SUNDAY 10 SEPTEMBER 2017			
12:00 – 18:00	Registration		
18:30 – 21:30	Welcome Cocktail Reception (at Clarke Quay, Pasta Fresca Da Salvatore)		
MONDAY 11 SEPTEMBER 2017			
09:00 – 09:15	**Welcome and Opening Remarks**		
Session 1 Intersubband Material and Fabrications-Chair: Mikhail A. Belkin			
09:15 – 09:45	**Invited talk**	Gottfried Strasser	Quantum Cascade Material Systems: Growth and Processing
09:45 – 10:00	Paper 61	Jean-Michel Chauveau	Intersubband Transitions and Polarons in (Zn,Mg)O/ZnO Quantum Wells
10:00 – 10:15	Paper 46	Martin A. Kainz	Compensation of asymmetries for high-performance InGaAs/InAlAs terahertz quantum cascade lasers
10:15 – 10:30	Paper 39	Zeineb Loghmari	Continuous wave operation of InAs-based quantum cascade lasers above 20 μm
10:30 – 11:00	Tea break		
Session 2 2D Material OptoElectronics-Chair: Carlo Sirtori			
11:00 – 11:45	**Plenary talk**	Andrea C. Ferrari	Graphene photonics and optoelectronics
11:45 – 12:00	Paper 64	Long Xiao	High Responsivity Detection of Terahertz Quantum Cascade Lasers with Graphene-Loaded Plasmonic Antenna Arrays
12:00 – 12:15	Paper 70	Xuechao Yu	Mid-infrared photodetectors based on novel two-dimensional materials
12:15 – 14:00	Lunch		
Session 3 Mid-IR Frequency Comb and Lasers-Chair: Qijie Wang			
14:00 – 14:30	**Invited talk**	Jerome Faist	Quantum cascade laser frequency combs
14:30 – 14:45	Paper 42	Dmitry Kazakov	Harmonic frequency comb initiated by population pulsations in a quantum cascade laser
14:45 – 15:00	Paper 16	Pierre Jouy	1 Watt Quantum Cascade Laser Frequency Comb emitting at λ~8.13 μm
15:00 – 15:15	Paper 10	Yves Bidaux	Waveguide engineering for low dispersion mid-infrared Quantum Cascade Lasers frequency combs
15:15 – 15:30	Paper 81	Mikhail A. Belkin	Transfer-printing of quantum cascade lasers to silicon-based substrates
15:30 – 16:00	Tea break		
Session 4 Intersubband Quantum Devices-Chair: Gottfried Strasser			
16:00 – 16:15	Paper 15	Giacomo Scalari	Ultra strong THz light-matter coupling with Landau levels: transport measurements and nanocavities
16:15 – 16:30	Paper 25	Angela Vasanelli	Quantum model of optical properties and thermal emission of superradiant electronic excitations
16:30 – 16:45	Paper 38	Francesca Carosella	Band mixing in THz cascade structures
16:45 – 17:00	Paper 26	Martin Franckie	Phonon-Polariton Intersubband Gain
17:00 – 17:15	Paper 77	Daniele Palaferri	Room temperature quantum well mid-infrared photodetector embedded into a patch-antennae array
17:15 – 17:30	Paper 31	Martin Franckie	Theory of 2-well GaAs/$Al_{0.25}Ga_{0.75}As$ THz Quantum Cascade Lasers
17:30 – 17:45	Paper 4	Asaf Albo	Direct-phonon terahertz light-emitting intersubband lasers
17:45	End of day one		
18:30	Banquet diner near Dome flower (Majestic Bay)		

Tuesday 12 SEPTEMBER 2017			
Session 5 Mid-IR Sensing and Spectroscopy-Chair: Jerome Faist			
09:00 – 9:30	**Invited talk**	Boris Mizaikoff	Mid-Infrared Breath Diagnostics via QCLs and ICLs: From the Laboratory to the Patient
09:30 – 9:45	Paper 19	Filippos Kapsalidis	Dual-wavelength DFB Quantum Cascade Lasers for Trace Gas Spectroscopy
09:45 – 10:00	Paper 14	Lorenz Butschek	MOEMS-based External Cavity QCLs for Real-time Spectroscopy
