Chairs‘ Message

It is my great pleasure to welcome you to the 2013 International Workshop on Antenna Technology (iWAT) in Karlsruhe on March 04-06, 2013.The workshop will continue the iWAT special concept with only one oral session in parallel with highly competitive speakers from different countries and a major focus on poster sessions. The iWAT 2013 is a premier forum for the exchange of information on state-of-the-art technologies in antenna design and advanced materials for antennas. In addition at our social activities like the Welcome Reception and an extraordinary dinner you will have great possibilities to make new contacts and hold fruitful discussions with colleagues. I am sure your presence and contributions to this workshop will make it a valuable and exciting event. As in the years before we expect you to benefit from the high quality keynotes, papers, posters, talks and the excellent networking.This year's venue is a historical place for antenna technology. It was in 1887 when Heinrich Hertz proved the existence of the electromagnetic wave in a lecture hall of the university. Through experimentation, he proved that transverse free space electromagnetic waves can travel over some distance. Hertz measured Maxwell's waves and demonstrated that the velocity of radio waves was equal to the velocity of light. His discoveries would later be more fully understood by others and be part of the new "wireless age". In bulk, Hertz' experiments explain reflection, refraction, polarization, interference, and velocity of electric waves. In his honour, the SI unit hertz (Hz) was established by the IEC in 1930 for frequency.
I would like to thank all colleagues who have helped organizing this event. Also, thanks to the IEEE Antennas and Propagation Society for technically co-sponsering the conference. Especially I want to thank the Technical Program Committee with its chair Prof. Dirk Manteuffel for offering their scientific and technical contributions.

I wish you an interesting conference and a nice time with many renowned scentists at the iWAT 2013 in Karlsruhe.

iWAT 2013 General Chair
Prof. Dr.-Ing. Thomas Zwick

General Information

Karlsruhe Institute of Technology

The Karlsruhe Institute of Technology (KIT) is the largest research and education institution in Germany, resulting from a merger of the university (Universität Karlsruhe (TH)) and the research center (Forschungszentrum Karlsruhe) of the city of Karlsruhe. The university, also known as Fridericiana, was founded in 1825. In 2009, it merged with the former national nuclear research center founded in 1956 as the Kernforschungszentrum Karlsruhe (KfK). The KIT is one of the leading universities in science and engineering in Europe, ranking 6th overall in terms of citation impact.
The university of Karlsruhe is a important historical place for antenna technology. It was in 1887 when Heinrich Hertz proved the existence of the electromagnetic wave in a lecture hall of the university.
The presentations will take place in one of the finest auditoriums, the Tulla lecture hall. Directly below is a large foyer with plenty of space for coffee breaks, poster presentations and exhibitions.

Registration

Registration desk will be open in the hallway of Tulla lecture hall during the following hours:

Monday (4th March): 8:00 am - 5:00 pm

Tuesday (5th March): 8:00 am - 5:00 pm

Wednesday (6th March): 8:00 am - 9:00 am

Welcome Reception

Monday from 6 pm

All conference attendees are invited to the Welcome Reception.

Poster Awards Ceremony

The best technical contributions will be awarded at the social event at Tuesday evening.

Social Event

Bus departure to the banquet is in front of the lecture hall at Tuesday 5:30 pm.

Program Overview

	Monday	Tuesday	Wednesday
08:30	Opening Session	Antennas with Metamaterials	MIMO & Reconfigurable Antennas
09:15	Antenna Frontiers		
09:50			
10:10			Coffee Break
10:15			
10:30		Coffee Break	Electrically Small Antennas
10:45	Coffee Break		
10:50		Millimeter Wave Antennas in Package	
11:05	THz Antennas		
11:50		Lunch	Closing Session
12:05	Lunch		Lunch
12:50		Poster Session II	
13:00	Poster Session I		
13:30			
14:50		Antenna Measurement Techniques	
15:00	Automotive Antennas		
15:50		Coffee Break	
16:10		Antennas for Body Centric Networks and Medical Applications	
16:20	Coffee Break		
16:40	Special Session:Resonant Optical Antennas		
17:10			
17:30		Bus Departure	
18:00	Welcome Reception	Social Event	
19:30			
23:00			

Monday

08:30 - 09:15	**Opening Session with Keynote Speech:** **Antenna Technology at NASA/JPL: From Mars Rovers to CubeSats to Micro-fabricated Devices** Dr. Tom Cwik (California Institute of Technology, USA)
Oral Session:	**Antenna Frontiers** Session Chair: Thomas Zwick (Karlsruhe Institute of Technology, Germany)
09:15 - 09:45	**The Birth of Antennas in Europe** Werner Wiesbeck (Karlsruhe Institute of Technology, Germany)
09:45 - 10:15	**Integrated Antennas for RF Sensing, Wireless Communications and Energy Harvesting Applications** Peter Russer (Technical University Munich, Germany)
10:15 - 10:45	**A Look at the Small Antenna Design Problem from a Practitioner's Viewpoint** Raj Mittra (Pennsylvania State University, USA)
10:45 - 11:05	**Coffee Break**
Oral Session:	**THz Antennas** Session Chair: Goutam Chattopadhyay (California Institute of Technology, USA)
11:05 - 11:25	**Easy to Fabricate Feeds for Astronomical Receivers** Ghassan Yassin (University of Oxford, UK)
11:25 - 11:45	**THz Leaky Wave Antennas Integrated with Kinetic Inductance Detectors** Andrea Neto (Delft University of Technology , Netherlands)
11:45 - 12:05	**Silicon Micromachined Receiver Front-Ends at Terahertz Frequencies** Goutam Chattopadhyay (California Institute of Technology, USA)

