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**Nuremberg, Germany
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EuRAD02: Synthetic Aperture Radar

Chair: Pierfrancesco Lombardo, Università di Roma "La Sapienza", Italy

Co-Chair: Risto Vehmas, Tampere University of Technology, Finland

Kopenhagen, Time 13:50 - 15:30, Wednesday 11th October 2017

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Jan Torgrimsson¹, Patrik Dammert², Hans Hellsten², Lars M.H. Ulander¹
¹Chalmers University of Technology, Sweden; ²SAAB, Sweden
- 5 **Analysis of Geometrical Approximations in Signal Reconstruction Methods for Multistatic Large Along-Track Baseline SAR Constellations**
Nida Sakar, Marc Rodriguez-Cassola, Pau Prats-Iraola, A. Reigber, Alberto Moreira, DLR, Germany
- 9 **An Analysis of Ship Azimuth Smearing in Spaceborne SAR Imagery**
Shen Chiu, DRDC, Canada
- 13 **Improving the Estimation Accuracy and Computational Efficiency of ISAR Range Alignment**
Risto Vehmas, Juha Jylhä, Tampere University of Technology, Finland
- 17 **Investigating the Shadow Radiation of 3-Dimensional Radar Targets in the Near Field**
Davide Comite, Marta Tecla Falconi, Pierfrancesco Lombardo, Frank Silvio Marzano, Alessandro Galli, Università di Roma "La Sapienza", Italy

EuRAD03: Radar Remote Sensing

Chair: Laurent Ferro-Famil, IETR, France

Co-Chair: Felix Yanovsky, National Aviation University, Ukraine

Kopenhagen, Time 16:10 - 17:50, Wednesday 11th October 2017

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- 25 **Analysis of Rain Clutter Detections in Commercial 77GHz Automotive Radar**
Rossiza Gourova, Oleg A. Krasnov, Alexander Yarovoy, Technische Universiteit Delft, The Netherlands
- 29 **Comparison of Tropical Forest Above Ground Biomass Estimation Techniques Based on Polarimetric and Tomographic SAR Data Acquired at P Band**
Bassam El Hajj Chehade¹, Laurent Ferro-Famil¹, Stefano Tebaldini², Dinh Ho Tong Minh³, Thuy Le Toan⁴
¹IETR, France; ²Politecnico di Milano, Italy; ³UMR TETIS, France; ⁴CNES, France
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¹Universiti Teknologi MARA, Malaysia; ²Tokyo Denki University, Japan
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Jochen Jebramcik, Jan Barowski, Dennis Pohle, Christoph Baer, Ilona Rolfes, Ruhr-Universität Bochum, Germany

EuRAD04: Automotive Radar 1

Chair: Marina Gashinova, University of Birmingham, UK

Co-Chair: Piotr Samczynski, Warsaw University of Technology, Poland

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Thomas F. Eibert²*
¹ASTYX, Germany; ²Technische Universität München, Germany
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¹Robert Bosch, Germany; ²KIT, Germany
- 49 **Polarimetric RCS Analysis of Traffic Objects**
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- 53 **Polarimetric RCS Measurements of Selected Two-Wheeled Vehicles for Automotive Radar**
Tristan Visentin¹, Jürgen Hasch¹, Thomas Zwick²
¹Robert Bosch, Germany; ²KIT, Germany
- 57 **Radar Reflectivity and Motion Characteristics of Pedestrians at 300GHz**
*E. Marchetti¹, Rui Du¹, Fatemeh Norouzian¹, Edward G. Hoare¹, Mikhail Cherniakov¹,
Marina Gashinova¹, T.-Y. Tran²*
¹University of Birmingham, UK; ²Jaguar Land Rover, UK

EuRAD05: Localisation and Tracking

Chair: Manuel Rosa-Zurera, University of Alcalá, Spain

Co-Chair: Willem A. Hol, Thales, The Netherlands

Kopenhagen, Time 08:30 – 10:10, Thursday 12th October 2017

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*Nicolas Knudde¹, Baptist Vandersmissen¹, Karthick Parashar², Ivo Couckuyt¹,
Azarakhsh Jalalvand¹, André Bourdoux², Wesley De Neve¹, Tom Dhaene¹*
¹Ghent University, Belgium; ²imec, Belgium
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- 73 **Super-Resolution Algorithm for Joint Range-Azimuth-Doppler Estimation in Automotive Radars**
Yalın Gürçan, Alexander Yarovoy, Technische Universiteit Delft, The Netherlands
- 77 **Suppression of False Targets from Active Defense Radar Sensors**
Premysl Hudec¹, Petr Panek², Petr Ourednik¹
¹Czech Technical University in Prague, Czech Republic; ²Czech Academy of Sciences, Czech Republic