10:00 – 10:30	**Invited talk**	Bernhard Lendl	Introducing New approaches in QCL based gas sensing: Photothermal Interferometry and Heterodyne Phase Sensitive Dispersion Spectroscopy
10:30 – 11:00	Tea break		
Session 6 THz detection and generation-Chair: Boris Mizaikoff			
11:00 – 11:45	**Plenary talk**	Junichiro Kono	Ultrastrong Light-Matter Coupling in a High-Q Terahertz Cavity
11:45 – 12:15	**Invited talk**	Yanko Todorov	THz detection using metamaterial resonators and microcavities
12:15 – 12:30	Paper 59	Stefano Pirotta	Ultrafast terahertz detectors based on 3D meta-atoms
12:30 – 12:45	Paper 60	Sukhdeep Dhillon	Short THz pulse generation from a dispersion compensated mode locked quantum cascade laser
12:45 – 13:00	Paper 33	Petar Tzenov	Gain recovery dynamics and passive mode locking of THz quantum cascade lasers
13:00 – 14:30	Lunch		
14:30 – 17:00	Social Events (Free time)		

Wednesday 13 SEPTEMBER 2017			
Session7 THz Frequency Comb-Chair: Harald Schneider			
09:00 – 09:30	**Invited talk**	Jacob Khurgin	Temporal Dynamics of QCL frequency combs
09:30 – 09:45	Paper 36	Yang Yang	Full dynamic range comb formation in terahertz quantum cascade laser
09:45 – 10:00	Paper 68	Benedikt Schwarz	High power frequency comb based on a bi-functional QCLD
10:00 – 10:15	Paper 3	Hua Li	Terahertz intersubband photonic devices for frequency comb operation and fast detection
10:15 – 10:45	Tea break		
Session 8 THz Frequency Comb and Spectroscopy-Chair: Jacob Khurgin			
10:45 – 11:30	**Plenary talk**	Qing Hu	THz amplifiers, phased arrays, and novel emitting structures
11:30 – 12:00	**Invited talk**	Harald Schneider	THz-spectroscopic studies on electron dynamics in a GaAs single quantum well and an InAs single quantum dot
12:00 – 12:15	Paper 48	Jonas Westberg	Terahertz multiheterodyne spectroscopy of molecular samples with quantum cascade laser frequency combs
12:15 – 12:30	Paper 45	Alexander Valavanis	Frequency-monitored gas spectroscopy through self-mixing interferometry in a terahertz quantum-cascade laser
12:30 – 12:45	Paper 44	Till Hagelschuer	Real-time spectroscopy of various gas species through optical feedback in a terahertz quantum-cascade laser
12:45– 13:00	Paper 80	Miriam Serena	Spectral purity of terahertz quantum cascade laser sources based on

		Vitiello	intra-cavity difference frequency generation
13:00 – 14:30	Lunch		
14:30 – 17:00	Excursion starts (Sentosa island)		
18:00 – 21:00	BBQ at beach (Bora Bora Beach Bar)		

Thursday 14 SEPTEMBER 2017			
Session 9 THz Quantum Cascade Lasers-Chair: Giacomo Scalari			
09:00 – 09:15	Paper 51	Ji Chen	High brightness THz quantum-cascade lasers utilizing inexpensive custom-made lenses
09:15 – 09:30	Paper 53	Huan Zhu / Gangyi Xu	Terahertz master-oscillator power-amplifier quantum cascade laser with improved output power
09:30 – 09:45	Paper 71	Yongquan Zeng	Two-Dimensional Multimode Terahertz Random Lasing with Metallic Pillars
09:45 – 10:00	Paper 83	Simone Biasco	High-power, low-divergent, single-mode THz quantum cascade wire lasers operating in pulsed and continuous-wave regime
10:00 – 10:30	Tea break		
Session 10 Photodetectors-Chair: Yanko Todorov			
10:30 – 11:15	**Plenary talk**	Philippe Bois	ISBT for IR Detection
