

ICM²TS International Conference on Mobile and Miniaturized THz Systems					
Day	Session	Time	Title	Authors	Affiliation of first author
Sunday	TS-1: THz Materials Organizer: Amine El Moutaouakil Session Chair: Jan Taro Svejda Meeting Room 2: NDAU	08:00 - 08:24	Recent Advances of THz Plasmonic Detectors Based on Grating-Gate InGaAs-Channel HEMT	Akira Satou; Taichi Otsuji	Tohoku University, Japan
		08:24 - 08:48	Thermal Enhancement of InGaAs-Based Photoconductive Terahertz Emitters via Substrate Transfer	Mojdeh Vakili Tabatabaei; Mohammad Faraz Abdullah; Ahid S. Hajo; Florian Bek; Sascha Preu	Technische Universität Darmstadt, Germany
		08:48 - 09:12	Band Alignment Engineering of Graphene/Black-Phosphur Heterostructure for Bolometric and Plasmonic Resonance Terahertz Detection	Chao Tang; Yi Shuang; Victor Ryzhil	Tohoku University, Japan
		09:12 - 09:36	Nano-Electrode Based Schottky Diodes for Room Temperature Terahertz Detection	Ahid S. Hajo; Deniz Cicek; Sascha Preu; Franko Küppers	Technische Universität Darmstadt, Germany
		09:36 - 10:00	Exploring Dipole Dynamics in Ferroelectric Vortex Lattices: A Torsional Spring-Based Model	Marvin Degen; Jan Taro Svejda; Vakhtang Jandieri; Ramaz Khomeriki; Douglas H Werner; Jamal Berakdar; Daniel Erni	University of Duisburg-Essen, Germany
	TS-2: THz Imaging Organizer: Aman Batra Session Chair: Kevin Kolpatzek Meeting Room 2: NDAU	10:30 - 10:54	Contour and Surface Normal Estimation for SAR THz-TDS Measurements by Neural Network	Ekrem Emir Yildiz; Tobias Kubiczek; Jan C Balzer	University of Duisburg-Essen, Germany
		10:54 - 11:18	Terahertz Imaging for Food Safety: Image Processing Based Precise Localization and Edge Detection of Contaminants	Kabilan K; G. S. Ayyappan; A. Mercy Latha	Academy of Scientific and Innovative Research (AcSIR) & CSIR-Central Scientific Instruments Organization, India
		11:18 - 11:42	Phase Reconstruction of Scattered near-Fields of 2D Objects Based on Intensity Measurements	Jan Taro Svejda; Marvin Degen; Vakhtang Jandieri; Daniel Erni	University of Duisburg-Essen, Germany
		11:42 - 12:06	Deep Learning Based Robust Terahertz Image Enhancement for NDT Applications	Kabilan K; Pranav Chandra N V; Joel George; Katta Shriya; G. S. Ayyappan; A. Mercy Latha	Academy of Scientific and Innovative Research (AcSIR) & CSIR-Central Scientific Instruments Organization, India
	TS-3: THz Non-Destructive Testing Organizer: Sandrine van Frank Session Chair: Sandrine van Frank Meeting Room 4: NARI	10:30 - 10:54	Camera-Based THz Interferometry for Thickness Evaluation in Non-Destructive Testing and Ranging	Mohammad Faraz Abdullah; Felix Reschke; Ullrich Pfeiffer; Sascha Preu	Technische Universität Darmstadt, Germany
		10:54 - 11:18	Compressive Sensing-Based Terahertz Time-Domain Imaging with Random Spatial Undersampling	Zhangyue Wei; John Healy; Idelfonso Tafur Monroy; Min Wan	University of Eindhoven, The Netherlands
		11:18 - 11:42	Mobile Terahertz FMCW Systems for the Inspection of Glass Fiber-Reinforced Composites and Paint Layers	Maris Bauer; Raphael Hussung; Shiva Mohammadzadeh; Fabian Friederich; Joachim Jonuscheit	Fraunhofer Institute for Industrial Mathematics ITWM, Kaiserslautern, Germany
		11:42 - 12:06	THz TDS-Based Solutions for In-line and at-Line Non-Destructive Testing	Sandrine van Frank; Michael Pfeiffer; Peter Fosodader; Günther Hanneschläger; Elisabeth Leiss-Holzinger; Clemens Hesch	RECENDT GmbH, Austria
Monday	TS-4: THz Research in Sub-Saharan Africa Organizers: Thokozeni Shongwe, Han Vinck, Fawad Sheikh Session Chair: Thokozeni Shongwe Meeting Room 2: NDAU	08:00 - 08:24	TANC: A THz-Assisted near-Field Coupling for High-Capacity Data Offloading for Autonomous Underwater Vehicles	Nduduzo Siphwe Shandu; Richard Ndjongue; Wandile Nhlapo; Zheng Chang	University of Witwatersrand, South Africa