EuRAD06: Automotive Radar 2

Chair: Albert Huizing, TNO, The Netherlands

Co-Chair: Robert Palmer, Oklahoma University, Germany

St. Petersburg, Time 10:50 – 12:30, Thursday 12th October 2017

- N/A **Multistatic Automotive Radar Networks with Software Enabled Phase Coherency**
(Industrial Session Keynote)
Peter Gulden¹, Michael Gottinger²
¹Symeo, Germany; ²FAU Erlangen-Nürnberg, Germany
- 82 **Automotive MIMO Radar Angle Estimation in the Presence of Multipath**
Florian Engels¹, Markus Wintermantel¹, Philipp Heidenreich²
¹Continental, Germany; ²General Motors Europe, Germany
- 86 **A Convolutional Neural Network Approach to Parking Monitoring in Urban Radar Sensing**
Javier Martinez¹, Dominik Zoeke², Martin Vossiek¹
¹FAU Erlangen-Nürnberg, Germany; ²Siemens, Germany
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Jonathan Bechter, Fabian Roos, Mahfuzur Rahman, Christian Waldschmidt, Universität Ulm, Germany
- 94 **Multi-Target Reflection Point Model of Cyclists for Automotive Radar**
Martin Stolz¹, Eugen Schubert¹, Frank Meinl¹, Martin Kunert¹, Wolfgang Menzel²
¹Robert Bosch, Germany; ²Universität Ulm, Germany

EuRAD07: MIMO Radars and Waveforms

Chair: Alexander Yarovoy, Technische Universiteit Delft, The Netherlands

Co-Chair: Laurent Ferro-Famil, IETR, France

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Dominic Berges¹, Dominik Zoeke²
¹Technische Universität München, Germany; ²Siemens, Germany
- 110 **MIMO Arrays versus Conventional Thin Arrays for 2D and 3D Radar Applications**
Jan Mietzner, HENSOLDT, Germany
- 114 **Range Sidelobes Attenuation of Pseudorandom Waveforms for Civil Radars**
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EuRAD08: MIMO Radar Systems

Chair: Reinhard Feger, Johannes Kepler University Linz, Austria

Co-Chair: Winfried Mayer, Endress+Hauser, Germany

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Simon Kueppers¹, Harun Cetinkaya¹, Nils Pohl²
¹Fraunhofer FHR, Germany; ²Ruhr-Universität Bochum, Germany
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¹Goethe-Universität Frankfurt, Germany; ²FAU Erlangen-Nürnberg, Germany; ³FBH, Germany; ⁴Robo-Technology, Germany
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Jan Mietzner¹, Steffen Lutz¹, Christian Weckerle¹, Bernhard Hofstaetter¹, Enric Miralles², Alexander Ganis², Thomas Multerer², Juergen Puchinger¹, Ulrich Prechtel², Volker Ziegler², Askold Meusling²
¹HENSOLDT, Germany; ²Airbus, Germany
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Christoph Dahl, Ilona Rolfes, Michael Vogt, Ruhr-Universität Bochum, Germany

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Chair: Mateusz Malanowski, Warsaw University of Technology, Poland

Co-Chair: Mateo Burgos-Garcia, Universidad Politécnica de Madrid, Spain

St. Petersburg, Time 16:10 – 17:50, Thursday 12th October 2017

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¹Technische Universität Graz, Austria; ²AVL List, Austria
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Christoph Baer, Christian Schulz, Ruhr-Universität Bochum, Germany

EuRAD10: Classification and Recognition

Chair: Willem A. Hol, Thales, The Netherlands

Co-Chair: María Pilar Jarabo-Amores, University of Alcalá, Spain

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Pilar Jarabo-Amores¹, Elisa Giusti², Manuel Rosa-Zurera¹, Alessio Bacci², Amerigo Capria², David Mata-Moya¹
¹Universidad de Alcalá, Spain; ²CNIT, Italy
- 159 **Object Recognition Radar System for Partially Reconstructed Target Image**
Dilyan Damyantov¹, Thorsten Schultze¹, Ingolf Willms¹, Rahmi Salman²
¹Universität Duisburg-Essen, Germany; ²HF Systems Engineering, Germany
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B. Dekker¹, S. Jacobs¹, A.S. Kossen¹, M.C. Kruithof¹, A.G. Huizing¹, M. Geurts²
¹TNO, The Netherlands; ²NXP Semiconductors, The Netherlands
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G. Klarenbeek¹, R.I.A. Harmanny², L. Cifola²
¹Universiteit Utrecht, The Netherlands; ²Thales Nederland, The Netherlands
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M. LaManna¹, P. Monsurrò², G. Scotti², P. Tommasino², A. Trifiletti²
¹Evolvelectronics, Italy; ²Università di Roma "La Sapienza", Italy

