

PROGRAM

Oral Presentation

September 1, 2006 (Fri)

[09:10-12:00 Morning Session]

09:10-09:30 Opening (Chair J. Gruska Masaryk Univ.)

09:30-10:20 [Keynote Talk 1] (Chair C. H. Bennett, IBM)

Quantum Communication in Standard Optical Fibers

N. Gisin (Univ. of Geneva)

Break

(Chair Hoi-Kwong Lo, Univ. Toronto)

10:40-11:20 [Invited Talk 1] *Continuous Variable QKD Protocols in Realistic Environments and Entanglement Verification in Qubit-Mode Systems*

N. Lutkenhaus (Univ. of Waterloo)

11:20-12:00 [Invited Talk 2] *Non-Localities and Multi-Party Commitments*

C. Crepeau (McGill Univ.)

Lunch

[14:00-18:00 Afternoon Session]

Session A1 [Quantum Cryptography] (Chair N. Lutkenhaus, Erlangen Univ.)

14:00-14:20 *Experimental Decoy State Quantum Key Distribution*

Yi Zhao(Univ. of Toronto), Bing Qi (Univ. of Toronto), Xiongfeng Ma(Univ. of Toronto),
Hoi-Kwong Lo(Univ. of Toronto), Li Qian(Univ. of Toronto)

14:20-14:40 *Practical Evaluation of Security for Quantum Key Distribution*

Masahito Hayashi (ERATO-SORST)

14:40-15:00 *Security of Quantum Key Distribution Protocol with Two-Way Classical Communication Assisted by One-Time Pad Encryption*

Shun Watanabe(TIT), Ryutaroh Matsumoto(TIT), Tomohiko Uyematsu(TIT)

15:00-15:20 *Collapsing Quantum Digital Signatures*

Yasuhito Kawano(NTT Communication Science Labs), Go Kato(NTT Communication Science Labs)

15:20-15:40 *Bounds on Quantum Correlations in Bell Inequality Experiments*

Yeong-Cherng Liang(Univ. of Queensland), Andrew C. Doherty(Univ. of Queensland)

15:40-16:00 *Robustness of an Improved Protocol for QKD with Classical Bob*

Michel Boyer(Univ. de Montréal), Dan Kenigsberg(Technion), Tal Mor(Technion)

Session B1 [Quantum Computation] (Chair R. Jozsa, Univ. Bristol)

14:00-14:20 *Classical Simulation of Limited-Width Cluster-State Quantum Computation*

Nadav Yoran(Univ. of Bristol), Anthony J. Short(Univ. of Bristol)

14:20-14:40 *Brokered Graph-state Quantum Computation*

D. E. Browne(Oxford Univ.), S. C. Benjamin(Oxford Univ.), J. Fitzsimons(Oxford Univ.),
J. L. Morton(Oxford Univ.)

14:40-15:00 *Entanglement via Adiabatic Quantum Computation*

Sangchul Oh(KIAS), Jaewan Kim(KIAS)

15:00-15:20 *Sufficient Conditions for Quantum Adiabatic Approximation*

Ming-Yong Ye(USTC), Xiang-Fa Zhou(USTC), Yong-Sheng Zhang(USTC), Guang-Can Guo(USTC)

15:20-15:40 *Quantum Property Testing for Solvable Groups*

Yoshi fumi Inui (Univ. of Tokyo/ERATO-SORST)

15:40-16:00 *Quantum Cellular Automata and NMR Single-Spin Measurement*

Carlos A. Perez-Delgado(Univ. of Waterloo), Donny Cheung(Univ. of Waterloo),
Michele Mosca(Univ. of Waterloo/PITP), Paola Cappelaro(MIT), David G. Cory(MIT)

Break

Session A2 [Quantum Communication] (Chair A. Tomita, ERATO-SORST/NEC)

16:20-16:40 *Decoy State Quantum Key Distribution with Two-Way Classical Post-Processing*