		08:24 - 08:48	Integrated Terahertz and Acoustic Channels for Internet of Underwater Things	Nduduzo Siphwe Shandu; Richard Ndjongue; Wandile Nhlapo; Zheng Chang	University of Witwatersrand, South Africa
		08:48 - 09:12	A Feasibility Study on Sub-THz Filters Through Micromachined Ceramic Waveguide Inserts	Tinus Stander	University of Pretoria, South Africa
		09:12 - 09:36	Terahertz Metamaterial Absorption Prediction Using Machine Learning	Saud Alhajaj Aldossari	PSAU, Saudi Arabia & PSAU University, Saudi Arabia
		09:36 - 10:00	6G THz Wireless Channel Characterization for 1 km Links in Tropical Savanna and Temperate Oceanic Climates	Fawad Sheikh; Dien Lessy; A.J. Han Vick; Thomas Kaiser	University of Duisburg-Essen, Germany
	TS-5: THz RIS Organizers: Aydin Sezgin, Alejandro Jiménez-Sáez Session Chair: Alejandro Jiménez-Sáez Meeting Room 4: NARI	08:00 - 08:24	Physics-Compliant Three-Hop RIS Models: Specular Component and Ping-Pong Effect	Eduard A Jorswieck; Mohammad Soleymani; Ignacio Santamaria; Jesus Ouilierrez	Technische Universität Braunschweig, Germany
		08:24 - 08:48	RIS-Assisted Channels: Towards Validating Ray Tracing Based on Measurements	Lorenz H. W. Loeser; Varvara V. Elesina; Thomas Kürner	Technische Universität Braunschweig, Germany
		08:48 - 09:12	Preliminary Investigation of Mechanically-Reconfigurable Intelligent Surfaces for 6G Applications in mmWave and THz Bands	Simone Genovesi; Andrea Dalle Piagne; Francesco Alessio Dicanidia; Filippo Costa	University of Pisa, Italy
		09:12 - 09:36	Investigation of Pseudorandom Sequences for Optoelectronic Terahertz Correlation Radar	Filip Yordanov; Bashar Husain; Milan Deumer; Lars Liebenmeister; Robert B. Kohlhaas; Jan C. Balzer; Kevin Kolpatzek	University of Duisburg-Essen, Germany
		09:36 - 10:00	Outage Probability Analysis of Full-Array, Domino Tiled, and 2x2 Square Tiled RIS in THz System with Quantized Phase Control	Aral E. Zorkun (ONLINE)	University of Luxembourg, Luxembourg
	TS-6: THz Communications Organizer: Thomas Kürner Session Chair: Varvara V. Elesina Meeting Room 2: NDAU	10:30 - 10:54	Design of Space-Division-Multiplexed THz Links Under Far-Field Conditions	Tetsuya Kawanishi	Waseda University, Japan & National Institute of Information and Communications Technology, Japan
		10:54 - 11:18	Micromechanical Bolometers Arrays for Terahertz Hyperspectral Imaging	Alessandro Tredicucci; Lorenzo Alborghetti; Benedetta Bortoni; Leonardo Vicarelli; Alessandro Planti; Alvise Baglioni; Giuseppe Cautero; Marco Castrero; Dario Giuressi; Georgy Fedorov; Polina Kuzhir; Simone Zanotto	Università di Pisa, Italy
		11:18 - 11:42	Stable RF Signal Generation for Optical-Terahertz Seamless Access Systems	Atsushi Kanno; Shintaro Mamiya; Taiki Sawada	Nagoya Institute of Technology, Japan
		11:42 - 12:06	Analysis of Fixed Wireless System Field Trial Data in a Tropical Region and Performance Forecasting by a Machine Learning Method	Nutwipa Pinkhumpee; Chumphon Kaewmalee; Panus Kowatcharakul; Ukrit Mankong	Chiang Mai University, Thailand
		12:06 - 12:30	Comparative Analysis of Angular Spread Definitions for Low THz Channels	Varvara V. Elesina; Lorenz Helmut Wolfgang Löser; Thomas Kürner	Technische Universität Braunschweig, Germany
	TS-7: THz Photonics Organizer: Andreas Stöhr Session Chair: Andreas Stöhr Meeting Room 4: NARI	10:30 - 10:54	300-GHz Range Narrow-Band Photodetector with Impedance Matching Circuit	Toshimasa Umezawa; Shinya Nakajima; Atsushi Matsumoto; Kouichi Akahane; Naokatsu Yamamoto	NICT, Japan
		10:54 - 11:18	WR10-Coupled Photonic Spectrum Analyzer with Hz-Level Spectral Resolution	Benedikt L. Krause; Florian Bek; Sascha Preu	Technische Universität Darmstadt, Germany
		11:18 - 11:42	Low-Temperature SiN-Based Optical Microring Resonators for THz Generation	Kentaro Furusawa	National Institute of Information and Communications Technology, Japan
