

QIT29 Program (November 18 Mon., 2013)

Room: 04-05 Conference Room, 2nd Floor of Building 63, Nishi-Waseda Campus, Waseda University

Time	Title	Speaker(s)	Affiliation(s)
9:50 – 10:00 [Opening]			
10:00 – 11:00	Session I	Chair: Takayuki Miyadera (Kyoto Univ.)	
	Topological Blind Quantum Computing	Tomoyuki Morimae [a], Keisuke Fujii [b]	a: Gunma Univ., b: Kyoto Univ.
	Translating Measurement-Based Quantum Computation with gflow into Quantum Circuit	Jisho Miyazaki, Michal Hajdušek, Mio Murao	Univ. Tokyo
	Parallelized Adiabatic Gate Teleportation	Kosuke Nakago, Michal Hajdušek, Shojun Nakayama, Mio Murao	Univ. Tokyo
11:20 – 12:40	Session II	Chair: Tomohiro Ogawa (Univ. Elec.-Comm.)	
	A Representation of Quantum Graph States Using Binary Decision Diagrams	Yuto Hirakuri, Hidefumi Hiraishi, Hiroshi Imai	Univ. Tokyo
	Quantum Algorithms for Finding Constant-Sized Sub-Hypergraphs over 3-Uniform Hypergraphs	Francois Le Gall [a], Harumichi Nishimura [b], Seiichiro Tani [c]	a: Univ. Tokyo, b: Nagoya Univ., c: NTT
	Quantum Pushdown Automata with a Garbage Space	Masaki Nakanishi	Yamagata Univ.
	Continuity of the Von Neumann Entropy in Continuous Quantum Measurements	Toru Fuda	Hokkaido Univ.
12:40 – 14:10 Lunch			
14:10 – 15:40 Poster Session			
15:40 – 17:00	Session III	Chair: Naoki Yamamoto (Keio Univ.)	
	Equivalence Class Derived by Identification Limit of a System under Limited Access	Go Kato [a], Koji Maruyama [b,a], Masaki Owari [a]	a: NTT, b: Osaka City Univ.
	State-Steering Protocol towards Hamiltonian Identification of a System and Its Environment	Koji Maruyama [a,b], Masaki Owari [b], Go Kato [b]	a: Osaka City Univ., b: NTT
	Preparation of Non-Classical States for Interacting Particles	Thomás Fogarty [a], Anthony Kiely [b], Steve Campbell [a], OThomas Busch [a]	a: Okinawa Inst. Sci. Tech. (OIST), b: Univ. Coll. Cork (UCC)
	General Quantum Correlations in Critical Spin Systems	Steve Campbell, Jonathan Richens, Nicola Lo Gullo, Thomas Busch	Okinawa Inst. Sci. Tech. (OIST)
17:20 – 18:40	Session IV	Chair: Hiromichi Nakazato (Waseda Univ.)	
	Localization of Entangled Photons in Random Quantum Walks <Invited Talk>	Rozario Fazio	Scuola Normale Superiore, Pisa, Italy & CQT, Singapore
	Statistical Properties of Entanglement in Large Quantum Systems <Invited Talk>	Saverio Pascazio	Univ. Bari, Italy
19:00 – 20:30 Banquet			

QIT29 Program (November 19 Tue., 2013)

Room: 04-05 Conference Room, 2nd Floor of Building 63, Nishi-Waseda Campus, Waseda University

