

AQIS'08 PROGRAM

TUTORIAL

August 25, 2008 (Mon.)

[Tutorial]

[9:30 - 11:30] *Information Is Quantum*
Charles H. Bennett (IBM Research, USA)

[Tutorial]

[13:30 - 15:30] *QUANTUM INFORMATION PRIMITIVES and QUANTUM COMPLEXITY THEORY*
Jozef Gruska (Masaryk University, Czech Republik)

[Tutorial]

[16:00 - 18:00] *Introduction to Quantum information science*
Jaewan Kim (KIAS)

August 26, 2008 (Tue.)

[Tutorial]

[9:30 - 11:30] *Quantum Walks*
Mark Hillery (Hunter College of CUNY, USA)

[Tutorial]

[13:30 - 15:30] *Generalized quantum measurements (POVMs) and their application to quantum information processing*
Janos Bergou (Hunter College of CUNY, USA)

[Tutorial]

[16:00 - 18:00] *Engineering Quantum Information Processor*
Jungsang Kim (Duke University, USA)

PROGRAM

Oral Presentations

August 27, 2008 (Wed.)

[Keynote]

[9:00 - 9:45] *Time in quantum mechanics*
Sandu Popescu (University of Bristol)

[Invited Talk]

[9:45 - 10:30] *Optical sub-wavelength lithography: With and without entanglement*
M. Suhail Zubairy (Texas A& M University, USA)

[Coffee Break]

[Long Talk]

[11:00 - 11:30] *Coherent control of entanglement with atomic ensembles*
Kyung Soo Choi (California Institute of Technology, USA), Hui Deng (California Institute of Technology, USA), Julien Laurat (California Institute of Technology, USA), and Scott B. Papp (California Institute of Technology, USA) and H. Jeff Kimble (California Institute of Technology, USA)

[11:30 - 12:00] *Squashing Models for Optical Measurements in Quantum Communication*
Normand J. Beaudry (Institute for Quantum Computing, University of Waterloo, Canada), Tobias Moroder (Institute for Quantum Computing, University of Waterloo, Canada, and Institute of Optics, Photonics and Information, University Erlangen-Nuremberg, Germany) and Norbert Lütkenhaus (Institute for Quantum Computing, University of Waterloo, Canada, and Institute of Optics, Photonics and Information, University Erlangen-Nuremberg, Germany)

[12:00 - 12:30] *Molecular-Spin Quantum Manipulation by Pulsed Electron Magnetic Resonance: Pulsed ENDOR- and Coherent Dual ELDOR-QC*
Kazunobu Sato (Osaka City University, JST-CREST, Japan), Robabeh Rahimi (Kinki University, Japan) Shigeaki Nakazawa (Osaka City University, JST-CREST, Japan), Tomoaki Ise (Osaka City University, JST-CREST, Japan), Shinsuke Nishida (Osaka City University, JST-CREST, Japan), Tomohiro Yoshino (Osaka City University, Japan), Kazuo Toyota (Osaka City University, JST-CREST, Japan), Daisuke Shiomi (Osaka City University, JST-CREST, Japan), Yasushi Morita (Osaka University, JST-CREST, Japan), Masahiro Kitagawa (Osaka University, JST-CREST, Japan), Kazuhiro Nakasuji (Osaka University, Japan) Mikio Nakahara (Kinki University, Japan), Hideyuki Hara (Bruker Biospin, Japan and Germany), Patrick Carl (Bruker Biospin, Japan and Germany), Peter Hofer (Bruker Biospin, Japan and Germany), and Takeji Takui (Osaka City University, JST-CREST, Japan)