Xiongfeng Ma(Univ. of Toronto), Chi-Hang Fred Fung(Univ. of Toronto),

Frédéric Dupuis(Univ. de Montréal), Kai Chen(Univ. of Toronto),

Kiyoshi Tamaki (NTT Basic Research Labs), Hoi-Kwong Lo(Univ. of Toronto)

16:40-17:00 *Security Proof of Quantum Key Distribution Protocols with and without Rotational Symmetry*

David Shi rokoff(Univ. of Toronto), Chi-Hang Fred Fung(Univ. of Toronto),

Hoi-Kwong Lo(Univ. of Toronto)

17:00-17:20 *A Hindrance to Present Schemes of Reverse Reconciliation Continuous Variable Quantum Key Distribution*

Zhao Yi-BO(USTC), Gui You-Zhen(USTC), Chen Ji n-Ji an(USTC), Han Zheng-Fu(USTC),

Guo Guang-Can(USTC)

17:20-17:40 *On the Distinguishability of Random Quantum States*

Ashley Montanaro(Univ. of Bristol)

17:40-18:00 *Entanglement-Assisted Quantum Error Correction*

Todd Brun(USC), Igor Devetak(USC), Min-Hsi u Hsieh(USC)

Section B2 [Quantum Computation] (Chair A. Winter, Univ. Bristol)

16:20-16:40 *Always On Non-Nearest-Neighbor Coupling in Scalable Quantum Computing*

Yong Hu(USTC), Zheng-Wei Zhou(USTC), Guang-Can Guo(USTC)

16:40-17:00 *Efficient Quantum Algorithms for Simulating Sparse Hamiltonians*

Barry C. Sanders(Univ. of calgary /Macquarie Univ.), Dominic W. Berry(Univ. of Queensland),

Graeme Ahokas (Univ. of calgary), and Richard Cleve(Univ. of calgary/ Univ. of Waterloo)

17:00-17:20 *Improving Quantum Computer Simulation*

Guido Arnold(Research Centre Jülich), Marcus Richter(Research Centre Jülich),

Binh Trieu(Research Centre Jülich), Thomas Lippert(Research Centre Jülich),

K. De Raedt (Univ. of Groningen), K. Michiel sen (Univ. of Groningen),

H. De Raedt (Univ. of Groningen)

17:20-17:40 *Hamiltonian Oracles*

Carlos Mochon(PITP)

17:40-18:00 *Multi-Target Block Partial Search*

Byung-Soo Choi (Sungkyunkwan Univ.), Vladimir E. Korepin(State Univ. of New York)

September 2, 2006 (Sat)

[09:10-11:40 Morning session]

(Chair Y. Yamamoto, Satndford/NII)

09:10-10:00 [Keynote Talk 2] *Quantum Information Processing with Polar Molecules*
P. Zoller(Univ. of Innsbruck)

Break

(Chair P. Zoller, Univ. Innsbruck)

10:20-11:00 [Invited Talk 3] *Schrödinger Cats in Cavity QED and Decoherence Studies*
S. Haroche(l' Ecole normale superieure)

11:00-11:40 [Invited Talk 4] *Temporal Distinguishability of an N-Photon State and Its Characterization by Quantum Interference*

Ze-Yu Ou (USTC/Indiana Univ.-Purdue Univ.)

Lunch

[13:40-18:00 Afternoon session]

Session A [Generation and Estimation] (Chair Ze-Yu Ou, Indiana-Purdue Univ./USTC)

13:40-14:00 *Schemes for Realizing Frequency Up- and Down-Conversions in Two-Mode Cavity QED*

Xubo Zou(USTC), Yuli Dong(USTC), Guangcan Guo(USTC)

14:00-14:20 *CQED-enhanced Single Photon Sources From InGaAs Quantum Dots*

C. Y. Hu(Univ. of Bristol), Y-L. D. Ho(Univ. of Bristol), R. Gibson(Univ. of Bristol),
J. G. Rarity(Univ. of Bristol), M. Fox(Univ. of Sheffield), J. Timpson(Univ. of Sheffield),
D. Sanvitto(Univ. of Sheffield), A. Darei(Univ. of Sheffield),
M. Hopkinson(Univ. of Sheffield), M. S. Skolnick(Univ. of Sheffield)