Time	Title	Speaker(s)	Affiliation(s)
9:20 – 10:40 Session V Chair: Keiichi Edamatsu (Tohoku Univ.)			
	Experimental Evaluation of Measurement Error and Disturbance of Ozawa's Inequality in Two Level Systems	Masataka Iinuma [a], Yutaro Suzuki [a], Ryuji Kinoshita [a], Holger F. Hofmann [a,b]	a: Hiroshima Univ., b: JST-CREST
	Experimental Investigation of Complex Joint Probabilities Using Sequential Polarization Measurements with Arbitrary Intermediate Measurement Strength	Yutaro Suzuki [a], Masataka Iinuma [a], Ryuji Kinoshita [a], Holger F. Hofmann [a,b]	a: Hiroshima Univ., b: JST-CREST
	Direct Mapping of Poincaré Sphere Using Weak Measurement with Optical Vortex	Hirokazu Kobayashi [a], Yutaka Shikano [b]	a: Kochi Univ. Tech., b: Inst. Mol. Sci.
	Exact Analysis of Weak Value Amplification for Single-Photon-Level Nonlinearity	Fumiaki Matsuoka, Akihisa Tomita, Atsushi Okamoto	Hokkaido Univ.
11:00 – 12:40 Session VI Chair: Masataka Iinuma (Hiroshima Univ.)			
	Macroscopic Quantum Hybrid System <Invited Talk>	Koichi Semba	NICT, NII, NTT
	Vacuum Rabi Oscillation between a Superconducting Flux Qubit and NV Centers in Diamond	Y. Matsuzaki [a], X. Zhu [a], R. Amsuss [a,b], K. Kakuyanagi [a], T. Shimooka [c], M. Mizuochi [c], K. Nemoto [d], W. J. Munro [a], K. Semba [d], S. Saito [a]	a: NTT, b: Vienna Univ. Tech., c: Osaka Univ., d: NII
	Interaction Control Using Quantum Feedback in Solid-State Qubits	Takahiko Satoh [a,b], Yuichiro Matsuzaki [a], Keisuke Fujii [c], Kosuke Kakuyanagi [a], Koichi Semba [d], Shiro Saito [a]	a: NTT, b: Univ. Tokyo, c: Kyoto Univ., d: NII
	Adiabatic Passage as a Quantum Brachistochrone Curve	Kazutaka Takahashi	Tokyo Inst. Tech.
12:40 – 14:10 Lunch			
14:10 – 15:50 Session VII Chair: Satoshi Ishizaka (Hiroshima Univ.)			
	Information Theory Based on General Probabilistic Theories and an Attempt to Derive Quantum Theory from Physical Principles <Tutorial>	Gen Kimura	Sibaura Inst. Tech.
	Qualitative Information-Disturbance Relation for Quantum Measurement	Takayuki Miyadera [a], Teiko Heinosaari [b]	a: Kyoto Univ., b: Univ. Turku
	Relation between Information and Disturbance in Semi-Quantum Secret Sharing	Ryoma Fujinoi, Takayuki Miyadera	Kyoto Univ.
	Identification of Measurement Processes by Posterior Probability	Masatomo Kobayashi, Takayuki Miyadera	Kyoto Univ.
16:10 – 17:30 Session VIII Chair: Takashi Yamamoto (Osaka Univ.)			
	Quantum Hypothesis Testing and an Operational Interpretation of the Quantum Rényi Relative Entropies	Milán Mosonyi [a,b,c], OTomohiro Ogawa [d]	a: Univ. Bristol, b: Univ. Autò. Barcelona, c: Budapest Univ. Tech. Econ., d: Univ. Elec.-Comm. (UEC)
	The Squashed Entanglement of a Quantum Channel	Masahiro Takeoka [a], Saikat Guha [b], Mark M. Wilde [c]	a: NICT, b: Raytheon BBN Tech., c: Louisiana State Univ.
	Pulsed Sagnac Polarization-Entangled Photon Source with PPKTP Crystal at Telecom Wavelength	Rui-Bo Jin [a], Ryosuke Shimizu [b], Kentaro Wakui [a], Mikio Fujiwara [a], Taro Yamashita [a], Shigehito Miki [a], Hirotaka Terai [a], Zhen Wang [c], Masahide Sasaki [a]	a: NICT, b: Univ. Elec.-Comm. (UEC), c: Chinese Acad. Sci.
	Quantum Key Distribution over 306 km Using Superconducting Single-Photon Detector with Ultralow Dark Count Rate	Hiroyuki Shibata, Kaoru Shimizu, Toshimori Honjo	NTT
17:30 – 17:40 [Closing]			

Nov. 18 (Mon.)
14:00 – 15:30

Poster

Room: 03 Conference Room, 2nd floor of Building 63, Nishi-Waseda Campus, Waseda University

