November 13th, Monday

8th NTT-BRL School

10:00 - 10:30	Opening Remarks
10:30 - 10:45	Short Break
10:45 - 12:15	**Lecture 1**

The ABC's of Quantum Computation

Prof. Kae Nemoto

National Institute of Informatics (NII)

12:15 - 12:30	8th NTT-BRL School Photo
12:30 - 13:45	Lunch Time
13:45 - 15:15	**Lecture 2**

Hybrid Quantum Systems Using Collective Excitations in Solid

Prof. Yasunobu Nakamura

Research Center for Advanced Science and Technology (RCAST),

The University of Tokyo

15:15 - 15:45	Coffee Break
15:45 - 17:15	**Lecture 3**

Coherent Ising Machine for Solving Complex Optimization Problems

Dr. Hiroki Takesue

NTT Basic Research Laboratories

17:30 - 19:30	Welcome Reception

November 14th, Tuesday

ISNTT2017 Symposium

9:40 - 10:00 Opening Remarks

Session 1

10:00 - 11:00

Tu-01 : **Quantum Metrology with Schrödinger Cats**
(Keynote) S. Haroche
Laboratoire Kastler Brossel, Collège de France

11:00 - 11:30 Coffee Break

Session 2: Optmechanics

11:30 - 12:00

Tu-02 : **Extremely High Frequency Cavity Optomechanics**
(Invited) A. Fainstein
Comisión Nacional de Energia Atómica (CNEA),
Consejo Nacional de Investigaciones Cientificas y Técnicas (CONICET)

12:00 - 12:20

Tu-03 : **Toward a Phononic Crystal Nano-string with a Quality Factor of One Billion**
A. Ghadimi, S. Fedorov, N. J. Engelsen, M. Breyhi, R. Schilling, H. Shutz, D. J. Wilson, and T. J. Kippenberg
Ecole Polytechnique Federale de Lausanne (EPFL)

12:20 - 12:40

Tu-04 : **The Fully Quantized Dynamical Casimir Effect – Vacuum Casimir-Rabi Oscillations in Optomechanical Systems**
V. Macrì, A. Ridolfo, O. Di Stefano, A. F. Kockum, F. Nori, and S. Savasta
RIKEN

12:40 - 12:50 ISNTT2017 Symposium Photo

12:50 - 14:00 Lunch Time

Session 3: Quantum State Manipulation in Superconducting Systems

14:00 - 14:30
Tu-05 : **Quantum Engineering of Superconducting Qubits**
(Invited) W. D. Oliver
Massachusetts Institute of Technology

14:30 - 15:00
Tu-06 : **Towards Fault-tolerant Quantum Computing Using Superconducting Qubits**
(Invited) M. Takita
IBM

15:00 - 15:20
Tu-07 : **Tunable Quantum Gate Between a Superconducting Atom and a Propagating Microwave Photon**
K. Koshino, K. Inomata, Z. R. Lin, Y. Tokunaga, T. Yamamoto, and Y. Nakamura
College of Liberal Arts and Sciences, Tokyo Medical and Dental University

15:20 - 15:40
Tu-08 : **Quantum Non-demolition Detection of an Itinerant Microwave Photon Using an Entangling Gate with a Superconducting Qubit**
S. Kono, Y. Tabuchi, A. Noguchi, R. Yamazaki, K. Koshino, and Y. Nakamura
Research Center for Advanced Science and Technology (RCAST),
The University of Tokyo

15:40 - 16:10 Coffee Break

Session 4: Unconventional Superconducting Junctions

16:10 - 16:40
Tu-09 : **Majorana Modes in InAs/Al Two-dimensional Heterostructures**
(Invited) F. Nichele
University of Copenhagen

16:40 - 17:00
Tu-10 : **Tunable Josephson Junctions and Superconducting Quantum Interference in an Interfacial Superconductor**
A. M. R. V. L. Monteiro, D. J. Groenendijk, N. Manca, E. Mulazimoglu, S. Goswami, R. Wölbing, D. Koelle, R. Kleiner, Y. Blanter, L. M. K. Vandersypen, and A. D. Caviglia
Kavli Institute of Nanoscience

17:00 -17:20
Tu-11 : **Finite Supercurrent in Nb/(In, Fe)As/Nb Junctions**
T. Nakamura, L. D. Anh, Y. Hashimoto, S. Ohya, M. Tanaka, and S. Katsumoto
The University of Tokyo

17:20 - 17:40
Tu-12 : **Charge Quantum Interference Device**
R. Shaikhaidarov, S. E. de Graaf, S. T. Scacel, T. Höenigl-Decrinis, V. A. Antonov, E. V. Il'ichev, and O. V. Astafiev
Royal Holloway University of London

17:40 - 19:30 Poster Session I

November 15th, Wednesday

Session 5: Strongly Coupled Systems

9:00 - 9:30
We-01 : **Polaritons Beyond The Rotating Wave Approximation**
(Invited) J. Kono
Rice University