Monday

12:05 - 13:00 **Lunch**

13:00 - 15:00 **Poster Session**

Beamforming Antennas

I.1 **Dual-Polarized Switched Beam Antenna with Variable Phase Shifter**

Hiroyuki Arai (Yokohama National University, Japan)

I.2 **Electronic Beam Scanning in Two Dimensions with Holographic Phased Array Antenna**

Christian Rusch (Karlsruhe Institute of Technology, Germany); Stefan Beer (Karlsruhe Institute of Technology, Germany); Philipp Pahl (Karlsruhe Institute of Technology, Germany); Heiko Gulan (Karlsruhe Institute of Technology, Germany); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

Circular-Polarized Antennas

I.3 **A Slot-Loaded Circular-Polarized Microstrip Antenna**

Mingming Liu (Shanghai Jiao Tong University, P.R. China); Peng Yan (Shanghai Jiao Tong University, P.R. China)

I.4 **Omnidirectional Circularly Polarized Patch Antenna with Post Manufacture Characteristic Refinement**

Adam Narbudowicz (Dublin Institute of Technology, Ireland); Xiu Long Bao (Dublin Institute of Technology, Ireland); Max James Ammann (Dublin Institute of Technology, Ireland)

I.5 **A Design of Dual-Frequency and Dual-Circularly Polarized Patches Antenna**

Ning Zhang (The State Key Laboratory of Experimental Physics & Computational Mathematics, P.R. China); Ruipeng Zhang (The State Key Laboratory of Experimental Physics & Computational Mathematics, P.R. China); Suixue Wang (The State Key Laboratory of Experimental Physics & Computational Mathematics, P.R. China)

Monday

I.6 **An Anisotropic Impedance Surface for Dual-Band Linear-to-Circular Transmission Polarization Convertor**

Yogesh Ranga (CSIRO, ICT Centre, Australia); Ladislau Matekovits (Politecnico di Torino, Italy); Stuart G Hay (CSIRO ICT Centre, Australia); Trevor S. Bird (Antengenuity, Australia)

I.7 **Broadband Circular Polarized Antenna for Mobile Communication Applications**

Oluyemi Peter Falade (Queen Mary University of London, United Kingdom); Xiaodong Chen (Queen Mary, University of London, United Kingdom); Clive Parini (Queen Mary University of London, United Kingdom)

Communication Antennas

I.8 **Reduction of Envelope Correlation on Non-metallic and Metallic Chassis Phones**

Chi-Yuk Chiu (Sony Mobile Communications, P.R. China)

I.9 **Novel AoA Estimation Method Using Delay Profile in Downlink**

Takahiro Hayashi (KDDI R&D Laboratories, Japan)

I.10 **A Compact Low-cost Dielectric Loaded Antenna for Wi-Fi Access Point Applications**

Zhijiao Chen (Queen Mary University of London, United Kingdom); Clive Parini (QMUL, United Kingdom)

I.11 **A Space-Efficient Coupling Element Antenna for WWAN Applications**

Aykut Cihangir (University of Nice Sophia Antipolis, France); Fabien Ferrero (University of Nice, France); Cyril Luxey (University Nice Sophia-Antipolis, France); Gilles Jacquemod (University of Nice, France)

I.12 **Bandwidth Enhancement of a Compact Dual-Polarized Indoor Base Station Antenna**

Shen Wang (Yokohama National University, Japan); Hiroyuki Arai (Yokohama National University, Japan); Huiling Jiang (NTT DoCoMo, Japan); Keizo Cho (Chiba Institute of Technology, Japan); Zhanghuan Li (Nihon Dengyo Kosaku Co., LTD, Japan)

I.13 **Active Intelligent Antenna System for car2car**

Matthias Geissler (IMST, Germany)

I.14 **Design of a Compact Bandpass Filter using Multimode Resonators for Ultra-Wideband Application with WLAN band notch**

Pratik Mondal (Bengal Engineering and Science University, India)

I.15 **A Dual-band Wide-beamwidth WLAN Access Point Antenna**

Son Xuat Ta (Ajou University, Korea); Hosung Choo (Hongik University, Korea); Ikmo Park (Ajou University, Korea)