EuRAD11: Remote Sensing and Surveillance

Chair: Stefan Stanko

Co-Chair: Mayazzurra Ruggiano, Thales, The Netherlands

Kiew, Time 08:30 – 10:10, Friday 13th October 2017

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- 183 **DVB-T Based Passive Radar Performance Sensitivity with Respect to Channel Availability**
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- 187 **A Machine Learning Framework for Performance Prediction of an Air Surveillance System**
Juha Jylhä¹, Marja Ruotsalainen¹, Ville Väisänen¹, Kai Virtanen², Mikko Harju², Minna Väilä¹
¹Tampere University of Technology, Finland; ²Aalto University, Finland
- 191 **SETHI/RAMES-NG: New Performances of the Flexible Multi-Spectral Airborne Remote Sensing Research Platform**
Rémi Baqué, Olivier Ruault du Plessis, Nicolas Castet, Patrick Fromage, Joseph Martinot-Lagarde, Jean-François Nouvel, Hélène Oriot, Sébastien Angelliaume, Frédéric Briguei, Hubert Cantalloube, Martine Chanteclerc, Pascale Dubois-Fernandez, Xavier Dupuis, Philippe Martineau, ONERA, France

EuRAD12: Radar Applications 1

Chair: Krzysztof Kulpa, Warsaw University of Technology, Poland

Co-Chair: Stephen Harman, QinetiQ, UK

St. Petersburg, Time 08:30 – 10:10, Friday 13th October 2017

- 195 **Nearfield Imaging Probe for Contactless Assessment of Burned Skin**
*Daniel Oppelt¹, Tim Pfahler¹, Felix Distler¹, Johannes Ringel¹, Ole Goertz²,
Martin Vossiek¹*
¹FAU Erlangen-Nürnberg, Germany; ²Martin-Luther-Krankenhaus, Germany
- 199 **Material Characteristics of Concretes During the Dehydration Process in Furnaces**
*Sabine Gütgemann, Andries Küter, Jasmin Steinbrecher, Christian Krebs, Ralf Brauns,
Dirk Nüßler, Fraunhofer FHR, Germany*
- 203 **Joint Doppler and DOA Estimation Using 2D MUSIC in Presence of Phase Residual**
Shengzhi Xu, Alexander Yarovoy, Technische Universiteit Delft, The Netherlands
- 207 **A Novel Estimation Technique of the Permittivity and the Effective Thickness of Dielectric Materials for Wideband Radar Systems**
*B. Friederich, S. Tonder, Thorsten Schultze, Ingolf Willms, Universität Duisburg-Essen,
Germany*
- 211 **Transmission Through Uniform Layer of Ice at Low-THz Frequencies**
*Fatemeh Norouzian, Rui Du, E. Marchetti, Marina Gashinova, Edward G. Hoare,
Costas Constantinou, Peter Gardner, Mikhail Cherniakov, University of Birmingham, UK*

EuRAD13: EuRAD Interactive Session

Chair: Christian Schulz, Ruhr-Universität Bochum, Germany

Co-Chair: Nils Pohl, Ruhr University Bochum, Germany

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Stefano Turso, Andrej Konforta, Thomas Bertuch, Peter Knott, Fraunhofer FHR, Germany
- 219 **Integrated Target Detection Hardware Unit for Automotive Radar Applications**
*Farhan Bin Khalid, Dian T. Nugraha, Andre Roger, Romain Ygnace, Infineon
Technologies, Germany*
- 223 **Millimeter-Wave Gaussian Beam Shaping and Steering Phased Array Antenna**
Christian Koenen, Uwe Siart, Thomas F. Eibert, Technische Universität München, Germany
- 227 **Noise Matching in Coupled Antennas**
Paulus Krüger, Barend Visser, North-West University, South Africa
- 231 **Narrow Band Wide Angle Scanning Circular Frequency Diverse Array Radar**
Ramazan Çetiner, Altunkan Hizal, R. Firat Tığrek, Aselsan, Turkey
- 235 **Compression of Phase-Shift Keyed Signals by Means of the Mismatched Sidelobe-Free Filter with Application to Coherent Pulse Radar**
*L.B. Fridman, G.A. Ershov, S.A. Myasnikov, V.N. Perelomov, E.A. Sinitsin, JSC VNIIRA,
Russia*
- 239 **Hybrid Architecture of a Compact, Low-Cost and Gain Compensated Delay Line Switchable from 1m to 250m for Automotive Radar Target Simulator**
Fabien Arzur¹, Marc Le Roy¹, André Pérennec¹, Gérard Tanné¹, Nicolas Bordais²
¹Lab-STICC, France; ²ZF TRW Autocruise, France

