NNCI2005 Program

January 30, Sunday

18:00-21:00 Welcome Party at "Royal Park Hotel"

January 31st, Monday

9:30-9:50 Opening Remarks

9:50-11:00 Superconductor Q-bits

9:50-10:30

Mo-1 J. E. Mooij (Invited); *Delft University of Technology*
Title to be confirmed

10:30-11:00

Mo-2 J. S. Tsai (Invited); *NEC Fundamental and Environmental Research Laboratories, The Institute of Physical and Chemical Research, Frontier Research System*
"Recent progresses in Josephson junction qubits"

11:00-11:30 Coffee Break (30 min.)

11:30-12:50 Nanoprobes

11:30-12:00

Mo-3 Shuji Hasegawa (Invited); *Department of Physics, University of Tokyo*
"**Electrical Conduction through Atomic/Nano Wires on Silicon"**

12:00-12:20

Mo-4 M. Nagase[1], K. Nakamatsu[2,3], S. Matsui[2,3], H. Namatsu[1]; *[1]NTT Basic Research Labs., NTT Corp., [2]Univ. of Hyogo, Graduate School of Science, LASTI, [3]CREST, JST*
"Carbon multi-probes with nano-springs on a Si cantilever grown by ionbeam-induced deposition"

12:20-12:40

Mo-5 Takashi Tokizaki[1, 2], Teppei Onuki1, Hiroshi Yokoyama[1, 2]; *[1]Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), [2]SORST*
"Microscopic observation of magneto-photoluminescence from two-dimensional electron gas systems"

12:40-13:40 Lunch (60 min.)

13:40-15:00 Mesoscopic and Spin Phenomena I

13:40-14:10

Mo-6 Yasuhiro Iye, Akira Endo, Masaaki Ueki, Masanori Kato, Shingo Katsumoto (Invited); *Institute for Solid State Physics, University of Tokyo*
"Quantum Magnetotransport in Lateral Superlattices"

14:10-14:30

Mo-7 T. Hatano[1], M. Stopa[1], S. Tarucha[1, 2]; *[1]Tarucha Quantum Spin Information with Quantum Dots, ERATO/SORST, JST, [2]Department of Applied Physics, Univ. of Tokyo*
"Tunnel and exchange couplings in laterally coupled double-dot system"

14:30-15:00

Mo-8 Y. Shimoyama (Invited); *Department of Physics, Hokkaido University of Education, CREST-JST*
"Development of Multi-Quantum Coherence Electron Spin Resonance Spectroscopy and Its Application to Nanoelectronics"

15:00-15:30 Coffee Break (30 min.)

15:30-17:00 Si-based Q-bits and Nanodevices

15:30-16:10

Mo-9 R.G. Clark (Invited); *The University of New South Wales*
"Progress towards the demonstration of single atom qubits in silicon"

16:10-16:30

Mo-10 Y. Ono[1], K. Nishiguchi[1], H. Inokawa[1], S. Horiguchi[2], Y. Takahashi[3]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]Department of Electrical and Electronic Engineering, Faculty of Engineering and Resource Science, Akita University, [3]Graduate School of Information Science and Technology, Hokkaido University*
"Room- and Low-Temperature Characteristics of Phosphorus-doped SOI MOSFET"

16:30-17:00

Mo-11 Neil M. Zimmerman[1], Akira Fujiwara[2], Yukinori Ono[2], Hiroshi Inokawa[2], Yasuo Takahashi[2], Emmanouel Hourdakis[1] (Invited); *[1]National Institute of Standards and Technology (NIST), [2]NTT Basic Research Laboratories, NTT Corporation*
"The Physics of Coulomb Blockade in Tunable-Barrier Si Wires"

17:00-19:00 Poster Session

PMo-1 T. Kawamura[1] H. Omi, S. Kimura[2], S. Takeda[2], M. Mizumaki[2]; *[1]NTT Basic Research Laboratories, [2]Japan Synchrotron Radiation Research Institute*
"Internal Strain of Multilayer Germanium Nanowires on Silicon (113) Substrates"

PMo-2 K. Tateno[1], H. Gotoh1, Y. Watanabe[2]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2] NTT Advanced Technology Corporation*
"Nanowires and Nanoholes on GaAs (311)B Substrates"

