November 30, Monday

11th NTT-BRL School

9:30 - 10:10	**Opening + Introduction of BRL**

10:10 - 11:20	**Lecture 1**

Fundamental Processes in Classical and Quantum Harmonic Oscillators

Dr. Hiroshi Yamaguchi (Fellow)

Basic Research Laboratories, NTT, Inc.

11:20 - 12:30	**Lunch**

12:30 - 13:40	**Lecture 2**

Quantum Technologies with Superconducting Circuits

Dr. Shiro Saito (Senior Distinguished Researcher)

Basic Research Laboratories, NTT, Inc.

13:40 - 13:50	**School Photo**
13:50 - 14:10	**Coffee Break**
14:10 - 16:30	**Student Laboratory Tour**
16:30 - 16:50	**Break**
16:50 - 17:30	**Transfer**
17:30 - 18:30	**Sake Brewery Tour**
18:30 - 19:30	**Transfer**
19:30 - 21:30	**Student Networking Reception**

December 1, Tuesday

ISNTT2026 Symposium

9:00 - 9:20	**Symposium Opening**

Opening Keynote

9:20 - 10:40

1Tu-01 : **Artificial Intelligence, Computing, and Learning in the Quantum Domain**

(Keynote) H. J. Briegel

University of Innsbruck

10:40 - 11:10	**Coffee Break**

Session 1 : Theory for Quantum Computing and Communication

11:10 - 11:40

1Tu-02 : **Fault-Tolerant Quantum Computation in Optical Systems under General Noise**

(Invited) T. Matsuura

RIKEN

11:40 - 12:00

1Tu-03 : **High-Rate and Resource-Efficient All-Photonic Quantum Repeater Architectures with 9 km Repeater Spacing**

R. Shiina, K. Goodenough, N. Arnold, F. Rozpędek

University of Massachusetts

12:00 - 12:20

1Tu-04 : **Near-Optimal Embedding of Quantum Circuits into Graph States**

K. Takemura, T. Yoshida, F. Yoshihara, Y. Takeuchi

Tokyo University of Science

12:20 - 12:40

1Tu-05 : **Digital Construction of Shortcuts to Adiabaticity**

T. Hatomura

Basic Research Laboratories, NTT, Inc.

12:40 - 13:50	**Lunch**

Session 2 : Quantum Complexity: From Many-Body Physics to Quantum Computing

13:50 - 14:20

1Tu-06 : **Advantage of Hybrid Continuous-Discrete-Variable Quantum Computing**

(Invited) Y. Liu

North Carolina State University

14:20 - 14:40

1Tu-07 : **Stabilizer Statistical Mechanics: A Framework for Efficient Quantification and Classification of Magic States**

W. E. Salazar, G. Saxena, J. S. Baker, L. C. Kwek, T. H. Kyaw

LG Electronics Toronto AI Lab / National University of Singapore

14:40 - 15:00

1Tu-08 : **Semiclassical Phase-space Dynamics of Emitter Ensembles with Local Dissipation**

L. Ruks

Basic Research Laboratories, NTT, Inc.

15:00 - 15:20

1Tu-09 : **Fragment Embedding Techniques for Electronic Structure Simulations on Quantum Computers**

M. Cho, T. V. Voorhis

Massachusetts Institute of Technology

15:20 - 15:50 **Coffee Break**

Session 3 : Optical Computation

15:50 - 16:20

1Tu-10 : **Integrated Photonic Multigrid Solvers for Partial Differential Equations**

(Invited) W. Pernice

University of Heidelberg

16:20 - 16:40

1Tu-11 : **Combinatorial Optimization with Excitability Learning in a 2000-node Photonic Spiking Neural Network**

T. Inagaki, K. Inaba, Y. Yamada, T. Honjo, T. Ikuta, Y. Yonezu, T. Kazama, K. Enbutsu, T. Umeki, K. Aihara, H. Takesue

Basic Research Laboratories, NTT, Inc.

16:40 - 17:00

1Tu-12 : **Adding Noise and Scaling Forces Speeds Up Thermodynamic Computation**

P. Basak, J. Bechhoefer, S. Whitelam

Simon Fraser University

17:00 - 17:20

1Tu-13 : **Fault-tolerant Modular Quantum Computing with Surface Codes Using Single-Shot Emission-Based Hardware**

S. Singh, R. Kashiwagi, K. Tanji, W. Roga, D. Bhatti, M. Takeoka, D. Elkouss
Okinawa Institute of Science and Technology

17:20 - 19:20 Poster Session I

December 2, Wednesday

Morning Tutorial

9:00 - 10:20

2We-01 : **Taking a LEAP in Quantum Simulation with Superconducting Processors**

(Invited) P. Roushan

Google Quantum AI

10:20 - 10:50 **Coffee Break**

Session 4 : Superconducting Quantum Circuits 1

10:50 - 11:20

2We-02 : **Superconducting Qubit Interconnects**

(Invited) J. M. Fink

Institute of Science and Technology Austria

11:20 - 11:40

2We-03 : **Aharonov-Casher Effect in the Charge Quantum Interference Device**

I. Antonov, R. Shaikhaidarov, V. N. Antonov, E. Il'ichev

Royal Holloway University of London

11:40 - 12:00

2We-04 : **Towards a Voltage-Tunable Parametric Quantum Amplifier Using Quantum Phase-Slip Nanowires**

K. Jansepar, H. Chew, V. Sridharbabu, F. Johnson, J. Williams, P. A. Warburton

University College London / London Centre for Nanotechnology

12:00 - 12:30

2We-05 : **Electrons on Helium and Neon for Quantum Information: From Collective Excitations to Single-Electron Qubits**

(Invited) E. Kawakami

RIKEN

12:30 - 13:50 **Lunch**

Session 5 : Superconducting Quantum Circuits 2

13:50 - 14:20

2We-06 : **Millisecond Lifetimes and Coherence Times in Transmon Qubits**

(Invited) M. P. Bland

Princeton University

14:20 - 14:40

2We-07 : **Noise Spectroscopy of All-Nitride Transmon Qubit Using CPMG Dynamical Decoupling and Spin Locking Techniques**