9:30 - 9:50
We-02 : **Probing the Dressed Structure of the Light-matter Ground State in the Ultra-strong Coupling Regime**
M. Cirio, N. Lambert, S. De Liberato, K. Debnath, and F. Nori
Riken

9:50 - 10:10
We-03 : **Twists of Qubit Energies in Deep-strongly-coupled Qubit-oscillator Circuits**
F. Yoshihara, T. Fuse, Z. Ao, S. Ashhab, K. Kakuyanagi, S. Saito, T. Aoki, and K. Semba
National Institute of Information and Communications Technology

10:10 - 10:30
We-04 : **A Coupling Between a Lamped Element Resonator and 4300 Superconducting Flux Qubits Ensemble**
K. Kakuyanagi, Y. Matsuzaki, C. Déprez, H. Toida, K. Semba, H. Yamaguchi, W. J. Munro, and S. Saito
NTT Basic Research Laboratories

10:30 - 11:00 Coffee Break

Session 6: Semiconductor-based Quantum Devices and Technologies

11:00 - 11:30
We-05 : **Strong-Coupling Silicon Charge and Spin Qubits to Microwave Photons**
(Invited) X. Mi
Princeton University

11:30 - 11:50
We-06 : **Long Spin Coherence of Acceptor Atoms in Mechanically Strained Silicon**
T. Kobayashi, J. van der Heijden, J. Salfi, C. Chua, M. G. House, B. C. Johnson, J. C. McCallum, H. Riemann, N. Abrosimov, P. Becker, H.-J. Pohl, M. Y. Simmons, and S. Rogge
University of New South Wales, Tohoku University

11:50 - 12:10
We-07 : **Multi-level Landau-Zener-Stückelberg-Majorana Transitions in a Silicon-based Single-electron Interferometer**
S. N. Shevchenko, A. Chatterjee, S. Barraud, R. Otxoa, F. Nori, J. J. L. Morton, and M. F. Gonzalez-Zalba
B. Verkin Institute for Low Temperature Physics and Engineering

12:10 - 12:30
We-08 : **Quantum Hall Stripes in Tilted Magnetic Fields**
M. A. Zudov, Q. Shi, Q. Qian, G. C. Gardner, J. D. Watson, and M. J. Manfra
University of Minnesota

12:30 - 14:00 Lunch Time

Session 7: Nanophotonics and Nano Structures

14:00 - 14:30
We-09 : **Quantum Processing with Phonons**
(Invited) B. Sussman
National Research Council Canada

14:30 - 14:50
We-10 : **Spontaneous Emission Enhanced by Purcell Effect in a Set of Optomechanical Cavities**
F. Tian, H. Sumikura, E. Kuramochi, M. Takiguchi, M. Ono, H. Taniyama, A. Shinya, and M. Notomi
NTT Basic Research Laboratories

14:50 - 15:10
We-11 : **Optoplasmonic Rolled-up-microtube Cavities**
Y. Yin and O. G. Schmidt
Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden)

15:10 - 15:40
We-12 : **Towards Nano Topological Photonics**
(Invited) X. Hu
National Institute for Materials Science

15:40 - 16:10 Coffee Break

16:10 - 16:30
We-13 : **Electric-field Switchable Second-harmonic Generation in Bilayer MoS_2 by Inversion Symmetry Breaking**
J. Klein, J. Wierzbowski, A. Steinhoff, M. Florian, M. Rösner, F. Heimbach, K. Müller, F. Jahnke, T. O. Wehling, J. J. Finley, and M. Kaniber
Walter Schottky Institut und Physik Department

16:30 - 16:50
We-14 : **Spatio-temporal Coherent Control of Light Transport in Disordered Materials**
M. Mounaix, S. Gigan
Laboratoire Kastler Brossel, ENS, CNRS, UPMC

16:50 - 17:10
We-15 : **Estimation of π- π Electronic Couplings from Current Measurements**
J.Trasobares, J. Rech, T. Jonckheere, T. Martin, O. Aleveque, E. Levillain, V. Diez-Cabanes, Y. Olivier, J. Cornil, J. P. Nys, R. Sivakumarasamy, K. Smaali, P. Leclere, A. Fujiwara, D. Theron, D. Vuillaume, and N. Clement
NTT Basic Research Laboratories

17:10 - 17:40
We-16 : **Challenges for Nanocar and Molecular Machine by nm-size Tip Approach and cm-level Hand Motion**
(Invited) K. Ariga
National Institute for Materials Science

17:40 - 19:30 Poster Session II

November 16th, Thursday

Session 8: Single-electron Devices and Physics

9:00 - 9:30

Th-01 : **Stochastic Thermodynamics in Superconducting and Hybrid Circuits**
(Invited) J. P. Pekola
Aalto University School of Science

9:30 - 10:00

Th-02 : **Shot Noise and Feedback in Single-electron Tunneling through Quantum Dots**
(Invited) R. J. Haug
University of Hannover

10:00 - 10:20

Th-03 : **Power Generation with Maxwell's Demon in a Silicon Nanodevice**
K. Chida, K. Nishiguchi, and A. Fujiwara
NTT Basic Research Laboratories