PMo-3 G. –H. Jeong[1], A. Yamazaki[2], D. Takagi[2], S. Suzuki[1], K. Furukawa[1], Y. Kobayashi[1], Y. Homma[2,3], K. Torimitsu[1]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]CREST, JST, co Dept. of Physics, Tokyo University of Science, [3]Dept. of Physics, Tokyo University of Science*
"Suspended Single-Walled Carbon Nanotube Growth and Their Hybridization using DNA and Gold Nanoparticles"

PMo-4 K. Yamazaki, H. Namatsu; *NTT Basic Research Labs. NTT Corporation*
"Three-Dimensional Nanofabrication (3D-NANO) Down to 10 nm Using Electron-Beam Lithography"

PMo-5 Takahito Inoue, Takashi Tokizaki, Hiroshi Yokoyama; *Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology, SORST-JST*
"Ultrafast electrical nanoprobing by heterodyne force-detected scanning Maxwell-stress microscopy"

PMo-6 K. Kanisawa[1], S. Perraud [1, 2], and Y. Hirayama[1, 3]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]Laboratoire de Photonique et de Nanostructures, CNRS, [3]SORST-JST*
"Local Density of States of InGaAs Nanostructures Characterized using Low-Temperature Scanning Tunneling Microscopy"

PMo-7 K. Suzuki[1], K. Kanisawa[1], M. Ueki[2], K. Takashina[1], Y. Hirayama[1,3]; *[1]NTT Basic Research Labs., NTT Corporation, [2]NEL TechnoSupport Corporation, [3]SORST-JST*
"Low-temperature scanning tunnel microscopy and spectroscopy studies of the cleaved surface of InAs/GaSb superlattices"

PMo-8 S. Perraud[1,2], K. Kanisawa[1], Z. Z. Wang[2], Y. Hirayama[1,3]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]Laboratoire de Photonique et de Nanostructures, CNRS, [3]SORST-JST*
"Observation of electron standing waves at the MBE-grown InGaAs/InP(111)A surface using LT-STM"

PMo-9 Zhaohui Zhang[1], Koji Sumitomo[2]; *[1]School of Physics and State Key Laboratory for Artificial Microstructure & Mesoscopic Physics, Peking University, [2]NTT Basic Research Laboratories, NTT Corporation*
"Boron Doping at Si(113) Surfaces and Related Surface Structures"

PMo-10 K. Ikushima[1], Y. Yoshimura[1], S. Komiyama[1], T. Ueda[1], K. Hirakawa[2]; *[1]Department of Basic Science, University of Tokyo, [2]Institute of Industrial Science, University of Tokyo*
"Photon-Counting Mode Operation of Terahertz Imaging Microscope Using Quantum Dot Detectors"

PMo-11 H. Kumano[1], S. Kimura[1], M. Endo[1], I. Suemune[1,3], H. Sasakura[3], S. Adachi[2,3], S. Muto[2,3], H. Z. Song[3,4], S. Hirose[5], T. Usuki[3,4]; *[1]RIES, Hokkaido University, [2]Department of Applied Physics, Hokkaido University, [3]JST CREST, [4]Fujitsu Ltd., [5]Fujitsu Labs Ltd.*
"Single photon emission from a single InAlAs Quantum dot"

PMo-12 K. Tsumura[1], S. Nomura[1,3], T. Akazaki[2,3], J. Nitta[2,3]; *[1]Institute of Physics, University of Tsukuba, [2]NTT Basic Research Laboratories, [3]CREST-JST*
"Infrared magneto-photoluminescence spectroscopy of an InAs-inserted-channel InGaAs/InAlAs heterostructure"

PMo-13 Y. Tokura[1], H. Nakano[1,2], K. Kanisawa[1]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]Department of Physics, Tokyo University of Science*
"Electronic structure of triangular quantum dots"

PMo-14 Kenji Miyakoshi[1,3], Hiroyuki Tamura[2,3], Hideaki Takayanagi[1,2,3]; *[1]Tokyo University of Science, [2]NTT Basic Research Laboratories, NTT Corporation, [3]CREST-JST*
"Hofstadter's butterfly energy band in quantum dot lattices"

PMo-15 Mikio Eto, Yoko Hada; *Faculty of Science and Technology, Keio University*
"Multivalley degeneracy and Kondo effect in Si quantum dots"

PMo-16 H. Aikawa, S. Katsumoto and Y. Iye; *Institute for Solid State Physics, University of Tokyo*
"Magnetic Flux Tuning of the Fano-Kondo Effect in an AB Ring - Quantum Dot Hybrid"

