

Tuesday April. 14		
Room A		
7:30-8:30A M	Breakfast	
Session: Keynote Chair: Shun-Jen Cheng		
8:30-9:00AM	A01: New Approaches to the Uncertainty Principle	Masanao Ozawa Nagoya University Japan
9:00-9:30AM	A02: Information-theoretical principles for Quantum Theory and Quantum Field Theory	Giacomo Mauro D'Ariano University of Pavia Italy
9:30-10:00 AM	A03: Quantum Technology of Light as a Harmonic Oscillator	Alexander Lvovsky University of Calgary Canada
10:00-10:20AM	Session Break	
Session: Low Dimensional Materials and Devices I Chair: Giacomo Mauro D'Ariano		
10:20 -10:45AM	A04: Enhanced Solar Energy Conversion via Photovoltaics and Photocatalysis Based on Programmed Hybrid Nanomaterials	DongHa Kim Ewha Womans University South Korea
10:45-11:10AM	A05: The underlying anti-ferromagnetism in paramagnetic ion doped semiconductor nanocrystals	Shun-Jen Cheng National Chiao Tung University Taiwan
11:10-11:35AM	A06: Second order nonlinear susceptibility in Silicon	Joerg Schilling Martin-Luther-Universität Halle-Wittenberg Germany
11:35-12:00PM	A07: Organic field-effect transistor made with acenes	Tahsin J. Chow Academia Sinica Taiwan
12:25-13:25 PM	Lunch Break	
Session: Quantum Computation and Control I Chair: SUIL IN		
13:25-13:50 PM	A08: Topological single electron pumping based on Majorana fermions in topological superconductors	Xiao Hu Natl Inst Mat Sci Japan
13:50 -14:15 PM	A09: Semiclassical Methods for Highly Accurate and Efficient Surface Hopping Calculations of Nonadiabatic Transition Probabilities	Michael Herman Tulane University USA
14:15 -14:40 PM	A10: Ignorance Is Bliss: General and Robust Cancellation of Decoherence via No-Knowledge Quantum Feedback	Michael Hush The Australian Defence Force Academy at University of New South Wales

		Australia
14:40 -15:05PM	A11: From Reversible Logic to Quantum Computation	Gerhard Dueck University of New Brunswick Canada
15:05-15:20PM	Session Break	
Session: General I Chair: Xiao Hu		
15:20-15:45PM	A12: Abundant Organic Molecules in Interstellar Space	Takeshi Oka The University of Chicago USA
15:45-16:10PM	A13: Cu _x O-TiO _{2-x} Cl _x photocatalyst for CO ₂ Reduction into Methane by Solar Irradiation	SUIL IN Daegu Gyeongbuk Institute of Science and Technology South Korea
16:10-16:35PM	A14: Self-calibrating quantum state estimation	Jiangwei Shang National University of Singapore Singapore
16:35-17:00PM	A15: Atom Lasers: Production, properties and prospects for precision inertial measurements	John Close The Australian National University Australia
17:30PM	Dinner Social	

Wednesday April. 15		
Room B		
7:30-8:30A M	Breakfast	
Session: Electronic Structure Theories Chair: Takashi Uchihashi		
8:30-8:55AM	B01: Recent Search for New Superhard Materials: Go Nano!	Dominik Legut VSB Technical University of Ostrava Czech Republic
8:55-9:20AM	B02: Extreme quantum isotope effects in muonium/muon chemical reactions	Toshiyuki Takayanagi Saitama University Japan
9:20-9:45AM	B03: Electronic structure calculations of nanomaterials: basic theories and practical applications	Jisoon Ihm Seoul National University South Korea
9:45-10:10 AM	B04: Electronic structure calculation using Diffusion Monte Carlo methods	Ryo Maezono Japan Advanced Institute of Science and Technology(JAIST) Japan
10:10-10:30AM	Session Break	
Session: General II Chair: Toshiyuki Takayanagi		
10:30 -10:55AM	B05: Atomic layer superconductors on silicon and intrinsic lateral Josephson junctions	Takashi Uchihashi National Institute for Materials Science Japan
10:55-11:20AM	B06: Recent progress of spintronics materials: new n-type electron-induced ferromagnetic semiconductor and its heterostructures	Masaaki Tanaka The University of Tokyo Japan
11:20-11:45AM	B07: A new non-destructive readout by using photo-recovered surface potential contrast	Kuijuan Jin Chinese Academy of Sciences, Institute of Physics China
11:45-12:10PM	B08: Linear and Non-linear spectroscopy in transition metal dichalcogenide monolayers	Gang Wang Center National De Recherche Scientifique France
12:10-13:10 PM	Lunch Break	
Session: Low Dimensional Materials and Devices II Chair: Kimberley Hall		
13:25-13:50 PM	B09: Nondestructive Nanofabrication on GaAs Surface by Tribochemical Removal	Linmao Qian Southwest Jiaotong University China