[Parallel session A] QUANTUM KEY DISTRIBUTION

[14:30 - 14:50] *Passive decoy-state quantum cryptography with pseudo-single-photon sources*
Yoritoshi Adachi (Osaka University, and CREST Research Team for Photonic Quantum Information, Saitama, Japan) Takashi Yamamoto (Osaka University, and CREST Research Team for Photonic Quantum Information, Saitama, Japan), Masato Koashi (Osaka University, and CREST Research Team for Photonic Quantum Information, Saitama, Japan) and Nobuyuki Imoto (Osaka University, and CREST Research Team for Photonic Quantum Information, Saitama, Japan)

[14:50 - 15:10] *Decoy states for quantum key distribution based on decoherence-free subspaces*

Zhen-Qiang Yin (University of Science and Technology of China, China), Yi-Bo Zhao (University of Science and Technology of China, China), Zheng-Wei Zhou (University of Science and Technology of China, China), Zheng-Fu Han (University of Science and Technology of China, China) and Guang-Can Guo (University of Science and Technology of China, China)

[15:10 - 15:30] *Security proof of differential phase shift quantum key distribution in the noiseless case*
 Yi-Bo Zhao (University of Science and Technology of China, China), Chi-Hang Fred Fung (University of Hong Kong, China), Zheng-Fu Han (University of Science and Technology of China, China) and Guang-Can Guo (University of Science and Technology of China, China)

[15:30 - 15:50] *Tamper-Resistant Encryption of Quantum Information*
 Andris Ambainis (University of Latvia, Latvia, and Institute for Quantum Computing, University of Waterloo, Canada), Jan Bouda (Masaryk University, Czech Republic) and Andreas Winter (University of Bristol, UK, and National University of Singapore, Singapore)

[15:50 - 16:10] *Sub-poissonian distributed heralded single photon source and decoy-state quantum key distribution*
 Q. Wang (University of Science and Technology of China, China, and the Royal Institute of Technology Sweden, Sweden), W. Chen (University of Science and Technology of China, China), G. Xavier (the Royal Institute of Technology Sweden, Sweden), M. Swillo (the Royal Institute of Technology Sweden, Sweden), M. Tengner (the Royal Institute of Technology Sweden, Sweden) Z. F. Han (University of Science and Technology of China, China), G. C. Guo (University of Science and Technology of China, China) and A. Karlsson (the Royal Institute of Technology Sweden, Sweden)

[Parallel session B] QUANTUM STATES & OPERATIONS

[14:30 - 14:50] *Generalized W-Class State and its Monogamy Relation*
 Jeong San Kim (University of Calgary) and Barry C. Sanders (University of Calgary, Canada)

[14:50 - 15:10] *On the Complexity of Deciding whether a Quantum Channel is Markovian*
 Toby Cubitt (University of Bristol, UK)

[15:10 - 15:30] *An alternative fidelity measure for quantum states*
 Paulo E. M. F. Mendonça (The University of Queensland, Australia) R. d. J. Napolitano (Universidade de São Paulo, Brazil), Marcelo A. Marchioli (Universidade Estadual Paulista, Brazil), Christopher. J. Foster (The University of Queensland, Australia) and Yeong-Cherng Liang (University of Sydney, Australia)

[15:30 - 15:50] *Minimum uncertainty dynamics of quantum spin twist map*
 Taehoon Ahn (Korea Institute for Advanced Study, Korea), Jae-Weon Lee (Korea Institute for Advanced Study, Korea) and Jaewan Kim (Korea Institute for Advanced Study, Korea)

[15:50 - 16:10] *Holonomic Quantum Gates using Isospectral Deformations of Ising Model*
 Yukihiro Ota (Kinki University, Japan), Masamitsu Bando (Kinki University, Japan), Yasusi Kondo (Kinki University, Japan) and Mikio Nakahara (Kinki University, Japan)

[16:30-18:10] Poster Session

August 28, 2008 (Thu.)