PMo-17 M. Sato, H. Aikawa, S. Katsumoto, Y. Iye; *Institute for Solid State Physics, University of Tokyo*
"Observation of the Fano-Kondo effect in a Quantum Wire with a Side-Coupled Quantum Dot"

PMo-18 Y.Igarashi[1], T.Ota[2], K.Ono[1], Y.Nakata[3], H.Z.Song[3], T.Miyazawa[3], T.Usuki[3], M.Takatsu[3], N.Yokoyama[3], S.Tarucha[1,2]; *[1]University of Tokyo, [2]ERATO-SORST, JST, [3]Fujitsu Laboratories Ltd.*
"Zeeman splitting and Hund's rule in strongly coupled InAs quantum dots"

PMo-19 H.W. Liu[1,2], T. Fujisawa[1,3], T. Hayashi[1], Y. Hirayama[1,2]; *[1]NTT Basic Research Laboratory, NTT Corporation, [2]SORST-JST, [3]Tokyo Institute of Technology*
"Singlet-Triplet Spin Blockade in the Cotunneling Regime through a Double Quantum Dot"

PMo-20 T. Yokoyama[1,2], Y. Tanaka, J. Inoue[1,2], A. A. Golubov[3], Y. Asano[4]; *[1]Department of Applied Physics, Nagoya University, [2]CREST Japan Science and Technology Cooperation (JST), [3]Faculty of Science and Technology, University of Twente, [4]Department of Applied Physics, Hokkaido University*
"Theory of charge transport in the normal metal / diffusive ferromagnet /superconductor junctions"

PMo-21 M. Hayashi[1,3], H. Ebisawa[1,3], M. Kato[2,3]; *[1]Graduate School of Information Sciences, Tohoku University, [2]Department of Mathematical Sciences, Osaka Prefecture University, [3]JST-CREST*
"Phase transition in nanoscopic superconducting network systems"

PMo-22 Akira Oguri[1], Yoshihide Tanaka[1],A. C. Hewson[2]; *[1]Department of Material Science, Osaka City University, [2]Department of Mathematics, Imperial College*
"NRG study of the Kondo effect in a Josephson junction"

PMo-23 Yu-xi Liu[1], Sahin Kaya Özdemir[2,3], Adam Miranowicz[2,4], and Nobuyuki Imoto[2,3,5]; *[1]Frontier Research System, The Institute of Physical and Chemical Research (RIKEN), [2]SORST Research Team for Interacting Carrier Electronics, [3]CREST Research Team for Photonic Quantum Information, Graduate School of Engineering Science, Osaka University, [4]Nonlinear Optics Division, Physics Institute, Adam Mickiewicz University, [5]NTT Basic Research Laboratories*
"A study on the effects of damping on qubits using Kraus Representation"

PMo-24 Junichi Shimamura[1], Şahin Kaya Özdemir[1], Fumiaki Morikoshi[2], Nobuyuki Imoto[1, 2]; *[1]SORST Research Team for Interacting Carrier Electronics, CREST Research Team for Photonic Quantum Information, Graduate School of Engineering Science, Osaka University, [2]NTT Basic Research Laboratories, NTT Corporation*
"The role of entanglement in quantum versions of classical games"

PMo-25 Tetsuya Mukai[1,3], Fujio Shimizu[1,2,3,4]; *[1]NTT Basic Research Laboratories, NTT corporation, [2]Institute for Laser Science, UEC, [3]CREST, Japanese Science and Technology Agency, [4]Coherent Optical Science, Univ. of Electro-Communications, 21st Century COE Program*
"Quantum computation with neutral atoms trapped in an optical super-lattice"

PMo-26 Hayato Nakano; *NTT Basic Research Laboratories, CREST, Japanese Science and Technology Agency*
"Block Diagrams for Quantum Dynamics"

PMo-27 Sergey Savel'ev[1], Xuedong Hu [1, 2], Franco Nori[1,3]; *[1]Frontier Research System, The Institute of Physical and Chemical Research (RIKEN), [2]Department of Physics, University at Buffalo, SUNY, [3]Center for Theoretical Physics, Department of Physics, University of Michigan*
"Quantum electromechanics: Qubits from buckling nanobars"