14:20-14:40 *Mott Transitions and XY Spin Models in Coupled Cavity Arrays*

D. G. Angelakis(Univ. of Cambridge), M. Santos(Univ. Federal de Minas Gerais),
S. Bose(Univ. College London)

14:40-15:00 *Information-Disturbance Tradeoff in Quantum State Discrimination*

F. Buscemi(ERATO-SORST / Dipartimento di Fisica "A. Volta" and CNISM),
M. F. Sacchi(Dipartimento di Fisica "A. Volta" and CNISM /CNR - INFM)

15:00-15:20 *Entanglement, Area, and the Problem of Finding Ground States of Many-body Systems*

J. Eisert(Imperial College London), M. Cramer(Imperial College London),
M. B. Plenio(Imperial College London)

15:20-15:40 *State Estimation from Pair of Conjugate Qudits*

Xiang-Fa Zhou(USTC), Yong-Sheng Zhang(USTC), Guang-Can Guo(USTC)

Session B [Quantum Computation and Nonlocality] (Chair Lixin He, USTC)

13:40-14:00 *Molecular-Spin Quantum Computing by the Use of Electron and Nuclear Spins*

Kazunobu Sato(Osaka City Univ./CREST), Robabeh Rahimi (Kinki Univ.),
Nobuyuki Mori (Osaka City Univ.), Shinsuke Nishida(Osaka City Univ.),
Kazuo Toyota(Osaka City Univ./CREST), Daisuke Shiomi (Osaka City Univ./CREST),
Yasushi Morita(Osaka Univ./CREST), Akiira Ueda(Osaka Univ.), Shuichi Suzuki (Osaka Univ.),
Ko Furukawa(IMS), Toshikazu Nakamura(IMS), Masahiro Kitagawa(Osaka Univ./CREST),
Kazuhiro Nakasuji (Osaka Univ.), Mikiyo Nakahara(Kinki Univ.),
Hideyuki Hara(Bruker Biospin), Patrick Carl (Bruker Biospin),
Peter Hoyer(Bruker Biospin), Takeji Takui (Osaka City Univ./CREST)

14:00-14:20 *Quantum Gate Operations and State Tomography in a Nanometre-scale NMR Device*

S. K. Ozdemir(SORST/CREST/Osaka Univ.),
A. Miranowicz(SORST/Osaka Univ./Adam Mickiewicz Univ.), T. Ota(SORST),
G. Yusa(SORST/NTT), K. Muraki(NTT), N. Imoto(SORST/CREST/Osaka Univ.),
Y. Hirayama(SORST/NTT/Tohoku Univ.)

14:20-14:40 *Non-Local Tasks with no Quantum Advantage*

Noah Linden(Univ. of Bristol), Sandu Popescu(Univ. of Bristol/Hewlett-Packard Labs),
Anthony J. Short(Univ. of Bristol), Andreas Winter(Univ. of Bristol)

14:40-15:00 *On the Quantum Chromatic Number of a Graph*

P. J. Cameron(Univ. of London), A. Montanaro(Univ. of Bristol),
M. W. Newman(Univ. of London), S. Severini(Univ. of York), A. Winter(Univ. of Bristol)

15:00-15:20 *Polyhedral and Semidefinite Approaches to Classical and Quantum Bell Inequalities*

David Avis(McGill Univ.), Tsuyoshi Ito(Univ. of Tokyo)

15:20-15:40 *Generalised Non-Locality: A Trade-off between Strength and Versatility*

Anthony J. Short(Univ. of Bristol), Jonathan Barrett(PITP)

15:40-17:40 **Poster Session I (No. 1-26)**

18:00 **Conference party**

September 3, 2006 (Sun)

[09:10-12:00 Morning session] (Chair S. Haroche, l'Ecole normale superieure)

09:10-09:50 [Invited Talk 5] *Differential Phase Shift Quantum Key Distribution, quantum Repeater and Quantum Computer*

