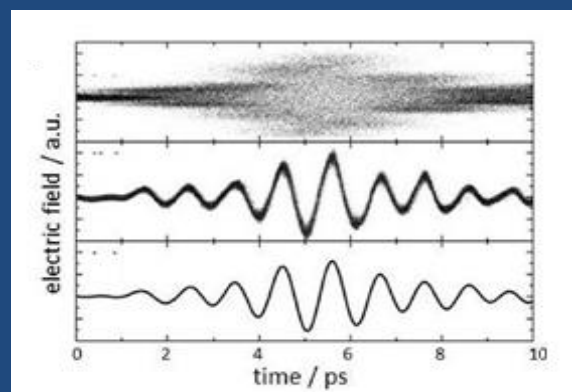
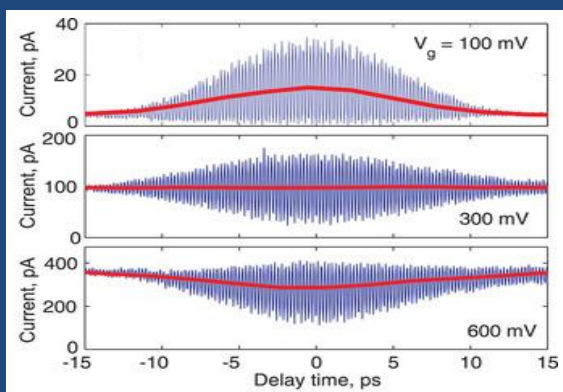


2019

# FELBE / TELBE User Workshop

May 13 – 15, 2019  
Dresden, Germany



**HZDR**



HELMHOLTZ  
ZENTRUM DRESDEN  
ROSSENDORF



## May 13 (Monday)

Building 106, Room 255

	13:00	14:00	Registration + Light Lunch & Coffee	
Session 1	14:00	16:00	Opening Session	
	14:00	14:20	Welcome & Opening Remarks	Roland Sauerbrey HZDR - Scientific Director
	14:20	14:40	FELBE User Facility Review	Stephan Winnerl HZDR - Institute of Ion Beam & Materials Research
	14:40	15:00	TELBE User Facility Review + THz/ARPES	Sergey Kovalev HZDR - Institute of Radiation Physics
	15:00	16:00	Presentation of DALI Conceptual Design	Pavel Evtushenko, Jochen Teichert, Andreas Wagner HZDR - Institute of Radiation Physics
	16:00	16:40	Coffee Break	
Session 2	16:40	17:55	Advanced Applications in THz Science Chair: <i>Jan Deinert</i>	
	16:40	17:05	Higgs spectroscopy in superconducting cuprates	Stefan Kaiser Max Planck Institute for Solid State Research
	17:05	17:30	Terahertz- and Laser Spectroscopy at the DLR & TU Berlin: what can TELBE do for us?	Michael Gensch Technische Universität Berlin
	17:30	17:55	Field effect transistor-based detectors: covering the THz band and beyond with few ps resolution	Stefan Regensburger Technische Universität Darmstadt
	18:30		Workshop Dinner in Dresden	

## May 14 (Tuesday)

Building 106, Room 255

Session 3	09:00	10:40	Ultrafast Dynamics Chair: <i>Alexej Pashkin</i>	
	09:00	09:25	Magnetization dynamics in ferromagnetic metallic thin films driven by broad- and narrowband THz radiation	Debanjan Polley Stockholm University
	09:25	09:50	The electron-boson coupling constants determined by time-resolved methods	Jure Demsar Johannes Gutenberg-Universität Mainz
	09:50	10:15	Ultrafast and Coherent Magnetic Phenomena at TELBE	Ilie Radu Max Born Institut - Berlin
	10:15	10:40	Manipulating multiferroic domains and magnetic skyrmions via intense light pulses	István Kézsmárki Universität Augsburg
	10:40	11:10	Coffee Break + Posters	
Session 4	11:10	12:50	Subcycle THz Control & Nanoscale Imaging Chair: <i>J. Michael Klopff</i>	
	11:10	11:35	Subcycle lightwave control and switching of spins by strong THz pulses	Christoph Lange Universität Regensburg
	11:35	12:00	Surface chemical reaction directed by strong THz radiation	Hirohito Ogasawara SIMES at SLAC
	12:00	12:25	Direct nanoscopic observation of plasma waves in the channels of graphene field-effect transistors	Amin Soltani Johann Wolfgang Goethe-Universität
	12:25	12:50	Near-field nanoscopy at ELBE	Susanne Kehr Technische Universität Dresden
	13:00	14:00	Lunch Break (HZDR Canteen)	
Session 5	14:00	15:40	High Field THz Sources and Facilities Chair: <i>Harald Schneider</i>	
	14:00	14:25	Laser based Single-Cycle and Multi-Cycle THz pulse generation	Nicholas Matlis DESY Center for Free-Electron Laser Science - CFEL
	14:25	14:50	Status of the CAEP THz FEL Facility in China	Kui Zhou CAEP THz FEL
	14:50	15:15	The TeraFERMI beamline as a powerful tool for nonlinear studies on Dirac materials	Andrea Perucchi TeraFERMI
	15:15	15:40	Intense ultrafast narrowband THz pulses at X-ray FELs: photon-diagnostics and applications	Nikola Stojanovic DESY FLASH
	15:40	16:10	Coffee Break + Posters	
Session 6	16:10	17:15	Open Forum: DALI Scientific Case	
	16:10	17:15	User Discussion on DALI: The Scientific Case for High-Field Coherent THz/IR Sources	Manfred Helm HZDR - Institute of Ion Beam & Materials Research
Session 7	17:15	19:00	Poster Session (Group Photo)	