[Invited Talk]

- [9:00 - 9:45] *Towards Quantum Repeaters*
Nicloas Gisin (University of Geneva, Switzerland)
- [9:45 - 10:30] *Quantum measurement and nanomechanical resonators*
G.J.Milburn (The University of Queensland Australia, Australia), A. Doherty (The University of Queensland Australia, Australia), E. Babourina-Brooks (The University of Queensland Australia, Australia), C. Meaney (The University of Queensland Australia, Australia) and M.J.Woolley (The University of Queensland Australia, Australia)

[Coffee Break]

[Long Talk]

- [11:00 - 11:30] *Quantum Communication With Zero-Capacity Channels*
Graeme Smith (IBM Research, USA), and Jon Yard (Quantum Institute, CNLS, Los Alamos National Laboratory, USA)
- [11:30 - 12:00] *Secret Keys Assisted Private Classical Communication Capacity over Quantum Channels*
Min-Hsiu Hsieh (University of Southern California, USA), Zhicheng Luo (University of Southern California, USA) and Todd Brun (University of Southern California, USA)
- [12:00 - 12:30] *Security proof for QKD systems with threshold detectors*
Toyohiro Tsurumaru (Mitsubishi Electric Corporation, Information Technology R&D Center, Japan) and Kiyoshi Tamaki (NTT Basic Research Laboratories, Japan)

[Parallel session A] QUANTUM COMPUTATION & ALGORITHMS

- [14:30 - 14:50] *Quantum algorithms for shifted subset problems*
Ashley Montanaro (University of Bristol, UK)
- [14:50 - 15:10] *Simplifying quantum logic using multi-level systems*
Benjamin P. Lanyon (University of Queensland Australia, Australia), Marco Barbier (University of Queensland Australia, Australia), Marcelo P. Almeida (University of Queensland Australia, Australia), T. Jennewein (University of Queensland Australia, Australia, and Institute for Quantum Optics and Quantum Information Austrian Academy of Sciences) T. C. Ralph (University of Queensland Australia, Australia), K. J. Resch (University of Queensland Australia, Australia, and Institute for Quantum Computing and Department of Physics & Astronomy University of Waterloo, Canada), G. J. Pryde (University of Queensland, Australia, and Centre for Quantum Dynamics, Griffith University, Australia), J. L. O'Brien (University of Queensland, and Macquarie University, Australia), A. Gilchrist (University of Queensland, Australia) and A. G. White (University of Queensland, Australia)
- [15:10 - 15:30] *Random Quantum Circuits are Approximate 2-designs*
Aram Harrow (University of Bristol, UK), Richard Low (University of Bristol, UK)
- [15:30 - 15:50] *Quantum computing with zero entanglement & the road to fault tolerance*
Benjamin Lanyon, Till Weinhold, Marcelo de Almeida, Marco Barbieri, Geoff Gillett, Michael Goggin and Andrew White
- [15:50 - 16:10] *Measurement-based classical computation: Classifying the computational power of quantum states*
Dan Browne (University College London, UK) and Janet Anders (University College London, UK)

[Parallel session B] QUANTUM STATES AND NONLOCALITY

- [14:30 - 14:50] *Leggett's model and beyond: testing quantum correlations versus single-particle properties*
Cyril Branciard (University of Geneva, Switzerland), Nicolas Brunner (University of Geneva, Switzerland), Nicolas Gisin (University of Geneva, Switzerland), Christian Kurtsiefer (National University of Singapore, Singapore), Antia Lamas-Linares (National University of Singapore, Singapore), Alexander Ling (National University of Singapore, Singapore), Valerio Scarani (National University of Singapore, Singapore)
- [14:50 - 15:10] *Quantum non-locality test with an optical bipartite qudit state*

Jaewoo Joo (University of Calgary, Canada and Imperial College London, UK), Terry Rudolph (Imperial College London, UK), and Barry C. Sanders (University of Calgary, Canada)