11:15 – 11:45	**Invited talk**	Kaz Hirakawa/Zhang Ya	Novel bolometric THz detection by MEMS resonators
11:45 – 12:00	Paper 22	Behnam Mirzaei	An 8-Beam, 4.7 THz Local Oscillator Using a Quantum Cascade Laser and a Phase Grating
12:00 – 12:15	Paper 47	Pedro Pereira	Photovoltaic asymmetric superlattice QWIP with confined states in the continuum
12:15 – 12:30	Paper 56	Zahra Asghari	Room Temperature High Performances Quantum Cascade Detectors
12:30 – 14:00	Lunch		
Session 11 Mid-IR Quantum Cascade Lasers-Chair: Igor Vurgaftman			
14:00 – 14:30	**Invited talk**	Liu Fengqi	History and current status of quantum cascade lasers in China
14:30 – 14:45	Paper 5	Dan Botez	4.7 μm-Emitting In-Phase Resonant-Coupled, Phase-Locked Arrays of QCLs: 3.6 W Near-Diffraction-Limited Power
14:45 – 15:00	Paper 40	Marco Piccardo	Beat spatial hole burning
15:00 – 15:15	Paper 35	Frederic Demmerle	Surface Emission by Transversally Superimposed Gratings in Nonlinear Quantum Cascade Lasers
15:15 – 15:30	Paper 73	Dan Botez	High Internal Efficiency Mid-IR Quantum Cascade Lasers
15:30 – 16:00	Tea break		
Session 12 Interband Cascade Lasers-Chair: Dan Botez			
16:00 – 16:30	**Invited talk**	Igor Vurgaftman	Progress in Interband Cascade Lasers and LEDs
16:30 – 16:45	Paper 24	Alireza Mottaghizadeh	Ultra-fast modulation of mid infrared buried heterostructure quantum cascade lasers
16:45 – 17:00	Paper 62	Sukhdeep Dhillon	Multi-THz Sideband Generation on an optical telecom carrier at room temperature using InP-based Quantum Cascade Lasers
17:00 – 17:15	Paper 32	Martin Holzbauer	Ring Cavity interband cascade lasers
17:15	End of day four		

Friday 15 SEPTEMBER 2017			
Session 13 Intersubband Devices and applications-Chair: Benjamin Williams			
09:00 – 09:30	**Invited talk**	Claire F. Gmachl /Yasin Kaya	II-VI and II-VI/III-V hybrid intersubband devices
09:30 – 09:45	Paper 37	Martin Wienold	Doppler-free spectroscopy with a terahertz quantum-cascade laser
09:45 – 10:00	Paper 27	Rolf Szedlak	Commutable Monolithic QC Laser/Detector System for Remote Sensing
10:00 – 10:15	Paper 84	Bernhard Lendl	New sensing approaches employing QCLs
10:15 – 10:45	Tea break		
Session 14 Metasurfaces-Chair: Carlo Sirtori/Wang Qijie			
10:45 – 11:30	**Plenary talk (teleconference)**	Federico Capasso	High Performance Flat Optics from the Mid-IR to the Visible
11:30 – 12:00	**Invited talk**	Ben William	Terahertz metasurface QC-lasers
12:00 – 12:15	Paper 17	Matias Katz	Vacuum-field Rabi Splitting at SWIR in Photocurrent of Quantum Cascade Infrared Photodetectors Coupled to Metamaterial Nano-antennas
12:15 – 12:30	Paper 41	Lorenzo Bosco	High power surface emitting single mode Terahertz Quantum Cascade Laser
12:30 – 12:45	Paper 28	Moritz Wenclawiak	Controlling the radiative response of plasmonic resonators in the terahertz regime
12:45 – 14:00	Lunch		
14:00 – 17:00	NTU-visit		

POSTER SESSION Monday 11 to Thursday 14 September 2017 (10 am – 5 pm)	
SESSION I Monday 11 to Tuesday 12 September 2017 (10 am – 5 pm)	
P1	**Investigation of tunable manipulation terahertz waves based on graphene patterns** Xiaoyong He and Hao Zhang
P2	**Calculation of performance of InGaSb-based terahertz quantum cascade lasers** Hiroaki Yasuda