T. Fuse, S. Kim, S. Ashhab, K. Semba, S. Shirai, A. Noguchi, H. Terai

National Institute of Information and Communications Technology

14:40 - 15:00

2We-08 : **Interferometric Readout of Two Superconducting Qubits with Frequency-Degenerate Resonators**

J. Ilves, S. Kono, A. F. van Loo, T. Miyamura, Z. Wang, K. Matsuura, H. Mukai, Y. Nakamura

The University of Tokyo

15:00 - 15:20

2We-09 : **A Few Recent Results on Superconducting Qubits: (1) One Photon Simultaneously Exciting Two Qubits; (2) Strong Coupling Between a Single Photon and a Two-Photon Fock State; and (3) Thouless Pumping**

F. Nori

RIKEN

15:20 - 15:50 **Coffee Break**

Session 6 : Quantum Communication

15:50 - 16:20

2We-10 : **Building a Long-Distance Quantum Repeater Network Using Atomic Quantum Interconnects**

(Invited) E. Figueroa

Stony Brook University

16:20 - 16:40

2We-11 : **Quantum Networking with Tin-Vacancy Centres in Diamond**

N. A. G. Timmerman, N. Mulholland, W. G. Roth, D. A. Gangloff, B. Machielse, M. Bhaskar, M. Atatüre

University of Cambridge

16:40 - 17:00

2We-12 : **A New Method for Protecting Heralded Single Photons in Hot-Atom Biphoton Generation**

W.-K. Huang, T.-Y. Lin, P.-Y. Tu, Y.-F. Chen, I. A. Yu

National Tsing Hua University

17:00 - 17:20

2We-13 : **Polarization Compensation on an Inter-City Fiber Link for Quantum Key Distribution**

S. Naik, G. Sauer, V. Z. Perez, P. Paul, T. Goebel, F. Steinlechner

Fraunhofer Institute for Applied Optics and Precision Engineering / Friedrich Schiller University

17:20 - 19:20 Poster Session II

December 3, Thursday

Morning Tutorial

9:00 - 10:20

3Th-01 : **Emergent Quantum Phenomena in Graphene**

(Invited) L. Ju

Massachusetts Institute of Technology

10:20 - 10:50 **Coffee Break**

Session 7 : Quantum Transport

10:50 - 11:20

3Th-02 : **Supercurrent in a Quantum Hall Interferometer**

(Invited) G. Finkelstein

Duke University

11:20 - 11:40

3Th-03 : **Quantum Transport in Germanium Devices**

S. Cender, Y. Gul, Y. Xie, S. N. Holmes, M. Myronov, M. Pepper

University College London

11:40 - 12:00

3Th-04 : **Controlled Partial Intercalation of Epitaxial Graphene: A Platform for Normal-Superconductor Junctions**

D. Höllmann, M. Bothe, S. Wundrack, N. Mousavi-Savadkouhi, J. C. Bayer, V. Labracherie, K. Pierz, A. Bakin, R. Stosch, H. W. Schumacher, T. M. Tschirner

Physikalisch-Technische Bundesanstalt

12:00 - 12:20

3Th-05 : **Measurement of Zeptoampere Current by Bidirectional Counting of Single Electrons**

T. Mulqueen, J. Eastoe, P. See, J. T. Nicholls, J. D. Aldous, D. A. Ritchie, J. R. A. Dann, J. P. Griffiths, G. A. C. Jones, and M. Kataoka

National Physical Laboratory / University of London

12:20 - 12:40 **Symposium Photo**

12:40 - 13:50 **Lunch**

Session 8 : Ultrafast Terahertz Science on a Chip

13:50 - 14:20

3Th-06 : **Integrated Photonics for Next-Generation Terahertz and Millimeter Wave Classical and Quantum Applications**

(Invited) I.-C. Benea-Chelmus

École Polytechnique Fédérale de Lausanne (EPFL)

14:20 - 14:40

3Th-07 : **Quantum Nanoelectronics at THz Frequencies**

G. Georgiou

University of Glasgow

14:40 - 15:00

3Th-08 : **On-Chip THz Pump-Probe Spectroscopy Revealing Ultrafast-Current-Induced Dynamics of Superconducting Nb Microstrip**

F. Sekiguchi, D. Yoshioka, N. Yoshikawa, R. Shimano

The University of Tokyo

15:00 - 15:20

3Th-09 : **Superdiffusive Sub-Picosecond Hot-Carrier Extraction in Black Phosphorus**

K. Yoshioka, T. Wakamura, T. Okamoto, N. Kumada

Basic Research Laboratories, NTT, Inc.

15:20 - 15:50 **Coffee Break**

Session 9 : Spintronics and Spin-Related Phenomena

15:50 - 16:20

3Th-10 : **Electrical Generation and Control of Spin Transport in Heterostructures with 2D Channels**

(Invited) M. Ciorga

Wrocław University of Science and Technology

16:20 - 16:40

3Th-11 : **Dynamics of Current-Induced Switching in the Quantum Anomalous Hall Effect**

A. Rupp, D. Rosenbach, T. Röper, D. Hoborka, A. Taskin, Y. Ando, E. Bocquillon

University of Cologne

16:40 - 17:00

3Th-12 : **Surface-Acoustic-Wave Probing of Temperature-Dependent Magnetic Dynamics in CrSBr**

G. Park, M. Kim

Sogang University

17:00 - 17:20

3Th-13 : **Integrating High-Spin Donors with MOS Quantum Dots in Silicon**

B. Wilhelm, J. Zingel, S. Kruskic, M. J. Carballido, R. Y. Su, E. Flurin, M. C. Berrington, M. Nurizzo, A. Vaartjes, M. van Blankenstein, S. Q. Lim, A. M. Jakob, F. E. Hudson, K. M. Itoh, A. S. Dzurak, D. N. Jamieson, D. Holmes, A. Morello