Y. Yamamoto(Stanford Univ./NII)

Break

(Chair N. Gisin, Univ. Geneva)

10:10-10:50 [Invited Talk 6] *Research Directions toward Quantum Networks*

A. Tomita(ERATO-SORST/NEC/TIT)

10:50-11:30 [Invited Talk 7] *An Experimental Toolbox for Single Photon Quantum Information Science*

J. O'Brien (Univ. of Bristol)

11:30-11:40 announcement

Lunch

[13:40-18:00 Afternoon session]

Session A [Quantum Processing] (Chair J. O'Brien Univ. Bristol)

13:40-14:00 *Demonstration of Controllable Temporal Distinguishability in a Three-Photon State*

Bi-Heng Liu(USTC), Fang-Wen Sun(USTC), Yan-Xiao Gong(USTC), Yun-Feng Huang(USTC), Zhe-Yu Ou(USTC/Indiana Univ.-Purdue Univ.), Guang-Can Guo (USTC)

14:00-14:20 *Realization of Wheeler's "delayed-choice" experiment with single-photon interference.*

V. Jacques (Lab de PQM), E Wu (Lab de PQM /ECNU), F. Grosshans(Lab de PQM)

F. Treussart (Lab de PQM), A. Aspect (l'Institut d'Optique),
P. Grangier (l'Institut d'Optique), J.-F. Roch (Lab de PQM)

14:20-14:40 *Distilling Three-Party W-like States to Randomly Shared Two-Party Entanglement*
Ben Fortescue (Univ. of Toronto), Hoi-Kwong Lo (Univ. of Toronto)

14:40-15:00 *Experimental Entanglement Distillation of Two-Qubit Mixed States Under Local Filtering Operations*

Zhi-Wei Wang (USTC), Xiang-Fa Zhou (USTC), Yun-Feng Huang (USTC),
Yong-Sheng Zhang (USTC), Xi-Feng Ren (USTC), Guang-Can Guo (USTC)

15:00-15:20 *Experimental Demonstration of Phase Measurement Precision Beating Shot Noise Limit*

F. W. Sun (USTC), B. H. Liu (USTC), Y. X. Gong (USTC), Z. Y. Ou (USTC/Indiana Univ.-Purdue Univ.), Y. F. Huang (USTC), G. C. Guo (USTC)

15:20-15:40 *Generic Entanglement is Physical.*

R. Oliveira (IBM Watson Research Center), O. Dahlsten (Imperial College London),
M. Plenio (Imperial College London)

Session B [Quantum Processing, Solid State] (Chair Gui-Lu Long, Tsinghua Univ.)

13:40-14:00 *Atomistic Theories of Dot Molecule Quantum Gates*
Lixin He (USTC)

14:00-14:20 *Surface Plasmon Assisted Transmission*

Guo-Ping Guo (USTC), Xi-Feng Ren (USTC), Yun-Feng Huang (USTC), Chuan-Feng Li (USTC),
Zhe-Yu Ou (USTC/Indiana Univ.-Purdue Univ.), Guang-Can Guo (USTC)

14:20-14:40 *Equivalent Qubit Dynamics under Classical and Quantum Noise*

O.-P. Saira (Helsinki Univ. of Technology), V. Bergholm (Helsinki Univ. of Technology), T.
Ojanen (Helsinki Univ. of Technology), M. Möttönen (Helsinki Univ. of Technology)

14:40-15:00 *An Analysis of the Quality of Charge Qubit Measurement by a Strongly Coupled Single-Electron Transistor*

Neil P. Oxtoby (Griffith Univ.), H. M. Wiseman (Griffith Univ.), He-Bi Sun (Griffith Univ.)

15:00-15:20 *Quantum Brachistochrone*

Alberto Carlini (TIT), Akiyo Hosoya (TIT), Tatsuhiro Koike (Keio Univ.),
Yosuke Okudaira (TIT)

15:20-15:40 *New Quantum Bounds for the Claw Finding Problem*

Seiichi Tani (ERATO-SORST/NTT Communication Science Labs)

15:40-17:40 poster Session II (No. 27-52)

September 4, 2006 (Mon)

Excursion

Posters

September 2, 2006 (Sat)

1) *Effects of Anisotropy on Pairwise Entanglement of a Four-Qubit Heisenberg XXZ Chain*
Min Cao (Nantong Univ.), Shiqun Zhu (Suzhou Univ.)