Nano-Antennas

I.16 **Frequency Selective Surface for Directivity Enhancement of a Terahertz Photomixer Antenna**

Truong Khang Nguyen (Ajou University, Korea); Haewook Han (Pohang University of Science and Technology, Korea); Ikmo Park (Ajou University, Korea)

I.17 **Tuning Field Extinction by Non-spherical Plasmonic Particles as Nanoantennas**

Mahdieh Khosravi (Khaje Nasir-e Toosi University of Technology, Iran); Ramezan Ali Sadeghzadeh (K. N. Toosi University of Technology, Iran); mohammad Sadegh Abrishamian (K. N. Toosi Univerity, Iran)

I.18 **Study of Active Coated Nano-Toroid Antennas**

Junping Geng (Shanghai Jiaotong University, China); Dunyuan Chen (Shanghai Jiaotong University, China); Rong Hong Jin (Shanghai Jiaotong University, China); Xianling Liang (Shanghai Jiaotong University, China); Jingjing Tang (Shanghai Jiaotong University, China); Richard W. Ziolkowski (University of Arizona, USA)

I.19 **Novel Wire-Grid Nantenna Array for Optical Communication Systems**

Ezzeldin Soliman (The American University in Cairo, Egypt); Mai Sallam (The American University in Cairo, Egypt); Guy Vandenbosch (Katholieke Universiteit Leuven, Ukraine)

I.20 **Localized Surface Plasmon Resonance in Nano-sinusoid Arrays**

Daryoush Mortazavi (Deakin University, Australia); Abbas Z. Kouzani (Deakin University, Australia); Ladislau Matekovits (Politecnico di Torino, Italy)

Monday

I.21 **Magneto-electric Nano-antennas**

Stefan Varault (Institut Fresnel, France); Guillaume Boudarham (Institut Fresnel, France); Brice Rolly (Institut Fresnel, France); Brian Stout (Institut Fresnel, France); Nicolas Bonod (Institut Fresnel, France)

Millimeter Wave Antennas

I.22 **Design of a Wide-Bandwidth on-Chip Antenna for Uncooled Passive THz Imaging**

Bernhard Klein (Technische Universität Dresden, Germany); Thomas Morf (IBM Research - Zurich, Switzerland); Michel Despont (IBM Research - Zurich, Switzerland); Ute Drechsler (IBM Research - Zurich, Switzerland); Dan Corcos (IBM Research - Haifa, Israel); Noam Kaminski (IBM Research - Haifa, Israel); Danny Elad (IBM Research - Haifa, Israel); Lukas Kull (IBM Research - Zurich, Switzerland); Matthias Braendli (IBM Research - Zurich, Switzerland); Thomas Toifl (IBM Zurich Research Lab, Switzerland); Ronny Hahnel (Technische Universität Dresden, Germany); Dirk Plettemeier (Dresden University of Technology, Germany)

I.23 **Broadside Radiating Vivaldi Antenna for the 60 GHz Band**

Ronny Hahnel (Technische Universität Dresden, Germany); Wolf-Stefan Benedix (Technische Universität Dresden, Germany); Dirk Plettemeier (Dresden University of Technology, Germany)

I.24 **A Surface-Mountable 116-GHz Transmitter with Chip-to-Antenna Wire Bond Interconnect**

Stefan Beer (Karlsruhe Institute of Technology, Germany); Christian Rusch (Karlsruhe Institute of Technology, Germany); Heiko Gulan (Karlsruhe Institute of Technology, Germany); Wolfgang Winkler (Silicon Radar GmbH, Germany); Gerhard Kunkel (Hightech MC AG, Switzerland); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

MIMO Antennas

I.25 **A MIMO Antenna for Mobile Applications**

Di Wu (City University of Hong Kong, Hong Kong); William S. W. Cheung (The University of Hong Kong, Hong Kong); Ti Yuk (The University of Hong Kong, Hong Kong); Xiaolei Sun (The University of Hong Kong, Hong Kong)

I.26 **A Compact 8-Element MIMO Antenna System for 802.11ac WLAN Applications**

Muhammad U. Khan (King Fahd University of Petroleum & Minerals, Saudi Arabia); Mohammad S. Sharawi (King Fahd University of Petroleum and Minerals, Saudi Arabia)

I.27 **Agile and Efficient MIMO System for Smart Phone Terminals**

Osama Alrabadi (AAU, Denmark); Elpiniki Tsakalaki (Aalborg University, Denmark); Mauro Pelosi (Aalborg University, Denmark); Gert Pedersen (Aalborg University, Denmark)

I.28 **Comparison of Two Generations of Textile MIMO Antennas at IHF**

Hammam Shakhtour (RWTH Aachen University); Joerg Pamp (RWTH Aachen University); Dirk Heberling (RWTH Aachen University); Gerrit Schellstede (RWTH Aachen University); Hyun-Young K. Lee (RWTH Aachen University); Christof Breckenfelder (RWTH Aachen University);

