

## Poster Session 3

SUNDAY, December 3, 2006

**POSTER Session : Non-classical Light Sources, Quantum Communication Systems,  
Quantum Computation | 10:45-12:45**

Christian Kurtsiefer, Chair

Paper #

- T. Coudreau**, J. Laurat, G. Keller, C. Fabre  
P3-1 "Generation of two-color polarization-entangled optical beams with a self-phase-locked two-crystal optical parametric oscillator"
- Alessandro Zavatta**, Marco Bellini, Milena D'Angelo, Valentina Parigi  
P3-2 "Remotely-prepared, time-encoded, single-photon entangled states: tomographic characterization and Bell's inequality test"
- Anh Tuan Nguyen**, Edouard Brainis, Marc Haelterman, Philippe Emplit, Costantino Corbari, Albert Canagasabay, Peter Kazansky, Olivier Deparis, Andrei Fotiadi, Patrice Megret, Kien Phan Huy, Serge Massar  
P3-3 "Towards a photon pair source using periodically poled twin-hole silica fibre"
- Xiaoying Li**, Jun Chen, Kim Fook Lee, Paul L. Voss, Prem Kumar  
P3-4 "Spectrum correlation of entangled photon-pairs generated in optical fiber"
- Yuta Takahashi**, Naoto Namekata, Jonas Soederholm, Keiichi Hirano, Susumu Machida, Shuichiro Inoue, Shinichi Komatsu, Sunao Kurimura  
P3-5 "Homodyne and photon-counting measurements of squeezed light at 1550 nm"
- Nicolai B. Grosse**, Warwick P. Bowen, Kirk McKenzie, Thomas Symul, Ping Koy Lam  
P3-6 "Harmonic entanglement from second-order nonlinearity"
- A. Beveratos**, S. Laurent, R. Braive, L. Le Gratier, A. Lemaitre, I. Sagnes, I. Robert-Philip, I. Abram  
P3-7 "Tailoring the emission from single quantum dot through cavity effects for quantum communications"
- Piotr Kolenderski**, Wojciech Wasilewski, Konrad Banaszek  
P3-8 "Spectral properties of photon pairs generated in spontaneous parametric down conversion"
- Yujiro Eto**, Takashi Tajima, Yun Zhang, Takuya Hirano  
P3-9 "Measurement of 3dB squeezing at telecommunication wavelength using pulsed homodyne detector"
- R. Shimizu**, T. Yamaguchi, Y. Mitsumori, H. Kosaka, K. Edamatsu  
P3-10 "Generation of polarization entangled photons using a spatial correlation in spontaneous parametric down-conversion"

P3-11	<b>A. P. VanDevender</b> , N. A. Peters, K. J. Arnold, E. R. Jeffrey, J. B. Altepeter, J. T. Barreiro, R. Rangarajan, O. Hosten, P. G. Kwiat “Deterministic single-photon source”
P3-12	<b>Yun Zhang</b> , Tatsuya Furuta, Takuya Hirano “Experimental generation of quadrature entanglement using laser pulses”
P3-13	<b>Kim Fook Lee</b> , Chuang Liang, Jun Chen, Prem Kumar “High purity fiber-based entangled photon sources”
P3-14	<b>A. Goebel</b> , Q. Zhang, C. Wagenknecht, Y. -A. Chen, B. Zhao, T. Yang, A. Mair, J. Schmiedmayer, J. -W. Pan “Experimental quantum teleportation of a two-qubit composite system”
P3-16	<b>Paolo Perinotti</b> , Giacomo M. D’Ariano, Massimiliano F. Sacchi, Rafal Demkowicz-Dobrzanski “Decorrelation of quantum systems”
P3-17	<b>Kunihiro Kojima</b> , Akihisa Tomita “Proposal for QND-measurement of photon-arrival with an atom-cavity system”
P3-18	<b>Joseph Spring</b> “Entanglement and irreducibility”
P3-19	<b>Go Kato</b> , Yasuhito Kawano “Quantum digital signature: the signature is destroyed by verification”
P3-21	<b>Akira Kitagawa</b> , Masahiro Takeoka, Masahide Sasaki, Anthony Chefles “Entanglement evaluation of non-Gaussian states generated by photon subtraction from squeezed states”
P3-22	<b>Peter van Loock</b> , Nicolas C. Menicucci, Mile Gu, Christian Weedbrook, Timothy C. Ralph, Michael A. Nielsen “Universal quantum computation with continuous-variable cluster states”
P3-23	<b>Agata M. Branczyk</b> , Alexei Gilchrist “Loss tolerant optical quantum computation with weak nonlinearities”
P3-24	<b>S. Utsunomiya</b> , N. Y. Kim, T. Byrnes, P. Recher, Y. Yamamoto “Quantum simulation of Bose-Hubbard model using microcavity exciton polaritons with surface acoustic wave induced potential”
P3-26	<b>Alex Hayat</b> , Pavel Ginzburg, Meir Orenstein “High-efficiency entangled photon source via microcavity-controlled two-photon spontaneous emission”
P3-27	<b>J. Ishi-Hayase</b> , K. Akahane, N. Yamamoto, M. Kujiraoka, K. Ema, M. Sasaki “Long-lived coherence of quantum dot excitons in the telecommunication waveband”
P3-29	<b>Avinash Koli</b> , Brendon W. Lovett, Simon C. Benjamin, Tom M. Stace “Optical measurement of spin parity in coupled quantum dots”
P3-30	<b>Y. Omar</b> , A. T. Costa Jr., S. Bose “Entanglement of two impurities through electron scattering”