10:20 - 10:40

Th-04 : **Quench Dynamics in Superconducting Nanojuncions: Metastability and Dynamical Phase Transitions**
R. Souto, A. Martín-Rodero, and A. L. Yeyati
Autonomous university of Madrid

10:40 - 11:10 Coffee Break

Session 9: Spin-orbit Interactions and Spin Transport

11:10 - 11:30

Th-05 : **Drift-induced Enhancement of Cubic Dresselhaus Spin-orbit Interaction in Two-dimensional Electron Gas**
Y. Kunihashi, H. Sanada, Y. Tanaka, H. Gotoh, K. Onomitsu, K. Nakagawara, M. Kohda, J. Nitta, and T. Sogawa
NTT Basic Research Laboratories

11:30 - 11:50

Th-06 : **Anisotropy and Suppression of Spin-orbit Interaction in GaAs Double Quantum Dots**
A. Hofmann, V. F. Maisi, T. Krähenmann, C. Reichl, W. Wegscheider, K. Ensslin, and T. Ihn
ETH Zürich

11:50 - 12:10

Th-07 : **Detecting Non-local Spin Signal through Electron Interaction**
T. Shimizu, Y. Hashimoto, S. Sugumaran, A.Endo, T. Nakamura, and S. Katsumoto
The University of Tokyo

12:10 - 12:30

Th-08 : **Spin Hall Photoconductance and Ultrafast Helicity-dependent Currents in Topological Insulators**
P. Seifert, C. Kastl, K. Vaklinova, S. Ganichev, K. Kern, M. Burghard, and A. W. Holleitner
Walter Schottky Institut , TU Munich

12:30 - 12:50

Th-09 : **Observation of Full Spin-Orbit Polarization in a Band-Inverted InAs/InGaSb Composite Quantum Well at Zero Magnetic Field**
Y. Takahashi, H. Irie, T. Akiho, K. Onomitsu, and K. Muraki
NTT Basic Research Laboratories

12:50 - 14:00 Lunch Time

Session 10: Nanomechanics and Phononics

14:00 - 14:30
Th-10 : **Electro-mechanical Resonators Based on Graphene**
(Invited) A. Bachtold
The Institute of Photonic Sciences

14:30 - 15:00
Th-11 : **Broadband Nanomechanical Torque Magnetometry**
(Invited) J. E. Losby
University of Alberta

15:00 - 15:20
Th-12 : **Reorientation of Quantization Axis for Quantum Dot through High Variable Uniaxial Stress**
X.Yuan, F. Weihausen-Brinkmann, J. Martín-Sánchez, G. Piredda, V. Krapek, Y. Huo, H. Huang, O. G. Schmidt, J. Edlinger, G. Bester, R. Trotta, and A. Rastelli
Johannes Kepler University Linz, Institute of Semiconductor and Solid State Physics

15:20 - 15:40
Th-13 : **Coherent Coupling of Dark and Bright Excitons in a Mechanical Resonator**
R. Ohta, H. Okamoto, T. Tawara, H. Gotoh, and H. Yamaguchi
NTT Basic Research Laboratories

15:40 - 16:10 Coffee Break

16:10 - 16:30
Th-14 : **Spins and Mechanics in Diamond Quantum Systems**
D. Lee, K. Lee, J. Cady, and A. Jayich
Korea University

16:30 - 16:50
Th-15 : **Dissipation as a Resource for Quantum-limited Amplification and Nonreciprocal Devices in Superconducting Circuit Optomechanics**
L. D. Toth, N. R. Bernier, A. Nunnenkamp, A. K. Feofanov, and T. J. Kippenberg
Ecole Polytechnique Federale de Lausanne (EPFL)

16:50 - 17:20
Th-16 : **Double Quantum Dot Coupled with a Phonon Resonator**
(Invited) T. Fujisawa
Tokyo Institute of Technology

17:20 - 17:50
Th-17 : **Acoustic Control of Light and Matter on a Chip**
(Invited) H. J. Krenner
University of Augsburg

17:50 - 18:40 Bus Transfer

18:40 - 20:40 Banquet

November 17th, Friday

Session 11: Topological Phases and Phase Transitions in 2D Systems

9:00 - 9:30
Fr-01 : **Edge Conduction in Monolayer WTe_2**
(Invited) T. Palomaki
University of Washington

9:30 - 9:50
Fr-02 : **Electric-field Driven Topological Phase Transition in InAs/$In_xGa_{1-x}Sb$ Composite Quantum Wells**
H. Irie, T. Akiho, K. Suzuki, F. Couëdo, K. Onomitsu, and K. Muraki
NTT Basic Research Laboratories

9:50 - 10:10
Fr-03 : **First-order Phase Transition of Quantum Hall Skyrmions Observed by Photoluminescence Microscopy**
J. N. Moore, J. Hayakawa, H. Iwata, T. Mano, T. Noda, and G. Yusa
Tohoku University

10:10 - 10:40 Coffee Break

Session 12: Superconducting Hybrid Systems

10:40 - 11:10
Fr-04 : **Qubit-assisted Transduction for a Detection of Surface Acoustic Waves Near the Quantum Limit**
(Invited) A. Noguchi
The University of Tokyo