2) *Effect of Vacuum-Induced Coherence in a Four-Level Atomic System*
Chen Jun (Nanchang Univ.), Liu Zhengdong (Nanchang Univ.)

- 3) *Preparation of Microwave Single-Photon State with Superconducting Circuit QED*
Yun-Feng Xiao(USTC), Xu-Bo Zou(USTC), Yong Hu(USTC), Zheng-Fu Han(USTC)
Guang-Can Guo(USTC)
- 4) *An Efficient Quantum Circuit for Addition in $GF(P)$ and Shor's Algorithm*
Yasuhiro Takahashi (NTT Communication Science Lab/Univ. Electro-Communications),
Noboru Kunihiro(Univ. Electro-Communications),
Kazuo Ohta(Univ. Electro-Communications)
- 5) *A Finite Statistics Protocol for Quantum Key Distribution*
Jim Harrington(LANL), Ark Etinger(LANL), Patrick Rice(LANL),
Richard Hughes(LANL), Jane Nordholt(LANL)
- 6) *Plasmon Assisted Transmission of High Dimensional Orbital Angular Momentum Entangled State*
Xi-Feng Ren(USTC), Guo-Ping Guo(USTC), Yun-Feng Huang(USTC),
Chuan-Feng Li(USTC), Guang-Can Guo(USTC)
- 7) *Strong Monotonicity in Mixed-State Entanglement Manipulation*
Satoshi Ishizaka(NEC/JSTA)
- 8) *Run-Time Analysis of Quantum Algorithm for Solution to a Graph Problem*
Vidya Raj C. (NIE), Dr. M. S. Shrivakumar(NIE)
- 9) *Implication of The Lüders Postulate for the Distinguishability Of observables*
Bernhard K. Meister(RUC)
- 10) *A New Interpretation of the Planck Constant and Wave-Particle Duality Based on Micro-Photon Theory*
Liang-Zao Fan(CAS), Jing-Song Feng(CAXI)
- 11) *Enhanced Single-Photon Emission from Single Quantum Dots in Two-Dimensional Photonic Crystal Cavities*
Xiulai Xu(Hitachi Cambridge Lab), Frederic S.F. Brossard(Hitachi Cambridge Lab),
David A. Williams(Hitachi Cambridge Lab), Robert A. Taylor(Hitachi Cambridge Lab),
Kwan H. Lee(Univ. Oxford), Felix Waldmann(Univ. Oxford)
- 12) *Quantum Key Distribution with Vacuum-One-Photon Qubits*
Lee Su-Yong(KAIST), Se Wan Jie(KAIST), Jae-Weon Lee(KIAS), Ho Joon Kim(KAIST),
Hai-Woong Lee(KAIST)
- 13) *Pairwise Thermal Entanglement in a Generalized Jaynes-Cummings Model of Three Two-Level Atoms Interact with a Single-Mode Cavity*
Guo-Feng Zhang(CAS/BUAA), Shu-Shen Li (CCAST/CAS)
- 14) *Generalization of Landauer's Information Erasure Principle*
J. A. Vaccaro, S.M. Barnett
- 15) *Applying Quantum Search Algorithm to Attack Advanced Encryption Standard(AES)*
Phaneendra H. D. (NIE), Dr. M. S. Shrivakumar(NIE)
- 16) *Separability of the Scalar Quantum Fields Vacuum with a Boundary*
Jae-Weon Lee(KIAS), Jaewan Kim(KIAS), Taesung Choi (Korea Univ.)
- 17) *Quantum Direct Communication without Public Announcement of Basis*
Ming Gao(NUDT), Shuang Wu(NUDT)
- 18) *Problems of Security in Quantum Key Distribution with Floating Basis Protocol.*
Yury Kurochkin(MIPT), Vladimir Kurochkin(RAS).
- 19) *Quantum Simulation of the Fermi-Hubbard Model using a Two-Dimensional Electron Gas and*

Surface Acoustic Waves

Shoko Utsunomiya(NII/Uni v. of Tokyo), Tim Byrnes(NII), Patrik Recher(Stanford Uni v.),
Na Young Kim(Stanford Uni v.), Yoshi hisa Yamamoto(NII/Uni v. of Tokyo/Stanford Uni v.)

