation for FET Models**
Ciarán Wilson¹, M. Schmidt-Szałowski², Justin B. King³
¹University College Dublin, Ireland; ²Ampleon, The Netherlands; ³Trinity College Dublin, Ireland
- 177  **C** **Estimation of Large-Signal Output Capacitance of a Power Transistor**
M. Schmidt-Szałowski¹, M. Marchetti², G. Avolio²
¹Ampleon, The Netherlands; ²Anteverta-mw, The Netherlands

EuMIC11: Transceiver and Transmitter ICs

Chair: Sébastien Chartier, Fraunhofer IAF, Germany

Co-Chair: Ingmar Kallfass, Universität Stuttgart, Germany

08:30-10:10, Tuesday 12 January 2021, Mission 1






- 181  **C** **Single Chip Transmitter with Integrated Up-Converter and PLL for Ku-Band M2M Applications**
Maurice van Wanum¹, Enrico Lia², Lex de Boer¹, Lennaert Bronts¹, Marien Rodenburg¹, Bas Jacobs¹, Ana Inês Inácio¹, Marc van Heijningen¹, Frank E. van Vliet¹
¹TNO, The Netherlands; ²ESA-ESTEC, The Netherlands
- 185  **C** **A Full E-Band Single-Channel SiGe Transceiver MMIC for Monostatic FMCW Radar Systems**
Christian Bredendiek¹, Steffen Hansen¹, Gunnar Briese¹, Nils Pohl²
¹Fraunhofer FHR, Germany; ²Ruhr-Universität Bochum, Germany
- 189  **C** **A 76GHz CMOS Low-P_{DC} Transmitter with 15dBm P_{SAT} at 150C for Automotive Radar**
Nobumasa Hasegawa, Shuya Kishimoto, Shinji Yamaura, DENSO, Japan
- 193  **C** **A W-Band Transceiver Chip for Future 5G Communications in InP-DHBT Technology**
Maruf Hossain, T. Shivan, M. Hrobak, T. Al-Sawaf, D. Stoppel, Hady Yacoub, N. Weimann, Wolfgang Heinrich, Viktor Krozer, FBH, Germany
- 197  **C** **A Low Power Consumption 65-nm CMOS True Time Delay N-Path Circuit Achieving 2ps Delay Resolution**
Erez Zolkov, Roy Weiss, Asher Madjar, Emanuel Cohen, Technion, Israel

EuMIC12: Design and Characterisation Techniques

Chair: Ernesto Limiti, Università di Roma "Tor Vergata", Italy

Co-Chair: Simona Donati Guerrieri, Politecnico di Torino, Italy

08:30-10:10, Tuesday 12 January 2021, Expedition






- 201  **C** **Effects of Load Impedances at Third Order Intermodulation Tones**
*Eigo Kuwata¹, Yashar Alimohammadi², Xuan Liu², James Bell², Paul Tasker²,
Shintaro Shinjo¹, Johannes Benedikt²*
¹Mitsubishi Electric, Japan; ²Cardiff University, UK
- 205  **C** **Intermodulation Distortion Analysis of Microwave Tunable Filters Using Barium Strontium Titanate Capacitor and Varactor Diode**
*Patricia Bouça, Ricardo Figueiredo, João Nuno Matos, Paula M. Vilarinho,
Nuno Borges Carvalho, Universidade de Aveiro, Portugal*
- 209  **C** **Non-Linear Analysis of a Broadband Power Amplifier at 300GHz**
*Haitham Ghanem¹, Benjamin Schoch², Ingmar Kallfass², Pascal Szriftgiser³,
Malek Zegaoui², Mohammed Zaknoute², François Danneville¹, Guillaume Ducournau¹*
¹IEMN (UMR 8520), France; ²Universität Stuttgart, Germany; ³PhLAM (UMR 8523), France
- 213  **C** **Global Assessment of PA Variability Through Concurrent Physics-Based X-Parameter and Electro-Magnetic Simulations**
S. Donati Guerrieri, Chiara Ramella, F. Bonani, G. Ghione, Politecnico di Torino, Italy
- 217  **C** **Spatial Power Combining and Impedance Matching Silicon IC-to-Waveguide Contactless Transition**
*P. Kaul, A. Aljarosha, A.B. Smolders, Marion K. Matters-Kammerer, R. Maaskant,
Technische Universiteit Eindhoven, The Netherlands*

