**QCMC 2010 Program**

**Monday**

8:50 **G.J. Milburn**

*Space, time and measurement* (MON-1)

9:20 **Masanao Ozawa**

*Universal uncertainty principle, simultaneous measurability, and weak values* (MON-2)

9:50 **D. Kaszlikowski**

*A new physical principle: Information Causality* (MON-3)

10:40 **A. I. Lvovsky**

*Quantum-optical process tomography using coherent states* (MON-4)

11:10 **M.J. Padgett**

*Holographic Ghost Imaging* (MON-5)

11:40 **F. N. C. Wong**

*Imaging beyond the Rayleigh bound* (MON-6)

12:00 **S. Guha**

*Enhanced standoff sensing resolution using quantum illumination* (MON-7)

14:00 **M.Y. Simmons**

*Towards Atomically Precise Silicon Devices in all Three Dimensions* (MON-8)

14:30 **S. Tarucha**

*Micro-magnet technique for implementing multiple spin qubits and qubit gates with quantum dots* (MON-9)

15:00 **Gleb Maslennikov**

*Substantial interaction between a singe atom and a focused light beam* (MON-10)

15:20 **W. Rosenfeld**

*Quantum interference of photons emitted by two remotely trapped atoms* (MON-11)

16:10 **C. F. Roos**

*Entangling interactions for quantum measurements and state engineering of trapped ions* (MON-12)

16:40 **Björn Lauritzen**

*Atomic Frequency Comb Memory for Light with Spin Wave Storage* (MON-13)

**Tuesday**

8:30 **J. Laurat**

*Quantum memory and repeater architecture with continuous variables* (TUE-1)

9:00 **Ben C. Buchler**

*Gradient echo quantum memory: flexible storage and manipulation of light* (TUE-2)

9:30 **E. Figueroa**

*Electromagnetically induced transparency with single atoms in a cavity* (TUE-3)

9:50 **J. J. Longdell**

*Hybrid photon echoes for broadband optical quantum memories* (TUE-4)

10:40 **Christopher A. Fuchs**

*Charting the Shape of Hilbert Space* (TUE-5)

11:10 **E.S. Polzik**

*Entanglement of atomic objects generated by dissipation* (TUE-6)

11:40 **K. S. Choi**

*Entanglement of spin-waves among four quantum memories* (TUE-7)

12:00 **M. J. Biercuk**

*Coherent control and large-scale entanglement in ion crystals* (TUE-8)

14:00 **Gerhard Rempe**

*Cavity QED with Single Atoms and Single Photons* (TUE-9)

14:30 **E Giacobino**

*Microcavity polaritons : a new tool for quantum information* (TUE-10)

15:00 **Jungsang Kim**

*Modular Universal Scalable Ion-trap Quantum Computer (MUSIQC)* (TUE-11)

15:20 **A. P. VanDevender**

*Recent advances in scalable ion-trap quantum information processing at NIST* (TUE-12)

16:10 **S. Gleyzes**

*Quantum non-demolition measurement,preparation and control of non-classical states of the light* (TUE-13)

16:40 **Giacomo Mauro D’Ariano**

*Simulation of Quantum Fields by a Quantum Computer as a new type of Field Theory*

(TUE-14)

**Wednesday**

8:30 **Philippe Grangier**

*Quantum Communications with Non-Gaussian States of the Light* (WED-1)

9:00 **N. Lütkenhaus**

*Testing and Benchmarking of Optical Quantum Communication Devices* (WED-2)

9:30 **W. J. Munro**

*High Bandwidth Quantum Communication* (WED-3)

9:50 **Philip Walther**

*Experimental photonic state engineering and quantum control of two optical qubits* (WED-4)

10:40 **Akira Furusawa**

*Quantum teleportation and quantum information processing* (WED-5)

11:10 **Prem Kumar**

*Engineering quantum communications for the telecom band* (WED-6)