[15:10 - 15:30] *Entanglement-assisted Delayed-Choice Experiment*

Xiaosong Ma (IQOQI, Austrian Academy of Sciences, and University of Vienna, Austria), Angie Qarry (University of Vienna, Austria) Johannes Kofler (IQOQI, Austrian Academy of Sciences, and University of Vienna, Austria) Nuray Tetik (University of Vienna), Thomas Jennewein (University of Vienna, Austria) and Anton Zeilinger (IQOQI, Austrian Academy of Sciences, and University of Vienna, Austria)

[15:30 - 15:50] *Causality and Tsirelson's bound*

Sujit K. Choudhary (Indian Statistical Institute, Kolkata, India)

[15:50 - 16:10] *Multipartite states violating Bell's inequality have many distillable bipartite splits*

Soojoon Lee (Kyung Hee University, Korea) Jinhyoung Lee (Hanyang University, Korea) and Jaewan Kim (Korea Institute for Advanced Study, Korea)

[16:30-18:10] Poster Session

August 29, 2008 (Fri.)

[Invited Talk]

- [9:00 - 9:45] *Photonic systems for quantum information processing*
Akihisa Tomita (ERATO-SORST Quantum Computation and Information Project, JST, Japan)
- [9:45 - 10:30] *Codeword stabilized quantum codes*
John A. Smolin (IBM Research, USA)

[Coffee Break]

[Long Talk]

- [11:00 - 11:30] *Simulation complexity of quantum matchgate circuits*
Richard Jozsa (University of Bristol, UK) and Akimasa Miyake (University of Innsbruck, Austria, and IQOQI Austrian Academy of Sciences, Austria)
- [11:30 - 12:00] *Locally Indistinguishable Subspaces Spanned by Three-Qubit Unextendible Product Bases*
Runyao Duan (Tsinghua University, China), Yu Xin (Tsinghua University, China) and Mingsheng Ying (Tsinghua University, China)
- [12:00 - 12:30] *Structural approximations to positive maps and entanglement breaking channels*
J. K. Korbicz (ICFO–Institut de Ciències Fotòniques, Barcelona, University of Barcelona, Spain, Technical University of Gdańsk, and National Quantum Information Centre of Gdańsk, Poland), M. L. Almeida (ICFO–Institut de Ciències Fotòniques, Barcelona, Spain), J. Bae (Korean Institute for Advanced Study, Korea) M. Lewenstein (ICFO–Institut de Ciències Fotòniques, Barcelona, Spain, and ICREA) and A. Acín (ICFO–Institut de Ciències Fotòniques, Barcelona, Spain, and ICREA)

August 30, 2008 (Sat.)

[Keynote]

- [9:00 - 9:45] *Photonic Entanglement and Quantum Communication*
Anton Zeilinger (IQOQI, Austrian Academy of Sciences, and University of Vienna, Austria)

[Invited Talk]

- [9:45 - 10:30] *Quantum Key Distribution with Imperfect Devices*
Won-Young Hwang (Chonnam National University, Korea)

[Coffee Break]

[Long Talk]

- [11:00 - 11:30] *Fractional Quantum Hall State in Coupled Cavities*
Jaeyoon Cho (University College London, UK), Dimitris G. Angelakis (National University of Singapore, Singapore and Technical University of Crete, Greece) Sougato Bose (University College London, UK)
- [11:30 - 12:00] *Simple entanglement purification protocol by spin chain dynamics without CNOTs*
Koji Maruyama (Advanced Science Institute, The Institute of Physical and Chemical Research (RIKEN), Japan) and Franco Nori (Advanced Science Institute, The Institute of Physical and Chemical Research (RIKEN), CREST, Japan Science and Technology Agency, and University of Michigan, USA)
- [12:00 - 12:30] *Swapping Telecom-Band Entanglement Generated in Fibers*
Hiroki Takesue (NTT Basic Research Laboratories, NTT corporations, and CREST, Japan Science and Technology, Japan)