13:50 -14:15 PM	B10: Dark nanomaterials: from ultra-high absorption to black-body lasers	Andrea Fratolocchi King Abdullah UnivSci&Technol Saudi Arabia
14:15 -14:40 PM	B11: Multidimensional coherent spectroscopy of semiconductor excitons	Alan D. Bristow West Virginia University USA
14:40 -15:05PM	B12: Group IV semiconductor nanocolloids produced by bandgap-controlled etching: Influence of quantum size effect on the etching and optical properties	Seiichi Sato University of Hyogo Japan
15:05-15:35PM	Poster Session	
Session: General III Chair: Andrea Fratolocchi		
15:35-16:00PM	B13: Femtosecond pulse shaping for semiconductor qubit manipulation	Kimberley Hall Dalhousie University Canada
16:25-16:50PM	B14: Practical applications for photonic quantum technologies	Anthony Laing University of Bristol UK
16:50-17:15PM	B15: Rational design of flourene-based light photoactive molecules for the application of DSSCs: A DFT study	Feng Wang Swinburne University of Technology Australia
17:30PM	Dinner Social	

Wednesday April. 15
Room C

7:30-8:30A M	Breakfast	
Session: Geometry and Topology Chair: Markus Pollnau		
8:55-9:20AM	C01: 4-dimensional Lefschetz fibration invariants from the quantum representations	Takefumi Nosaka RIMS, Kyoto University Japan
9:20-9:45AM	C02: Braids and quantum symmetry	Toshitake Kohno The University of Tokyo Japan
9:45-10:10 AM	C03: The topology of ideal conduction	Balazs Hetényi Bilkent University, Ankara Turkey
10:10-10:30AM	Session Break	
Session: Lasers Chair: Takefumi Nosaka		
10:30 -11:00AM	C04: Quantum and coherence aspects of continuous-wave lasers near and below laser threshold	Keynote Speaker: Markus Pollnau KTH - Royal Institute of Technology Sweden
11:00-11:25AM	C05: Comprehensive and fully self-consistent simulation of an operation of modern semiconductor lasers	Włodzimierz Nakwaski Lodz University of Technology Poland
11:25-11:50AM	C06: Control on high-order interference through phase modulation on coherent lasers	Guoquan Zhang Nankai University China
11:50-12:15PM	C07: Coherent and Squeezed Light Generation by Three-Level Laser	Fesseha Kassahun Addis Ababa University Ethiopia
12:15-13:15 PM	Lunch Break	
Session: Quantum Computation and Control II Chair: Holger Vach		
13:25-13:50 PM	C08: Reversing Quantum Chaos	Boris Fine Skolkovo Institute of Science and Technology Russia
13:50 -14:15 PM	C09: Quantum remote state preparation and quantum operation remote implementation	Zhou Ping Guangxi University for Nationalities China

14:15 -14:40 PM	C10: Holographic imaging of quantum states and efficient decoherence decoupling in a single Si quantum dot	Vesna Berc University of Belgrade Serbia
14:40 -15:05PM	C11: Atomistic Modeling of Si:P devices for Si-based quantum computing	Hoon Ryu Korea Institute of Science and Technology Information Koera
15:05-15:35PM	Poster Session	
Session: Low Dimensional Materials and Devices III Chair: Boris Fine		
15:35-16:00PM	C12: Aromatic Silicon Nanocrystals – outstanding properties and future applications	Holger Vach CNRS France
16:00-16:25PM	C13: Measurement of photo-induced dark fraction and photo-darkening probability in aqueous CdTe quantum dots	Shivprasad Patil Indian Institute of Science Education and Research India
16:25-16:50PM	C14: Polarimetric determination of CdSe/cdS nanocrystal dipole orientation	Agnes Maitre Université Pierreet Marie Curie France
17:30PM	Dinner Social	