University of New South Wales, Sydney /

ARC Centre of Excellence for Quantum Computer Performance and Integration (QPI)

17:20 - 18:00	**Transfer**

18:00 - 20:00	**Banquet**

December 4, Friday

Morning Tutorial

9:00 - 10:20

4Fr-01 : **Attosecond Quantum Optics**

(Invited) M. Ivanov

Max Born Institute

10:20 - 10:50 **Coffee Break**

Session 10 : Attosecond and Lightwave Driven Quantum Phenomena

10:50 - 11:20

4Fr-02 : **Attosecond Coherent Electron Dynamics in Doped Semiconductors**

(Invited) M. Lucchini

Politecnico di Milano / Institute for Photonics and Nanotechnologies (IFN), National Research Council (CNR)

11:20 - 11:40

4Fr-03 : **32-Fold Compression of a Microjoule Yb:YAG Laser to 11.4 fs for Ultrafast Quantum Optics**

D. Lim, A. M. Côté, R. Vicencio, S. Sederberg

Simon Fraser University

11:40 - 12:00

4Fr-04 : **High-Harmonic Generation in Finite-Size Graphene Nanoflakes**

A. Hashmi, S. Li, K. Yabana, K. L. Ishikawa

The University of Tokyo

12:00 - 12:20

4Fr-05 : **Observation of Floquet-Induced Berry Phase**

Z. Shen, H. Ning, H. Xia, S. Chaudhary, A. de las Heras Muñoz, S. V. B. Jensen, D. Shin, T. Oka, A. Rubio, N. Gedik

Massachusetts Institute of Technology

12:20 - 13:40 **Lunch**

Session 11 : Emergent Phenomena and Nonlinear Responses in Quantum Materials

13:40 - 14:10

4Fr-06 : **Superconducting Quantum Nonlinearities**

(Invited) J. C. W. Song

Nanyang Technological University Singapore

14:10 - 14:30

4Fr-07 : **Terahertz Magneto-Photogalvanics of Correlated Ground States in Magic-Angle Twisted Bilayer Graphene**

A. L. Shilov, M. Kravtsov, L. Elesin, S. Ganichev, D. A. Bandurin

National University of Singapore

14:30 - 14:50

4Fr-08 : **Negative Differential Conductance Due to Extreme Band Filling in Ionically Gated TiS_3 Nanowires**

M. D. Randle, A. Kumar, A. Datta, A. Lipatov, T. Paudel, U. Singisetti, A. Sinitskii, P. A. Dowben, J. P. Bird

University at Buffalo / Chiba University

14:50 - 15:10

4Fr-09 : **Exciton-Phonon Coupling in Moire Heterobilayers**

C. Uzundal, W. Kim, S. Louie, F. Wang

University of California / Physics & Informatics (PHI) Lab, NTT Research, Inc.

15:10 - 15:30	**Closing**

15:30 - 15:50	**Break**

15:50 - 16:30	**School Closing**

Poster Session I (December 1, Tuesday)

PTu-01 : Nanoscale Study of Ag/Cu Filament Formation in α-Si Memristors

A. Samsonova, V. Dremov, O. Klimenko, N. Brilliantov, V. N. Antonov

Skolkovo Institute of Science and Technology

PTu-02 : Two-Dimensional $MoSe_2$ Schottky-Barrier Transistors for On-Chip Thermal Sensing

D. Tua, V. Labuntsov, O. D. Shaibu, L. N. Holtzman, A. Mundaganur, S. Mundaganur, K. Barmak, P. Prasad, V. Perebeinos, N. Aoki, J. P. Bird

University at Buffalo

PTu-03 : Oscillation of Non-Local Voltage in the Valley-Hall Regime of a Bilayer MoS_2-Hall Bar

Y. Nakamura, Y. Nakayama, T. Kobayashi, D. K. Ferry, J. P. Bird, N. Aoki

Chiba University

PTu-04 : Temperature-Induced Flux-Offset Variation in a Superconducting Flux Qubit

H. Toida, S. Saito, K. Kakuyanagi

Basic Research Laboratories, NTT, Inc.

PTu-06 : Tailoring Entangled Coherent States for Schrödinger Cat-State Teleportation

A. M. Datta, W. J. Munro, N. L. Piparo, K. Nemoto

Okinawa Institute of Science and Technology Graduate University

PTu-09 : Optical and System Technologies Toward Multipartite Quantum Communication Using Three-Photon Time-Bin Entanglement

H.-P. Lo, T. Ikuta, Y. Yonezu, S. Murakami, T. Honjo, K. Azuma, H. Takesue

Basic Research Laboratories, NTT, Inc.

PTu-10 : Balancing Photon Indistinguishability and Generation Efficiency for Multipartite Time-Bin Quantum Systems

H.-P. Lo, H. Takesue

Basic Research Laboratories, NTT, Inc.

PTu-11 : Chirality Arising from Asymptotic Exceptional Points in Coupled Resonators Controlled by Local Perturbations

K. Yagi, T. Uemura, Y. Moritake, M. Notomi

Institute of Science Tokyo / Basic Research Laboratories, NTT, Inc.

PTu-12 : BIC Splitting and Chiral Singularity Control via Symmetry Breaking in Non-Hermitian Photonic Crystals

T. Suzuki, T. Harada, T. Uemura, T. Yoda, M. Ono, E. Kuramochi, Y. Moritake, M. Notomi

Institute of Science Tokyo / Basic Research Laboratories, NTT, Inc.

PTu-14 : Spectrum–Resolved Characterization of Detector Backflash for Quantum Communication

D. Trefilov, A. Marcomini, M. Pereira, G. Currás-Lorenzo, C. Pacher, M. Curty, M. Petrov

University of Vigo

PTu-15 : W-state Quantum Conference Key Agreement with Communication for Omniscience

S. Sun, D. Bhatti, K. Azuma, D. Elkouss

Okinawa Institute of Science and Technology Graduate University / LQUOM, Inc.

