Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speaker
1	10:00 ~ 10:45	Plenary	Laser Terahertz Emission Microscope for Real World Application	Masayoshi Tonouchi	-	-	-	-	-
2	10:45 ~ 11:30	Plenary	FEL activity in Budker INP	Nikolay Vinokurov	-	-	-	-	-
			Group Photo / Lunch Break			•		Group Photo / Lunch Break	
Millimeter/THz Wave Generation & Applications I			9/30 (Mon.) Session A : Manarola		Microwave/THz Sensing & Imaging I			9/30 (Mon.) Session B : Vernazza	
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speaker
1	13:20 ~ 13:45	Invited	Novel Concepts of Intense THz Sources and Applications	Jozsef Andras Fulop	1	13:20 ~ 13:45	Invited	Highly Sensitive THz Detection Using IS-TPG	Kodo Kawase
2	13:45 ~ 14:10	Invited	Laser-based, Palmtop-size Terahertz-wave Parametric Oscillator	Hiroaki Minamide	2	13:45 ~ 14:10	Invited	Full-field terahertz imaging at kilohertz frame rates using atomic vapour	Kevin John Weatherill
3	14:10 ~ 14:35	Invited	Frequency-versatile terahertz vortex generation	Katsuhiko Miyamoto	3	14:10 ~ 14:35	Invited	THz Mixers and Detectors Developed for the DATE5 Telescope	Sheng-Cai Shi
4	14:35 ~ 15:00	Invited	Terahertz special beams: Generation and characterization	Yan Zhang	4	14:35 ~ 14:50	Oral	100-GHz Optical Waveform Measurement by Novel Lightwave/THz-wave Interferometer	Ruo Yamamoto
					5	14:50 ~ 15:05	Oral	Gate Electrode as an Output Port of a Grating-Gate Plasmonic THz Detector	Taku Saito
			Coffee Break					Coffee Break	
	r/THz Wave Gene Applications II	eration &	9/30 (Mon.) Session A : Manarola		Microwave/THz Quantum phenomena I 9/30 (Mon.) Session B : Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speakers
1	15:35 ~ 16:00	Invited	Novel Resonant-Tunneling-Diode Terahertz Oscillators Integrated with Cavity Resonators for High Frequency and High Output Power	Masahiro Asada	1	15:35 ~ 16:00	Invited	Terahertz Power Detectors based on Superconducting HEBs with Microwave Readout	Jian Chen
2	16:00 ~ 16:25	Invited	Solid-state terahertz sources based on intracavity stimulated polariton scattering	Andrew Lee	2	16:00 ~ 16:25	Invited	High-T <sub>c</sub> Superconducting Terahertz Receivers for Wireless Communication	Jia Du
3	16:25 ~ 16:50	Invited	Graphene for Room-Temperature Operating Terahertz Coherent Light Sources	Akira Satou	3	16:25 ~ 16:50	Invited	Quantum limited RF Amplifiers based on Superconducting Quantum Interference Devices	Yong-Ho Lee
	16:50 ~ 17:05	Oral	Terahertz plasmonic graphene-channel transistor laser	Yoshiki Fuse	4	16:50 ~ 17:15	Invited	InGaAs high-electron-mobility transistors toward Tera-Hz operation	Dae-Hyun Kim