Wednesday April. 15		
Room D		
7:30-8:30A M	Breakfast	
Session: Nanophotonics I Chair: Raul C. Munoz		
8:30-8:55AM	D01: One photon wave packet propagation in a 1D waveguide: role of virtual photons	M. A. Bouchene University Toulouse 3 France
8:55-9:20AM	D02: High speed silicon photonic devices	David John Thomson University of Southampton UK
9:20-9:45AM	D03: Phonons in low dimensional sp ² carbon systems	Nedjma Bendiab Université Joseph Fourier France
9:45-10:10 AM	D04: Nanostructure design for device performance improving: absorption and quantum efficiency enhancement of thin-film InGaAs photodetectors	Xin Wei Chinese Academy of Sciences, Institute of Semiconductors China
10:10-10:30AM	Session Break	
Session: Low Dimensional Materials and Devices IV Chair: M. A. Bouchene		
10:30 -10:55AM	D05: Size effects and the resistivity induced by electron-surface and electron-grain boundary scattering in gold nanostructures, as revealed by measuring the magnetoresistance and the Hall effect at 4 K: The end of the road for circuit miniaturization?	Raul C. Munoz Universidad de Chile Chile
10:55-11:20AM	D06: Photoluminescence blinking and spectral diffusion in single semiconductor nanocrystals	Toshiyuki Ihara Kyoto University Japan
11:20-11:45AM	D07: Observation of optical second harmonic generation from suspended monolayer and bilayer graphene sheets	Kung-Hsuan Lin Institute of Physics, Academia Sinica Taiwan
12:10-13:10 PM	Lunch Break	
Session: Modeling and Simulation of Quantum Devices Chair: Martin Lukac		
13:25-13:50 PM	D08: Quantum Free Energies from Non-Equilibrium Processes: A Path Integral Approach	Lisandro Hernandez de la Pena Kettering University USA

13:50 -14:15 PM	D09: Coherent Charge and Spin Transport in Quantum Devices	Chi-Shung Tang National United University Taiwan
14:15 -14:40 PM	D10: Bistability and chaos at low level of quanta	Lock Yue Chew Nanyang Technological University Singapore
14:40 -15:05PM	D11: Modeling and simulations for ultrafast digital optical switches with quantum photonic theory and submicron-scale Si-photonics technology	DeGui Sun University of Ottawa Canada
15:05-15:35PM	Poster Session	
Session: General IV Chair: Lisandro Hernandez de la Pena		
15:35-16:00PM	D12: Principles of Clifford-T circuit synthesis	Martin Lukac Nazarbayev University Kazakhstan
16:00-16:25PM	D13: Multifunctional block copolymers for sensing, imaging, and drug delivery	Yanqing Tian South University of Science and Technology of China China
16:25-16:50PM	D14: Quantum neural networks: a review	Mikhail Altaisky Space Research Institute RAS Russia
17:30PM	Dinner Social	

Thursday April. 16 Room B		
7:30-8:30A M	Breakfast	
Session: General V Chair: Rosa Tualle-Brouri		
8:30-8:55AM	B16: Semiconductor Nanowires for Optoelectronics and Energy Applications	Chennupati Jagadish Australian National University Australia
8:55-9:20AM	B17: Cavity optomechanics	Eyal Buks Technion-Israel Institute of Technology, Haifa Israel
9:20-9:45AM	B18: Controlling the dynamics of Bose-Einstein condensate under external confinements: A new analytical perspective	Utpal Roy Indian Institute of Technology Patna India
9:45-10:10 AM	B19: Matter-wave interferometry near the surface of an Atom-Chip	Ron Folman Ben Gurion University of the Negev Israel
10:10-10:30AM	Session Break	
Session: Measurement and Communication Chair: Chennupati Jagadish		
10:30 -10:55AM	B20: Microwave photonic advances in measurement and communication signal processing	Robert Minasian The University of Sydney Australia
10:55-11:20AM	B21: Mesoscopic quantum states of light for quantum information processing	Rosa Tualle-Brouri University Paris11 France
11:20-11:45AM	B22: Opto-acoustic interaction in a subwavelength-diameter optical fibre	Jean-Charles Beugnot CNRS France
11:45-11:10AM	B23: Continuous-variable Hyper-entanglement in an Optical Parametric Oscillator	Jiangrui Gao Shanxi University China
12:10-13:10 PM	Lunch Break	
Session: Low Dimensional Materials and Devices V Chair: Haifeng Hu		
13:50 -14:15 PM	B24: Tunneling via Single and Coupled Dopant Atoms in Si Nanodevices	Daniel Moraru Shizuoka University Japan