P3	**Homogeneous spectral broadening of pulsed terahertz quantum cascade lasers with radio frequency modulation** Wen-Jian Wan, Hua Li, Chang Wang and Jun-Cheng Cao
P4	**C/L-band emission of InAs QDs monolithically grown on Ge substrate** Wenqi Wei
P5	**Frequency resolved far fields of terahertz quantum cascade lasers** Sebastian Schoenhuber, Martin Brandstetter, Michael Krall, Martin A. Kainz, Hermann Detz, Tobias Zederbauer, Aaron Maxwell Andrews, Gottfried Strasser and Karl Unterrainer
P6	**Strain dependent intersubband transition in GaN/AlGaN single quantum well on different crystal planes** Jianbin Kang, Mo Li, Qian Li, Wangping Wang, Feiliang Chen, Lai Wang, Yi Luo and Jian Zhang
P7	**Optical analysis of non-polar, m-plane GaN/AlGaN quantum cascade structures** Sumit Saha and Jitendra Kumar
P8	**Intersubelvel transitions in zero-dimensional nanomaterials probed by terahertz photocurrent spectroscopy** Y. Zhang, K. Shibata, N. Nagai, C. Ndebeka-Bandou, G. Bastard, J. Y. Wang, H. Q. Xu, and K. Hirakawa
P9	**Dynamic modelling of coupled-cavity Terahertz Quantum Cascade lasers with optical feedback** Xiaoqiong Qi, Gary Agnew, Iman Kundu, Thomas Taimre, Yah Leng Lim, Karl Bertling, She Han, Paul Dean, Andrew Grier, Alexander Valavanis, Edmund Linfield, A. Giles Davies, Dragan Indjin and Aleksandar Rakić
P10	**Analysis of Granular Materials using a THz QCL operating as a Laser Feedback Interferometer** She Han, Thomas Taimre, Yah Leng Lim and Aleksandar Rakic
P11	**High-power single-mode terahertz quantum cascade lasers** Yuanyuan Li, Junqi Liu, Fengqi Liu, Jinchuan Zhang and Zhanguo Wang
P12	**Two-section, single-frequency terahertz quantum-cascade lasers with continuous frequency tuning by external illumination** Martin Hempel, Benjamin Roeben, Michael Niehle, Lutz Schrottke, Achim Trampert and Holger T. Grahn
P13	**Waveguide design for GaN/AlGaN terahertz quantum cascade lasers** Ke Wang, Tsung Tse Lin, Wataru Terashima and Hideki Hirayama
P14	**Efficient frequency conversion in THz metal-insulator-metal disk resonators loaded with semiconductor quantum wells** Christian Georg Derntl, Moritz Wenclawiak, Karl Unterrainer and Juraj Darmo
P15	**A comparative study of a three-well active region in double metal and single plasmon THz QCLs** Roland Teissier, Hoang Nguyen Van, Michael Bahriz and Alexei Baranov
P16	**Phase-locked quantum cascade laser array based on a monolithically integrated Talbot cavity** Yue Zhao, Jinchuan Zhang and Fengqi Liu
P17	**Normal incident long wave infrared quantum dash quantum cascade photodetector** Feng-Jiao Wang, Dong-Bo Wang, Fei Ren, Shu-Man Liu, Ning Zhuo, Shen-Qiang Zhai, Jun-Qi Liu, Feng-Qi Liu and Zhan-Guo Wang

P18	**The design and fabrication of slotted quantum cascade lasers at 5.1μm** Xuefeng Jia, Lijun Wang, Ning Zhuo, Zhiwei Jia, Jinchuan Zhang, Fengqi Liu and Zhanguo Wang
P19	**Gain Coupled Distributed Feedback Mid-Infrared Quantum Cascade Lasers for THz generation** Wolfhard Oberhausen, Frederic Demmerle, Dominik Burghart, Alexander Wolf, Gerhard Boehm, Hannes Schmeiduch and Markus-Christian Amann
P20	**Parallel plates waveguide for single resonator THz spectroscopy** Djamal Gacemi, Alireza Mottaghizadeh, Yanko Todorov and Carlo Sirtori