Printed Antennas

I.29 **Inkjet Printed BST Thick-Films for X-Band Phase Shifter and Phased Array Applications**

Mohammad Nikfalazar (TU Darmstadt, Germany)

I.30 **Printed Stub-Loaded Square Helical Antenna**

Nauroze Syed (National University of Computer & Emerging Sciences, Pakistan)

Resonator Antennas

I.31 **High-Gain Fabry-Pérot Resonator Antenna**

Yong Sun (University of Tongji, P.R. China); Ding Yaqiong (Tongji University, P.R. China); Yewen Zhang (Tongi University, P.R. China)

I.32 **Dual Band Dielectric Resonator Antenna with very high Permittivity for Wireless Applications**

Hedi Ragad (université de Nantes, France); Mohamed Latrach (Radio-Frequency and Microwave Research Group - ESEO, France); Tchanguiz Razban (University of Nantes, France); Ali Gharsallah (Electronic Laboratry, Tunisia)

I.33 **Microstrip-Strip Feed Transparent Ceramic Rectangular Dielectric Resonator Antenna**

Maria Castillo Solis (University of Manchester, United Kingdom); Zhipeng Wu (University of Manchester, United Kingdom); Cheng-Guo Liu (Wuhan University of Technology, P.R. China)

UWB I

I.34 **A Simple UWB Monopole Antenna using Half-elliptical Radiator**

Xinjie Yang (The University of Hong Kong, Hong Kong); Li Liu (The University of Hong Kong, Hong Kong); William S. W. Cheung (The University of Hong Kong, Hong Kong)

I.35 **A Planar Dual-mode UWB Antenna Design for an Indoor MIMO Communication System**

Leen Sit (Karlsruhe Institute of Technology (KIT), Germany); Xuyang Li (Karlsruhe Institute of Technology, Germany); Lars Reichardt (Karlsruhe Institute of Technology, Germany); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

I.36 **A Dual-polarized UWB Antenna System for the Demonstration of Autonomous Localization and Object Recognition with Mobile Sensors**

Lars Reichardt (Karlsruhe Institute of Technology, Germany); Stefan Beer (Karlsruhe Institute of Technology, Germany); Tobias Deißler (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Rahmi Salman (University Duisburg-Essen, Germany); Rudolf Zetik (Technical University Ilmenau, Germany); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

I.37 **Study of UWB Adaptive Bit Loading in Time Varying Channel**

Musa Magani (Queen Mary University of London, United Kingdom); Lu Guo (Queen Mary, University of London, United Kingdom); Xiaodong Chen (Queen Mary, University of London, United Kingdom); Akram Alomainy (Queen Mary, University of London, United Kingdom)

Monday

Oral Session:	**Automotive Antennas** Session Chair: Oliver Klemp (BMW Forschung und Technik GmbH, Germany)
15:00 - 15:20	**79 GHz LTCC-Integrated Antennas** Wolfgang Menzel (University of Ulm, Germany)
15:20 - 15:40	**Antenna Technology for Mobile Satellite Radio Reception** Stefan Lindenmeier (Universität der Bundeswehr München, Germany)
15:40 - 16:00	**Numerical Simulation Approaches for the Development of Automotive Antenna Systems** Hicham Tazi (Audi AG, Germany)
16:00 - 16:20	**Automotive Grade MIMO Antenna Setup and Performance Evaluation for LTE-Communications** Andreas Thiel (Delphi Deutschland GmbH, Germany)
16:20 - 16:40	**Coffee Break**
Oral Session:	**Special Session: Resonant Optical Antennas** Session Chair: Hans Eisler (Karlsruhe Institute of Technology, Germany)
16:40 - 17:00	**Resonant Optical Antennas** Jean-Jacques Greffet (Ecole Centrale Paris, France)
17:00 - 17:20	**Thermal Plasmonics as a Route to Photovoltaics?** David J. Norris (ETH Zürich, Switzerland)
17:20 - 17:40	**Confining Light to Atomic Length Scales** Bert Hecht (Universität Würzburg, Germany)
17:40 - 18:00	**Discussion**
18:00 - 19:30	**Welcome Reception**

Tuesday

Oral Session:	**Antennas with Metamaterials** Session Chair: Xianming Qing (Institute for Infocomm Research, Singapore)
08:30 - 08:50	**Review of Artificial Dielectrics Containing Small Scale Inclusions** Yiannis C. Vardaxoglou (Loughborough University, UK)
08:50 - 09:10	**Several Types of Microwave Metamaterial Antennas** Cui Tie Jun(South-East University, P. R. China)
09:10 - 09:30	**Progress Towards an Electrically Small Antenna with High Efficiency and Large Bandwidth Simultaneously with High Directivity and a Large Front-to-Back Ratio** Richard W. Ziolkowski (The University of Arizona, USA)
09:30 - 09:50	**Zero-Phase-Shift Line Antennas** Zhi Ning Chen (Institute for Infocomm Research, Singapore)
09:50 - 10:10	**Design and Realization of Planar Reflectors through Transformation Optics** Feng Yijun (Nanjing University, P. R. China)
10:10 - 10:30	**Effects of Pitch and Ground Plane Size on Monofilar Metamaterial Spiral Antenna Characteristics** Hisamatsu Nakano (Hosei University, Japan)
10:30 - 10:50	**Coffee Break**
Oral Session:	**Milimeter Wave Antennas in Package** Session Chair: Raj Mittra (Pennsylvania State University, USA)
10:50 - 11:10	**Off-Chip Antenna Designs for Fully Integrated, Low-Cost Millimeter-Wave Transceivers** Thomas Zwick (Karlsruhe Institute of Technology, Germany)