EuMIC15: EuMIC Interactive Poster Session

Chair: Christian Fager, Chalmers University of Technology, Sweden







Co-Chair: Mark Oude Alink, University of Twente, The Netherlands

14:20-16:10, Tuesday 12 January 2021, Hall 1

- 221  **C** **A PLL Frequency Synthesizer In 65nm CMOS for 60GHz Sliding-IF Transceiver**
Yang Liu¹, Zhiqun Li², Hao Gao³
¹Nanjing Institute of Technology, China; ²Southeast University, China; ³Technische Universiteit Eindhoven, The Netherlands
- 225  **C** **A Suitable Approach to Assess Thermal Properties of GaN Power Bars**
Rocco Giofrè, Paolo Colantonio, M. Auf der Maur, A. Reale, Università di Roma "Tor Vergata", Italy
- 229  **C** **A Large-Signal Behavioural Modeling Approach of GaN HEMTs for Power Amplifier Design**
M. Oguz Yegin, Armagan Gurdal, Ulas Ozipek, Ekmel Ozbay, Bilkent University, Turkey
- 233  **C** **A Broadband 60-GHz Low Noise Amplifier with 3.2dB Noise Figure and 24dB Gain**
Ali Ferschischi, Hatem Ghaleb, Sami Ur Rehman, Corrado Carta, Frank Ellinger, Technische Universität Dresden, Germany
- 237  **C** **An Advanced Ageing Methodology for Robustness Assessment of Normally-Off AlGaIn/GaN HEMT**
F. Albany¹, Arnaud Curutchet¹, N. Labat¹, Francois Lecourt², E. Walasiak², H. Maher³, Y. Cordier⁴, N. Defrance⁵, N. Malbert¹
¹IMS (UMR 5218), France; ²OMMIC, France; ³Université de Sherbrooke, Canada; ⁴CRHEA (UPR 10), France; ⁵IEMN (UMR 8520), France





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- 241  **C** **A 30–36.6GHz Low Jitter Degradation SIL QVCO with Frequency-Tracking Loop in 65nm CMOS for 5G Frontend Applications**
Jhe-Wei Li¹, Wei-Cheng Chen¹, Jung Chou¹, Yu-Cheng Liu², Hong-Yeh Chang¹
¹National Central University, Taiwan; ²ITRI, Taiwan
- 245  **C** **A Three Stage Gain Cell Topology with an Active Ultra-Wideband Input Matching in H-Band**
Athanasios Gatzastras¹, Hermann Massler², A. Leuther², Sébastien Chartier², Ingmar Kallfass¹
¹Universität Stuttgart, Germany; ²Fraunhofer IAF, Germany
- 249  **C** **Empowering GaN-Si HEMT Nonlinear Modelling for Doherty Power Amplifier Design**
Gianni Bosi¹, Antonio Raffo¹, Rocco Giofrè², Valeria Vadalà¹, Giorgio Vannini¹, Ernesto Limiti²
¹Università di Ferrara, Italy; ²Università di Roma “Tor Vergata”, Italy
- 253  **C** **Orthogonalization of Multi-Port Scattering Matrices with the Generalized S-Parameter Transformation to Reduce Surrogate Model Complexity**
Petrie Meyer, Stellenbosch University, South Africa
- 257  **C** **Multi-Gigabit RF-DAC Based Duobinary/PAM-3 Modulator in 130nm SiGe HBT**
Frida Strömbeck, Zhongxia Simon He, Herbert Zirath, Chalmers University of Technology, Sweden
- 261  **C** **167-GHz and 155-GHz High Gain D-Band Power Amplifiers in CMOS SOI 45-nm Technology**
Abdelaziz Hamani, Alexandre Siligaris, Benjamin Blampey, Jose Luis Gonzalez Jimenez, CEA-Leti, France

