



International School and Symposium on Nanoscale Transport and phoTonics November 18-22, 2019 NTT Atsugi R&D Center, JAPAN

The International School and Symposium on Nanoscale Transport and phoTonics (ISNTT 2019) focuses on the latest developments in the physics and technologies of nanoscale quantum and photonic devices.

The symposium, organized by Nippon Telegraph and Telephone (NTT) Corporation's Basic Research Laboratories (BRL), will host invited and contributed presentations at NTT's Atsugi R&D Center in Japan from November 19 to 22, 2019.

The BRL School will be held as a part of ISNTT 2019. The school will host tutorial lectures for selected graduate students, who will be financially supported, and it will give an opportunity for them to present their research at ISNTT 2019.

This symposium is held biennially and it brings together leading academics, scientists, and students with NTT BRL researchers to foster communications and collaborations.

Scope of Symposium

- Transport and optical properties of nanostructures (quantum dots, nanowires, nanotubes, molecules, and so on)
- Dynamics and coherent control of quantum systems
- Nanodevices and single-electron devices
- Spintronics and spin related transport
- Quantum Hall systems
- Nanophotonics and photonic crystals
- Quantum computation and information processing
- Micro and nanomechanical systems
- Mesoscopic superconductivity
- Graphene and Transition Metal Dichalcogenide (TMDC) materials
- Hybrid quantum systems
- Nanoprobing and nanoscale characterization

BRL School Topic

Hybrid Quantum Systems

BRL School Lecturers

Per Delsing (Chalmers University of Technology)

Göran Johansson (Chalmers University of Technology)

Kouichi Semba (National Institute of Information and Communications Technology)

Submission of Papers

Submission Deadline : September, 1 2019

Please see the conference website for details of the submission detail.

Organizing Committee

ISNTT 2019: A. Fujiwara, H. Yamaguchi, K. Muraki, H. Gotoh

BRL school: H. Okamoto, H. Yamaguchi

Program Committee

S. Saito (chair) , A. Fujiwara, H. Yamaguchi, K. Muraki, T. Tawara, K. Nishiguchi

Steering Committee

N. Kumada (chair), I. Mahboob (vice chair), H. Sumikura

Invited Speakers (Tentative)

(more speakers will be listed after confirmation)

[KEYNOTE] Klaus von Klitzing — Max Planck Institute

“T.B.A”

[KEYNOTE] Yasunobu Nakamura — RIKEN / The University of Tokyo

“T.B.A”

Dan Dalacu — National Research Council of Canada

"Nanowire-based quantum dots for quantum optics"

Ivan Favero — CNRS

“T.B.A”

Silvano De Franceschi — CEA-INAC

"Quantum horizon for silicon nanoelectronics"

Kazuhiko Hirakawa — The University of Tokyo

"Terahertz spectroscopy of electron-vibron coupling in single molecules by using nanogap electrodes"

Shahal Ilani — Weizmann Institute

"Imaging ballistic and hydrodynamic flow of electrons in graphene"

Vyacheslavs Kashcheyevs — University of Latvia

"Solitary electrons in semiconductor circuits"

Jevon Longdell — University of Otago

"Microwave to optical conversion using rare earth ions in the solid state"

Heiner Linke — Lund University

"Photothermoelectric energy conversion in nanowires"

Taiichi Otsuji — Tohoku University

"Physics and technology of graphene-based 2D heterostructures for current-injection terahertz lasers and amplifiers"

Serge Rosenblum — Weizmann Institute

"Fault-tolerant operations on a logical qubit"

Hoe Tan — Australian National University

"Semiconductor nanowires for optoelectronic and energy applications"

Laura Thevenard — Sorbonne Université

"Acoustic control of magnetization: from precession to switching"

Denis Vion — CEA Saclay

"Circuit-QED-enhanced Electron Spin Resonance"

Further Information

The symposium homepage will be periodically updated. Please, visit our web site at:

<http://www.brl.ntt.co.jp/event/isntt2019/>