11:10 - 11:30	**High Efficiency Planar Antennas Implemented in Millimeter Wave Systems** Makoto Ando (Tokyo Institute of Technology, Japan)
11:30 - 11:50	**On-chip/in-package integrated antenna for millimeter-wave medium and long-range applications** Laurent Dussopt (CEA / Leti, France)
11:50 - 12:50	**Lunch**
12:50 - 14:50	**Poster Session**
	Antenna Arrays
II.1	**A Low-profile Surface Wave Antenna With Directional Beam Pattern Using 2-by-3 Dogbone-pair Structure** Yuta Tanogashira (Kumamoto University, Japan); Takeshi Fukusako (Kumamoto University, Japan)
II.2	**A Novel Compact Four-Element Ultra-Wideband Linear Antenna Array** Hossein Mehrpourbernety (Babol Noshirvani University of Technology, Babol, Iran); Reza Gholami (Babol Noshirvani University of Technology, Iran); Bijan Zakeri (Babol University of Technology, Babol, Iran); Shayan Kamanzadeh (KU Leuven University, Belgium)
II.3	**Design of an enhanced patch Array on a Reactive Impedance Substrate** Vincent Jaeck (French-German Research Institute of Saint-Louis, France); Loic Bernard (ISL, France)
II.4	**Two-element folded-dipole-driven quasi-Yagi array with low mutual coupling** Son Xuat Ta (Ajou University, Korea); Ikmo Park (Ajou University, Korea)
II.5	**Corporate Array of Micromachined Dipoles on Silicon Wafer for 60 GHz Communication Systems** Mai Sallam (The American University in Cairo, Egypt); Ezzeldin Soliman (The American University in Cairo, Egypt)

Tuesday

Antenna Design Approaches

II.6 **Study of Conformal Self-Complimentary Dipole Antenna Designed On Various Non-Planar Surfaces**

Dipen Kumar Das (North South University, Bangladesh); Mostakin Ahmed (North South University, Bangladesh); Atiqur Rahman (North South University, Bangladesh)

II.7 **Equivalent Circuit Modeling of Monopoles on a Small Platform**

Sana Salama (Duisburg-Essen Uni., Germany); Klaus Solbach (UDE, Germany)

II.8 **Antenna Cancellation for Simultaneous Cognitive Radio Communication and Sensing**

Elpiniki Tsakalaki (Aalborg University, Denmark); Osama Alrabadi (AAU, Denmark); Alexandru Tatomirescu (Aalborg University, Denmark); Elisabeth de Carvalho (Aalborg University, Denmark); Gert Pedersen (Aalborg University, Denmark)

II.9 **Fast Analysis and Design Solution of Dual PIFA Antenna System for [1.15-5.825GHz] Mobile Terminal Applications with Optimizing Isolation Performance**

Rafik Addaci (University of Nice, France); Robert Staraj (University of Nice-Sophia Antipolis, France)

Antenna Measurement Techniques

II.10 **An Indoor Measuring Technique for Antenna Gain**

Razvan D. Tamas (Constanta Maritime University, Romania); Daniela Deacu (Constanta Maritime University, Romania); George Caruntu (Constanta Maritime University, Romania); Teodor Petrescu (Politehnica University of Bucharest, Romania)

II.11 **Probe Based Antenna Measurements up to 325 GHz for upcoming Millimeter-Wave Applications**

Heiko Gulan (Karlsruhe Institute of Technology, Germany); Stefan Beer (Karlsruhe Institute of Technology, Germany); Sebastian Diebold (Karlsruhe Institute of Technology, Germany); Christian Rusch (Karlsruhe Institute of Technology, Germany); Arnulf Leuther (Fraunhofer Institute for Applied Solid State Physics, Germany); Ingmar Kallfass (Karlsruhe Institute of Technology, Germany); Thomas Zwick (Karlsruhe Institute of Technology (KIT), Germany)

Antennas with Metamaterials

II.12 **Enhancement of X Band Planar Antenna Parameters with Zero Index Metamaterial**

Ahmet Mali (University of Kassel, Germany); Raid Hadi (University of Kassel, Germany); Axel Bangert (University of Kassel, Germany)

II.13 **TE Waves in a Cylindrical Superlattices (LANs) and Left Handed Material (LHm) Waveguide Structure**