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- 265  **C** **Over 40W, X-Band GaN on SiC MMIC Amplifier**
*Charles A. Mjema¹, Benoît Haentjens¹, Erwan Fourn², M'Hamed Drissi²,
Laura Diego Arroyo¹, Amparo Herrera Guarardo³*
¹VectraWave, France; ²IETR (UMR 6164), France; ³Universidad de Cantabria, Spain
- 269  **C** **Ku-Band 25W High Power Amplifier Using 0.25 μ m GaN Technology**
Santosh K. Gedela¹, Simplicie N'Gongo², Kishore Bantupalli¹, K. Suman¹
¹Astra Microwave Product, India; ²Aelius Semiconductors, Singapore
- 273  **C** **High Power Density 4 to 16GHz Non-Uniform Distributed Power Amplifier with a Novel Trifilar**
*Simon J. Mahon¹, Leigh E. Milner², Irfan Shahid¹, Anthony E. Parker¹,
Melissa C. Gorman¹, Michael C. Heimlich¹*
¹Macquarie University, Australia; ²DST, Australia
- 277  **C** **Third Order Notch Over Multi-Bias and Temperature in GaN and GaAs HEMTs**
Mohammad A. Alim¹, Ali A. Rezazadeh², Christophe Gaquiere³
*¹University of Chittagong, Bangladesh; ²University of Manchester, UK; ³IEMN (UMR 8520),
France*

EuMIC16: EuMIC Closing Session

Chair: François Deborgies, ESA-ESTEC, The Netherlands and Domine Leenaerts, NXP Semiconductors, The Netherlands

Co-Chair: Stefan Heinen, RWTH Aachen University, Germany and Christian Fager, Chalmers University of Technology, Sweden

16:10-17:50, Tuesday 12 January 2021, Polar

- (NA) **C** **Radio ICs for Future Wireless Networks**
Igor Tasevski, Ericsson, Sweden






- (NA) **C** **MetOp-SG mm-Wave Instruments and Technologies**
Ville Kangas, ESA-ESTEC, The Netherlands

EuMIC/EuMC01 : Silicon Integrated Sub-mmWave Circuits

Chair: Christophe, Gaquière, IEMN (UMR 8520), France

Co-Chair: François Deborgies, ESA-ESTEC, The Netherlands

08:30-10:10, Tuesday 12 January 2021, Quest

- 281  **C** **A 240-GHz FMCW Radar Transceiver with 10dBm Output Power Using Quadrature Combining**
Faisal Ahmed¹, Muhammad Furqan¹, Klaus Aufinger², Andreas Stelzer³
¹Infiniteon Technologies, Austria; ²Infiniteon Technologies, Germany; ³Johannes Kepler Universität Linz, Austria
- N/A  **C** **A 160GHz High Output Power and High DC-to-RF Efficiency Fundamental Oscillator in a 130-nm SiGe BiCMOS Process**
Xingcun Li, Wenhua Chen, Yunfan Wang, Zhenghe Feng, Tsinghua University, China
- 289  **C** **250GHz SiGe SPDT Resonator Switch**
Yehia Tawfik¹, Ahamed Raju¹, Mikko Varonen², Md. Najmussadat¹, Kari A.J. Halonen¹
¹Aalto University, Finland; ²VTT Technical Research Centre of Finland, Finland
- 292  **C** **Compact and Transfer Printable 64Gb/s Differential Transimpedance Amplifier in 130-nm BiCMOS**
Mesut Inac¹, Adel Fatemi¹, Friedel Gerfers², Andrea Malignaggi¹
¹IHP, Germany; ²Technische Universität Berlin, Germany
- 296  **C** **A 122-242GHz Dynamic Frequency Divider in an Advanced BiCMOS Technology**
Badou Sene¹, Herbert Knapp¹, Daniel Reiter¹, Nils Pohl²
¹Infiniteon Technologies, Germany; ²Ruhr-Universität Bochum, Germany