PTu-16 : Nonlocal Correlation-Direction Modulation of Two-Photon Frequency Wavefunctions

K. Taninaka, T. Kakue, K. Morita

Chiba University

PTu-17 : Phase Noise Characteristics of Fiber-Based Interferometer Using an Ultralow Noise Laser for Quantum Communication

T. Kashimura, Y. Shitaka, Y. Sugiyama, W. Kokuyama, K. Asakawa, D. Akamatsu, F.-L. Hong

Yokohama National University

PTu-18 : Search for Dark-State Polariton BEC---A Possible Platform for Quantum Simulations

M.-C. Xie, B. Kim, C.-J. Hsu, C.-T. Ho, S.-C. Wu, T.-J. Chen, I. A. Yu

National Tsing Hua University

PTu-19 : Graph Neural Networks on Quantum Computers: A Trainability and Classical Simulability Analysis

T. Iosif, P. S. Sebastian, T. G. Limbäck-Stokin, K. I. Lo, Y. Liao

University College London / London Centre for Nanotechnology

PTu-20 : The Geometric Phase as a Diagnostic for Driven-Dissipative Oscillators

Z. Sun, Y. Shen, H. Ding, Y. Zhan, and L.-C. Kwek

National University of Singapore

PTu-21 : Quantum Simulation of Continuous-Time Quantum-Walk Centrality in Network Representations of Proteins

S. I. Mohtashim, M. Sajjan, S. Kais

North Carolina State University

PTu-22 : Two-Sided Bounds on Entanglement Growth in Quantum Circuits with Native Three-Qubit Gates

A. F. Valencia, W. E. Salazar, J. Madroñero

Universidad de los Andes

PTu-23 : Analytic Expression for the Full Counting Statistics of a Quantum Point Contact over Complementary Temperature Regimes

T. Chikashige, Y. Utsumi

Mie University

PTu-24 : All-Nitride Superconducting Qubits with Energy Relaxation Times Exceeding 800 μs

S. Kim, H. Terai, T. Fuse, S. Ashhab, S. Shirai, A. Noguchi, K. Semba

National Institute of Information and Communications Technology (NICT)

PTu-26 : Shadow Masks for Molecular Beam Epitaxy of InAs Nanowires and In-Situ Josephson Junctions

C. Schäfer, L. Grosch, Y. Kutovyi, N. von den Driesch, T. Schäpers, A. Pawlis

Peter Grünberg Institute (PGI) / RWTH Aachen University

PTu-27 : Nonlinear Synchronization of Microwave Frequency Combs in a Superconducting Optomechanical Circuit

H. Jung, J. S. Seo, S. K. Kim, J. Cha

Korea Research Institute of Standards and Science /

Korea Advanced Institute of Science and Technology

PTu-28 : Absolute Mass Measurement of Solid Neon Films Using a Quartz Crystal Microbalance

I. Grytsenko, H. Chung, A. Jennings, J. Wang, Y. Tian, O. Rybalko, E. Kawakami

RIKEN

PTu-29 : Efficient Frequency Calibration of a Silicon Spin Qubit Quantum Processor

C. Selvadurai, E. Kelly, J. Finney, V. Ciriano-Tejel, K. Muir, G. A. Oakes, D. J. Ibberson, A. Carniol, S. Beyne, D. Wan, J. Jussot, S. Kubicek, K. DeGreve, D. F. Wise

Quantum Motion / University College London

PTu-31 : Cryogenic Characterization of a Dielectric Microwave Resonator Toward Strong Inductive Coupling with a Superconducting Flux Qubit

M. Uehara, Y. Kubo, T. Fuse, T. Nitta, H. Ito, T. Kubo, F. Yoshihara

Tokyo University of Science

PTu-32 : Sweet-Spot-Protected Dynamically Decoupled √iSWAP Gate for Spin Qubits

J. S. Rojas-Arias

Basic Research Laboratories, NTT, Inc.

PTu-33 : Geometry-Engineered Atomic Mirrors in Waveguide QED

C.-Y. Lee, K.-T. Lin, G.-D. Lin, H. H. Jen

National Center for Theoretical Sciences

PTu-34 : Numerical Analysis of Two-Level-System Inference from Multimode Frequency Fluctuations

M. Chazono, K. Kakuyanagi

Basic Research Laboratories, NTT, Inc.

PTu-35 : Dependence of the Critical Current on Junction Number and Spacing in Josephson Junction Arrays

S. Kobayashi, A. Hirade, T. Lindemann, S. Gronin, G. Gardner, M. Manfra, S. Tarucha, S. Ikegaya, S. Matsuo

Institute of Science Tokyo / RIKEN Center for Emergent Matter Science

PTu-36 : Hall-Effect Determination of the Density of States for Two-Dimensional Quantum Devices

C. Bae, S. Kim, K. Watanabe, T. Taniguchi, M. Kim

Sogang University

PTu-37 : Evidence for Suppressed Thermalization in a Dynamic Quantum Dot

N. Johnson, G. Yamahata, A. Fujiwara

Basic Research Laboratories, NTT, Inc.

PTu-41 : Epitaxial Growth and Characterization of Superconducting Vanadium / III-V Semiconductor Heterostructures

K. Iwakura, R. Wakasa, T. Hotta, H. Maki, M. Tanaka, L. D. Anh

The University of Tokyo

PTu-42 : Gate-Tunable Kondo Effect at the Interface of an InAs/Fe-Doped Ferromagnetic Semiconductor (Ga,Fe)Sb Heterostructure

E. Shibata, H. Hara, M. Tanaka, L. D. Anh

The University of Tokyo

PTu-44 : Cumulative Effects in 100 kHz-Class High-Repetition-Rate High Harmonic Generation

H. Yamada, K. Nagai, T. Okamoto, Y. Shinohara, I. Katayama, J. Takeda, H. Sanada, K. Oguri

Basic Research Laboratories, NTT, Inc. / Yokohama National University

PTu-45 : Nonlinear Optical Spin-Orbit Conversion Enhanced by Longitudinal Fields in an Epsilon-Near-Zero Material

K. Nagai, T. Okamoto, T. Inaba, Y. Shinohara, H. Sanada, K. Oguri

Basic Research Laboratories, NTT, Inc.