20) *Quantum Computation and Quantum Language in Genomes*

Guang-Gui Bao(NUST), Ai-Fei Bao(Soochow Univ.)

21) *Remote Implementations of Partially Unknown Quantum Operations of Multiqubits*

An Min Wang(USTC)

22) *Off-Diagonal Geometric Phase for Mixed States in Experiment of Franson Interferometer*

Yun-Kun Jiang(ERATO-SORST), Jian Li (Southeast Uni v. of Nanjing),

Aki hisa Tomi ta(ERATO-SORST)

23) *Information Geometry of Mean Field Approximation for Quantum Boltzmann Machines*

Nihal Yapage(Uni v. Electro-Communications),

Hiroshi Nagaoka(Uni v. Electro-Communications)

24) *Modular Logic and Quantum Finite State Automata*

Ilze Dzelme-Bērziņa(Uni v. of Latvia)

25) *An Efficient Approximation of $SU(D)$ using Decomposition*

Hiroyuki Ni shiyama(NIST), Masaki Nakani shi (NIST), Shigeru Yamashi ta(NIST),

asuhi ro Nakashi ma(NIST)

26) *Large Scale Quantum Computer Simulator*

Marcus Richter(Research Centre Jülich), Guido Arnold(Research Centre Jülich),

Binh Trieu(Research Centre Jülich), Thomas Lippert(Research Centre Jülich),

K. De Raedt(Uni v. of Groningen), K. Mi chi el sen(Uni v. of Groningen),

H. De Raedt(Uni v. of Groningen)

September 3, 2006(Sun)

27) *Entanglement in a Quantum Mixed-Spin Chain*

Xi ang Hao(Suzhou Uni v.), Shi qun Zhu(Suzhou Uni v.)

28) *Quantum Bit Commitment using Quantum Algorithm*

Guang Ping He(Sun Yat-Sen Uni v.)

29) *Monogamy Inequality for Distributed Gaussian Entanglement*

Tohya Hi roshi ma(ERATO-SORST), Gerardo Adesso(Uni v. degli Studi di Salerno),

Fabrizio Illuminati (Uni v. degli Studi di Salerno/Uni v. of Cambridge)

30) *Computation of Topological Charges of Optical Vortices via Non-Degenerate*

Four-Wave-Mixing

Wei Ji ang(USTC), Qun-feng Chen(USTC), Yong-sheng Zhang(USTC), G. C. Guo(USTC)

31) *How to Determine the Existence of the Common Entanglement Witnesses for Some Entangled States*

YuChun Wu(USTC), GuangCan Guo(USTC)

32) *Controlled Decoherence-Free Subspace/Subsystem for Open Quantum Dynamical Systems*

Mi ng Zhang(NUDT), Wei -Wei Zhou(NUDT), HongWei Xi e(NUDT), Dewen Hu(NUDT)

33) *Quantum Secure Communication Scheme with W State*

Ji an wang(NUDT), Quan Zhang(NUDT), Chao-j i ng Tang(NUDT)

34) *Demonstration of Temporal Distinguishability in a Four-Photon State and a Six-Photon State*

Guo-Yong Xi ang(USTC), Yun-Feng Huang(USTC), Fang-Weng Sun(USTC),

Pei Zhang(USTC), Ze-Yu Ou(USTC/Indiana Uni v. -Purdue Uni v.), Guang-Can Guo(USTC)