N/A	Wide-Band Interference Mitigation Algorithm for SAR Based on Time-Varying Filtering and Sparse Recovery <i>Xingyu Lu, Weimin Su, Hong Gu, Jianchao Yang, NUST, China</i>
247	Building Edge Delineation Using InSAR and LiDAR Data <i>Umur Kathree, Jaco de Witt, Willie Nel, CSIR, South Africa</i>
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255	Ground Moving Target Classification Based on Micro-Doppler Signature Using Novel Spectral Information Features <i>Ammar Mesloub¹, Karim Abed-Meraim², Adel Belouchrani³</i> <i>¹École Militaire Polytechnique, Algeria; ²PRISME (UPRES 4229), France; ³École Nationale Polytechnique, Algeria</i>
N/A	Analysis of Sea Clutter Self-Similarity Under Influence of Moving Target <i>Ningbo Liu¹, Hao Ding¹, Shuliang Wen², Jian Guan¹, You He¹</i> <i>¹Naval Aeronautical & Astronautical University, China; ²CASIC, China</i>
N/A	Enabling Sea Clutter Power Model in Surface Duct Environment <i>Peipei Wei, Xiaoyan Du, Jianhui Liu, NDSC, China</i>
267	Adaptive Kalman Filter for Tracking of Fast Accelerating Targets <i>Premysl Hudec¹, Petr Panek²</i> <i>¹Czech Technical University in Prague, Czech Republic; ²Czech Academy of Sciences, Czech Republic</i>
271	Impact of the Radar Frequency on the Detection of Raindrops <i>Jonathan Schad, Philipp A. Scharf, Hubert Mantz, Thomas Walter, Hochschule Ulm, Germany</i>

EuRAD14: Short-Range Radar Applications

Chair: Reinhold Herschel, Fraunhofer FHR, Germany

Co-Chair: Axel Brockmeier, HENSOLDT, Germany

Kiew, Time 10:50 - 12:30, Friday 13th October 2017

275	Development of Ground Penetrating Radar Using 48 Channel Impulse Radar Array <i>Jihoon Kwon¹, Nojun Kwak¹, Dongwon Yang², Yeosun Yoon³</i> <i>¹Seoul National University, Korea; ²ADD, Korea; ³Hanwha Systems, Korea</i>
279	Time-Domain Correlation Radar for Fluid Surface Velocity Estimation Using a 77GHz Sensor Platform <i>Marc A. Mutschler¹, Christian Erhart¹, Philipp A. Scharf¹, Johannes Iberle¹, Johannes Burgardt¹, Hubert Mantz¹, Thomas Walter¹, Christian Waldschmidt²</i> <i>¹Hochschule Ulm, Germany; ²Universität Ulm, Germany</i>
283	Optimized Fractional-N PLL for FMCW Radar Indoor Positioning Applications <i>Mohammed El-Shennawy, Belal Al-Qudsi, Niko Joram, Frank Ellinger, Technische Universität Dresden, Germany</i>
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291	Mixer Assisted Interferometric Six-Port System for Accurate Distance Measurements <i>Stefan Lindner, Fabian Lurz, Sarah Linz, Robert Weigel, Alexander Koelpin, FAU Erlangen-Nürnberg, Germany</i>

EuRAD15: Radar Applications 2

Chair: Darren Coe, QinetiQ, UK

Co-Chair: Laura Anitori, TNO, The Netherlands

St. Petersburg, Time 10:50 – 12:30, Friday 13th October 2017

- 295 **Investigation of Circular Polarization for 76GHz Helicopter Collision Avoidance Radar to Improve Detection Performance of High-Voltage Power Lines**
Shunichi Futatsumori¹, Capucine Amielh², Kazuyuki Morioka¹, Akiko Kohmura¹, Norihiko Miyazaki¹, Naruto Yonemoto¹
¹ENRI, Japan; ²ENAC, France
- 299 **Low-Cost Jamming System Against Small Drones Using a 3D MIMO Radar Based Tracking**
Thomas Multerer¹, Alexander Ganis¹, Ulrich Prechtel¹, Enric Miralles¹, Askold Meusling¹, Jan Mietzner¹, Martin Vossiek², Mirko Loghi³, Volker Ziegler¹
¹Airbus, Germany; ²FAU Erlangen-Nürnberg, Germany; ³Università di Udine, Italy
- 303 **Surface Reconstruction Using Thinned Random Arrays in mm-Wave FMCW SAR Imaging**
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- 307 **2D and 3D-ISAR Images of a Small Quadcopter**
Massimiliano Pieraccini, Neda Rojhani, Lapo Miccinesi, Università di Firenze, Italy
- 311 **RotoSAR for Monitoring Bridges**
Massimiliano Pieraccini, Lapo Miccinesi, Università di Firenze, Italy

