International Workshop on Automotive Radar for Fully Automated Driving
Wednesday, 16th September 2020, 08.00 – 12.00 CEST (UTC+2), online (links will be provided by e-mail)

08:00  Session 1: General aspects on automated and connected driving (online live)
- Welcome address Stefan Mengel, Division “Electronics and Autonomous Driving”, German Federal Ministry for Education and Research (BMBF)
- Push & pull in digitalization Felix Govaers, Fraunhofer FKIE
- Future urban mobility Klaus Bogenberger, Technical University of Munich

09:30  Questions and discussions in virtual marketplace (online live in four rooms, video files of the presentations will be provided on 14th September)
- Session 2: New radar architectures and signal processing
  Rudolf Lachner, Infineon Technologies AG
  Automotive radar building blocks
  Benjamin Nuß, Karlsruhe Institute of Technology
  OFDM radar for automotive applications
  Simon Stephany, University of Ulm
  Digitally modulated radar and 4x8 MIMO demonstrator
  Martin Kunert, Robert Bosch GmbH
  High resolution fast chirp imaging radar for automotive applications
  Maria Gonzalez, Fraunhofer FHR
  Sparse MIMO arrays and high-resolution estimation using compressed sensing
- Session 3: New MMICs, antenna and packaging concepts
  Jan Schöpfel, Ruhr University Bochum
  SiGe transceiver chipsets for arbitrarily modulated radar at 77 GHz
  Ahmad Mushtaq, Silicon Radar
  Cascadable radar MMIC for massive MIMO-applications
  Thanh Duy Nguyen, IZM, Jue Chen, Schweitzer, and Jonathan Mayer, Karlsruhe Institute of Technology
  Panel level packaging and system in board technologies for conformal radar frontend
  Christian Tschoban, IZM
  MIMO-based module with integrated antennas for autonomous driving
- Session 4: Radar sensor networks and sensor fusion
  Thomas Binzer, Robert Bosch GmbH
  Cooperative sensor networks: chances and challenges
  Benedikt Meinecke, Johannes Schlichenmaier, University of Ulm
  Coherent and incoherent sensor networks
  Markus Gardill, University of Würzburg
  Radar architectures and signal processing for autonomous driving
  Cristina Grozea, Fraunhofer Fokus
  Camera-radar-fusion for safe driving in urban environment
- Session 5: Radar testing and verification
  Florian Baumgärtner, Daimler
  OTA test scenarios for automated driving
  Thomas Walter, University of Applied Sciences Ulm
  Radar target simulator
  Sebastian Graf, dSPACE, Andreas Löffler, Continental
  Raytracing simulations in automotive radar tests
  Sevda Abadpour, Karlsruhe Institute of Technology
  Radar channel simulation
  Matthias Hein, TU Ilmenau
  Virtual verification and validation of automotive radar in the installed state

10:30  Session 6: Virtual lab with demonstrators (online live in different rooms)
- An all-digital 4x4 MIMO automotive radar prototype based on an RFSoC
  Simon Stephany, University of Ulm
- Fast chirp sequence 4x16 TDM MIMO imaging radar demonstrator for automated driving applications
  Martin Kunert, Robert Bosch GmbH
- Printed circuit board technology enables direct embedding of MMIC and conformal antenna configuration for automotive radar applications
  Jue Chen, Schweitzer Electronic AG
- Automotive radar sensor testing using real-time raytracing
  Sebastian Graf, dSPACE
- Automotive radar OTA test setup with target simulator and mechanical positioning
  Bastian Hellweg, dSPACE, Ralf Stephan, TU Ilmenau
- A 77 GHz radar demonstrator for arbitrary digital modulation schemes
  Benjamin Nuß, Karlsruhe Institute of Technology, Jan Schöpfel, Ruhr University Bochum

11:30  Session 7: Panel discussion and closing remarks (online live)
- Panel discussion Stefan Mengel, Division “Electronics and Autonomous Driving”, German Federal Ministry for Education and Research (BMBF), Rudolf Lachner, Infineon, Martin Kunert, Robert Bosch GmbH, Frank Gruson, Continental, Holger Meinel, Independent ADAS Consultant
- Closing address Stefan Mengel, Division “Electronics and Autonomous Driving”, German Federal Ministry for Education and Research (BMBF)

Details and Registration: www.ihe.kit.edu/workshop.php  Contact: thomas.zwick@kit.edu