PMo-28 Tadashi Sakashita[1], Satoshi Nagai[1], Toshihiko Ono[1], Tomotaka Hoshino[1], Shinji Watanabe[1], Susumu Sasaki[1, 2,3], and Yoshiro Hirayama [2,4]; [1]*Graduate School of Science and Technology, Niigata University, [2]SORST-JST, [3]CREST-JST, [4]NTT Basic Research Laboratories*
"Nuclear-Spin Decoherence Pocess in GaAs and Si"

February 1st, Tuesday

9:10-11:00 Micro/nanomechanical Systems

9:10-9:40

Tu-1 Detlef Heitmann, M.P. Schwarz, M.A. Wilde, J.I. Springborn, Ch. Heyn and D. Grundler (Invited); *Institute of Applied Physics and Center of Microstructure Research, University of Hamburg*
"Magnetization of Electrons in GaAs and SiGe Quantum Wells, Quantum Dots and Antidot Arrays Measured with Micromechanical Cantilevers"

9:40-10:00

Tu-2 Hiroshi Yamaguchi,[1] Sen Miyashita,[2] and Yoshiro Hirayama[1,3]; *[1]NTT Basic Research Laboratories, NTT Corporation, Atsugi, 243-0198, Japan, [2]NTT Advanced Technology, Atsugi, 243-0198, Japan, [3]SORST-JST, 4-1-8 Kawaguchi, 331-0012, Japan*
"Piezoresistive micromechanical cantilevers using InAs/$Al_{0.5}Ga_{0.5}Sb$ two-dimensional electron systems"

10:00-10:30

Tu-3 M.D. LaHaye, O. Buu, B. Camarota, K.C. Schwab (Invited); *The University of Maryland, Laboratory for Physical Sciences*

"Nanomechanics Near the Quantum Limit"

10:30-11:00
Tu-4 R. Koch (Invited); *Paul-Drude-Institut für Festkörperelektronik*
"Strain Relief in Heteroepitaxy"

11:00-11:30 Coffee Break (30 min.)

11:30-12:40 Quantum Information Processing

11:30-12:00
Tu-5 Adam Miranowicz, Andrzej Grudka (Invited); *Faculty of Physics, Adam Mickiewicz University*
"Inconsistent orderings of two-qubit states with standard entanglement measures"

12:00-12:20
Tu-6 Şahin Kaya Özdemir[1], Masato Koashi[1], and Nobuyuki Imoto[1;2]; *[1]SORST Research Team for Interacting Carrier Electronics, CREST Research Team for Photonic Quantum Information, Graduate School of Engineering Science, Osaka University, [2]NTT Basic Research Laboratories*
"Watermarking of qubits"

12:20-12:40
Tu-7 Nobuyuki Imoto; *Osaka University, JST-SORST, JST-CREST, NTT Basic Research Laboratories*
"Development of photonic quantum-information-processing functions"

12:40-13:40 Lunch (60 min.)

13:40-15:50 Mesoscopic and Spin Phenomena II

13:40-14:10
Tu-8 Yutaka Majima (Invited); *Department of Physical Electronics, Tokyo Institute of Technology, SORST, Japan Science and Technology Agency*
"Control and Detection of Single Electron Motion in Double Barrier Tunneling Junction for Realization of Nanomechanical Single Electron Device"

14:10-14:30
Tu-9 P Kleinschmidt[1] , H Hashiba[2], S Giblin[1], A Tzalenchuk[1], S Komiyama[3,4], V Antonov[2]; *[1]National Physical Laboratory, [2]Physics Department, Royal Holloway University of London, [3]Department of Basic Science, University of Tokyo, [4]CREST. Japan Science and Technology Corporation (JST)*
"Sensitive Detector for a Passive Terahertz Imager"

14:30-15:00
Tu-10 C. Marcus (Invited); *Harvard, U.S.*
Title to be confirmed

15:00-15:30
Tu-11 M. Kroutvar, D. Heiss, H. Krenner, E. Clarke, M. Bichler, G. Abstreiter, J. J. Finley

(Invited); *Walter Schottky Institut, Technische Universität München*
"Long Electron Spin Lifetime and Exciton-Exciton Coupling in Quantum Dot Nanostructures"

15:30-15:50
Tu-12 S. Tarucha[1,2] and Y. Nishi[1]; *[1]Dep. of Applied Physics, Univ. of Tokyo, [2]ERATO/SORST, JST,*
"**Spin Blockade in Quantum Dots by Many-body Effect"**

16:00- Bus transfer to Banquet Site

17:30-20:00 Banquet at "Gotemba Beer Brewery"