[Parallel session A] QUANTUM CHANNELS

- [14:30 - 14:50] *Non-secret correlations can be used to distribute secrecy*
Joonwoo Bae (Korea Institute for Advanced Study, Korea), Toby Cubitt (University of Bristol, UK) and Antonio Acín (ICFO–Institut de Ciències Fotòniques, Barcelona, Spain and ICREA)
- [14:50 - 15:10] *A Lossy Bosonic Quantum Channel with Non-Markovian Memory*
Oleg Pilyavets (P. N. Lebedev Physical Institute, and Università di Camerino, Italy), Vadim Zborovskii , and Stefano Mancini (Università di Camerino, Italy)
- [15:10 - 15:30] *Monogamy equality in $2 \otimes 2 \otimes d$ quantum systems*
Dong Pyo Chi (Seoul National University, Korea), Jeong Woon Choi (Electronics and Telecommunication Research Institute Korea, Korea), Kabgyun Jeong (Seoul National University, Korea), Jeong San Kim (University of Calgary, Canada), Taewan Kim (Seoul National University, Korea) and Soojoon Lee (Kyung Hee University, Korea)
- [15:30 - 15:50] *Superposing the known and unknown*
Lawrence M. Ioannou (University of Cambridge, UK) and Michele Mosca (University of Waterloo, St. Jerome's University, and Perimeter Institute, Canada)

[Parallel session B] IMPLEMENTATIONS AND SCHEMES

- [14:30 - 14:50] *A scalable scheme of generating entanglement of atoms based on the cavity input-output process*
Jaehak Lee (Korea Advanced Institute of Science and Technology, Korea), Jiyong Park (Korea Advanced Institute of Science and Technology, Korea), Sang Min Lee (Korea Advanced Institute of Science and Technology, Korea), Hai-Woong Lee (Korea Advanced Institute of Science and Technology, Korea) and Ashfaq H. Khosa (COMSATS Institute of Information Technology, Islamabad, Pakistan)
- [14:50 - 15:10] *Quantum information transfer between a photon and a V-type atomic system*
Kunihiro Kojima (Quantum Computation and Information Project, ERATO-SORST, Japan) Akihisa Tomita (Quantum Computation and Information Project, ERATO-SORST, Japan)
- [15:10 - 15:30] *Nonclassical property by the alternated sequences of photon creation and annihilation on thermal and coherent states*
Su-Yong Lee (Korea Advanced Institute of Science and Technology, Korea), Jiyong Park (Korea Advanced Institute of Science and Technology, Korea), Se-Wan Ji (Korea Advanced Institute of Science and Technology, Korea), C.H.Raymond Ooi (Korea Advanced Institute of Science and Technology, Korea, and Korea University, Korea), Hai-Woong Lee (Korea Advanced Institute of Science and Technology, Korea)

- [15:30 - 15:50] *High-purity entanglement generation using silicon wire waveguide*
Ken-ichi Harada (NTT Corporation), Hiroki Takesue (NTT Corporation), Hiroshi Fukuda (NTT Corporation), Tai Tsuchizawa (NTT Corporation), Toshifumi Watanabe (NTT Corporation), Koji Yamada (NTT Corporation), Yasuhiro Tokura (NTT Corporation) and Sei-ichi Itabashi (NTT Corporation)
- [15:50 - 16:10] *Coherent Operation of Superconducting Flux Qubits at Optimal Point*
Mun Dae Kim (Korea Institute for Advanced Study, Korea) and Sam Young Cho (Chongqing University, China)

Posters

August 27, 2008 (Wed.) [Poster Session A]