P3-31	<b>Makoto Negoro</b> , Shogo Yamanaka, Akinori Kagawa, Kazuyuki Takeda, Masahiro Kitagawa "Universal control of nuclear spins in solids robust against decoherence"
P3-33	<b>Minaru Kawamura</b> , Takuji Morimoto, Yoshiyuki Mori, Ryuichi Sawae, Kenichi Takarabe, Yoshinori Manmoto, Toshio Sakata "A simple error correction method for NMR quantum computer"
P3-34	<b>J.P. Home</b> , G. Imreh, B. C. Keitch, D. M. Lucas, M. J. McDonnell, D. J. Szwer, N. J. Thomas, D. N. Stacey, A. M. Steane "Entanglement and long-lived coherence in QIP experiments with trapped-ion qubits"
P3-35	<b>Joseph Fitzsimons</b> , Li Xiao, Simon C. Benjamin, Jonathan A. Jones "Robust quantum computing via global control"
P3-36	<b>T. Coudreau</b> , P. Milman, W. Mainault, S. Guibal, L. Guidoni, B. Doucot, L. Ioffe "Topologically protected qubits with trapped ions"
P3-37	<b>Iulia Buluta</b> , Shuichi Hasegawa "A numerical study of decoherence control in ion traps"
P3-38	<b>Shigemasa Matsuo</b> , Toshiyuki Fujii, Sahel Ashhab, Franco Nori, Noriyuki Hatakenaka "Generation of Bell states and Greenberger-Horne-Zeilinger states in superconducting phase qubits"
P3-39	<b>Keisuke Fujii</b> , Katsuji Yamamoto "Robust one-way computer using encoded qubits"
P3-40	<b>Maarten Van den Nest</b> , Akimasa Miyake, Wolfgang Duer, Hans J. Briegel "Universal resources for measurement-based quantum computation"
P3-41	<b>Marcus Silva</b> , Vincent Danos, Elham Kashefi, Harold Ollivier "A direct approach to fault-tolerance in measurement-based quantum computation"
P3-43	<b>G. Gilbert</b> , M. Hamrick, F. J. Thayer, Y. Weinstein "Applications of the quantum computer condition"
P3-45	<b>Rodney Van Meter</b> , Kae Nemoto, W. J. Munro "Serial links for distributed quantum computation"
P3-50	<b>P.K. Gagnebin</b> , S. R. Skinner, E. C. Behrman, J. E. Steck "Quantum swapping channel"
P3-51	<b>Akira SaiToh</b> , Masahiro Kitagawa "Solving X3HS using a matrix-product-state simulation of an extended Brueschweiler search"
P3-52	<b>Alexander J. F. Hayes</b> , Alexei Gilchrist, Timothy C. Ralph "Circuit-based quantum computing with a loss-tolerant error code"
P3-53	<b>Anthony Chefles</b> , Akira Kitagawa, Masahiro Takeoka, Masahide Sasaki, Jason Twamley "Unambiguous discrimination among oracle operators"
P3-54	<b>Maris Ozols</b> , Laura Mancinska "On finding optimal quantum query algorithms using numerical optimization"
P3-55	<b>Taisia Mischenko-Slatenkova</b> "Low degree Boolean functions: application in quantum computation"

P3-56 **Rusins Freivalds**  
“Number-theoretical conjectures and size of quantum finite automata”

P3-57 **Rusins Freivalds**, Lelde Lace, Oksana Scegunajaja-Dubrovskaja  
“Two lower bounds for quantum query complexity”

P3-58 **Ilze Dzelme-Berzina**  
“Formulas of first order logic and quantum finite automata”

P3-59 **Vasilijs Kravcevs**, Maksim Kravtsev, Marats Golovkins  
“Closure properties of probabilistic reversible DH automata”

P3-60 **A. Carlini**, A. Hosoya, T. Koike, Y. Okudaira  
“Time optimal quantum evolutions”

P3-61 **T. Briant**, T. Caniard, P. -F. Cohadon, M. Pinard, A. Heidmann  
“Observation of radiation-pressure effects and back-action cancellation in interferometric measurements”