PTu-46 : Photoinduced Structural Dynamics of Semiconductor-to-Superionic Phase Transition in Cu_2S

K. En-ya, G. Privault, K. Sano, S. Ohmura, A. Arbouet, M. Sakamoto, M. Hada

University of Tsukuba

PTu-47 : Development of T-Shaped Gates and On-Chip Capacitors for Cryogenic THz Applications

Y. Liu, G. Georgiou

University of Glasgow

PTu-48 : Density Functional Theory Study of Atomic and Electronic Structures of the Permalloy/hBN Interface

N. Matsumoto, M. Uemoto, T. Ono

Kobe University

PTu-49 : Sub-Picosecond Observation of THz-Driven Lattice Dynamics and Interlayer Shear Motion in 2H-$MoTe_2$

H. Taira, F. Kato, K. En-ya, G. Privault, N. Yamamoto, T. Kaneko, Y. Mori, T. Fukuda, S. Koshihara, A. Arbouet, Y. Arashida, M. Hada

University of Tsukuba

PTu-50 : Instrumentation and Application of THz-STM for Ultrafast Dynamics in 2D Materials

S. Yoshida, Y. Arashida, H. Mogi, O. Takeuchi, H. Shigekawa

University of Tsukuba

PTu-51 : Controlling Proximity Coupling in Al/InAs Hybrid Structures Using InGaAsSb Barriers

A. Bera, H. Irie, T. Akiho, Y. Nakazawa, N. Kumada, K. Muraki

Basic Research Laboratories, NTT, Inc.

PTu-52 : Coherent Transfer of a Geometric Phase from Light Polarization to Electron Spin

M. Tai, Y. Miyashita, T. Kakue, S. Iba, K. Morita

Chiba University

PTu-53 : Growth and Quantum Anomalous Hall Transport in V-doped $(Bi,Sb)_2Te_3$/ZnTe Heterostructures

Y. Nakazawa, T. Akiho, K. Kanisawa, H. Irie, F. Fischer, N. Kumada, K. Muraki

Basic Research Laboratories, NTT, Inc.

PTu-55 : Alloy Engineering of Chiral-Anomaly Transport Signatures into a Group-IV Semiconductor

M. D. Randle, O. Concepcion, P. Zellekens, P. Kaul, M. C. Crawford, A. Devaiya, K. Ishibashi, D. Grützmacher, N. Kumada, D. Buca

Basic Research Laboratories, NTT, Inc.

PTu-56 : Signatures of Helical and Spinless Tomonaga-Luttinger Liquids in Electrostatically Defined Topological Mass Domain Walls

K. Muraki, T. Akiho, N. Kumada, H. Irie

Basic Research Laboratories, NTT, Inc.

PTu-57 : Excitonic Recombination Waves in Monolayer WSe_2 via Transient Electroluminescence

R. Chiesa, F. Tagarelli, A. Toral-Lopez, K. Watanabe, T. Taniguchi, G. Fiori, A. Kis

École Polytechnique Fédérale de Lausanne (EPFL)

PTu-58 : High-Harmonic Generation from Silicon Nanoclusters

S. Li, A. Hashmi, M. Uemoto, K. Yabana, K. L. Ishikawa

The University of Tokyo

PTu-59 : Continuous Cold Atom Generation without a Zeeman Slower for Field-Deployable Optical Lattice Clocks

H. Kawabata, R. Takeuchi, K. Nishida, A. Tanaka, S. Okaba, S. Tsuji, H. Katori

The University of Tokyo / RIKEN

PTu-60 : Nuclear-Isomer-Selective Laser Spectroscopy of Sympathetically Cooled $^{229}Th^{3+}$

K. Okamura, Y. Nakada, A. Yamaguchi, Y. Shigekawa, H. Haba, H. Kikunaga, K. Shirasaki, M. Wada, H. Katori

The University of Tokyo / RIKEN

PTu-61 : Demonstration of 50-km Optical Frequency Transfer Using an Optically Derived RF Reference

K. Nishiyama, T. Akatsuka, M. Nakagawa, K. Koshiji, H. Imai, K. Hitachi, N. Ohmae, T. Seki, H. Sanada, R. Hayashi, K. Oguri

Network Service Systems Labs., NTT, Inc.

PTu-63 : Direct Visible-to-Telecom Frequency Transfer in a Single-Branch Er:Fiber Comb Using a Dual-Pitch PPLN Waveguide

K. Hitachi, H. Imai, K. Nishiyama, M. Nakagawa, T. Akatsuka, H. Sanada, K. Oguri

Basic Research Laboratories, NTT, Inc.

PTu-64 : High-Intensity Multi-Terahertz Bicircular Pulse Generation for Symmetry-Selective Control of Solids

K. Ogawa, N. Kanda, Y. Murotani, H. Kuramochi, N. Ishii, R. Matsunaga

The University of Tokyo

PTu-65 : Ultrafast Shift-Current Dynamics in GaAs Revealed by On-Chip Terahertz Spectroscopy

T. Fujimoto, K. Yoshioka, T. Akiho, S. Chatterjee, N. Kumada

Basic Research Laboratories, NTT, Inc.