11:10 - 11:30
Fr-05 : **Efficient Unidirectional Transduction Between Electrical Microwaves and Surface Acoustic Waves and Routing of Propagating Microwave Phonons at the Quantum Level**
M. K. Ekström, T. Aref, J. Runeson, J. Björck, I. Boström, H. Sanada, G. Andersson, B. Suri, and P. Delsing
Chalmers University of Technology

11:30 - 11:50
Fr-06 : **Reducing 1/f Noise in Quantum Devices by Surface Spin Desorption**
S. E. de Graaf, L. Faoro, J. Burnett, A. Adamyan, A. Y. Tzalenchuk, S. E. Kubatkin, T. Lindstrom, and A. V. Danilov
National Physical Laboratory

11:50 - 12:10
Fr-07 : **Effects of Phonon-Bottleneck in Spin Relaxation of Er:YSO**
R. P. Budoyo, K. Kakuyanagi, H. Toida, Y. Matsuzaki, I. Mahboob, W. J. Munro, H. Yamaguchi, and S. Saito
NTT Basic Research Laboratories

12:10 - 12:40
Fr-08 : **Progress on Superconducting Multi-qubits System**
(Invited) X. Zhu
University of Science and Technology of China

12:40 - 12:50 Closing

Poster Session I (November 14th, Tuesday)

PTu01 : **Energy Detuning Control of a Superconducting Flux Qubit Using Microwave Irradiation**
H. Toida, T. Ohrai, Y. Matsuzaki, K. Kakuyanagi, H. Yamaguchi, and S. Saito
NTT Basic Research Labolatories

PTu02 : **Superconducting Flux Qubits Embedded in a 3D Cavity**
S. Saito, I. Mahboob, H. Toida, Y. Matsuzaki, K. Kakuyanagi, W. J. Munro, Y. Nakamura, and H. Yamaguchi
NTT Basic Research Labolatories

PTu03 : **Excitons in Capacitively Coupled Chains of Small Josephson Junctions**
H. Shimada, K. Matsudo, C. Ishida, H. Murai, and Y. Mizugaki
The University of Electo-Communications

PTu04 : **A 3D JPA**
I. Mahboob, H. Toida, K. Kakuyanagi, Y. Nakamura, and S. Saito
NTT Basic Research Labolatories

PTu05 : **Quantum Dynamics of a Josephson Junction-Driven Cavity Mode System in the Presence of Voltage Bias Noise**
H. Wang, M. P. Blencowe, A. D. Armour, and A. J. Rimberg
Dartmouth College

PTu06 : **Realization of a Nanowire Superinductance**
D. Niepce, J. Burnett, and J. Bylander
Chalmers University of Technology

PTu07 : **Coherent Emission of a Continuously Driven Three-level Artificial Atom**
I. Antonov, R. Shaikhaidarov, T. Honigl-Decrinis, V. N. Antonov, and O.V. Astafiev
Royal Holloway, University of London

PTu08 : **Coupling a Superconducting Qubit to Light Using Hybrid Qubit-Quantum Dot Nanostructures**
V. E. Elfving, S. Das, and A. S. Sørensen
University of Copenhagen

PTu09 : **Giant Lamb Shift Observed in Deep-strongly-coupled Superconducting Qubit-oscillator Circuit**
Z. Ao, F. Yoshihara, T. Fuse, S. Ashhab, K. Kakuyanagi, S. Saito, T. Aoki, and K. Semba
Waseda University

PTu10 : **Parity Symmetry and Selection Rules in a Qubit-Harmonic Oscillator Coupled System**
T. Fuse, F. Yoshihara, S. Ashhab, K. Kakuyanagi, S. Saito, and K. Semba
National Institute of Information and Communications Technology (NICT)

PTu11 : **Parity-preserving Light-matter System Mediates Effective Two-body Lnteractions**
T. H. Kyaw, S. Allende, L.-C. Kwek, and G. Romero
Centre for Quantum Technologies

PTu12 : **Superradiance with Local Phase-breaking Effects**
N. Shammah, N. Lambert, F. Nori, and S. De Liberato
RIKEN Center for Emergent Matter Science (CEMS)

PTu13 : **Non-Markovian Effect of Energy Flow**
R. Tezuka, and C. Uchiyama
University of Yamanashi

PTu14 : **Upper Bound on the Two-way Assisted Private Capacity of Various Quantum Channels**
K. Tsuji, and Y. Tokura
University of Tsukuba

PTu15 : **Two-way Quantum Computer**
A. Takemura, and Y. Tokura
University of Tsukuba

PTu16 : **Effects of Strong Atom-cavity Coupling on the Entanglement Dynamics of Two Atoms**
S. Kato, R. Suzuki, K. Yoshida, and Y. Tokura
University of Tsukuba

PTu17 : **Multi-mode Quantum Rabi Model and Superluminal Signalling**
C. S. Muñoz, F. Nori, and S. De Liberato
RIKEN Center for Emergent Matter Science (CEMS)