		11:42 - 12:06	Towards Compact and Cost-Efficient MM-Wave Sources for Industrial Applications	Oleg Cojocari; Diego Moro-Melgar; Javier Martinez-Gil; Veronica Lain-Rubio; Ion Oprea; Martin Keyn	ACST GmbH, Germany
		12:06 - 12:30	Compact THz-TDS Path Design for Narrow Diameter Parallel Beam Generation	Valentin Meier; Marc Nicolleret; Joseph Moerschell; Arnaud Demion; Mathieu Soutrenon; Hervé Girard	HES-SO, Switzerland

Tuesday	TS-8: THz Beamforming Organizers: Kevin Kolpatzeck, Andreas Czylik Session Chair: Andreas Czylik Meeting Room 2: NDAU	08:00 - 08:24	Compact Diffractive Structures for Beam Steering in Sub-terahertz Systems	Adrianna Nieradka; Mateusz Kaluza; Przemysław Zagajek; Paweł Komorowski; Agnieszka Siemion	Warsaw University of Technology, Poland
		08:24 - 08:48	Polar-Domain Hierarchical Multi-Grid OMP for near-Field THz UM-MIMO Channel Estimation	Akram Najjar; Mohammed El-Absi; Thomas Kaiser	University of Duisburg-Essen, Germany
		08:48 - 09:12	Active and Nonlinear Optical Meta-Surfaces for Beamforming	Pierre Berini	University of Ottawa, Canada
		09:12 - 09:36	Diffractive Beam-Shaping Solutions for Efficient Radiation Collection in sub-THz Free-Space Communication Systems	Marta Kurowska; Paweł Komorowski; Mateusz Kaluza; Agnieszka Siemion	Warsaw University of Technology, Poland
		09:36 - 10:00	Optimization of MEMS Reflectarrays for Terahertz Beam Steering over a Wide Frequency Range	Nabil Alchami; Yusuf Can Kara; Andreas Czylik	University of Duisburg-Essen, Germany
	TS-9: THz Computing Organizer: Diana Göhninger Session Chair: Diana Göhninger Meeting Room 4: NARI	08:00 - 08:24	Architectural Perspectives on Computing and Networking for Terahertz Systems	Marco Liess; Thomas Wild; Andreas Herkersdorf	Technical University of Munich, Germany
		08:24 - 08:48	Power Profiling of a High-Throughput RLL Encoder for THz Communications	Daniel Swist; Simon Friedrich; Emil Matus; Melk Dörpinghaus; Gerhard P. Fettweis	TU Dresden, Germany
		08:48 - 09:12	The Concept of Processing Architectures for Edge-Tailored Computing	Michael Hübner	Brandenburg Technical University Cottbus-Senftenberg, Germany
		09:12 - 09:36	Hardware Acceleration of THz SAR Imaging on a RISC-V Co-processor	Rohan Krishna Vijayaraghavan; Eunji Choi; Aman Batra; Thomas Kaiser; Diana Göhninger (ONLINE)	TU Dresden, Germany
Wednesday	TS-11: THz Life Science Monitoring Organizers: Fawad Sheikh, Andreas Prokscha Session Chair: Inna Nefedova Meeting Room 2: NDAU	09:30 - 09:50	Model-Based Dosimetric Analysis of Corneal Interaction with Terahertz Fields in the 220 - 330 GHz Band	Roman Grigorev; Lufang Guo; Faezeh Zarrinkhat; Joel Lamberg; Mikhail S. Sidorenko; Zachary D Taylor	Aalto University, Finland
		09:50 - 10:10	Multiband Reflection-Based Terahertz Sensing for Contactless Respiration Rate Estimation	Svenja Nicola Kobel; Andreas Prokscha; Yamen Zantah; Christian Wiede; Thomas Kaiser; Karsten Seidl	Fraunhofer Institute for Microelectronic Circuits and Systems (IMS), Germany
		10:10 - 10:30	Contactless Wideband Terahertz Reflection Measurements on Skin Phantoms by Fast-Sweeping Frequency-Domain Spectroscopy	Tim Dominik Zaubler; Andreas Prokscha; Kevin Kolpatzeck; Thomas Kaiser; Andreas Czylik (ONLINE)	University of Duisburg-Essen, Germany
	TS-12: THz Sensing Session Chair: Simone Genovesi Meeting Room 4: NARI	09:30 - 09:50	Towards a Validation System for Terahertz-Based Muscle Activity Sensing Using Multi-View 3D Digital Image Correlation	Elsa A. Kirchner (ONLINE)	University of Duisburg-Essen, Germany
		09:50 - 10:10	Aliasing Effects in Insufficiently Sampled Terahertz Frequency-Domain Spectroscopy Measurements	Kevin Kolpatzeck; Tobias Kubiczek; Lars Häring; Jan C. Balzer; Andreas Czylik	University of Duisburg-Essen, Germany
		10:10 - 10:30	Enhancing Data Capacity of Dielectric Sub-THz Chipless RFID Tags by Exploiting Anisotropy	Simone Genovesi; Francesco Alessio Dicandia; Filippo Costa; Giuliano Manar	University of Pisa, Italy