- Multi-setting Bell inequality for qudits* number 1
Se-Wan Ji (Korea Institute for Advanced Study, Korea), Jinhyoung Lee (Hanyang University, Korea), James Lim (Hanyang University, Korea), Koji Nagata (Korea Institute for Advanced Study, Korea) and Hai-Woong Lee (Korea Institute for Advanced Study, Korea)
- Generation of entanglement in the displaced number states with nonlinear crystals* number 2
Juhui Lee (Korea Institute for Advanced Study, Korea, and Sookmyung Women's University, Korea), Sergey Podoshvedov (Korea Institute for Advanced Study, Korea) and Jaewan Kim (Korea Institute for Advanced Study, Korea)
- Violation of local realism with three local measurements* number 3
Junghee Ryu (Hanyang University, Korea) and Jinhyoung Lee (Hanyang University, Korea)
- Complementary Local Measurements in Nonlocality* number 4
James Lim (Hanyang University, Korea), Junghee Ryu (Hanyang University, Korea) and Jinhyoung Lee (Hanyang University, Korea)
- Nonlocality of partially entangled two qutrits by genuinely high-dimensional inequalities* number 5
Minsu Kang (Hanyang University, Korea), James Lim (Hanyang University, Korea) and Jinhyoung Lee (Hanyang University, Korea)
- An approach of quantum learning machine to develop deterministic algorithms* number 6
Jeongho Bang (Hanyang University, Korea), James Lim (Hanyang University, Korea), Seokwon Yoo (Hanyang University, Korea), Myungshik Kim (The Queens University of Belfast), Jinhyoung Lee (Hanyang University, Korea)
- Resource Handling for Quantum Networks of Arbitrary Topology* number 7
Rodney Van Meter (Keio University, Japan), Thaddeus D. Ladd (Stanford University, USA, and National Institute of Informatics, Japan), Bill Munro (Hewlett-Packard Laboratories, Bristol, UK) and Kae Nemoto (National Institute of Informatics, Japan)
- Entanglement of a scalar field vacuum in a compact space* number 8
Jae-Weon Lee (Korea Institute for Advanced Study, Korea), Jin Hur (Korea Institute for Advanced Study, Korea), Jaewan Kim (Korea Institute for Advanced Study, Korea) and Taeseung Choi (Seoul Womens University, Korea)
- A Note on the Upper Bound Derived by Semidefinite Programming for the Maximum Quantum Violation of Bell Inequalities* number 9
Toshiaki Takahashi (University of Tokyo, Japan), Sonoko Moriyama (University of Tokyo, Japan) and Hiroshi Imai (ERATO-SORST Quantum Computation and Information Project, JST, Japan)
- Quantum teleportation using unitary transformation and single-qubit measurement* number 10
Chi-Yee Cheung (Academia Sinica, Taiwan)
- Incompatibility between quantum mechanics and Leggett-type nonlocal hidden variable theory for singlet state* . number 11
Kahngho Lee (Chonnam National University, Korea) and Kicheon Kang (Chonnam National University, Korea)
- Analysis of Quantum Walk Bipartite Graph against Decoherence Error* number 12
Yu Tokuda (University of Tokyo, Japan, and ERATO-SORST Quantum Computation and Information Project, JST, Japan) and Jun Hasegawa (University of Tokyo, Japan)
- Ground state instability and quantum criticality in XX spin chains* number 13
Wonmin Son, Luigi Amico, Francesco Plastina and Vlatko Vedral
- Representation of Quantum Circuits with Clifford and $\pi/8$ Gates* number 14
Ken Matsumoto (Gunma University, Japan) and Kazuyuki Amano (Gunma University, Japan)
- Optimality of minimum-error discrimination by the no-signalling condition* number 15

Joonwoo Bae (Korean Institute for Advanced Study, Korea), Jae-Weon Lee (Korean Institute for Advanced Study, Korea), Jaewan Kim (Korean Institute for Advanced Study, Korea) and Won-Young Hwang (Chonnam National University, Korea)