EuMC/EuRAD01: Antenna Systems — Industrial Perspectives

Chair: Matthias Geissler, IMST, Germany

Co-Chair: Ioan Lager, Delft University of Technology, The Netherlands

Hongkong, Time 10:50 – 12:30, Wednesday 11th October 2017

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Un-Pyo Hong, Michael Schneider, Ralf Gehring, Airbus, Germany
- 319 **Design and Testing of a Polarimetric X-Band Antenna for Avionic Weather Radar**
G. Galgani¹, G. Scozza¹, R.J. Bolt², N. Haider², Stefania Monni², F. Delbary³
¹IDS Ingegneria Dei Sistemi, Italy; ²TNO, The Netherlands; ³Rockwell Collins, France
- 323 **RF Analysis at K Band of a Radome-Covered Ground Station at Polar Latitudes**
A. Martellosio¹, Marco Pasian¹, F. Concaro², Piermario Besso²
¹Università di Pavia, Italy; ²ESA-ESOC, Germany
- 327 **Radiometric Accuracy and One-Year-Stability of Sentinel-1A Determined Using Point Targets**
Kersten Schmidt, Nuria Tous Ramon, Marco Schwerdt, DLR, Germany
- 331 **Test on the Prototype of a Multiple-Beam Reflector Antenna Subsystem**
Qinghua Lai, Chu Gao, Xiaotao Wang, Chen Zhang, ECRIEE, China

EuMC/EuRAD02 : Microwave Systems

Chair: Ilona Rolfes, Ruhr-University Bochum, Germany

Co-Chair: Bianca Will, FH Südwestfalen, Germany

Seoul, Time 10:50 – 12:30, Wednesday 11th October 2017

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Andries Küter, Stefan Reible, Thomas Geibig, Dirk Nüßler, Fraunhofer FHR, Germany
- 339 **High-Resolution FMCW Millimeter-Wave and Terahertz Thickness Measurements**
N.S. Schreiner¹, B. Baccouche¹, W. Sauer-Greff², R. Urbansky², F. Friederich¹
¹Fraunhofer ITWM, Germany; ²Technische Universität Kaiserslautern, Germany
- 343 **A Low-Cost Multi-Target Simulator for FMCW Radar System Calibration and Testing**
Werner Scheiblhofer¹, Reinhard Feger¹, Andreas Haderer², Andreas Stelzer¹
¹Johannes Kepler Universität Linz, Austria; ²Inras, Austria
- 347 **An M-Sequence-Based Baseband Network Analyzer Using a Combination of Hardware and Software Correlator**
Gordon Notzon, Lukas Polzin, Robert Storch, Thomas Musch, Michael Vogt,
Ruhr-Universität Bochum, Germany
- 351 **A Modular Multiport Vector Network Analyzer for Electromagnetic Tomography Applications**
Markus Freilinger¹, Sebastian Poltschak¹, Reinhard Feger¹, Andreas Stelzer¹,
Abouzar Hamidipour², Markus Hopfer², Ramon Planas², Tommy Henriksson²,
Serguei Semenov²
¹Johannes Kepler Universität Linz, Austria; ²EMTensor, Austria

EuMC/EuRAD03 : Focused Session: Conformal Antennas and Arrays

Chair: Peter Knott, Fraunhofer FHR, Germany

Co-Chair: Loic Bernard, ISL, France

Hongkong, Time 13:50 – 15:30, Wednesday 11th October 2017

- 355 **An Algorithm for Calculating Green's Functions of Curved Multilayer Metasurface Structures**
Zvonimir Sipus, Marko Bosiljevac, University of Zagreb, Croatia
- 359 **Design and Manufacturing of Conformal Antenna Array on a Conical Surface at 5.2GHz**
V. Jaeck¹, L. Bernard¹, K. Mahdjoubi², Ronan Sauleau², S. Collardey², P. Pouliquen³,
P. Potier³
¹ISL, France; ²IETR, France; ³DGA, France
- 363 **A Conformal Multi-Frequency Antenna Array for Safety-of-Life Satellite Navigation**
Kazeem A. Yinusa, Lukasz A. Greda, Achim Dreher, DLR, Germany
- 367 **Sequentially Shifted Beamforming from a Conformed Conical Array**
Sumit Karki, J. Ignacio Echeveste, Thomas Pairon, Christophe Craeye, Université
catholique de Louvain, Belgium
- 370 **Flexible UHF/VHF Vivaldi Antenna for Broadband and Gas Balloon Applications**
Anthony Presse, Jean Marie Floc'h, Anne Claude Tarrot, IETR, France