11:40 **Mankei Tsang**

*Coherent quantum noise cancellation for opto-mechanical sensors* (WED-7)

12:00 **G. J. Pryde**

*Heralded Noiseless Linear Amplification and Distillation of Entanglement* (WED-8)

**Thursday**

8:30 **P.G. Kwiat**

*The Joys and Sorrows of Hyperentanglement* (THU-1)

9:00 **C. Silberhorn**

*Quantum state engineering,charcterization and manipulation using pulsed quantum*

*light,integrated optics and time-multiplexed linear networks* (THU-2)

9:30 **G. Fujii**

*98* % *quantum efficiency photon number resolving detector with titanium-based transition edge sensor* (THU-3)

9:50 **N. K. Langford**

*Efficient quantum computing using coherent photon conversion (CPC)* (THU-4)

10:40 **J. Eisert**

*Learning much from little* (THU-5)

11:10 **J.L. O’Brien**

*Integrated quantum photonics* (THU-6)

11:40 **T.B. Pittman**

*Photonic quantum computing using forced fermion-like behavior* (THU-7)

12:00 **P. van Loock**

*Implementing all stabilizer codes by linear optics* (THU-8)

14:00 **G. Leuchs**

*Quantum optics in monolithic resonators* (THU-9)

14:30 **O. Pfister**

*Protecting an EPR state by quantum engineering of decoherence* (THU-10)

15:00 **J. S. Neergaard-Nielsen**

*Continuous variable qubit state engineering* (THU-11)

15:20 **Nicolas C. Menicucci**

*Arbitrarily large continuous-variable cluster states from a single QND gate* (THU-12)

16:10 **P. Nussenzveig**

*Multicolor quantum information* (THU-13)

16:40 **Ulrik L. Andersen**

*Quantum protocols with coherent states of light* (THU-14)

**Friday**

8:30 **M. A. Eriksson**

*Toward Si/SiGe quantum dot spin qubits* (FRI-1)

9:00 **C.G. Smith**

*Charge and spin state read out of a double quantum dot coupled to a resonator* (FRI-2)

9:30 **J.J. Pla**

*Single-shot readout of an electron spin in silicon* (FRI-3)

9:50 **R.J. Sewell**

*Nonlinear Metrology of Atomic Spins* (FRI-4)

10:40 **D. Vitali**

*Quantum signatures of the dynamics of a vibrational mode of a SiN membrane within an*

*optical cavity* (FRI-5)

11:10 **Andrew Shields**

*Semiconductor LEDs for Indistinguishable Photons and Entangled Pairs* (FRI-6)

11:40 **M. J. Woolley**

*Engineering Quantum States of Nanomechanical Resonators* (FRI-7)

12:00 **Holger F. Hofmann**

*On the relation between parameter estimation and weak values* (FRI-8)

14:00 **María J. Calderón**

*Manipulation and characterization of donor electrons in Si close to an interface* (FRI-9)

14:30 **T. Fujisawa**

*Multiple two-qubit operations in a semiconductor quadruple quantum dot* (FRI-10)

15:00 **Barry C. Sanders**

*Dangling-bond charge qubit on a silicon surface* (FRI-11)

16:00 **Libby Heaney**

*Natural mode entanglement as a resource for quantum communication* (FRI-12)

16:20 **E.H. Huntington**

*Adaptive Optical Phase Estimation Using Time-Symmetric Quantum Smoothing* (FRI-13)

16:40 **Stephen D. Bartlett**

*Efficient quantum state tomography* (FRI-14)

**Poster session 1**

P1-1 M.A. Jafarizadeha and **M. Mahdian Baygi**

*Quantifying entanglement of two relativistic particles using optimal entanglement witnesses*

P1-2 C. M. Herdman, Kevin C. Young, V. W. Scarola, Mohan Sarovar and **K. B. Whaley**