PTu-66 : Optically Tunable EUV Beam Splitter

R. Yoshioka, Y. Yokoyama, H. Mashiko, M. Hatayama, S. Ichimaru

NTT Advanced Technology Corporation

PTu-67 : High-Power Two-Stage Multi-Plate Spectral Broadening and Compression of an Azimuthally Polarized Femtosecond Pulse

Y. Liu, Y.-C. Lin, D. Dong, Y. Nabekawa, E. J. Takahashi

RIKEN

PTu-68：Atomic-Scale Ultrafast Dynamics by Lightwave-Driven Scanning Tunneling Microscopy Using Mid-Infrared Pulses

Y. Arashida, Y. Kondo, H. Mogi, O. Takeuchi, S. Yoshida, H. Shigekawa

University of Tsukuba

PTu-69：574-km-Long Optical Fiber Link with Ultralow-Noise Optical Repeaters for Networking Distant Optical Lattice Clocks

T. Akatsuka, H. Imai, M. Takamoto, I. Ushijima, H. Sanada, T. Hashimoto, H. Katori, K. Oguri

Basic Research Laboratories, NTT, Inc.

PTu-70：Carrier-Envelope-Phase-Stable Sub-10-fs Intense Pulse Sources with 47-W Average Power at MHz Repetition Rate

T. Okamoto, K. Hitachi, H. Sanada, K. Oguri

Basic Research Laboratories, NTT, Inc.

Poster Session II (December 2, Wednesday)

PWe-01 : Contact-Induced Band Engineering in Suspended Graphene Photodetectors with Heterogeneous Au/Al Electrodes

C. Yang, Y. Yang, Y. Zhang

Tokyo University of Agriculture and Technology

PWe-02 : The Simplest Approach to Josephson Junction Fabrication.....Ever!

I. Mahboob, S. Sasaki, T. Takenaka

Basic Research Laboratories, NTT, Inc.

PWe-03 : Observation of the Bulk Photovoltaic Effect in Electronic Ferroelectric $LuFe_2O_4$

A. Sugisawa, K. Aoyagi, H. Yu, X. Wang, T. Ishikawa, T. Nagata, Y. Yano, G. Park, N. Ikeda, Y. Okimoto

Institute of Science Tokyo

PWe-04 : Heat Transport in a Coulomb-Coupled Double Quantum Dot System

M. Nakajima, Y. Tokura

Japan Women's University

PWe-05 : Monolayer MoS2 Exfoliation Using Patterned Gold Template Stripping

C. Magee, D. Sekine, G. Mariani, J. Ishihara, M. Suzuki-Sakamaki, K. Matsuyama, H. Sanada, M. Kohda

Tohoku University / Basic Research Laboratories, NTT, Inc.

PWe-06 : Improved Uniformity of Al/AlOx/Al Josephson Junctions for Large-Scale Superconducting Quantum Circuits

K. Kakuyanagi, N. Teran, H. Toida, S. Saito

Basic Research Laboratories, NTT, Inc.

PWe-07 : Zero-Bias Photon-Assisted Transport through a Centrosymmetric Quantum Dot with Asymmetric Tunnel Barriers

Y. Tokura, K. Kuroyama

Japan Women's University

PWe-08 : Symmetry-Projected Quantum State Preparation for SU(2)

K. J. Joven, J. Burkat, V. M. Bastidas, M.-A. Filip, N. Fitzpatrick, Y. Liu

North Carolina State University

PWe-09 : Towards Measurement Device Independent and Twin-Field QKD on Real-World Optical Links

P. Paul, S. Cocchi, C. Spiess, F. Steinlechner

Friedrich Schiller University / Fraunhofer Institute for Applied Optics and Precision Engineering

PWe-10 : Tomographic Evaluation of Quantum Teleportation under Physical Noise

S. Yoshino, Y. Tokura

Japan Women's University

PWe-12 : Modelling and Dynamics of an All-Optical Mirrorless Amplifier in EIT Systems

C.-A. Bai, W.-L. Chen, K.-W. Shih, W.-T. Liao

National Central University

PWe-13 : Study of Nonlinear Optical Response in Silicon Nanowires Based on First-Principles Calculations

S. Okada, S. Li, K. L. Ishikawa, M. Uemoto

Kobe University

PWe-14 : Data-Driven Optimization of the Synchrony Timescale for Partial Synchrony Detection

Y. Yamada, K. Sakai, T. Inagaki, K. Inaba

Basic Research Laboratories, NTT, Inc. /

NTT Research Center for Theoretical Quantum Information

PWe-15 : Scalable Multipath Phase Stabilization for Programmable Photonic Interferometers

M. Leyendecker, C. A. S. Gutierrez, M. Dhinwa, V. R. Kaipalath, O. Kohout,

L. J. G. M. Del Campo, F. Steinlechner

Abbe Center of Photonics /

Fraunhofer Institute for Applied Optics and Precision Engineering IOF

PWe-16 : Distributing Graph States with a Photon-Weaving Quantum Server

D. Bhatti, K. Goodenough

Okinawa Institute of Science and Technology Graduate University

PWe-17 : Engineering Mode Overlap and Quantifying Indistinguishability Between SPDC and a Pulsed Laser for Photonic Quantum Computing and Sensing

N. J. Shankarappa, G. Sauer, V. R. Kaipalath, C. Sevilla-Gutiérrez, F. Steinlechner

University of Jena / Fraunhofer Institute for Applied Optics and Precision Engineering IOF

PWe-18 : Optical Coupling Between Si Waveguide and Erbium Ions by Heterogeneous Bonding Towards On-Chip Integrated Photonic Quantum Repeaters

M. Hiraishi, X. Xu, S. Yasui, T. Inaba, H. Sanada

Basic Research Laboratories, NTT, Inc.

PWe-19 : Inverse Design of Quantum Resource Theories

Y. Nakayama, H. Arai

NTT Communication Science Laboratories, NTT, Inc.