February 2nd, Wednesday

9:10-10:40 Nuclear Spin and Related Phenomena

9:10-9:40
We-1 Dale Li, Anatoly Dementyev, Kenneth MacLean, Yanqun Dong, Rona Ramos, and Sean Barrett (Invited); *Department of Physics, Yale University*
"Coherence beyond "T2": Surprises in the NMR of Silicon"

9:40-10:00
We-2 Y. Hirayama[1,2], G. Yusa[1], N. Kumada[1], K. Hashimoto[1], and K. Muraki[1]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]SORST-JST*
"Electronic and nuclear spin interactions in semiconductor systems"

10:00-10:20
We-3 Tadashi Sakashita[1], Satoshi Nagai1, Toshihiko Ono[1], Tomotaka Hoshino1, Shinji Watanabe[1], Susumu Sasaki[1, 2,3], Yoshiro Hirayama [2,4]; *[1]Graduate School of Science and Technology, [2]Solution-Oriented Research Science and Technology, Japan Science and Technology Agency, [3]Core Research for Evolutional Science and Technology, Japan Science and Technology Agency, [4]NTT Basic Research Laboratories*
"NMR Observation of Anomalous Behavior in Bulk and Modulation-Doped GaAs"

10:20-10:40
We-4 K. Ono[1, 3], A. Takahashi[1], Y. Nishi[1], Y. Hirayama[2, 3], S. Tarucha[1,4]; *[1]Department of Applied Physics, University of Tokyo, [2]NTT Basic Research Laboratories, [3]SORST, [4]ERATO-SORST*
"Coherent manipulation of quadrupoler nuclei in GaAs quantum dots"

10:40-12:40 Poster Session

PWe-1 Y. Takagaki, J. Herfort, and K. H. Ploog; *Paul Drude Institute for Solid State Electronics*
"Anomalous high-temperature suppression of the saturation magnetization in Fe nanodisks"

PWe-2 T. Inushima[1], T. Takenobu[2], M. Motokawa[2]; *[1]Department of Electronics, Tokai University, [2]Institute of Materials Research, Tohoku University*
"Negative magnetoresistance in Dy-doped InN"

PWe-3 Shin'ya Sato, Joel T. Asubar, Yoshio Jinbo, Naotaka Uchitomi; *Department of Electrical Engineering, Nagaoka University of Technology*
"Magnetoresistance of (Ga,Mn)As films grown on Si (001) substrates"

PWe-4 Yuhei Mori; *NTT Photonics Laboratories*
"Sliding Speed and Interaction Mechanism of Charged Solitons in Trans-Polyacetylene"

PWe-5 Yoshitake YAMAZAKI[1-4], Herbert GLEITER[2], Xing ZHU[1], Zhaohui ZHANG[1], Zhong-Can OU-YANG[3], Kun-Quan LU[4], and Quin-Fan SHICan OU-YANG[3], Kun-Quan LU[4], and Quin-Fan SHI[4,5]; *[1]Physics, Peking University, [2]Institut für Nanotechnologie, Forschungszentrum Karlsruhe, [3]Institute of Theoretical, Physics, CAS, [4]Institute of Physics, [5]Beijing Institute of Technology*
"Mesoscopic Characteristics and Their Control of Nanostructured Materials"

PWe-6 Kwok L Shum, Chihiro Watanabe; *21st Century COE Center of Excellence Science of Institutional Management of Technology (SIMOT) Program Department of Industrial Engineering and Management Tokyo Institute of Technology*
"Systems Integration Issues in a Nanotechnology Manufacturing Era"

PWe-7 Kenji Kajiwara, Kenji Sasaki, Taichi Yamazaki, Yoshikata Nakajima, Tatsuro Hanajiri, Toru Toyabe, and Takuo Sugano; *Bio-Nano Electronics Research Center, Toyo University*
"Impact of silicon on insulator / buried oxide interface on characteristics of MOSFETs"

PWe-8 Taichi Yamazaki, Kenji Kajiwara, Kenji Sasaki, Yoshiyasu Miyazawa, Yoshikata Nakajima, Tatsuro Hanajiri, Toru Toyabe, Takuo Sugano; *Bio-Nano Electronics Research Center, Toyo University*
"Enhancement of gate-source capacitance by silicon-on-quartz MOSFETs"