PTu18 : **State Preparation and Lifetime Measurements through Spectral Hole Burning in $^{167}Er^{3+}$:Y_2SiO_5**
M. I. Jspeert, M. Hiraishi, T. Tawara, K. Shimizu, H. Omi, S. Adachi, and H. Gotoh
NTT Basic Research Labolatories

PTu19 : **Cooperatively Coupled Motion with Superradiant and Subradiant Atoms**
K.-T. Lin, and G.-D. Lin
National Taiwan University

PTu20 : **Scalable Quantum Computing with an Ion Crystal Stabilized by Tweezers and Sympathetic Cooling**
Y.-C. Shen, and G.-D. Lin
National Taiwan University

PTu21 : **Atom Interferometry with the Sr Optical Clock Transition Inside an Optical Guide**
T. Takahashi, T. Akatsuka, and H. Katori
The University of Tokyo

PTu22 : **Efficient Single-Photon Coupling between an Optical Nanofiber and a Diamond Nanowire**
Y. Yonezu, K. Wakui, K. Furusawa, M. Takeoka, K. Semba, and T. Aoki
Waseda University

PTu23 : **Field and Temperature Dependent cavity Coupling for Highly Sensitive On-chip Spin Detection**
G. Franco, M. Martens, L. Chen, A. Zabalo, N. Dalal, and I. Chiorescu
Florida State University , The National High Magnetic Field Laboratory

PTu24 : **Non-unitary Transformation of the Square Root of Density Matrices**
K. Asai, and Y. Tokura
University of Tsukuba

PTu25 : **Spin Resonance beyond the Rotating Wave Approximations**
K. Yokohama, and Y. Tokura
University of Tsukuba

PTu26 : **Toward Coherent Feedback Control in Quantum Transport in Magnetic Field**
R. Suzuki, S. Kato, K. Yoshida, and Y. Tokura
University of Tsukuba

PTu27 : **Role of Density on Microwave Photoresistance in 2D Electron Gas**
X. Fu, M. D. Borisov, Q. Shi, Q. A. Ebner, M. A. Zudov, Q. Qian, J. D. Watson, and M. J. Manfra
University of Minnesota

PTu28 : **Fine Structure of Microwave-induced Resistance Oscillations**
Q. Shi, M. A. Zudov, I. A. Dmitriev, K. W. Baldwin, L. N. Pfeiffer, and K. W. West
University of Minnesota

PTu29 : **Dispersion Engineering of a PPLN Waveguide for the Generation of Spectrally-pure Photon Pairs**
A. Bergeot, T. Kashiwazaki, and N. Matsuda
NTT Basic Research Labolatories

PTu30 : **Shaped Microwave Pulses for Measuring Hybrid Quantum Devices**
A. Keyser, S. de Graaf, M. Oxborrow, and T. Lindström
National Physical Laboratory, Imperial College London

PTu31 : **Characterization of Low Loss Microstrip Resonators as a Building Block for Circuit QED in a 3D Waveguide**
D. Zoepfl, P. R. Muppalla, C. M. F. Schneider, S. Kasemann, S.Partel, and G. Kirchmair
University of Innsbruck

PTu32 : **Probing the Spectral Density of the Surface Electromagnetic Fields through Scattering of Waveguide Photons**
G.-Y. Chen
National Chung Hsing University

PTu33 : **Slow Microwave Propagation Guided by One-dimensional Left-handed Metamaterials**
Y.-H. Chang, V. C. Silalahi, and W. Kuo
National Chung Hsing University

PTu34 : **Optical Characterization of VLSI Graphene NEMS**
S. Houri, S. Cartamil-Bueno, P. G. Steeneken, and H. S. J. van der Zant
NTT Basic Research Labolatories

PTu35 : **Acoustically Modulated Single-photon Sources**
P. L. J. Helgers, K. Biermann, H. Sanada, Y. Kunihashi, and P. V. Santos
Paul-Drude-Institut für Festkörperelektronik

PTu36 : **Efficiency Bounds on Quantum Thermoelectric Heat Engine with Broken Time-reversal Symmetry: the Role of Inelastic Processes**
K. Yamamoto, O. Entin-Wohlman, A. Aharony, and N. Hatano
The University of Tokyo

PTu37 : **Evanescently-coupled Optomechanical Device with a GaAs Optical Disk- Mechanical Beam Structure**
M. Asano, R. Ohta, H. Okamoto, T. Tawara, H. Gotoh, and H. Yamaguchi
NTT Basic Research Labolatories

PTu38 : **Coarse-grain Molecular Dynamics Simulation of Vertical Lamellar Phase of Diblock Copolymer in a Thin Film**
T. Yamaguchi, H. Tanaka, N. Clement, and A. Fujiwara
NTT Basic Research Labolatories

PTu39 : **Theory of a Carbon-nanotube Polarization Switch**
K. Sasaki
NTT Basic Research Labolatories

PTu40 : **Structure-dependent Optical and Electrical Transport Properties of Ni-doped ZnO Nanorods by Spray Pyrolysis**
G. E. Patil and G. H. Jain
KKHA Arts, SMGL Commerce & SPHJ Science College