EuMC/EuRAD04: Beam Steering Antennas and Technologies

Chair: Christian Person, IMT Atlantique, France

Co-Chair: Georg Fischer, FAU Erlangen-Nuremberg, Germany

Hongkong, Time 16:10 – 17:50, Wednesday 11th October 2017

- 374 **76–81GHz LTCC Antenna for an Automotive Miniature Radar Frontend**
Frank Sickinger¹, Ernst Weissbrodt¹, Martin Vossiek²
¹Valeo Schalter und Sensoren, Germany; ²FAU Erlangen-Nürnberg, Germany
- 378 **The Cost-Effective Integration of Radiating Elements into an X-Band Multipack**
Horst Bilzer, Christian Holtzhausen, Felix Thurow, Manuel Böck, Leigh Glasgow, Peter Rützel, HENSOLDT, Germany
- 382 **X Band Distributed Phase Shifter Based on Sol-Gel BCTZ Varactors**
D. Mercier¹, A. Niembro-Martin¹, H. Sibuet¹, C. Baret¹, J. Chautagnat¹, C. Dieppedale¹, C. Bonnard¹, J. Guillaume¹, G. Le Rhun¹, C. Billard¹, P. Gardes², P. Poveda²
¹CEA-LETI, France; ²STMicroelectronics, France
- 386 **Monopulse RLSA Antenna at 24GHz Based on a Gap-Waveguide Cavity Feed**
Manuel Sierra-Castañer¹, Adrián Tamayo Domínguez¹, Mariano Barba Gea¹, Eva Rajo-Iglesias², Jose Luis Vazquez-Roy²
¹Universidad Politécnica de Madrid, Spain; ²Universidad Carlos III de Madrid, Spain
- 390 **Frequency Beam Steering Antenna for Millimeter Wave Checkpoint Scanners**
Mohammad Alibakhshikenari¹, Bal S. Virdee², Aurora Andújar³, Jaume Anguera³, Ernesto Limiti¹
¹Università di Roma “Tor Vergata”, Italy; ²London Metropolitan University, UK; ³Fractus, Spain

EuMC/EuRAD05: Advanced Radar Technologies and Systems

Chair: Volker Ziegler, Airbus Group Innovations, Germany

Co-Chair: Philippe Eudeline, Thales Air Systems, Switzerland

Hongkong, Time 08:30 – 10:10, Thursday 12th October 2017

- 393 **MIMO versus Conventional Radar Performance Against Jammers**
Eli Brookner, Independent Researcher, USA
- 397 **A 36–40GHz Full 360° Ultra-Low Phase Error Passive Phase Shifter with a Novel Phase Compensation Technique**
Cheng-Yu Chen, Yun-Shan Wang, Yu-Hsuan Lin, Yuan-Hung Hsiao, Yi-Ching Wu, Huei Wang, National Taiwan University, Taiwan
- 401 **X-Band Antenna Module for Advanced Navigational Phased Array Radar**
Stefan Radziejewski, Nils Hansen, Jan-Philip Mohncke, Arne F. Jacob, Technische Universität Hamburg-Harburg, Germany
- 405 **SiGe BiCMOS X-Band Transceiver-Chip for Phased-Array Systems**
Peter Lohmiller, Rolf Reber, P. Schuh, Martin Oppermann, Sébastien Chartier, HENSOLDT, Germany
- 409 **Ultra-High Resolution Airborne Experiments with a New Ka-Band SAR Sensor**
Gabriel El-Arnauti, Olaf Saalmann, Andreas R. Brenner, Fraunhofer FHR, Germany

EuMC/EuRAD06: Polarisation Diversity and Measurements

Chair: Dietmar Kissinger, Technische Universität Berlin, Germany

Co-Chair: Alexander Koelpin, FAU Erlangen-Nuremberg, Germany

Kiew, Time 08:30 - 10:10, Thursday 12th October 2017

- 413 **Improvement of Dynamic Range for Arbitrary Radar Systems Using Antenna Polarization Modulation**
Daniel Schindler¹, Jürgen Hasch¹, Felix Mueller¹, Christian Waldschmidt²
¹Robert Bosch, Germany; ²Universität Ulm, Germany
- 417 **Performance Characterization of a Polarisation Agile Wideband AESA**
C. Fischer, S. Appel, W. Gautier, W. Gruener, HENSOLDT, Germany
- 421 **Over 15-Gb/s MIMO Wireless Transmission Using Ultra Wideband Antennas in SHF Band**
Noriaki Kaneda¹, Chen Zhu¹, Xiaoqiang Li², Tatsuo Itoh², Young-Kai Chen¹
¹Nokia Bell Labs, USA; ²University of California at Los Angeles, USA
- 425 **ARC₄² — A Double-Arch Positioner for Bistatic RCS Measurements with Four Degrees of Freedom**
Matthias Röding¹, Gerd Sommerkorn¹, Stephan Häfner¹, Alexander Ihlow¹, Snezhana Jovanoska², Reiner S. Thomä¹
¹Technische Universität Ilmenau, Germany; ²Fraunhofer FKIE, Germany