Hana Mousa (Al Azhar University, Palestine); Mohammed Shabat (Islamic University of Gaza, Palestine)

II.14 **Non-Linear Phase Shifter Using Composite Right/Left-Handed Transmission Line on Dielectric Substrate**

Yosuke Aizu (National Defense Academy, Japan); Naobumi Michishita (National Defense Academy, Japan); Yoshihide Yamada (National Defense Academy, Japan); Keizo Cho (Chiba Institute of Technology, Japan)

II.15 **Metamaterial Absorber with Extended Bandwidth Configuration**

Hyungsup Lee (Kyonggi University, Korea); Hongmin Lee (Kyonggi University, Korea)

II.16 **Squeeze Broad-Band Patch Antenna Based on Metamaterial Transmission Line**

Mohammad Alibakhshi-Kenari (Shahid Bahonar University of Kerman, Iran)

II.17 **Optimum Reflector Configuration for Dipole Antenna by using Artificial Magnetic Conductor**

Yasutaka Murakami (University of Fukui, Japan); Toshikazu Hori (University of Fukui, Japan); Mitoshi Fujimoto (University of Fukui, Japan)

II.18 **A Transmission Polarizer Based on Width-Modulated Lines and Slots**

Yogesh Ranga (CSIRO, ICT Centre, Australia); Dushmantha Thalakotuna (Macquarie University, Australia); Karu Esselle (Macquarie University, Australia); Stuart G Hay (CSIRO ICT Centre, Australia); Ladislau Matekovits (Politecnico di Torino, Italy); Mario Orefice (Politecnico di Torino, Italy)

II.19 **Superdirective Compact Parasitic Array of Metamaterial-Inspired Electrically Small Antenna**

Bruno Sentucq (University of Rennes 1, France); Ala Sharaiha (Université de Rennes 1, France); Sylvain Collardey (University of Rennes 1, France)

Compact and Small Antennas

II.20 **A Single Layer Wideband Low Profile Tooth-like-slot Microstrip Patch Antenna Fed by Inset Microstrip Line**

Wenwen Yang (Southeast University, P.R. China); Jianyi Zhou (Southeast University, P.R. China)

II.21 **Compact size Patch Antenna for RFID Applications**

Islam MD saiful (École Supérieure d'Electronique de l'Ouest (ESEO), Angers, France); Mohamed Latrach (Radio-Frequency and Microwave Research Group - ESEO, France); Wafa Abdouni-Abdallah (Equipe Radio & Hyperfréquences, ESEO, France)

II.22 **Miniaturization of the Patch Antenna with Slotted Ground Plane**

Islam MD saiful (École Supérieure d'Electronique de l'Ouest (ESEO), Angers, France); Mohamed Latrach (Radio-Frequency and Microwave Research Group - ESEO, France); Wafa Abdouni-Abdallah (Equipe Radio & Hyperfréquences, ESEO, France)

II.23 **Investigation of Lumped Loading Technique for Printed Antenna Miniaturization**

Lionel Rudant (CEA-LETI, France); Christophe Delaveaud (CEA-LETI, France)

Medical Application Antennas

II.24 **Antenna Design for Heartbeat Detection for Triggering Purposes of Medical Devices**

Ronny Hahnel (Technische Universität Dresden, Germany); Qiong Wang (Dresden University of Technology, Germany); Robert Trieb (Technische Universität Dresden, Germany); Dirk Plettemeier (Dresden University of Technology, Germany); André Henning (Technische Universität Dresden, Germany)

II.25 **Noise Sources in Equivalent Circuits of Intrabody Communication Channels**

Nozomi Haga (Gunma University, Japan); Kuniyuki Motojima (Gunma University, Japan)

Multiband Antennas

II.26 **Miniaturizing of a Distributed MEMS Impedance Matching Network**

Yi Chen (University of Kiel, Germany); Dirk Manteuffel (University of Kiel, Germany)

II.27 **A Dual-band Antenna for Wireless USB Dongle Applications**

Xiaolei Sun (The University of Hong Kong, Hong Kong); William S. W. Cheung (The University of Hong Kong, Hong Kong); Ti Yuk (The University of Hong Kong, Hong Kong)

II.28 **A Compact Triple-band Planar Monopole Antenna for WLAN and WiMAX Applications**

Yih-Chien Chen (Lunghwa University of Science and Technology, Taiwan); Ken Chiu (Auden Techno Corp., Taiwan); Jimmy Tsai (Auden Techno Corp., Taiwan); Ming-De Chen (Lunghwa University of Science and Technology, Taiwan)

II.29 **Single-Layer Dual-Frequency Reflectarray**

Patrik Grüner (University of Ulm, Germany); Wolfgang Menzel (University of Ulm, Germany)