P21	**THz Quantum Cascade Lasers Toward High Output Power Near Liquid Nitrogen Temperature Operation** Tsung-Tse Lin and Hideki Hirayama
P22	**Doping engineering in THz QCLs** Thomas Grange
SESSION II Wednesday 13 to Thursday 14 September 2017 (10 am – 5 pm)	
P23	**Longer than 1.9 μm photoluminescence emission from InAs quantum structure on GaAs (001) substrate** Yulian Cao, Ke Liu, Wenquan Ma, Jianliang Huang, Yanhua Zhang and Wenjun Huang
P24	**Pushing detection wavelength toward 1um by type II InAs/GaAsSb superlattices** Yanhua Zhang, Wqma Ma, Jianliang Huang, Yulian Cao, Ke Liu, Wenjun Huang and Chengcheng Zhao
P25	**Impact of band structure of Ohmic contact layers on the response feature of p-i-n very long wavelength type II InAs/GaSb superlattice photodetector** Jianliang Huang, Wenqua Ma, Yanhua Zhang, Yulian Cao, Ke Liu, Wenjun Huang, Chengcheng Zhao and Shulong Lu
P26	**Reliable density matrix modeling of THz QCL active regions from the energy eigenbasis** Benjamin Burnett, Andrew Pan and Benjamin Williams
P27	**Grayscale hologram based on mid-infrared metasurfaces** Kedi Wu and Qi Jie Wang
P28	**Electronic structure and optical properties of GeSn and Ge quantum wells** Wj Fan
P29	**Graphene-based mid-infrared Si modulator** Xiaonan Hu, Guozhen Liang, Xianshu Luo and Qi Jie Wang
P30	**User-friendly Software for the Simulation of Quantum Cascade Lasers with the NEGF Method** Stefan Birner, Zoltán Jéhn, Carola Burkl and Thomas Grange
P31	**InAsSb based heterojunction infrared photodetectors** Jinchao Tong, L.M.T. Tobing, Yu Luo and Dao Hua Zhang
P32	**Growth of AlGaN/GaN multiple quantum well structure on silicon by plasma assisted molecular beam epitaxy for infrared photodetector** Yi Zheng, Manvi Agrawal, Dharmarasu Nethaji and Radhakrishnan K
P33	**Epitaxial Growth of GeSn Alloy by Chemical Vapor Deposition (CVD) Using Ge2H6 and SnCl4** Lin Zhang, Yew Heng Tan, Kwang Hong Lee, Gang Yih Chong, P. Anantha, Wei Li and Chuan Seng Tan
P34	**Noninvasive Photoacoustic Glucose Measurement by Near-infrared Laser** Ruochong Zhang and Yuanjin Zheng
P35	**Electrical modulation of all dielectric metamaterial tuned by birefringent liquid crystal** Mingyu Sun, Hongjuan Wang, Yuanjin Zheng and Xiaowei Sun
P36	**Lasing channels switching in dual color scattering assisted THz quantum-cascade laser** B. Wen, C. Xu, S. Wang, K. Wang, X. He, Z. R. Wasilewski and D. Ban
P37	**High efficient 3μm OPCPA pumped by temporal and spatial flat-top pulse** Xiao Zou, Houkun Liang, Shizhen Qu, Kun Liu and Qijie Wang

P38	**3um OPCPA System With High Energy at 10kHz** Shizhen Qu, Xiao Zou, Kun Liu, Qijie Wang, Houkun Liang and Ying Zhang
P39	**Stable broadband supercontinuum generation in dielectrics pumped by 1μm picosecond pulses for CEP-stable OPCPA** Kun Liu, Shizhen Qu, Xiao Zou, Houkun Liang and Qi Jie Wang
P40	**Bright Monolayer Tungsten Disulfide via Exciton Chemical Modulations** Tao Ye, Yu Xuechao and Wang Qi Jie
P41	**Active focal tuning of graphene-metal metasurface lenses** Bin Hu and Zongduo Huang
P42	**Strong Light-matter Interaction in Monolayer WS2 Coupled with Nanoantenna Arrays** Lin Liu, Landobasa Y.M. Tobing, Jinchao Tong, Dao Hua Zhang and Yu Luo