PWe-9 M. A. H. Khalafalla[1], H. Mizuta[1], S. Oda[1], Z. A. K. Durrani[2]; *[1]Quantum Nanoelectronics Research Centre, Tokyo Institute of Technology, [2]Department of Engineering, University of Cambridge*
"Investigation of variable coupling and current percolation paths in nanocrystalline silicon cross transistors"

PWe-10 S. W. Jung, B. H. Lee, K. T. Lee, Y. H. Jeong; *Division of Electrical and Computer Engineering, POSTECH National Center for Nanomaterials and Technology (NCNT)*
"New digital quantizer based on single electron box"

PWe-11 S Roy, S Mahinder, A R Khudabukhsh; *Dept. of Computer Science & Engineering, Kalyani Govt. Engineering College*
"XOR Design at Nanoscale With Quantum-Dot Cellular Automata"

PWe-12 M. Yamamoto[1], M. Stopa[2], Y. Tokura[3], Y. Hirayama[2, 3], S. Tarucha[1, 2]; *[1]Department of*

Applied Physics, University of Tokyo, [2]SORST Project, JST, [3]NTT Basic Research Laboratories
"Negative Drag in Parallel Quantum Wires"

PWe-13 T. Kubo[1], Y. Tokura[2]; *[1]Department of Physics, Tokyo University of Science, [2]NTT Basic Research Laboratories, NTT Corporation*
"Interaction Effects on Tunneling Conductance in Magnetic-Field-Induced Quasi-One-Dimensional Electron Systems in Semiconductor Nanowhiskers"

PWe-14 Hiroyuki Yoshimoto, Kazuo Sano; *Department of Physics, Waseda University*
"Thermoelectric Properties of a Charge-Density-Wave Point Contact"

PWe-15 G. Yusa[1], K. Muraki[1], K. Takashina, K. Hashimoto[2], Y. Hirayama[1,2]; *[1]NTT Basic Research Laboratories, [2]SORST-JST*
"Electron-nuclear spin coupling in nano-scale devices: self-sustaining resistance oscillations and controlled multiple quantum coherences"

PWe-16 Akira Fukuda[1], Daiju Terasawa[2], Masayuki Morino[2], Kazuki Iwata[2], Shinsuke Kozumi[2], Michiro Suzuki[2], Anju Sawada[1], Zyun F. Ezawa[2], Norio Kumada[3], Yoshiro Hirayama[3]; *[1]Research Center for Low Temperature and Materials Sciences, Kyoto University, [2]Graduate School of Science, Tohoku University, [3]NTT Basic Research Laboratories, NTT Corporation*
"Soliton Lattice Phase and Anisotropic Transport in ν_T=1 Bilayer Quantum Hall State"

PWe-17 M. Brun[1,2], K.Takashina[1], T. Ota[2], Y. Ono[1], Y. Hirayama[1,2]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]SORST-JST*
"Inter-subband interactions and Landau-level coincidences in SiO2/Si/SiO2 quantum-wells"

PWe-18 F. E. Meijer[1] , A. F. Morpurgo[1], T. M. Klapwijk[1], J. Nitta[2,3]; *[1]Kavli Institute of NanoScience, Delft University of Technology, [2]NTT Basic Research Laboratories, NTT Corporation, [3]CREST-Japan Science and Technology Agency*
"Universality of time reversal symmetry breaking induced by competition between Rashba spin-orbit interaction and Zeeman effect"

PWe-19 B.S.Pavlov[1,2], A.M.Yafyasov[3]; *[1]Computer Solid State Laboratory Univ. of Aizu, [2]Dept. Math. Univ. of Auckland, [3]V.A. Fock Inst. for Physics, St.Petersburg State Univ.*
"Spin-dependent resonance transmission across the quantum well"

PWe-20 S. Sasaki[1], T. Fujisawa[1, 2], T. Hayashi[1], Y. Hirayama[1,3]; *[1]NTT Basic Research Laboratories, [2]Tokyo Institute of Technology, [3]SORST-JST*
"Singlet-triplet spin relaxation mechanism in a quantum dot studied by electrical pump-and-probe"

PWe-21 Yoshiaki Rikitake[1,2], Hiroshi Imamura[2], Hiromichi Ebisawa[2]; [1]JST-CREST, [2]GSIS Tohoku University
"Decoherence of localized spins interacting via RKKY interaction"

PWe-22 T. Hayashi[1], T. Fujisawa[1,2], R. Tomita[2], Y. Hirayama[1,3]; *[1]NTT Basic Research Laboratories, [2]Tokyo Institute of Technology, [3]SORST-JST*