Radar Antennas

II.30 **Bi-static Radar Antenna using EBG structure for Shallow Area Detection**

Takuji Arima (Tokyo University of Agriculture and Technology, Japan); Tomoyuki Muto (Tokyo University of Agriculture and Technology, USA); Toru Uno (Tokyo University of Agricultural Technology, Japan)

II.31 **A Multi Directional Dielectric Lens Approach for Antennas Used in Industrial RADAR Applications**

Christian Schulz (Ruhr-Universität Bochum, Germany); Christoph Baer (Ruhr-Universität Bochum, Germany); Nils Pohl (Ruhr-Universität Bochum, Germany); Thomas Musch (Ruhr-Universität Bochum, Germany); Bianca Will (Ruhr-University Bochum, Germany); Ilona Rolfes (Ruhr-Universität Bochum, Germany)

UWB Antennas II

II.32 **UWB Antenna using Offset feeding and Slotted Ground Plane for On-body communications**

Yiye Sun (The University of Hong Kong, Hong Kong); William S. W. Cheung (The University of Hong Kong, Hong Kong); Ti Yuk (The University of Hong Kong, Hong Kong)

II.33 **Efficiency, Correlation, and Diversity Gain of UWB Multiport Self-Grounded Bow-tie Antenna in Rich Isotropic Multipath Environment**

Ahmed Hussain (Chalmers University of Technology, Sweden); Per-Simon Kildal (Chalmers University of Technology, Sweden); Ali Al-Rawi (Chalmers University of Technology, Sweden); Jian Yang (Chalmers University of Technology, Sweden)

II.34 **UWB planar Antennas for Wireless Capsule Endoscopy**

Jingchen Wang (Xi'an Jiaotong University, P.R. China); Eng Lim (XJTLU, P.R. China); Zhao Wang (Xi'an Jiaotong Liverpool University, P.R. China); Yi Huang (University of Liverpool, United Kingdom); Tammam Tillo (Xi'an Jiaotong-Liverpool University, P.R. China); Meng Zhang (Xi'an Jiaotong University, P.R. China); Rula Alrawashdeh (The University of Liverpool, United Kingdom)

II.35 **Gain enhancement of UWB antennas with and without band notch feature**

Dawar Awan (University of Engineering and Technology Peshawar, Pakistan); Shahid Bashir (University of Engineering & Technology Peshawar, Pakistan); Husan Ali (UET Peshawar, Pakistan)

Tuesday

Oral Session:	**Antenna Measurement Techniques** Session Chair: Cyril Luxey (University of Nice Sophia-Antipolis, France)
14:50 - 15:10	**Measurement and Calibration Challenges of Microwave and Millimeter-Wave Phased-Arrays** A.B. Smolders (Eindhoven University of Technology, Netherlands)
15:10 - 15:30	**Antenna Input Impedance Measurement using Multi-Load MST** Jordi Romeu (UPC Barccelona, Spain)
	A Novel Technology for Fast and Accurate Specific Absorption Rate Measurement Benoit Derat (ART-Fi, France)
15:50 - 16:10	**Coffee Break**
Oral Session:	**Antennas for Body Centric Networks and Medical Applications** Session Chair: Leena Ukkonen (Tampere University of Technology, Finland)
16:10 - 16:30	**Embroidered RFID Tags in Body-Centric Communication** Leena Ukkonen (Tampere University of Technology, Finland)
16:30 - 16:50	**Dual-mode Wearable Antenna for Medical Applications** Koichi Ito (Chiba University, Japan)
16:50 - 17:10	**Wearable Wireless Sensors for Healthcare Applications** Yang Hao (Queen Mary University of London, UK)
17:30	**Bus departure (from lecture hall)**
17:30 - 23:00	**Social Event**

Wednesday

Oral Session:	**MIMO and Reconfigurable Antennas** Session Chair: Dirk Manteuffel (University of Kiel, Germany)
08:30 - 08:50	**Comparison of Two-Element Antenna Correlation Coefficient and Received Waveform Orthogonality in a Simple Multipath Environment** Steven Best (The MITRE Cooperation, USA)
08:50 - 09:10	**Reconfigurable Leaky Wave Antennas** Jay Guo (CSIRO ICT Centre, Australia)
09:10 - 09:30	**Active Antennas for MIMO and Beamforming Operation** Roland Gabriel (KATHREIN-Werke KG, Germany)
09:30 - 09:50	**New Stub-Loaded Neutralization Network for Two-element Closely-spaced Array Using Even-Odd Mode Analysis** Tzyh-Ghuang Ma (National Taiwan University of Science and Technology, Taiwan)
09:50 - 10:10	**COST IC1102 VISTA: Strengthening Pan-European Cooperation in Antenna Research** Marta Martinez (IMST GmbH, Germany)
10:10 - 10:30	**Coffee Break**
Oral Session:	**Electrically Small Antennas and Sensors** Session Chair: Kwai-Man Luk (City University of Hong Kong, Japan)
10:30 - 10:50	**Diagonal Antenna-Chassis Mode for Wideband LTE MIMO Antenna Arrays in Mobile Handsets** Ying Zhinong (Sony Mobile, Sweden)
10:50 - 11:10	**Miniaturization of Small Antenna Q** Wen Geyi (Fudan University Shanghai, P.R. China)
11:10 - 11:30	**Frequency Reconfigurable Patch Antenna for Landmine Detection** Kin-Fai Tong (University College London, UK)
11:30 - 11:50	**Printed Antennas for Millimeter-Wave Applications** Hang Wong (City University of Hong Kong, Japan)