PTu41 : **Parity-dependent Shot Noise in a Superconductor-nanowire Quantum Dot**
K. Takase, Y. Ashikawa, G. Zhang, K. Tateno, Y. Okazaki, and S. Sasaki
NTT Basic Research Labolatories

PTu42 : **Giant Gate Control of Rashba Spin-orbit Interaction in a Gate-all-around InAs/InP Core-shell Nanowire**
K. Takase, D. Ibrahimagic, K. Tateno, and S. Sasaki
NTT Basic Research Labolatories

PTu43 : **Telecom-band Light Emitting Diodes Based on Bottom-up InAs/InP Heterostructure**
G. Zhang, M. Takiguchi, K. Tateno, T. Tawara, M. Notomi, and H. Gotoh
NTT Basic Research Labolatories

PTu44 : **Probing Photonic States in 1D Space using Quantum Wave Mixing**
T. Hoenigl-Decrinis, A. Yu. Dmitriev, R. Shaikhaidarov, V. N. Antonov, and O. Astafiev
Royal Holloway, University of London, National Physical Laboratory (NPL)

PTu45 : **Electrical Control of a Quantum Non-linearity in a Nano-photonic Waveguide**
D. Hallett, A. Foster, B. Royall, D. Hurst, P. Kok, E. Clarke, M. S. Skolnick, and L. R. Wilson
University of Sheffield

PTu46 : **Evaluation of 2*f*-to-3*f* Self-referencing Interferometer Using Dual-pitch PPLN Ridge Waveguides**
K. Hara, K. Hitachi, A. Ishizawa, T. Nishikawa, and H. Gotoh
NTT Basic Research Labolatories

PTu47 : **Valley-contrasting Eigenmodes in Photonic Crystals with Triangular Lattice**
T. Yoda, and M. Notomi
Tokyo Institute of Technology, NTT Basic Research Laboratories

PTu48 : **Integrated Optics in 3C Silicon Carbide**
F. Martini, and A. Politi
University of Southampton

PTu49 : **$CsPbBr_3$-perovskite Nanowire-induced Nanocavities in SiN Photonic Crystals**
S. Sergent, M. Takiguchi, T. Tsuchizawa, J. Chen, Y. Fu, H. Taniyama, E. Kuramochi, S. Jin, and M. Notomi
NTT Basic Research Labolatories

Poster Session II (November 15th, Wednesday)

PWe01 : Spin Diffusion Dynamics Under Spin-orbit Magnetic Field in Undoped GaAs Quantum Wells
H. Sanada, Y. Kunihashi, Y. Tanaka, H. Gotoh, K. Onomitsu, M. Kohda, J. Nitta, and T. Sogawa
NTT Basic Research Labolatories

PWe02 : Spin Chain Applications for Quantum Information Processing
M. P. Estarellas, I. D'Amico, and T. P. Spiller
York Center for Quantum Technologies

PWe03 : Geometric Phase Switching in Circular and Polygonal Mesoscopic Rings
H. Saarikoski, A. Reynoso, D. Frustaglia, J.-P. Baltanás, M. Kohda, and J. Nitta
RIKEN Center for Emergent Matter Science (CEMS)

PWe04 : Diffusion-suppressed Drift-spin Dynamics in GaAs Quantum Wells
Y. Tanaka, Y. Kunihashi, H. Sanada, H. Gotoh, K. Onomitsu, M. Kohda, J. Nitta, and T. Sogawa
NTT Basic Research Labolatories

PWe05 : In-plane Spin-filtering with Rashba-Dresselhaus Interaction
Y. Hashimoto, X. Yao, Y. Iwasaki, T. Nakamura, and S. Katsumoto
Institute for Solid State Physics, The University of Tokyo

PWe06 : Evaluation of Spin Orbit Interaction by Weak Anti-localization Measurement in Copper Nitride System
R. Enoki, H. Gamou, S. Karube, M. Kohda, Y. Kunihashi, H. Sanada, and J. Nitta
Tohoku University

PWe07 : Spin-current Induced Mechanical Torque in a Chiral Molecular Junction
N. Sasao, H. Okada, and Y. Utsumi
Mie University

PWe08 : Spin-orbit Semimetal $SrIrO_3$ in the Two-dimensional Limit
D. J. Groenendijk, C. Autieri, J. Girovsky, M. C. Martinez-Velarte, N. Manca, G. Mattoni, A. M. R. V. L. Monteiro, N. Gauquelin, J. Verbeeck, A. F. Otte, M. Gabay, S. Picozzi, and A. D. Caviglia
Delft University of Technology

PWe09 : Strain-induced Dirac State Shift in Topological Insulator Bi_2Se_3 Nanowires
C. Schindler, C. Wiegand, J. Sichau, L. Tiemann, K. Nielsch, R. Zierold, and R. Blick
University of Hamburg

PWe10 : Disorder-induced Dephasing in Backscattering-free Quantum Transport
C. Gneiting and F. Nori
RIKEN Center for Emergent Matter Science (CEMS)