EuMC/EuRAD07: EuMC/EuRAD Interactive Session

Chair: Jan Barowski, Ruhr-University Bochum, Germany

Co-Chair: Ilona Rolfes, Ruhr-University Bochum, Germany

Exhibition Hall, Time 10:00 - 11:40, Thursday 12th October 2017

- 429 **Reflectarray with Split Ring Resonators at 83.5GHz**
Jonathan Mayer, Jerzy Kowalewski, Marc Vieweger, Joerg Eisenbeis, Tobias Mahler, Thomas Zwick, KIT, Germany
- 433 **Circularly Polarized Conical Dielectric Resonator Antenna for X-Band Applications: An Experimental Study**
Sounik Kiran Kumar Dash, Taimoor Khan, Mandovi Borthakur, NIT Silchar, India
- 437 **Optimization of Broadband Smooth Wall Microwave Horn Antennas**
Burkhard Plaum, Universität Stuttgart, Germany
- 441 **Printed Planar Double Inverted-F Antenna with Large Frequency Reconfigurability Range**
Jean Marie Floc'h, Imen Ben Trad, IETR, France
- 445 **Multiport Model of Hertzian Dipoles Coupled in the Near-Field**
Johannes A. Russer¹, Michel T. Ivrlač¹, Michael Haider¹, Sidina Wane², Damienne Bajon³, Peter Russer¹, Josef A. Nassek¹
¹Technische Universität München, Germany; ²NXP Semiconductors, France; ³ISAE, France
- 449 **High-Sensitivity HTS Multi-Channel Receiver Front-End for 900MHz Band Mobile Base Station**
Tamio Kawaguchi, Hiroaki Ikeuchi, Hiroyuki Kayano, Yuichi Sawahara, Noritsugu Shiokawa, Toshiba, Japan

- 453 **OROTRON Intracavity Millimeter-Wave Spectroscopy of Weakly Bound Complexes Containing Molecular Hydrogen**
L.A. Surin, Russian Academy of Sciences, Russia
- 457 **Circularly Polarized Duplex Antenna with High Port-to-Port Isolation**
Peisheng Zhang, Zeming Xie, Xianjing Lin, South China University of Technology, China
- 461 **Novel TM₀ Surface Wave Launcher for Integrated Planar Leaky Wave Antennas**
Jochen Schäfer, Heiko Gulan, Benjamin Göttel, Thomas Zwick, KIT, Germany
- 465 **Modified 0.6–50GHz Ultra-Wideband Double-Ridged Horn Antenna Design for Parameters Improvement**
Pavel D. Kuroptev, Vladimir V. Levyakov, Alexey V. Fateev, TUSUR, Russia
- 469 **Full SMT Low Cost X-Band Multichannel T/R-Module**
Marion Filleböck, Felix Thurow, HENSOLDT, Germany
- 473 **Design of a 2-Bit Unit-Cell for Electronically Reconfigurable Transmitarrays at Ka-Band**
Fatimata Diaby¹, Antonio Clemente¹, Luca Di Palma¹, Laurent Dussopt¹, Kien Pham², Erwan Fourn³, Ronan Sauleau²
¹CEA-LETI, France; ²IETR, France; ³Université de Rennes, France
- 477 **Probing Concept for an Antenna Array for 60GHz Band**
Zunnurain Ahmad, Jan Hesselbarth, Universität Stuttgart, Germany
- 481 **Microwave Receiving System for Antenna Measurement Using Optical Devices up to 40GHz**
Satoru Kurokawa¹, Masanobu Hirose¹, Tsutomu Mitui², Shintaro Arata²
¹AIST, Japan; ²Koden Electronics, Japan

- 485 **Polarization Optimization of Compact Antenna Arrays for Direction of Arrival Estimation**
Mariana Pralon¹, Matthias A. Hein¹, Reiner S. Thomä¹, Leandro Pralon², Bruno Pompeo², Gabriel Beltrao², Giovanni Del Galdo³, Markus Landmann³
¹Technische Universität Ilmenau, Germany; ²CTEx, Brazil; ³Fraunhofer IIS, Germany
- N/A **Fast Direction Finding System with Four Dipole Antennas for IoT Applications**
Soo-Ji Lee¹, Dong-Jin Lee², Seung-Tae Khang³, Ghoo Kim³, Jong-Sang Yu³, Jong-Won Yu³
¹ADD, Korea; ²KINS, Korea; ³KAIST, Korea
- 493 **Damper-to-Damper Path Loss Characterization for Intra-Vehicular Wireless Sensor Networks**
Carlos A.M. Costa Júnior¹, Hao Gao¹, Thibault Le Polain², Rainier van Dommelle¹, Bart Smolders¹, Miguel Dheans², Peter Baltus¹
¹Technische Universiteit Eindhoven, The Netherlands; ²Tenneco, Belgium
- N/A **Convolutional Neural Network for Human Micro-Doppler Classification**
Yue Lang¹, Chunping Hou¹, Yang Yang¹, Danyang Huang¹, Yuan He²
¹Tianjin University, China; ²NUDT, China