1	Numerical Simulation of an Environment Identification Protocol	Masaki Owari [a], Go Kato [a], Koji Maruyama [a,b]	a: NTT, b: Osaka City Univ.
2	Structure Identification and State Initialization of Spin Network with Limited Access	Yuzuru Kato, Naoki Yamamoto	Keio Univ.
3	Boundary Conditions in One-Dimensional Tunneling Junction	Yutaka Shikano [a], Masao Hirokawa [b]	a: Inst. Mol. Sci., b: Okayama Univ.
4	Generation of Entanglement between Two Qubits with a Ring Interferometer	Kouichi Inaba, Kazuya Yuasa	Waseda Univ.
5	A Hardware Quantum Circuit Simulator Architecture Based on Register Reordering	Miki Matsuyama, Yumi Yokoo, Masaki Nakanishi	Yamagata Univ.
6	Operational Meaning of Entanglement Entropy in Anyonic Systems	Kohtaro Kato, Fabian Furrer, Mio Murao	Univ. Tokyo
7	Improved Deutsch's Algorithm Using Nondestructive Imaging of Bose-Einstein Condensates	Ebubechukwu O. Ilo-Okeke [a,b], Tim Byrnes[a]	a: NII, b: Federal Univ. Tech.
8	Qubit Subalgebra from Weyl Algebra of Quantum Angular Momentum System	Jun Suzuki	Univ. Elec.-Comm. (UEC)
9	Single-Photon Detection Using a Sinusoidally Gated Silicon Avalanche Photodiode	Shingo Suzuki [a], Naoto Namekata [a], Kenji Tsujino [b], Shuichiro Inoue [a]	a: Nihon Univ., b: Tokyo Women's Medical Univ.
10	Improving Precision Measurement with the Sequential Weak Measurement	Tatsuya Morita [a], Jaeha Lee [a], Izumi Tsutsui [b]	a: Univ. Tokyo, b: KEK
11	Quantum State Data Mining	Takafumi Ono [a,b], Ryo Okamoto [a,b], Shigeki Takeuchi [a,b], Satoshi Hara [b], Takashi Washio [b]	a: Hokkaido Univ., b: Osaka Univ.
12	Adjusting Gaussian Type Probe for Improving of Signal to Noise Ratio in the Weak Value Amplification	Yuki Susa	Tokyo Inst. Tech.
13	Error and Disturbance in Linear Quantum Systems	Yachiko Nakagawa, Naoki Yamamoto	Keio Univ.
14	Fabrication of Nanostructured Tapered Fibers for Highly Efficient Single Photon Sources	Shunya Kamioka, Masazumi Fujiwara, Shigeki Takeuchi	Osaka Univ. & Hokkaido Univ.
15	Negative Wigner Fuction Light Generated by Exciton-Polariton Condensates	Cristian Joana [a,b], Peter van Loock [c], Tim Byrnes [a]	a: NII, b: Univ. Autò. Barcelona, c: Johannes Gutenberg-Univ. Mainz
16	Entanglement Generation and Detection between Spinor Bose-Einstein Condensates	Danny Rosseau, Qianqian Ha, Alexey Pyrkov, Tim Byrnes	NII
17	Non-Equilibrium Dynamics of Coupled Cavity-Quantum Dot System	Natsuko Ishida [a], Tim Byrnes [b], Yoshihisa Yamamoto [b,c], Franco Nori [a]	a: RIKEN, b: NII, c: Stanford Univ.
18	Determining All the Eigenvalues of a Density Operator via a Finite-Dimensional Auxiliary System	Tohru Tanaka [a], Mitsunori Kanazawa [a], Hiromichi Nakazato [a], Gen Kimura [b]	a: Waseda Univ., b: Shibaura Inst. Tech.
19	Evaluation of the Phase Correlation between the Optical Pulses for Transmission in Quantum Key Distribution at 10 GHz	Toshiya Kobayashi, Akihisa Tomita, Atsushi Okamoto	Hokkaido Univ.
20	Observing Weak Value through Quantum Interference	Takuya Mori [a], Izumi Tsutsui [b]	a: Univ. Tokyo, b: KEK
21	Designing GHz-Clock Operating Balanced Single Photon Detector and Evaluation	Hirofumi Hashimoto, Akihisa Tomita, Atsushi Okamoto	Hokkaido Univ.