*Stroboscopic Generation of Topological Protection*

P1-3 Thomas Gerrits, Scott Glancy, Tracy Clement, Brice Calkins, Adriana Lita, Aaron Miller, Alan Migdall, **Sae Woo Nam**, Richard Mirin and Manny Knill

*Generation of optical Schrödinger cat states by number-resolved squeezed photon subtraction*

P1-4 Jonathan D. Weinstein, Kyle Beloy and **Andrei Derevianko**

*Entangling the lattice clock: Towards Heisenberg-limited timekeeping*

P1-5 **R. I. Karasik** and H. M. Wiseman

*How many bits does it take to track an open quantum system?*

P1-6 **Kimin Park** and Hyunseok Jeong

*Decoherence properties of polarization-entangled photon pair and entangled coherent states*

P1-7 **Chang-Woo Lee**, Mauro Paternostro and Hyunseok Jeong

*Testing non-local realism through Leggett inequality test with entangled coherent states*

P1-8 **X. Ma**, T. Moroder and N. Lütkenhaus

*Detection-loophole-free quantum key distribution*

P1-9 **M. Sohma** and O. Hirota

*Decoding property for quantum M-ary ASK signal states*

P1-10 **Alberto M. Marino**, Raphael C. Pooser, Vincent Boyer, Kevin M. Jones and Paul D. Lett

*Cloning of a Continuous-Variable Quantum State*

P1-11 **S.-Y. Baek**, Y.-W. Cho and Y.-H Kim

*Nonlocal dispersion cancellation using entangled photons*

P1-12 **Rui-Bo Jin**, Jun Zhang, Ryosuke Shimizu, Nobuyuki Matsuda, Yasuyoshi Mitsumori, Hideo Kosaka and Keiichi Edamatsu

*Nonclassical interference between a heralded pure single photon state and a weak coherent state*

P1-13 **L. Sheridan** and V. Scarani

*Security Proof for Quantum Key Distribution Using Qudit Systems*

P1-14 **H. Kobayashi**, S. Tamate, T. Nakanishi, K. Sugiyama and M. Kitano

*Direct observation of geometric phases without state evolution*

P1-15 **Y. Tokunaga**, S. Okamoto, R. Ikuta, T. Yamamoto, M. Koashi and N. Imoto

*Process tomography of elementary gates in optical one-way quantum computing*

P1-16 **S. Tamate**, H. Kobayashi, T. Nakanishi, K. Sugiyama and M. Kitano

*Geometric phase in quantum eraser and weak measurement*

P1-17 **Y. M. Wang**, L. Sheridan and V. Scarani

*Interaction between an atom and a photon wave-packet in free space*

P1-18 **Ravishankar Ramanathan**

*Optimal cloning and Singlet monogamy*

P1-19 **Kamil Brádler**

*Attacking the Cloning Channels*

P1-20 **A. Fedrizzi**, A. M. Brańczyk, T. C. Ralph and A. G White

*Spectral wave-packet shaping for the creation of pure single photons*

P1-21 **Feihu Xu**, Bing Qi and Hoi-Kwong Lo

*Experimental demonstration of phase-remapping attack in a practical quantum key distribution system*

P1-22 **D. Aratsu**

*Modified circuit against error propagation in conventional ancilla preparation for logical*

*Toffoli gate of Steane code*

P1-23 **G. Y. Xiang**, B. L. Higgins, H. F. Hofmann and G. J. Pryde

*Phase estimation using four- and six-photon Holland-Burnett states*

P1-24 **G. A. Paz-Silva**, G. K. Brennen and J. Twamley

*Fault-tolerance with slow and noisy measurement & preparation*

P1-25 **S. Rebić** and J. Twamley

*Quantum Networks Using Many-Body Interactions in Circuit-QED*

P1-26 **J. Pienaar** and T.C. Ralph

*The Heisenberg picture for single photon states.*

P1-27 **Y. Shikano**

*Limit Distributions of Discrete Time Quantum Walks with Environment*

P1-28 **Y. Chu**, E. Togan, A. Trifonov, L. Jiang, J. Maze, L. Childress, M.V. G. Dutt, A. Sørensen, P. Hemmer, A. S. Zibrov and M. Lukin

