

QIT23 Program

Nov. 15 (Mon), 2010

Time	Title	Speaker	Affiliation
10:10- 10:20	[Opening]		
10:20- 11:40	Session I	Chair Takuya Hirano (Gakushuin University)	
	Achievement and future perspective of quantum key distribution technology in system application <Tutorial talk>	Mikio Fujiwara	Institute of Information and Communications Technology
	Quantum-state reconstruction via polarization-based entanglement swapping in the telecom-band	Yinghong Xue [a,b], Akio Yoshizawa [a,b], Hidemi Tsuchida [a,b]	a:AIST, b:JST
	Realization of photon-number resolving transition-edge sensors with 98% detection efficiency	Go Fujii [a,b], Daiji Fukuda [a], Takayuki Numata [a], Akio Yoshizawa [a], Hidemi Tsuchida [a], Hidetoshi Fujino [a], Takayuki Ishii [a], Itatani Taro [a], Shuichiro Inoue [b], Tatsuya Zama [a]	a:AIST, b:Nihon Univ.
11:40- 13:00	Lunch		
13:00- 14:30	Poster Session		
14:30- 15:50	Session II	Chair Shigeru Yamashita (Ritsumeikan University)	
	Quantum network coding <Invited talk>	Francois Le Gall	Univ. of Tokyo
	Quantum counterfeit coin problems	Kazuo Iwama [a], Harumichi Nishimura [b], Rudy Raymond [c], Junichi Teruyama [a]	a:Kyoto Univ., b:Osaka Pref. Univ., c: IBM Research-Tokyo
	Limit distribution for a localization mode of 2-state quantum walks	Takuya Machida	Meiji Univ.
15:50- 16:10	Coffee Break		
16:10- 17:50	Session III	Chair Harumichi Nishimura (Osaka Prefecture University)	
	Exploration from two proposals by Feynman to graphs and computational complexity	Hiroshi Imai [a,b]	a:Univ. of Tokyo, b:JST ERATO-SORST QCI
	Characterization of quantum relative entropy and asymptotic state transformation	Keiji Matsumoto [a,b]	a:NII, b:JST
	Comparison of quantum statistical models: a "Quantum Blackwell Theorem"	Francesco Buscemi	Univ. of Nagoya
	Possibility of deterministic LOCC transformations of three-qubit pure states	Hiroyasu Tajima	Univ. of Tokyo
18:00- 20:00	Banquet		

QIT23 Program

Nov. 16 (Tue), 2010

Time	Title	Speaker	Affiliation
9:20- 10:40 Session IV Chair Toyohiro Tsurumaru (Mitsubishi Electric Corporation)			
	Indirect tomography of quadratic hamiltonians	Koji Maruyama [a], Daniel Burgarth [b], Franco Nori [a,c]	a:RIKEN, b:Imperial College London, c:Univ. of Michigan
	Robust construction of many qubits in infinite dimensional Hilbert spaces	Jun Suzuki, Kae Nemoto	NII
	Quantum repeaters and computation by a single module: Remote nondestructive parity measurement	Koji Azuma [a,b], Hitoshi Takeda [b], Masato Koashi [b], Nobuyuki Imoto [b,c]	a:NTT BRL, b:Osaka Univ.
	Composite quantum gates and dynamic phases	Masamitsu Bando, Yasushi Kondo	Kinki Univ.
10:40- 11:00 Coffee Break			
11:00- 12:20 Session V Chair Keiichi Edamatsu (Tohoku University)			
	Optical lattice clock: 17 digits' frequency comparison and future prospects <Invited talk>	Hidetoshi Katori	Univ. of Tokyo
	Photon counter based on Si APD operating in sub-Geiger mode: Toward high detection efficiency	Kenji Tsujino, Akihisa Tomita	JST ERATO-SORST QCI
	Experimental realization of spin amplification with gain over 100 in a hyperpolarized nuclear spin system	Makoto Negoro, Kenichiro Tateishi, Akinori Kagawa, Masahiro Kitagawa	Osaka Univ.
12:20- 13:40 Lunch			
13:40- 15:00 Session VI Chair Shiro Kawabata (AIST)			
	Introduction to quantum feedback control <Tutorial talk>	Naoki Yamamoto	Keio Univ.
	Information Theoretical Aspects in Superconducting Qubit Readout	Hayato Nakano	NTT BRL
	Deterministic photon-photon (SWAP) ^{1/2} gate using a lambda system	Kazuki Koshino [a], Satoshi Ishizaka [b], Yasunobu Nakamura [c,d]	a:Tokyo M&D Univ, b:Hiroshima Univ, c:NEC, d:RIKEN
15:00- 15:20 Coffee Break			
15:20- 16:20 Session VII Chair Fumiaki Morikoshi (NTT)			
	Measurement, correlation, and contextuality	Masanao Ozawa	Nagoya Univ.
	Limit to qubit control by coherent field	Kazuhiro Igeta [a,b], Nobuyuki Imoto [c], Masato Koashi [c]	a:NTT BRL, b:JST CREST, c:Osaka Univ.
	Fundamental quantum limits for practical devices	Ryo Namiki	Kyoto Univ.
16:20- 16:25 Closing			