PWe-20 : Physical Bottlenecks to Fast Quantum Control Under Finite Resources

I-Y. Hsiao, Y. Teranishi

National Center for Theoretical Sciences

PWe-21 : Deep Thermalization in Photonic Circuits with Fock States

N. T. W. Koo, L. C. Kwek, T. Haug

National University of Singapore

PWe-22 : Evaluation of Variational Quantum Linear Solver for Transport Property Calculations

K. Yamauchi, M. Uemoto, T. Ono

Kobe University

PWe-23 : GQIS: A GPU Quantum Interferometry Solver

O. V. Ivakhnenko, S. N. Shevchenko, F. Nori

B. Verkin Institute for Low Temperature Physics and Engineering / RIKEN

PWe-24 : Fast Master-Equation Simulations of the Measurement-Induced State Transitions in Inductively-Shunted Transmons

I. Iakoupov, W. J. Munro

Okinawa Institute of Science and Technology Graduate University

PWe-25 : Synchronization of Bloch Oscillations in Array of Parallel Josephson Junctions

R. Shaikhaidarov, R. Hussain, V. N. Antonov, E. Il'ichev

Royal Holloway, University of London

PWe-26 : A Three-Dimensional Superconducting Niobium Cavity as a Quantum Bus for Rydberg-Atom Qubits

M. B. Shem, M. J. H. Kendall, J. D. Breeze

University College London

PWe-27 : Nonlinear Nanomechanics of Monolayer Amorphous Carbon Resonators

L. Jasulaneca, A. Martín-Pérez, H. Zhang, P. Munireternam, N. A. Mamchik, C.-T. Toh, A. K. Grebenko, B. Oezyilmaz, M. Šiškins, F. Alijani

University of Latvia

PWe-28 : Toward Spin Qubits on Solid Neon with Local Micromagnets

Y. Tian, J. Wang, I. Grytsenko, A. Jennings, X. Zhou, H. Terai, D. Jin, E. Kawakami

RIKEN

PWe-29 : Development of a Compact Single-Beam Optically Pumped Magnetometer Based on Absorption Detection

J.-Y. Liou, Y.-H. Chen, H.-A. Chuang, C.-H. Huang, Z.-H. Liu, I-C. Tsai, Y.-H. Chen

National Sun Yat-Sen University

PWe-30 : Observation of Solid Ne Surface for a Qubit Platform Using Low-Temperature Atomic Force Microscopy

Y. Yasui, Y. Sugimoto

The University of Tokyo

PWe-31 : Fabrication and Yield Analysis of Niobium-Nitride Nanowires for Applications in Quantum Phase Slip Devices

V. Sridharbabu, K. Jansepar, H. Chew, F. Johnson, P. A. Warburton

University College London / London Centre for Nanotechnology

PWe-33 : Quantum-Enhanced Sensing in a Driven-Dissipative System via Chiral Waveguide

Y. X. Foo, S. Sarkar, L. C. Kwek, A. Bayat, D. Aghamalyan

Nanyang Technological University / National University of Singapore

PWe-34 : Hall Viscosity in Fractional Chern Insulators

D. Nawa, R. Sano

The University of Tokyo

PWe-35 : From Edge to Bulk: Long-Range Electrostatic and Dynamical Responses in the Quantum Hall Regime

K. Sasaki, Y. Jeong, G. Yusa

Basic Research Laboratories, NTT, Inc.

PWe-36 : Enhanced Edge Superconductivity in a Topological Superconductor Candidate T_d-$MoTe_2$

T. Wakamura, M. Hashisaka, S. Okazaki, T. Sasagawa, T. Taniguchi, K. Watanabe, K. Muraki, N. Kumada

Basic Research Laboratories, NTT, Inc.

PWe-37 : Emergence of Non-Fermi Liquid Behavior and Wigner Crystal in Transition Metal Dichalcogenides

N. Ali, Z. Wang, T. Wakamura, T. Takeda, N. Kumada, M. S. Choi, W. J. Yoo

Basic Research Laboratories, NTT, Inc. / *Sungkyunkwan University*

PWe-38 : Real-Time Observation of Bixbyite Ordering in Er:Gd_2O_3 on Si(111) by RHEED

T. Inaba, X. Xu, H. Omi, T. Tawara, H. Yamamoto, H. Sanada

Basic Research Laboratories, NTT, Inc.

PWe-39 : Gold-Assisted Exfoliation and Transfer of Large-Area Transition Metal Dichalcogenides

T. Takeda, T. Wakamura, S. Chatterjee, G. Mariani, K. Yoshioka, T. Taniguchi, K. Watanabe, N. Kumada

Basic Research Laboratories, NTT, Inc.

PWe-40 : Characterization of Impact-Ionization Induced at a Point-Tunnel Junction on a Cleaved Semiconductor Surface Using a Single Donor Probe

K. Kanisawa

Basic Research Laboratories, NTT, Inc.

PWe-41 : Characterization of Composition-Dependent Physical Properties in a New Quaternary-Alloy Ferromagnetic Semiconductor (Ga,Al,Fe)Sb

L. Kondo, H. Hara, L. D. Anh, M. Tanaka

The University of Tokyo

PWe-43 : Geometric Scaling and Resonance Analysis of Helicity-Selective Terahertz Absorption in Twisted Carbon Nanotube Fibers

S. Hisano, S. Kusaba, K. Shiba, M. Á. L. Carrillo, S. Saito, R. Tamaki, J. Takeda, K. Yanagi, I. Katayama

Yokohama National University

PWe-44 : Real-Space Mapping of Photoinduced Polariton Dynamics in van der Waals Heterostructures

K. Kamada, K. Shinokita, F. Zeng, R. Kitaura, K. Watanabe, T. Taniguchi, A. Paarmann, M. Shibuta, T. Kumagai, J. Nishida

Osaka Metropolitan University / National Institutes of Natural Sciences

PWe-45 : Engineering Shallow Spin Defects in hBN Toward Nanoscale Quantum Sensing of van der Waals Materials

S. Ito, G. Mariani, K. Matsuyama, J. Noborisaka, G. Yamahata, T. Wakamura, T. Taniguchi, K. Watanabe, J. Nitta, T. Tawara, H. Sanada

Basic Research Laboratories, NTT, Inc. / Nihon University

PWe-46 : Resolving Dark Exciton Spectra in Suspended Monolayer WSe_2 under Magnetic Fields

K. Matsuyama, G. Mariani, T. Wakamura, S. Sasaki, M. Kohda, J. Nitta, H. Sanada

Basic Research Laboratories, NTT, Inc.