EuMC/EuRAD08: Modelling and Synthesis of Array Antennas

Chair: Jochen Dederer, HENSOLDT, Germany

Co-Chair: Boris Levitas, Geozondas, Lithuania

Hongkong, Time 10:50 – 12:30, Thursday 12th October 2017

- 501 **Applying Antenna Synthesis Methods on a Path Based MIMO Channel Model for Verification**
Tobias Mahler, Thibault Deletoille, Johannes Frey, Jerzy Kowalewski, Thomas Zwick, KIT, Germany
- 505 **Pattern Recovery of a Beam-Tilting Phased Array Antenna on a Doubly Wedge-Deformed Surface**
Giulia Mansutti, Francesco Rigobello, M. Saeed Khan, Antonio-D. Capobianco, Università di Padova, Italy
- 509 **Effects of Finite Aperture and Random Phase Errors for a Space Debris Radar Antenna Array**
Giuseppe Siciliano¹, Marco Pasian¹, Luca Perregrini¹, Magdalena Mendijur², Piermario Besso²
¹Università di Pavia, Italy; ²ESA-ESOC, Germany
- 513 **An Alternative Design Approach for Multi-Feed Spatial Power Combining Reflectarray Antenna**
Tse-Tong Chia¹, Felicia Ying-Fei Tai², Kelly Xinjie Siah³
¹DSO National Laboratories, Singapore; ²NUS, Singapore; ³Raffles Institution, Singapore
- 517 **Accurate Modelling and Experimental Validation of a Large Antenna Array in Ka-Band**
Benoit Lesur¹, Christophe Melle¹, David Chaimbault¹, Alain Karas¹, Marc Thevenot², Eric Arnaud², Thierry Monediere²
¹Zodiac Data Systems, France; ²XLIM, France

EuMC/EuRAD09: Radar Signal Sources

Chair: Nils Pohl, Ruhr University Bochum, Germany

Co-Chair: Marion Filleböck, HENSOLDT, Germany

Kiew, Time 10:50 – 12:30, Thursday 12th October 2017

- 521 **Modeling of Range Accuracy for a Radar System Driven by a Noisy Phase-Locked Loop**
Frank Herzel, Herman Jalli Ng, Dietmar Kissinger, IHP, Germany
- 525 **Optoelectronic Waveforms Generation: PCSS Characterization and Genetic Algorithm**
Gwenaél Reineix¹, Romain Négrier¹, Michèle Lalande¹, Vincent Couderc¹, Joël Andrieu¹, Laurent Desrumaux²
¹XLIM, France; ²DGA, France
- 529 **A Software-Defined and Filter-Free 0–26.5GHz Ultra-Wideband RF Transmitter Enabled by Photonics**
D. Onori, F. Scotti, F. Laghezza, A. Bogoni, P. Ghelfi, CNIT, Italy
- 533 **A Generalised Brownian Motion Model of RF Spectral Dispersion Due to Phase Noise**
Kashif Siddiq¹, Robert J. Watson², Steve R. Pennock²
¹Navtech Radar, UK; ²University of Bath, UK

EuMC/EuRAD10: Special Session: Radar Technology and System Applications in Central Europe

Chair: Kostyantyn Lukin, IRE NASU, Ukraine

Co-Chair: Jerzy Michalski, SpaceForest, Poland

Oslo, Time 16:10 – 17:50, Thursday 12th October 2017

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|-----|---|
| N/A | Passive Radar Research in Poland
<i>K. Kulpa, M. Malanowski, M. Bączyk, D. Gromek, M. Wielgo, Warsaw University of Technology, Poland</i> |
| N/A | Quantum Radar and Noise Radar Concepts
<i>Konstantin Lukin, NASU, Ukraine</i> |
| N/A | Feasibility of Air Target Detection Using Pulsar FSR Net
<i>Hristo Kabakchiev¹, Vera Behar², Ivan Garvanov³, Dorina Kabakchieva⁴, Avgust Kabakchiev⁵, Herman Rohling⁶, Mark Bentum⁷, Jorge Fernandes⁸</i>
<i>¹Sofia University, Bulgaria; ²IICT-BAS, Bulgaria; ³ULSIT, Bulgaria; ⁴UNWE, Bulgaria; ⁵BULATSA, Bulgaria; ⁶Technische Universität Hamburg-Harburg, Germany; ⁷University of Twente, The Netherlands; ⁸INESC-ID Lisboa, Portugal</i> |
| N/A | Fully Autonomous Tracking and Data Transmission System for Sounding Rocket
<i>Przemysław Kant, Adrian Szwaba, Jerzy Michalski, SpaceForest, Poland</i> |
| N/A | Applications of Microwaves in Medicine and Biology
<i>Jan Vrba¹, Jiri Kubes², Ferdinand Třebický³, Pavla Novakova³, František Vožeh⁴, Jan Barcal⁴, Luca Vannucci⁵, Jan Vrba Jr¹, David Vrba¹, Ladislav Oppl¹, Ondrej Fiser¹, Ilja Merunka¹, Jesus Cumana¹</i>
<i>¹Czech Technical University in Prague, Czech Republic; ²Proton Therapy Center, Czech Republic; ³Bulovka Hospital, Czech Republic; ⁴Charles University, Czech Republic; ⁵Czech Academy of Sciences, Czech Republic</i> |