9/30 (Mon.) Session B : Vernazza

9/30 (Mon.) Session A : Manarola

Plenary talk

	Plenary talk		10/1 (Tue.) Session A : Manarola			-		10/1 (Tue.) Session B : Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speaker			
1	09:00 ~ 09:45	Plenary	Terahertz nano antennas for extreme applications	Dai Sik Kim	-	-	-	-	-			
			Coffee Break			Coffee Break						
TH	THz Communications 10/1 (Tue.) Session A : Manarola					THz Quantum ph	enomena II	10/1 (Tue.) Session B : Vernazza				
Presentation Order	Time	Presentation	Title	Speakers	Presentation	Time	Presentation Type	Title	Speakers			
1	10:15 ~ 10:40	Invited	Future Direction of Photonics-enabled Terahertz Communications	Tadao Nagatsuma	1	10:15 ~ 10:40	Invited	Josephson Junction Microwave Parametric Amplifiers for Quantum Computation	Jose Aumentado			
2	10:40 ~ 11:05	Invited	300-GHz-Band One-Chip CMOS Wireless Transceiver and Its Future	Minoru Fuiishima	2	10:40 ~ 11:05	Invited	Interaction between a Transmon and Microwave Driving Fields	Guozhu Sun			
3	11:05 ~ 11:30	Invited	Prospect of Next ten years R&D on Terahertz Communication	lwao Hosako	3	11:05 ~ 11:30	Invited	Generation and detection of itinerant microwave photons using superconducting qubits	Shingo Kono			
4	11:30 ~ 11:45	Oral	Demonstration of AND Operation between Two Carriers for Encryptionat Secured Terahertz Wave Communication	Kenta Yamauchi	4	11:30 ~ 11:55	Invited	Circuit Engineering for Scalable Quantum Computer	Jae-Yoon Sim			
5	11:45 ~ 12:00	Oral	Multiplication of Repetition Frequency at Optical Pulse Train Generated from Optical  Frequency Comb	Kohei Ichiyama								
			Lunch Break				•	Lunch Break				
Millimete	r/THz Wave Gene Applications III	eration &	10/1 (Tue.) Session A : Manarola		THz Spectroscopy I			10/1 (Tue.) Session B : Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation	Time	Presentation Type	Title	Speakers			
1	13:30 ~ 13:55	Invited	Terahertz Spintronic Emitters: the Properties and Optimizations	Masahiko Tani	1	13:30 ~ 13:55	Invited	Probing Transient Photoconductivity in Metal Oxides, Mixed Metal Oxides, and Oranic Molecular Frameworks (MOFs) Using Time-Resolved THz Spectroscopy	Charles Schmuttenmaer			
2	13:55 ~ 14:20	Invited	Recent progress of THz wave generators based on organic nonlinear optical single crystals	O-Pil Kwon	2	13:55 ~ 14:20	Invited	Ultrafast Studies of Terahertz Plasmon Polartions in Topological Insulators	Hyunyong Choi			
3	14:20 ~ 14:45	Invited	Terahertz radiation generated by multi-color laser excited air plasma: The role of pump power ratio and relative phase	Ci-Ling Pan	3	14:20 ~ 14:45	Invited	Terahertz conductivity of semiconductor nanostructures	Hynek Nemec			
4	14:45 ~ 15:00	Oral	MHz repetition-rate, few-cycle, multi-octave THz generation in HMQ-TMS	Tobias Buchmann	4	14:45 ~ 15:10	Invited	All-dielectric THz topological waveguides	Ranjan Singh			
5	15:00 ~ 15:15	Oral	Contribution of nonlinear optical effects in terahertz differential frequency generation in organic crystals	Isao Yoshimine	5	15:10 ~ 15:25	Oral	Trion light emission in type-I WSe <sub>2</sub> /MoTe <sub>2</sub> van der Waals heterostructures	Hyemin Bae			
6	15:15 ~ 15:30	Oral	Generation of mJ-level terahertz pulses in lithium niobate crystals	Baolong Zhang								
			Coffee Break					Coffee Break				
THz Spin	THz Spintronics & Magneto-optics 10/1 (Tue.) Session A : Manarola				THz Spectroscopy II			10/1 (Tue.) Session B : Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speakers			
1	16:00 ~ 16:25	Invited	THz Spintronics: from fundamental research to applications	Yang Wu	1	16:00 ~ 16:25	Invited	Revealing the ultralong mean free paths of room-temperature phonons by using THz  Acoustics	Chi-Kuang Sun			
2	16:25 ~ 16:50	Invited	Unconventional phase transition in optimally doped BaFe <sub>1.87</sub> Co <sub>0.13</sub> As <sub>2</sub>	Kyungwan Kim	2	16:25 ~ 16:50	Invited	Ultrafast dynamics of Dirac electrons and excitons in 2D semiconductors and topological insulators	Sangwan Sim			
3	16:50 ~ 17:15	Invited	Manipulation of terahertz polarization and femtosecond spin currents in ferromagnetic heterostructures	Xiaojun Wu	3	16:50 ~ 17:15	Invited	Dielectric Permittivity Measurement Insensitive to the Sample Deformation at Millimeter Wave	EunMi Choi			
4	17:15 ~ 17:30	Oral	Ultrafast Kerr-rotation measurements of spin-valley dynamics across thr MoS <sub>2</sub> /WTe <sub>2</sub> interface	Wonhyeok Heo	4	17:15 ~ 17:30	Oral	Modern gyrotron setups for molecular gas spectroscopy	Anton Sedov			