<i>Addition on a Linear Nearest Neighbor Architecture</i>	number 16
Yasuhiro Takahashi (NTT Corporation, Japan) and Noboru Kunihiro (University of Tokyo, Japan)	
<i>Variants of Controlled Quantum Teleportation: Toward Controllers' Majority Vote</i>	number 17
Robabeh Rahimi (Kinki University, Japan), Akira SaiToh (Kinki University, Japan) and Mikio Nakahara (Kinki University, Japan)	
<i>Noise and the Mermin-GHZ Game</i>	number 18
Ivan Fialik (Masaryk University, Czech Republic)	
<i>Optimal Covariant Measurement of Momentum of a Particle in Quantum Mechanics</i>	number 19
Yutaka SHIKANO (Tokyo Institute of Technology, Japan) and Akio HOSOYA (Tokyo Institute of Technology, Japan)	
<i>Automata theory and unsharp quantum logic</i>	number 20
Yun Shang (Institute of Mathematics, AMSS, Academia Sinica, China)	
<i>Coherent View on Entropy</i>	number 21
Won-Young Hwang (Chonnam National University, Korea)	

August 28, 2008 (Thu.) [Poster Session B]

- Implementation of quantum error correction in solid state nuclear magnetic resonance* number 22
Osama Moussa (University of Waterloo, Canada), Jonathan Baugh (University of Waterloo, Canada), Colm Ryan (University of Waterloo, Canada) and Raymond Laflamme (University of Waterloo, Canada, and Perimeter Institute, Canada)
- Quantum Secret Sharing with Mutually (Un-)Biased Bases* number 23
I-Ching Yu (National Taiwan Normal University, Taiwan), Feng-Li Lin (National Taiwan Normal University, Taiwan) and Ching-Yu Huang (National Taiwan Normal University, Taiwan)
- Distribution of polarization-entangled photon-pairs produced via spontaneous parametric down-conversion over 82 km and 132 km of optical fiber* number 24
Han Chuen Lim (University of Tokyo, Japan, and National Institute of Advanced Industrial Science and Technology (AIST), Japan), Akio Yoshizawa (National Institute of Advanced Industrial Science and Technology (AIST), Japan, and CREST, Japan Science and Technology Agency (JST), Japan), Hidemi Tsuchida (National Institute of Advanced Industrial Science and Technology (AIST), Japan, and CREST, Japan Science and Technology Agency (JST), Japan) and Kazuro Kikuchi (University of Tokyo, Japan)
- Fast Exact Quantum Leader Election on Anonymous Rings* number 25
Hirotada Kobayashi (National Institute of Informatics, Japan, and ERATO-SORST Quantum Computation and Information Project, JST, Japan), Keiji Matsumoto (National Institute of Informatics, Japan, and NTT Corporation, Japan) and SEIICHIRO TANI (ERATO-SORST Quantum Computation and Information Project, JST, Japan, and NTT Corporation, Japan)
- Temporal shaping of a heralded single-photon wave packet* number 26
So-Young Baek (Pohang University of Science and Technology, Korea), Osung Kwon (Pohang University of Science and Technology, Korea) and Yoon-Ho Kim (Pohang University of Science and Technology, Korea)
- Measurement-induced evolution of conditional state of a charge qubit coupled to a quantum point contact detector* . number 27
Gyong Luck Khym (Chonnam National University) and Kicheon Kang (Chonnam National University)
- Quantum Isomorphism Testing for Semidirect Product Groups* number 28
Francois Le Gall (ERATO-SORST Quantum Computation and Information Project Japan Science and Technology Agency, Japan)
- Quantum features of surface plasmon polaritons* number 29
Changhyoup Lee (Hanyang University, Korea), Mark Simon Tame (Queens University, UK), Daniel Ballester (Queens University, UK), Myungshik Kim (Queens University, UK) and Jinhyoung Lee (Hanyang University, Korea)
- Solvability of Sliding Atoms Puzzle on a Lattice* number 30
Norie Fu (University of Tokyo, Japan) and Hiroshi Imai (University of Tokyo, Japan, and ERATO-SORST Quantum Computation and Information Project, JST, Japan)
- Construction of Quantum Low Density Parity Check Code Based on Finite Geometry* number 31
Sheng-mei Zhao (Nanjing University of Posts & Telecommunications, China) and Bao-yu ZHENG (Nanjing University of Posts & Telecommunications, China)
- Quantum communication beyond the localization length in disordered spin chains* number 32
Jonathan Allcock (University of Bristol, UK) and Noah Linden (University of Bristol, UK)
- Experimental spin squeezing on the caesium clock-transition* number 33
Daniel Oblak (Niels Bohr Institute, University of Copenhagen, Denmark), Patrick Windpassinger (Niels Bohr Institute, University of Copenhagen, Denmark), Jurgen Appel (Niels Bohr Institute, University of Copenhagen, Denmark), Ulrich Busck Hoff (Niels Bohr Institute, University of Copenhagen, Denmark), Niels Kjargaard (Niels Bohr Institute, University of Copenhagen, Denmark) and Eugene Polzik (Niels Bohr Institute, University of Copenhagen, Denmark)
- Quantum states for perfectly secure secret sharing* number 34