"Time-resolved single charge detection in a double quantum dot via a quantum point contact"

PWe-23 Takuya Mouri[1,3], Hayato Nakano[2,3], Hideaki Takayanagi[2,1,3]; *[1]Dept. Physics, Tokyo University of Science, [2]NTT Basic Research Laboratories, [3]CREST, Japanese Science and Technology Agency*
"Decoherence for entangled states in inductively-coupled superconducting flux qubits"

PWe-24 Yu-xi Liu[1], J.Q. You[1,2], L.F. Wei[1], C.P. Sun[1,3], Franco Nori[1,4]; *[1]Frontier Research System, RIKEN, [2]National Laboratory for Surface Physics and Department of Physics, Fudan University, [3]Institute of Theoretical Physics, The Chinese Academy of Science, [4]Center for Theoretical Physics, Physics Department, CSCS, The University of Michigan*
"Selection rules of superconducting flux qubits"

PWe-25 Y. Shimazu [1,2], Y. Wada [1,2], T. Niizeki [1], Y. Yamamoto[1], T. Yoshida[1], Z. Wada[1], T. Yokoyama[1,2]; *[1]Department of Physics, Yokohama National University, [2]CREST, Japan Science and Technology Agency*
"Observation of persistent current states and excitation in coupled flux qubits"

PWe-26 Shiro Saito[1,4], Tatsuya Kutsuzawa[1,2,4], Takayoshi Meno[5], Hirotaka Tanaka[1,4], Masahito Ueda[1,3,4], Hayato Nakano[1,4], Kouich Semba[1,4], Hideaki Takayanagi[1,2,4]; *[1]NTT Basic Research Laboratories, NTT Corporation, [2]Department of Physics, Tokyo University of Science, [3]Department of Physics, Tokyo Institute of Technology, [4]CREST, Japan Science and Technology Agency, [5]NTT-AT Nanofabrication Corporation*
"Multi-photon Rabi oscillations observed in a superconducting flux qubit"

PWe-27 Jan Johansson[1,2], T. Meno[3], S. Saito[1,2], K. Semba[1,2], H. Takayanagi[1,2]; *[1]NTT Basic Research Laboratories, Atsugi, [2]CREST, Japan Science and Technology Agency, [3]NTT-AT Nanofabrication Corporation*
"Qubit-qubit coupling via resonator"

PWe-28 F. Deppe[1,2,4], T. Meno[5], S. Saito[1,4], H. Tanaka[1,4], D. Haviland[3], K. Semba[1,4], H. Takayanagi[1,4]; *[1]NTT BRL, NTT Corp., [2]Walther-Meissner-Institut, [3]Nanostructure Physics, [4]CREST JST, [5]NTT-AT Nanofabrication Corp.*
"Flux Qubit Readout via a Series Capacitor"

12:40-13:30 Lunch (50 min.)

13:30-15:20 Advanced Heterostructures

13:30-14:00

We-5 Alexander Khaetskii (Invited); *Institute of Microelectronics Technology RAS*
"Spin currents. Myth and reality"

14:00-14:20

We-6 A. Jensen[1], M. Utko[1], P.E. Lindelof[1], Y. Hirayama[2]; *[1]Niels Bohr Institute, Nano-Science Center, University of Copenhagen, [2]NTT Basic Research Laboratories*
"A novel GaAs/GaAlAs wide quantum well P(2DEG)-P&N(lateral recombination region)-N(2DHG) light emitting diode"

14:20-14:40

We-7 S. Nomura[1,3], M. Yamaguchi[2,3], D. Sato[1,2,3], T. Akazaki[2,3], H. Tamura[2,3], H. Takayanagi[2,3], Y. Hirayama[2,4]; *[1]Institute of Physics, University of Tsukuba, [2]NTT Basic Research Laboratories, [3]CREST-JST, [4]SORST-JST*

"Photoluminescence spectroscopy of a dilute electron system in a back-gated undoped quantum well"

14:40-15:00

We-8 Victor Ryzhii; *Computer Solid State Physics Laboratory, University of Aizu*

"Microwave photoconductivity in two-dimensional electron systems in magnetic field: Effect of plasma reflection"

15:00-15:40

We-9 K. Ploog (Invited); *Paul Drude Institute for Solid State Electronics*

"Unexpected Gems in the Search for Optimized Spin-Injector Materials"

15:40-16:00 Closing Remarks