14:15 -14:40 PM	B25: Study of charge balance for quantum dot light emitting diode	Jing Chen Southeast University China
14:40 -15:05PM	B26: Electronic, magnetic and transport properties of quantum dots	Ashok Chatterjee University Hyderabad India
15:05-15:20PM	Session Break	
Session: Plasmonic Nanostructures and Metamaterials Chair: Daniel Moraru		
15:20-15:45PM	B27: Broadband absorption engineering of hyperbolic metasurface	Haifeng Hu Northeastern University China
15:45-16:10PM	B28: Coherent control of electromagnetic fields with plasmonic meta-surface	Xiangang Luo Chinese Academy of Science, Institute of Optics and Electronics China
17:30PM	Dinner Social	

Thursday April. 16 Room C		
7:30-8:30A M	Breakfast	
Session: Low Dimensional Materials and Devices VI Chair: Ashok Chatterjee		
8:55-9:20AM	C15: Symmetry breaking and optical applications at oxide quantum heterostructures	Hiroaki Matsui The University of Tokyo Japan
9:20-9:45AM	C16: Theoretical probing of excitonic effects in transition dichalcogenides monolayers: a true numerical experience	Iann Gerber Universitéde Toulouse France
9:45-10:10 AM	C17: Spin- and valley-dependent transport properties for metal-silicene-metal junctions	Guanghai Zhou Hunan Normal University China
10:10-10:30AM	Session Break	
Session: Quantum Computation and Control III Chair: Iann Gerber		
10:30 -11:00AM	C18: Quantum control for quantum technologies	Keynote Speaker: Tommaso Calarco Ulm University Germany
11:00-11:25AM	C19: Chromophore Excited States – Towards Predictive Theoretical Studies	Yavuz Dede Gazi University Turkey
11:25-11:50AM	C20: Invariant Numerical Algorithms for the Nonlinear Schroedinger Equation	Ravi C. Venkatesan Systems Research Corporation India
12:15-13:15 PM	Lunch Break	
Session: General VI Chair: Susumu Fukatsu		
13:25 -13:50 PM	C21: Hidden spin polarization in inversion-symmetric bulk crystals	Jun-Wei Luo Chinese Academy of Sciences, Institute of Semiconductors China
13:50 -14:15 PM	C22: Modulation of Condensation and Charge Inversion of DNA by Ethanol	Guangcan Yang Wenzhou University China
14:15 -14:40 PM	C23: Deterioration of the performance of shortwave Quantum cascade lasers due to carrier leakage	Abdullah Aldukhayel Majmaah University Saudi Arabia
14:40 -15:05PM	C24: To be determined	Paolo Perinotti University of Pavia

		Italy
15:05-15:20PM	Session Break	
Session: Nanophotonics II Chair: Jun-Wei Luo		
15:20-15:45PM	C25: Valleytronic photonics in Ge-based structures	Susumu Fukatsu University of Tokyo Japan
15:45-16:10PM	C26: Silicon/graphene heterogeneous photonic integrated devices	Daoxin Dai Zhejiang University China
16:10-16:35PM	C27: Photonic crystal microcavity with single Ge quantum dot	Jinsong Xia Huazhong Univ Sci&Technol China
16:35-17:00PM	C28: Graphene oxide nanophotonic devices	Baohua Jia Swinburne University of Technology Australia
17:30PM	Dinner Social	

Wednesday April. 15

15:05-15:35PM

Session: Poster

P1	Superposition of Squeezed Laser Light Beams	Tizazu Masresha Addis Ababa University Ethiopia
P2	The Effect of Spontaneous Emission on the Dynamics of Three-level Laser	Derribe Hirpo Addis Ababa University Ethiopia
P3	Enhanced Photoluminescence property for Quantum Dot-gold nanoparticle hybrid	Qianqian Huang Southeast University China
P4	Noncollinear Andreev Reflection at Semiconductor Nanowires	Binhe Wu Donghua University China