<p>Dong Pyo Chi (Seoul National University, Korea), Jeong Woon Choi (Electronics and Telecommunications Research Institute, Korea), Jeong San Kim (University of Calgary, Canada), Taewan Kim (Seoul National University, Korea) and Soojoon Lee (Kyung Hee University, Korea)</p>	
<i>Efficient algorithm of the Extended Clifford Group</i>	number 35
<p>Yasuhito Kawano (NTT Corporation, Japan)</p>	
<i>Generation and Characterization in a Laboratory of $C^2 \otimes C^d$ States with Negative or Positive Partial Transpose Possessing Free or Bound E</i>	number 36
<p>N Chandra (Indian Institute of Technology, Kharagpur, India)</p>	
<i>On the Effect of Quantum Interaction Distance on the Quantum Addition Circuits</i>	number 37
<p>Byung-Soo Choi (Ewha Womans University, Korea) and Rodney Van Meter (Keio University, Japan)</p>	
<i>A Simple Scheme for Random Number Generation in Quantum Key Distribution Systems</i>	number 38
<p>Guilherme Barreto Xavier (Pontifical Catholic University of Rio de Janeiro, Brazil), Thiago Ferreira da Silva (Pontifical Catholic University of Rio de Janeiro, Brazil), Guilherme Penello Temporao (Pontifical Catholic University of Rio de Janeiro, Brazil), Giancarlo Vilela de Faria (Pontifical Catholic University of Rio de Janeiro, Brazil) and Jean Pierre von der Weid (Pontifical Catholic University of Rio de Janeiro, Brazil)</p>	
<i>A Measurement-Based Form of the Out-of-Place Quantum Carry-Lookahead Adder</i>	number 39
<p>Agung Trisetyarso (Keio University, Japan), Rodney Van Meter (Keio University, Japan) and Kohei Itoh (Keio University, Japan)</p>	
<i>Experimental demonstration of SARG04 quantum cryptography protocol in free space</i>	number 40
<p>Youn-Chang Jeong (Pohang University of Science and Technology, Korea), Yong-Su Kim (Pohang University of Science and Technology, Korea) and Yoon-Ho Kim (Pohang University of Science and Technology, Korea)</p>	
<i>Deterministic Dense Coding and Faithful Teleportation with Multipartite Graph States</i>	number 41
<p>Ching-Yu Huang (National Taiwan Normal University, Taiwan), Feng-Li Lin (National Taiwan Normal University, Taiwan), I-Ching Yu (National Taiwan Normal University, Taiwan) and Li-Yi Hsu (Chung Yuan Christian University Taiwan)</p>	
<i>An Optimal and Exact Quantum Algorithm for the General Weight Decision Problem</i>	number 42
<p>Byung-Soo Choi (Ewha Womans University, Korea) and Masahito Hayashi (Tohoku University, Japan)</p>	
<i>Unexpected Commutation Relation of Spontaneously Emitted Photon in Free Space</i>	number 43
<p>Raymond Ooi (Korean University, Korea)</p>	