- 35) *Controlled Quantum Key Distribution Protocol with Entangled State*
Jian Wang(NUDT), Quan Zhang(NUDT), Chao-jing Tang(NUDT)
- 36) *Lower Bounds on the Average Base Length of Lossless Quantum Data Compression*
Hsin-Hung Chou(NTHU), Jay Cheng(NTHU)
- 37) *Secure Controlled Teleportation*
Dan Kenigsberg(Technion IIT), Tal Mor(Technion IIT)
- 38) *Quantum Secret Sharing between M-Party and N-Party with Six States*
Ting Gao(Hebei Univ.), Fengli Yan(Hebei Univ.)
- 39) *Quantum Key Distribution Network with Wavelength Addressing*
Xiaofan Mo(USTC), Tao Zhang(USTC), Fangxing Xu(USTC),
Zhengfu Han(USTC), Guangcan Guo(USTC)
- 40) *Experimental Demonstration of Quadrature Entanglement using Laser Pulses*
Yun Zhang(Gakushuin Univ./CREST), Tatsuya Furuda(Gakushuin Univ.),
Takuya Hirano(Gakushuin Univ./CREST)
- 41) *3db Squeezing at Telecommunication Wavelength using Pulsed Homodyne Detector*
Takashi Tajima(CREST), Yujiro Eto(CREST), Yun Zhang(Gakushuin Univ./CREST),
Takuya Hirano(Gakushuin Univ./CREST)
- 42) *Robustness of Multiparty Nonlocality to Local Decoherence*
Sung Soon Jang(ETRI), Yong Wook Cheong(Hanyang Univ.),
Jaewan Kim(KIAS), Hai-Woong Lee(KAIST)
- 43) *Quantum Secret Sharing Extended from Quantum Key Distribution*
Wei-tao Liu(NUDT), Lin-mei Liang(NUDT), Cheng-zu Li(NUDT), Jian-min Yuan(NUDT)
- 44) *Quantum Entangled State Controlled by Ultrashort Laser*
Xiang-yang Yu(Sun Yat-Sen Univ.), Xiao-dong Zhang(Sun Yat-Sen Univ.),
Zheng-wen Zhang(Sun Yat-Sen Univ.)
- 45) *A Quantum-Mathematical Model to State Single Photon(Electron) Double Slit Experiment, Fresnel and Fraunhofer Diffractins*
Akbar Rahmani Nejad(AmirKabir Univ.)
- 46) *Secure Quantum Bit Commitment using Unstable Particles*
Chi-Yee Cheung(AST)
- 47) $\$(4, 1)\$$ -Quantum Random Access Coding Does Not Exist -- One qubit is not enough to recover one of four bits--
Masahito Hayashi (ERATO-SORST/Univ. of Tokyo,), Kazuo Iwama(Kyoto Univ),
Harumichi Nishimura(Osaka Prefecture Univ),
Rudy Raymond(Tokyo Research Lab, IBM), Shigeru Yamashita(NIST)
- 48) *Controlled and Combined Remote Implementations of Partially Unknown Quantum Operations of Multiqubits using GHZ States*
An Min Wang(USTC)
- 49) *Fiber Quantum Cryptography Setup with Auto-Compensating Scheme.*
V. L. Kurochkin(RAS), A. V. Zverev(RAS), Y. V. Kurochkin(MIPT), I. I. Ryabtsev(RAS),
I. G. Neizvestny(RAS), S. Moon(KIST), B. S. Bae(KIST), H. J. Shin(KIST),
J. B. Park(KIST), C. W. Park(KIST)
- 50) *Quantum Master Equation Descriptions of a Charge Qubit Coupled to a Single-Electron Transistor*

Chien Hung Lin (National Taiwan Univ.), H.-S. Goan (National Taiwan Univ.)

51) *Channels with Memory and Many-Body Physics.*

Martin Plenio (Imperial College London), Shashank Virmani (Imperial College London)

52) *A Computable Bounds of Deterministic LOCC Discrimination in a Multipartite System*

Masaki Owari (Univ. of Tokyo), Masahito Hayashi (ERATO-SORST/ Univ. of Tokyo),

Keiji Matsumoto (ERATO-SORST/NII)