PWe11 : Probing Helicity and the Topological Origins of Helicity Via Non-local Hanbury-Brown and Twiss Correlations
A. Mani and C. Benjamin
National Institute of Science Education & Research (NISER)

PWe12 : Topological Classification of Single-wall Carbon Nanotubes
R. Okuyama, W. Izumida, and M. Eto
Keio University

PWe13 : Conduction Impedance Effects in Atomically Thin Materials
N. J. Townsend, I. Amit, T. J. Octon, J. D. Mehew, F. Reale, C. Mattevi, C. D. Wright, M. F. Craciun, and S. Russo
University of Exeter

PWe14 : Electronic Properties of Laser-Patterned 2H/1T' Interface in Exfoliated Multilayer $MoTe_2$
K. Sakanashi, K. Kamiya, H. Ouchi, T. Yamanaka, P. Krueger, K. Miyamoto, T. Omatsu, J. P. Bird, and N. Aoki
Chiba University

PWe15 : **Influence of Metal Contacts on Metal-insulator Transition in Molybdenum Disulfide Field Effect Transistors**
T. Iwabuchi, K. Arai, and Y. Shimazu
Yokohama National University

PWe16 : **A Simulation of Two-Dimensional Crystal Heterostructure Solar Cells Quantum Efficiency**
P. Pashaei, G. Allegretto, and P. Servati
Quantum Matter Institute (QMI), University of British Columbia

PWe17 : **Enhanced Optical Activity of Atomically Thin $MoSe_2$ Proximal to Nanoscale Plasmonic Slot-waveguides**
M. Blauth, G. Mélen, M. Prechtl, O. Hartwig, J. Harms, M. Kaniber, and J. J. Finley
Walter Schottky Institut

PWe18 : **Engineering Coherent Color Centers in Two Dimensional Materials**
H. Songyan, M. D. Birowosuto, U. Saleem, T. H. T. Edwin, and W. Hong
Nanyang Technological University

PWe19 : **Ultrafast All Optical Modulation in Graphene-loaded Plasmonic Waveguides**
M. Hata, M. Ono, H. Sumikura, K. Nozaki, E. Kuramochi, and M. Notomi
Tokyo Institute of Technology, NTT Basic Research Labolatories

PWe20 : **Excitation Power Dependence of Nonequilibrium Carrier Relaxation Dynamics in Graphene**
Y. Hasegawa, K. Oguri, K. Kato, T. Nishikawa, and H. Gotoh
NTT Basic Research Labolatories

PWe21 : **Modulating Plasmons in Graphene by Substrate Modification**
M. Takamura, N. Kumada, S. Wang, and K. Kumakura
NTT Basic Research Labolatories

PWe22 : **Effects of Interaction on Charge Fractionalization in Tomonaga-Luttinger Liquids**
P. Brasseur, N. H. Tu, Y. Sekine, K. Muraki, M. Hashisaka, T. Fujisawa, and N. Kumada
NTT Basic Research Labolatories

PWe23 : **Evolution of Graphene Alignment on Recrystallizing Polycrystalline Cu-foil for Chemical Vapor Deposition Growth**
Y. Ogawa, S, Suzuki, H, Hibino, and K, Kumakura
NTT Basic Research Labolatories

PWe24 : **SIMPLE – Single Ion Multispecies Positioning at Low Energy – A Single Ion Implanter for Quantum Technologies**
N. Cassidy, R. Webb, R. Curry, P. Blenkinsopp, I. Brown, T. Adams, B. Murdin, L. Antwis, and D. Cox
University of Surrey

PWe25 : **Effects of Strain and Electric Filed on Single Erbium Ions in Silicon Nano-transistors**
G. Hu, Q. Zhang, G. G. de Boo, M. Rancic, B. C. Johnson, J. C. McCallum, J. Du, M. J. Sellars, C. Yin, and S. Rogge
University of New South Wales

PWe26 : **Mechanism of Single-electron Pumping via a Single-trap Level in Silicon**
G. Yamahata, S. P. Giblin, M. Kataoka, T. Karasawa, and A. Fujiwara
NTT Basic Research Labolatories

PWe27 : **Dependence of Threshold Voltages on Temperature Observed in Random Arrays of Au Nanoparticles**
M. Moriya, M. Moribayashi, K. Matsumoto, H. T. T. Tran, H. Shimada, Y. Kimura, A. Hirano-Iwata, and Y. Mizugaki
The University of Electro-Communications

PWe28 : **Fluctuations of Information Content and the Local Particle Number Superselection in a Quantum Conductor**
Y. Utsumi
Mie University

PWe29 : **Enhancement of the Impact Ionization Rate in Direct Gap Semiconductors Driving the Fast I-MOS Nanotransistors**
A. N. Afanasiev, A. A. Greshnov, and G. G Zegrya
Ioffe Institute

PWe30 : **High Fidelity Readout and Error Correction of Single Electron Pump**
H. Tanaka, G. Yamahata, and A. Fujiwara
NTT Basic Research Labolatories

