PTES2016 Program for Conference

(Venue: Nan Yang Hotel)

Thursday, 26 May, 2016	
07:30-08:00	**Registration**
08:00-08:30	**Opening Ceremony and Photograph**
Morning Session I: Thermoelectrics **Chair: Prof. Fuli Li**	
08:30-09:15 Plenary Talk	Kunihito Koumoto(Toyota Physical and Chemical Research Institute, Japan) TiS2 Intercalation Complexes for Flexible Thermoelectric Devices
09:15-09:45	David Singh (University of Missouri, USA) Transport in Thermoelectric Materials
09:45-10:15	Tsuneyoshi Nakayama (Tongji University, China/Hokkaido University, Japan) Thermal/Dynamic Properties of Thermoelectric Clathrates
10:15-10:35	**Tea Break**
Morning Session II: Heat Engine **Chair: Prof. Tsuneyoshi Nakayama**	
10:35-11:05	Haitao Quan(Peking University, China) Quantum Heat Engine and Negative Absolute Temperature
11:05-11:35	Zhisong Wang (National University of Singapore, Singapore) From isothermal nanomotors to nanoscale heat engines: thermodynamics and experimental development
11:35-12:05	Fabio Marchesoni(University of Camerino, Italy/Tongji University, China) Chemotaxis of Artificial Swimmers on Thermal Waves
1 2:05-13:30	**Lunch**

Afternoon Session I: Thermal Transport. I **Chair: Prof. Fabio Marchesoni**	
13:30-14:00	Xianfan Xu(Purdue University, USA) Anisotropic Thermal Transport in Few-layer Black Phosphorus
14:00-14:30	Jouni Ahopelto (VTT Technical Research Centre of Finland, Finland) Thermal and electrical properties of ultra-thin highly doped silicon membranes
14:30-15:00	Clivia Sotomayor Torres (Catalan Institute of Nanoscience and Nanotechnology, Spain) Thermal transport in 1D and 2D Si Phononic Crystals
15:00 – 15:30	Xiaojia Wang (University of Minnesota, USA) Thermal Transport across Surfactant Layers on Gold Nanorods in Aqueous Solution
15:30-15:50	**Tea Break**
Afternoon Session II: Thermal Transport. II **Chair: Prof. Xiaojia Wang**	
15:50-16:20	Sebastian Volz(CNRS, France/Tongji University, China) Understanding and Manipulating the Thermal Phonon Spectrum
16:20-16:50	Sophia Sklan (MIT/University of Colorado Boulder, USA) Phonon Transistors via Non-inertial Band Bending
16:50-17:20	Dahai He (Xiamen University, China) Quantum Thermal Transport through Anharmonic Systems: A Self-Consistent Phonon Approach
17:20-17:50	Fabrice Vallee (University of Lyon, France) Phononic of Nanoobjects: Ensemble and Single Metal Nanoparticles
18:00-19:30	**Dinner**

Friday, 27 May, 2016	
Morning Session I: Phonon and Optomechanics **Chair: Prof. Che Ting Chan**	
08:30-09:00	Lin Tian(University of California Merced, USA) Quantum Coherence of Optomechanical Systems in the Ultrastrong Coupling Regime
09:00-09:30	Yunfeng Xiao, Yongchun Liu(Peking University, China) Cavity optomechanical cooling beyond the resolved sideband limit
09:30-10:00	Yingdan Wang (Institute of Theoretical Physics, CAS, China) Optimization of STIRAP-based state transfer under dissipation
10:00-10:20	**Tea Break**
Morning Session II: Topological Acoustics and Phononics **Chair: Prof. Lin Tian**	
10:20-10:50	Che Ting Chan (Hongkong University of Science and Technology, China) Using acoustic systems to illustrate topological and parity-time symmetry concepts
10:50-11:20	Baile Zhang (Nanyang Technological University, Singapore) Some Topological Phases in Phononic Crystals and Acoustic Resonator Systems
11:20-11:50	Lifa Zhang (Nanjing Normal University, China) Phonon Angular Momentum: Discovery and Applications
11:50-13:30	**Lunch**

Afternoon Session I: Thermal Materials **Chair: Prof. Yingdan Wang**	
13:30-14:00	Tao Deng(Shanghai Jiao Tong University, China) Exploring Thermal Materials Inspired by Nature
14:00-14:30	Qing Hao(University of Arizona, USA) Multilength Scale Electro-Thermal Simulations of GaN-Based High Electron Mobility Transistors
14:30-15:00	Changying Zhao(Shanghai Jiao Tong University, China) Photon and Phonon Scattering in Random Micro/nanosctuctures
15:00-15:30	George Fytas(Max Planck Institute for Polymer Research, Germany) Colloid based hypersonic phononics based
15:30-18:30	**Poster Session** **(Chair of Selection Committees: Prof. Asegun Henry)**
18:30-19:30	**Dinner**

Saturday, 28 May, 2016	
Morning Session I: Phonon Transport. I **Chair: Prof. Prabhakar Bandaru**	
08:30-09:00	Timothy Fisher (Purdue University, USA) Heat flow at interfaces and heterojunctions
09:00-09:30	Asegun Henry (Georgia Institute of Technology, USA) A Correlation Based Perspective on Phonon Transport
09:30-10:00	Xiulin Ruan(Purdue University, USA) First-principles calculations of four-phonon scattering rates and reduced thermal conductivity
10:00-10:20	**Tea Break**
Morning Session II: Phonon Transport. II **Chair: Prof. XiulinRuan**	
10:20-10:50	Baoling Huang (Hong Kong University of Science and Technology, China) NanograinedSiGe Thin Films for Thermoelectric Energy Conversion
10:50-11:20	Markus Raschke(University of Colorado Boulder, USA) Thermal infrared near-field spectroscopy: coherence, optical forces, and chemical nano-imaging
11:20-11:50	Jun Liu (North Carolina State University, USA) Thermal Transport in Amorphous Polymers, Conducting Polymers, and Polymer Fibers
11:50-13:30	**Lunch**

Afternoon Session I: Thermal Metamaterials **Chair: Prof. Zhangqi Yin**	
13:30-14:00	Xiaobo Yin (University of Colorado Boulder, USA) Polymer-based Metamaterial for Large Scale RadiativeCoolong
14:00-14:30	Prabhakar Bandaru(UCSD, USA) Layered thermal metamaterials for the efficient directing, harvesting, and dissipation of heat
14:30-15:00	Bin Liang (Nanjing University, China) One-way street for sound: Asymmetric manipulation of acoustic waves by metamaterials
15:00-15:20	**Tea Break**
Afternoon Session II: Thermal Manipulation **Chair: Prof. Ronggui Yang**	
15:20-15:50	Bernard Perrin (Universite Pierre, France) Nonlinear Acoustic Imaging of Nanostructures
15:50-16:20	Zhangqi Yin (Tsinghua University, China) Cooling a Mechanical Resonator to Quantum Regime by Heating it
16:20-16:50	Theodorian Borca-Tasciuc(RPI, USA) High Thermal Conductivity Polymer Composites Using Self-Assembled and Branched Networks of Nanoscale Fillers
16:50-17:20	Thibaut Jacqmin(Pierre and Marie Curie University – Paris 6, France) Optomechanical systems in the quantum regime
17:20-17:30	**The prize awards for best posters;**
17:30-19:00	**Dinner**