11/15
13:00- 14:30

Poster (Hall 2F)

1	Orthogonality Preserving quantum teleportations and Entanglement of Distillation	Masakatsu Shibao	MCi Co., Ltd.
2	Quantum Error Correction beyond the Bounded Distance Decoding Limit via Non-binary LDPC Codes	Kenta Kasai [a], Manabu Hagiwara [b], Hideki Imai [b,c], Kohichi Sakaniwa [a]	a:Tokyo Institute of Technology, b:Advanced Industrial Science and Technology, c:Chuo University
3	Conversion to an LNN Architecture by Considering Gate Ordering	Atsushi Matsuo, Shigeru Yamashita	Ritsumeikan University
4	Limit theorems for the discrete-time quantum walk on a graph with joined	Kota Chisaki [a], Konno Norio [a], Segawa Etsuo [b]	a:Yokohama National Univ., b:Tokyo Institute of Technology
5	On the soundness of the Blier-Tapp QMA protocol	Shota Nakagawa, Harumichi Nishimura	Osaka Prefecture University
6	SU(N)-symmetric quasi-probability distribution functions	Todd Tilma, Kae Nemoto	NII
7	Dynamical Quantum Error Correction for Continuous Variable Systems	Go Tajimi, Naoki Yamamoto	Univ. of Keio
8	Estimation of the Ising coupling constant between two qubits via a single sequence of measurements on a single qubit without state initialization	Satoshi Ando [a], Kazuya Yuasa [b]	a:Waseda Univ., b:WIAS, Waseda Univ.
9	Near-optimal Quantum receiver for Multi-array Phase Shift Keyed optical signals	Hayato Iwama [a,b], Masahiro Takeoka [a], Hideyuki Sotobayashi [b], Masahide Sasaki [a]	a:NICT, b:Aoyamagakuin Univ
10	A universal protocol discriminating pure states without classical knowledge	Daiki Akimoto [a], Masahito Hayashi [a,b]	a:Tohoku University, b:National University of Singapore
11	Distribution of Polarization Entangled photon pairs using sinusoidally gated InGaAs/InP APDs	Taichi Kono [a], Naoto Namekata [a], Sunao Kurimura [b], Shuichiro Inoue [a]	a:Nihon univ., b:NIMS
12	Hypothesis testing for quantum Gaussian states	Wataru Kumagai [a], Masahito Hayashi [a,b]	a:Tohoku University, b:National University of Singapore
13	Efficient photonic entanglement distribution using DFS	Yohei Ono, Rikizo Ikuta, Toshiyuki Tashima, Takashi Yamamoto, Masato Koashi, Nobuyuki	Univ. of Osaka
14	Process tomography of quantum media conversion from photon to electron spin	Takahiro Inagaki [a,b], Hideo Kosaka [a,b], Yoshiaki Rikitake [c,b], Hiroshi Imamura [d,b], Yasuyoshi Mitsumori [a,b], Keiichi Edamatsu [a]	a:Tohoku Univ, b:CREST-JST, c:Sendai National College of Technology, d:AIST
15	Control of potential profile from double well to single well in four-Josephson-junction qubit	Y. Shimazu, K. Ochiai, E. Shinozaki, M. Nakajima, M. Takahashi	Yokohama National University
16	Cooperative quantum tunneling under a spontaneous external field in coupled Josephson junctions	Yoichi Chizaki [a,b], Shiro Kawabata [a,b]	a:AIST, b:CREST