Wednesday

11:50 - 12:05	**Closing Session**
12:05 - 13:30	**Lunch**

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(guest parking)
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Haupteinfahrt
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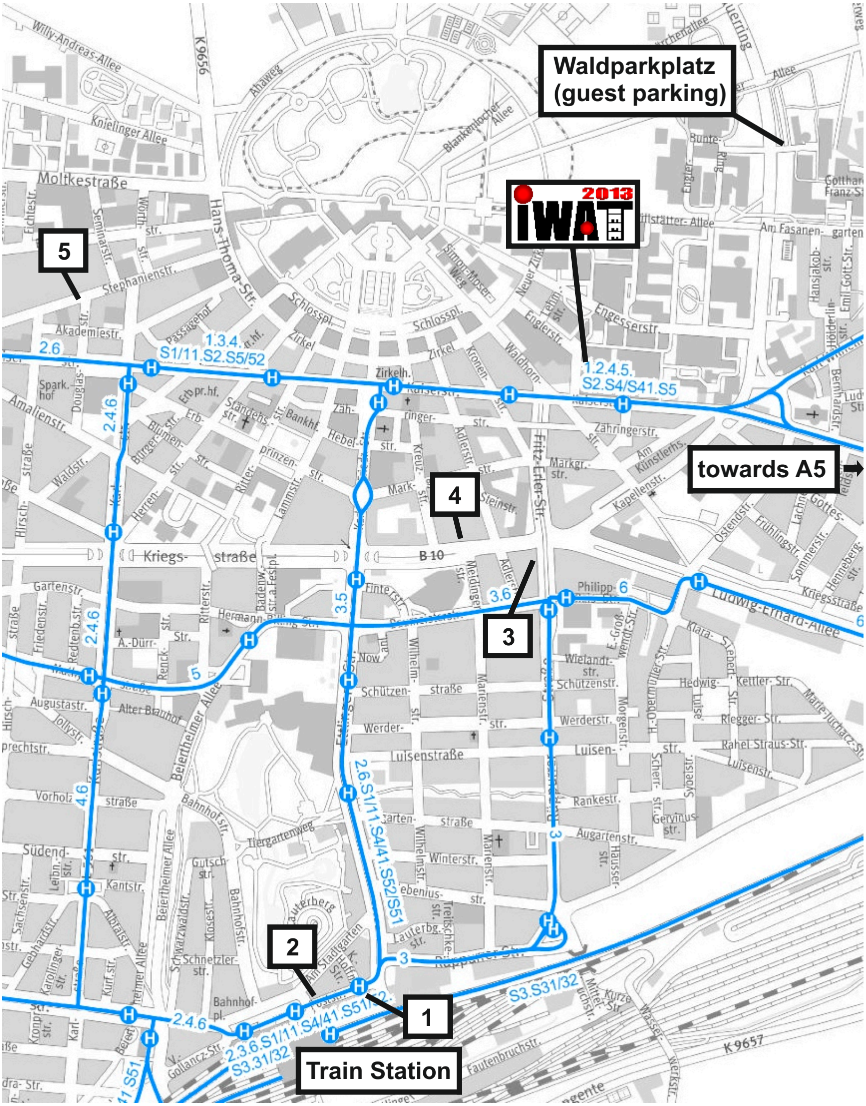
KIT-BIBLIOTHEK
AUDIMAX
FORUM
Straße am Forum
Studentenzentrum
KIT-Shuttle
Fritz-Haber-Weg
Irene-Rosenberg-Str.
Engesserstraße
Paulcke-Platz
Engelbert-Arnold-Straße
Rudolf-Plank-Str.
Otto-Ammann-Platz
Ernst-Gaber-Str.
R.-Baumeister-Platz
Wilhelm-Nußelt-Weg
Kaiserstraße
Kapellenstraße
Durlacher Tor
4, 5, S2
Durlacher Tor
1, 2, S4, S5
Durlacher Allee
Ehrenhof
Administration
Studentensekretariat
Prüfungsamt
IWAT 2013
Berliner Platz
Waldhornstraße
Kronenplatz
1, 2, 4, 5, S2, S4, S5
Lehmannstraße
Englerstraße
Leonhard-Sohncke-Weg
Wolfgang-Gaede-Straße
W.-Jordan-Weg
Forstschule
Neuer Zirkel
Westeinfahrt
mit Codekarte
Steinbuch Centre for Computing (SCC)
Gastdozentenhaus

Directions



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