PWe-47 : Theoretical Simulation of 337 nm Air Lasing in Neutral Nitrogen Molecules Controlled by Transient Quenching and Seed Injection

C. Cheng, W.-T. Liao

National Central University

PWe-48 : Quantum Geometry of Shift Current Induced by Finite-Wave-Vector Light

K. Kitayama, M. Mochizuki

Waseda University

PWe-49 : Nanoscale Phase Change in $Cr_2Ge_2Te_6$ Induced by Terahertz Scanning Tunneling Microscope

D. Kim, M. Kawaji, R. Tamaki, S. Kusaba, Y. Wang, Y. Shuang, Y. Sutou, I. Katayama, J. Takeda

Yokohama National University

PWe-51 : Aharonov-Bohm Effect on Photocurrent through Quantum Dots

M. Umebayashi, A. Ueda, M. Eto

Keio University / National Institute of Advanced Industrial Science and Technology

PWe-52 : Valley Spin Polarization in MoS_2 Induced by Magnetic Exchange Interaction

A. Zielińska, L. Kipczak, Gayatri, M. Dyksik, A. Surrente, T. Taniguchi, K. Watanabe, P. Plochocka, A. Babiński, M. R. Molas, M. Ciorga

Wrocław University of Science and Technology

PWe-53 : Magnetic Proximity-Induced Valley Splitting and Spin Polarization in WSe_2

A. Zielińska, L. Kipczak, Gayatri, C. Mohanty, W. Ali, G. Brizolla, A. Surrente, M. Dyksik, T. Taniguchi, K. Watanabe, P. Plochocka, A. Babiński, J. Fabian, M. R. Molas, M. Ciorga

Wrocław University of Science and Technology

PWe-54 : Spin and Charge Pumping by a Periodically Driven Kitaev QSL

J. S. Gomez, B. K. Nikolić

University of Delaware / University of Victoria

PWe-55 : Growth of High-Mobility InAs Two-Dimensional Electron Systems on GaAs Substrates Using an Interfacial Misfit Buffer

T. Akiho, Y. Nakazawa, H. Irie, N. Kumada, K. Muraki

Basic Research Laboratories, NTT, Inc.

PWe-56 : Observation of a Robust Two-Dimensional Weyl Semimetal Phase Mediating a Topological Phase Transition

H. Irie, T. Akiho, N. Kumada, K. Muraki

Basic Research Laboratories, NTT, Inc.

PWe-57 : Investigation of the Population-Transfer Pathway in Er:Gd_2O_3 Thin Films on Si through Time-Resolved Photoluminescence

R. Urai, M. Hiraishi, T. Inaba, T. Tawara, X. Xu, H. Sanada

Basic Research Laboratories, NTT, Inc. / Nihon University

PWe-59 : Ultrashort Pulsed Electrons Directly Observing the Electromagnetic Near Field

F. Kato, H. Taira, G. Privault, T. Kaneko, R. Nagao, N. Yamamoto, Y. Mori, S. Koshihara, Y. Arashida, A. Arbouet, M. Hada

University of Tsukuba

PWe-60 : Even-Order Harmonics of Floquet-Massive Graphene in Time-Resolved High-Harmonic Generation

Y. Choi, G. Bae, J. D. Lee

Daegu Gyeongbuk Institute of Science and Technology

PWe-61 : Recovery of the Grüneisen Relation in Nonequilibrium Laser-Excited Solids

M. Tani, T. Otobe

National Institutes for Quantum Science and Technology

PWe-62 : Complex-Gate All-Optical Frequency-Resolved Optical Gating for Ultrabroadband Isolated Attosecond Pulse Characterization

M. Xia, K. Nishimiya, E. J. Takahashi

RIKEN

PWe-63 : Phase-Noise-Compensated Unidirectional Optical Amplification for Frequency Transfer with an Auxiliary Bidirectional Path

M. Nakagawa, K. Nishiyama, H. Imai, T. Akatsuka, K. Hitachi, K. Koshiji, K. Oguri, T. Seki

Network Service Systems Labs., NTT, Inc.

PWe-64 : Development of a Compact Laser-Cooling System for Field-Deployable Optical Lattice Clocks

I. Tokiwai, H. Kawabata, S. Okaba, S. Tsuji, H. Katori

The University of Tokyo / RIKEN

PWe-65 : Real-Time First-Principles Calculations of Orbital Angular Momentum Transfer from an Optical Vortex to a Two-Dimensional Material Flake

S. Yamada, T. Otobe

National Institutes for Quantum Science and Technology (QST)

PWe-66 : Photocurrent Dynamics in van der Waals Materials with Broken Crystal Symmetry

S. Chatterjee, K. Yoshioka, T. Takeda, T. Fujimoto, T. Wakamura, V. Perebeinos, N. Kumada

Basic Research Laboratories, NTT, Inc.

PWe-67 : One-Cycle Pulse Generation at 4-μJ Energy via Hybrid Postcompression

K. Asaga, W.-C. Wu, S.-Y. Hsiao, S. Bhuvanesh, H.-H. Wang, S.-H. Chia, M.-C. Chen

National Tsing Hua University

PWe-68 : Towards the Assembly of Ultracold Triatomic Molecules of YbCaF

C. Darling, S. Haswell, B. Fox, H. G. Sewell, L. Caldwell

University College London

PWe-69 : Quantum Dynamics of Matter Driven by Bright Quantum Light

S. Imai

The University of Tokyo

PWe-70 : Epitaxial Growth of Superconducting HfN(111) Thin Films on $ScAlMgO_4$(0001) Substrates

Y. Tanaka, Y. Krockenberger, H. Sanada, J. Nitta, Y. Kunihashi

Basic Research Laboratories, NTT, Inc.