Session 8	09:00	10:15	<b>2D Materials/Correlated Systems</b> Chair: <i>Stephan Winnerl</i>	
	09:00	09:25	Extremely efficient THz high harmonics generation in graphene using TELBE source	Dmitry Turchinovich <i>Universität Bielefeld</i>
	09:25	09:50	Hot Carriers in Graphene: a Versatile Platform for THz Nonlinear Plasmonics	Martin Mittendorff <i>Universität Duisburg-Essen</i>
	09:50	10:15	Suppressed Auger scattering and tunable light emission of Landau-quantized massless Kane electrons	Milan Orlita <i>CNRS Grenoble</i>
	10:15	10:35	Coffee Break	
Session 9	10:35	11:50	<b>Soft Matter</b> Chair: <i>Sergey Kovalev</i>	
	10:35	11:00	Unravelling the THz response of water using multi-dimensional spectroscopy	Mischa Bonn <i>Max Planck Institute for Polymer Research</i>
	11:00	11:25	Orientation and -relaxation dynamics of liquid water induced by TELBE's narrowband THz pulses	Peter Zalden <i>European XFEL</i>
	11:25	11:50	Title: TBD	Stephan Grill <i>Max Planck Institute of Molecular Cell Biology and Genetics</i>
Session 10	11:50	12:50	Open Forum: FELBE / TELBE	
	11:50	12:50	User Discussion on FELBE/TELBE Facility Improvements	J. Michael Klopff / Sergey Kovalev <i>HZDR - Institute of Radiation Physics</i>
	12:50	13:00	Closing Remarks	Manfred Helm <i>HZDR - Institute of Ion Beam &amp; Materials Research</i>
	13:00	14:00	Lunch Break (HZDR Canteen)	
	14:00	15:00	FELBE / TELBE / ELBE Tour	

## Poster Session

- **Coherent Exciton Dynamics in the Excitonic Insulator Ta<sub>2</sub>NiSe<sub>5</sub>**  
*Parmida Shabestari, Max Planck Institute for Solid State Research*
- **Impact of non-resonant terahertz excitation on excitons and trions in MoSe<sub>2</sub> monolayer**  
*Tommaso Venanzi, Helmholtz-Zentrum Dresden-Rossendorf*
- **Various origin of static and dynamic magnetoelectric coupling in multiferroic hexaferrites**  
*Stanislav Kamba, Institute of Physics, Czech Academy of Sciences*
- **Towards the Development of FPGA-Based High-Speed Data Acquisition and Online Analysis System at MHz Repetition Rate: Proposals and Major Tradeoffs**  
*Mohammed Bawatna, Helmholtz Zentrum Dresden Rossendorf*
- **All-optical magnetoelectric memory**  
*Jakub Vit, Budapest University of Technology and Economics*
- **Ge and VO<sub>2</sub> plasma switch as a cavity dumper for the free-electron laser**  
*Rakesh Rana, Helmholtz-Zentrum Dresden-Rossendorf*
- **Cavity enhanced third harmonic generation from Si:B pumped with intense terahertz pulses**  
*Fanqi Meng, Johann Wolfgang Goethe-Universität*
- **On-Chip THz Diagnostics**  
*Niels Neumann, Technische Universität Dresden*

- **A new approach to femtosecond level intrinsic synchronization between accelerators and external laser systems**  
Min Chen, *Helmholtz-Zentrum Dresden-Rossendorf*
- **Terahertz View on Magnetization Dynamics**  
Nilesh Awari, *Helmholtz-Zentrum Dresden-Rossendorf*
- **Dynamics of MgB<sub>2</sub> superconductor driven by narrow-band THz pumping**  
Sergei Sobolev, *Johannes Gutenberg University Mainz*
- **Electron-doped SiGe Quantum Well Terahertz Emitters pumped by FEL pulses**  
Chiara Ciano, *University of Roma Tre*
- **Driving elementary processes with THz fields: From Dirac materials to liquids and superconductors**  
Jan-Christoph Deinert, *Helmholtz-Zentrum Dresden-Rossendorf*
- **The FELBE THz/IR FEL Facility: Overview of the Machine Performance and User Activities**  
J. Michael Klopff, *Helmholtz-Zentrum Dresden-Rossendorf*
- **CALIPSOplus**  
Barbara Schramm, *Helmholtz-Zentrum Dresden-Rossendorf*
- **LEAPS**  
Barbara Schramm, *Helmholtz-Zentrum Dresden-Rossendorf*