PWe31 : **Quantum Interference and Single Electron Transport in CVD Graphene Nanoribbon**
J.-H. Chen, Y.-L. Zhong, L.-J. Li, and C.-D. Chen
Chung Yuan Christian University

PWe32 : **Gate-based Dispersive Readout of a Classical-quantum CMOS Single-electron Memory Cell**
S. Schaal, S. Barraud, J. J. L. Morton, and M. F. Gonzalez-Zalba
Hitachi Cambridge Laboratory

PWe33 : **Landau-Zener-Stückelberg Interference in a Charge Qubit of a One-electron Double Quantum Dot**
T. Ota, K. Hitachi, and K. Muraki
NTT Basic Research Labolatories

PWe34 : **Tuning Hole Spin Physics in InAs Quantum Dot Molecules**
A. Lin, M. Doty, and G. Bryant
University of Maryland, NIST

PWe35 : **In-plane Nuclear Field Formation in Individual InAlAs Quantum Dots: Role of Nuclear Quadrupole Effects**
S. Yamamoto, R. Matsusaki, R. Kaji, and S. Adachi
Hokkaido University

PWe36 : **Evaluations of the Electron g-factor Anisotropy and Fluctuation of the Overhauser Field in Single Quantum Dots**
R. Matsusaki, S. Yamamoto, R. Kaji, and S. Adachi
Hokkaido University

PWe37 : **Electrical Transport in Low Dimensional Systems Fabricated in a (110) GaAs Quantum Well**
T. Nakagawa, R. Fukai, Y. Sakai, H. Kiyama, J. Ritzmann, A. Ludwig, A. D. Wieck, and A. Oiwa
Osaka University

PWe38 : **Electrical Properties of Quinoidal Dipyranylidene Derivative and its Use as a Hole Transport Layer in Perovskite Solar Cells**
M. Courté, S. Chao, and D. Fichou
Nanyang Technological University

PWe39 : **Ferroelectricity and Leakage Current Behavior Investigation for $HfZrO_4$ Film with Al_2O_3 Interlayers**
P. C. Han, C. H. Wu, and E. Y. Chang
National Chiao Tung University

PWe40 : **Transport Properties of Spray Deposited Lead Telluride Films**
A. B. Gite, V. B. Gaikwad, S. R. Jadkar, G. H. Jain, and H. M. Pathan
SNJB KKHA Arts, SMGL Comm and SPHJ Sci College chandwad Nashik

PWe41 : **Fluctuation of Exergy Efficiency in Quantum Transport**
H. Okada, and Y. Utsumi
Mie University

PWe42 : **Study of Single Electron Wavepacket Propagation in Quantum Hall Edge States High Above the Fermi Energy**
N. Johnson, J. D. Fletcher, C. Emary, S. Ryu, H.-S. Sim, P. See, J. P. Griffiths, G. A. C. Jones, I. Farrer, D. A. Ritchie, M. Pepper, T. J. B. M. Janssen, and M. Kataoka
NTT Basic Research Labolatories

PWe43 : **Effect of Gate Voltage Sweep on Integer Quantum Hall Transport Properties of InAs Quantum Wells**

T. Akiho, H. Irie, K. Onomitsu, and K. Muraki
NTT Basic Research Labolatories

PWe44 : **Excess Conductance in Quantum Hall Edge Transport Driven by Andreev Reflection**

M. Onizaki, Y. Hashimoto, T. Nakamura, and S. Katsumoto
The University of Tokyo

PWe45 : **Detection Limitation of Resistively-detected NMR (RD-NMR) in Quantum Point Contact (QPC)**

A. Noorhidayati, M. H. Fauzi, M. F. Sahdan, S. Maeda, K. Sato, K. Nagase, and Y. Hirayama
Tohoku University

PWe46 : **Nonlinear Quantum Transport in MgZnO/ZnO Heterostructures**

Q. Shi, J. Falson, M. A. Zudov, Y Kozuka, A. Tsukazaki, M. Kawasaki, K. von Klitzing, and J. Smet
University of Minnesota

PWe47 : **Hall Field-induced Resistance Oscillations in a Tunable-density Wide GaAs/AlGaAs Quantum Well**

M. A. Zudov, I. A. Dmitriev, B. Friess, Q. Shi, V. Umansky, K. von Klitzing, and J. Smet
University of Minnesota

PWe48 : **A Double-gate Delay Line for Edge Magneto Plasmons**

C. J. Lin, M. Hashisaka, K. Muraki, and T. Fujisawa
Tokyo Institute of Technology

PWe49 : **Effects of Two-Dimensional Electron System on the Coupling between Edge Channels on Opposite Sides of a Hall Bar**

N. H. Tu, Y. Sekine, K. Muraki, M. Hashisaka, T. Fujisawa, and N. Kumada
NTT Basic Research Labolatories

PWe50 : **Shot-noise Signature of Quantum Many-body Correlation in a Non-equilibrium Regime of a Microscopic Integer Quantum Hall State**

M. Hashisaka, K. Muraki, and T. Fujisawa
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