Plenary talk			10/2 (Wed.) Session A : Wallarola		-			10/2 (Wed.) Session B : Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speaker			
1	09:00 ~ 09:45	Plenary	Thin-film terahertz conductivity and field-driven electron emission	Peter Uhd	-	-	-		-			
	Coffee Break					Coffee Break						
THz Metamaterials I 10/2 (Wed.) Session A : Manarola					Microwave/THz Sensing & Imaging II			10/2 (Wed.) Session B : Vernazza				
Presentation	Time	Presentation	Title	Speakers	Presentation	Time	Presentation	Title	Speakers			
1	10:15 ~ 10:40	Invited	Accelerated Design of Terahertz All-Dielectric Metasurfaces with Machine Learning	Willie Padilla	1	10:15 ~ 10:40	Invited	Continuous Wave Terahertz System for Sensing and Imaging Applications	Kyung Hyun Park			
2	10:40 ~ 11:05	Invited	THz Metasurface for Efficient Polarization and Phase Control	Jae-Hyung Jana	2	10:40 ~ 11:05	Invited	Electrically Reconfigurable Grating Modulators for Terahertz Waves	Marco Rahm			
3	11:05 ~ 11:30	Invited	Metasurface Empowered Flat-Optics for Microwave Applications	Abul Azad	3	11:05 ~ 11:30	Invited	Nano-Carbon Flexible Camera and Frequency-tunable Plasmonic Imager	Yukio Kawano			
4	11:30 ~ 11:55	Invited	Highly Sensitive Biomolecule Sensing Exploiting Graphene Assisted THz Resonators	Minah Seo	4	11:30 ~ 11:55	Invited	Terahertz imaging detectors based on CMOS technology	Kyung Rok Kin			
5	11:55 ~ 12:10	Oral	All-dielectric guided- mode resonance filter for applications	Hyeon Sang Bark	5	11:55 ~ 12:10	Oral	High depth resolution THz-OCT using swept source for infrastructure inspection	Homare Momiyama			
			Lunch Break		Lunch Break							
TH	THz Metamaterials II 10/2 (Wed.) Session A : Manarola				Millimeter/THz Wave Generation & Applications IV			10/2 (Wed.) Session B: Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speakers			
1	13:30 ~ 13:55	Invited	THz Field Enhancement Structures and Applications	Thomas Feurer	1	13:30 ~ 13:55	Invited	Generation and Control of Terahertz-Wave Beam by Photonics Technology	Kazutoshi Kato			
2	13:55 ~ 14:20	Invited	Investigation of Broadband Electrically Tunable THz Metamaterials Polarization Conversion	Seongsin Margaret Kim	2	13:55 ~ 14:20	Invited	Precision control of the output parametrs of THz range gyrodevices	Alexander Tsvetkov			
3	14:20 ~ 14:45	Invited	Actively Controllable Molecularization of Terahertz Meta-Atoms	Hojin Lee	3	14:20 ~ 14:45	Invited	Noises in photoconductive antennas under fs pulse excitation	Yutaka Kadoya			
4	14:45 ~ 15:10	Invited	Ultrafast tunneling transport using terahertz time-domain spectroscopy	Young-Mi Bahk	4	14:45 ~ 15:00	Oral	Advanced Methods of Synthesis of Passive Microwave Components: Theory and Examples	Dmitry I Sobolev			
5	15:10 ~ 15:25	Oral	Terahertz Nonlinearity in Nano-gap Terahertz Metamaterials	Peidi Yang	5	15:00 ~ 15:15	Oral	Impact of AR coating on THz Wave Radiation from Arrayed Photomixers/Antennas	Nanami Nishiyama			
					6	15:15 ~ 15:30	Oral	Arrayed Light Sources for Photonic Terahertz Wave Generation	Younjin Kim			
			Coffee Break		Coffee Break							
Mic	Microwave/THz Biology 10/2 (Wed.) Session A : Manarola					Iz Spectroscopy	III	10/2 (Wed.) Session B : Vernazza				
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speakers			
1	16:00 ~ 16:25	Invited	MMW-THz field interactions with cells, tissues and organisms	Vincent Wallace	1	16:00 ~ 16:25	Invited	Terahertz spectroscopy for the solid electrolytes of fuel cells	Masaya Nagai			
2	16:25 ~ 16:50	Invited	THz dielectric constant of fungi and bacteria in conjunction with their cell wall composition	Yeong-Hwan Ahn	2	16:25 ~ 16:50	Invited	Monitoring cis-to-trans Isomerization of Azobenzene by Terahertz Time-Domain Spectroscopy	Jiaguang Han			
3	16:50 ~ 17:15	Invited	Conforational Analysis of Biogenic Precursors of Secondary Organic Aerosols Using High Resolution THz Spectroscopy	Arnaud Cuisset	3	16:50 ~ 17:15	Invited	Active Structural Changes of Polymer and Protein by Terahertz Irradiatio	Chiko Otani			
4	17:15 ~ 17:30	Oral	Assessment and manipulation of DNA methylation in blood cancer using terahertz radiation	Hwayeong Cheon	4	17:15 ~ 17:30	Oral	Time-resolved Optical Pump-THz Ellipsometer Probe Measurements on Silicon	Bong Joo Kang			

10/2 (Wed.) Session A : Manarola

10/2 (Wed.) Session B : Vernazza

Plenary talk

Plenary talk			10/3 (Thu.) Session A : Manarola			-		10/3 (Thu.) Session B : Vernazza			
Presentation order	Time	Presentation Type	Title	Speakers	Presentation order	Time	Presentation Type	Title	Speaker		
1	09:00 ~ 09:45	Plenary	Tailor Metasurface Dispersion for Broadband Terahertz Polarization Conversion	Hou-Tong Chen	-	-	-	-	-		
	Coffee Break					Coffee Break					
тн	z Metamaterials I	=	10/3 (Thu.) Session A : Manarola		Adva	nced THz Micros	сору	10/3 (Thu.) Session B : Vernazza			
Presentation order	Time	Presentation Type	Title Speakers		Presentation order	Time	Presentation Type	Title	Speakers		
1	10:15 ~ 10:40	Invited	All-Dielectric Metasurfaces Toward Functional Terahertz Devices	Weili Zhang	1	10:15 ~ 10:40	Invited	Ultrafast terahertz microscopy of local currents	Tyler Liam Cocker		
2	10:40 ~ 11:05	Invited	Photonic Weyl system with extremely broadband topological surface states and nodal surface using photonic metamaterials	Junsuk Rho	2	10:40 ~ 11:05	Invited	Terahertz Near-Field Microscopy	Haewook Han		
3	11:05 ~ 11:30	Invited	Graphene electromagnetically induced transparency metasurfaces	Teun-Teun Kim	3	11:05 ~ 11:30	Invited	Terahertz Chemical Microscopy for Visualizing Chemical Reactions	Toshihiko Kiwa		