*Quantum Entanglement Between Optical Photon and Solid-state Spin Qubit*

P1-29 **P. Kurzyński** and A. Wójcik

*Quantum walks with position dependent coin*

P1-30 **Huangjun Zhu**, Lin Chen and Masahito Hayashi

*Additivity and non-additivity of multipartite entanglement measures*

P1-31 **Yu Watanabe**, Takahiro Sagawa and Masahito Ueda

*Optimal Measurement on Noisy Quantum Systems*

P1-32 **S. Kocsis**, S. Ravets, B. Braverman, L. K. Shalm and A. M. Steinberg

*Observing the Trajectories of a Single Photon Using Weak Measurement*

P1-33 **B. Chalopin**, F. Scazza, C. Fabre and N. Treps

*Multimode non-classical dynamics crossing the oscillation threshold of an OPO*

P1-34 **Y. Shikano**, S. Kagami, S. Tanaka and A. Hosoya

*Hyperfine Interaction Hamiltonian Evaluation in Nitrogen Vacancy Center in Diamond using Weak Values*

P1-35 **M. Scherman**, O. Mishina, S. Burks, L. Giner, P. Lombardi, J. Ortalo, J. Laurat and E. Giacobino

*Quantum memories for continuous variable of light An experimental and theoretical study of EIT in hot atomic vapors*

P1-36 **K. Maruyama**, D. Burgarth, M. Murphy, S. Montangero, T. Calarco, F. Nori and M. B. Plenio

*Spin-chain-based full quantum computation by accessing only two spins*

P1-37 **A.N. Sharma**, K.T. McCusker, J.T. Barreiro and P.G. Kwiat

*Using hyperentangled photon pairs to prepare bound entanglement*

P1-38 **C. R. Myers** and T. C. Ralph

*Coherent State Topological Cluster State Production*

P1-39 **Florian Wolfgramm**, Alessandro Cerè, Yannick de Icaza Astiz and Morgan W. Mitchell

*Generation of High-Quality NOON States for Atom-Photon Interaction*

P1-40 **Xiao-Qi Zhou**, Timothy C. Ralph, Pruet Kalasuwan, Mian Zhang, Alberto Peruzzo, Benjamin P. Lanyon and Jeremy L. O’Brien

*Quantum gates via entanglement in a higher-dimensional Hilbert space*

P1-41 **A. Sergeevich**, J. Combes, A. Chandran, H. Wiseman and S. Bartlett

*Adaptive Bayesian estimation of double quantum dot Hamiltonian parameter*

P1-42 **Masahiro Yabuno**, Ryosuke Shimizu, Yasuyoshi Mitsumori, Hideo Kosaka and Keiichi Edamatsu

*High-flux photon pair source for multi-photon interference*

P1-43 **C. Gabriel**, A. Aiello, W. Zhong, A. Holleczek, P. Banzer, M. Foertsch, D. Elser, U. L. Andersen, C. Marquardt and G. Leuchs

*Quantum Optics with Spatio-Polarization Modes*

P1-44 T. Symul, **H. M. Chrzanowski**, J. Bernu, A. Lund, T. C. Ralph and P. K. Lam

*Schrödinger Kitten States characterisation using only Continuous Variables Gaussian resources*

P1-45 **Kaoru Shimizu**, Yasuhiro Tokura and Akira Kawaguchi

*Relationships between correlated spin fluctuation characteristics and pairwise entanglement in a nearly critical quantum spin chain*

P1-46 **Viv Kendon**

*Fractional scaling of quantum walks on percolation lattices*

P1-47 **Mile Gu**, Karoline Wiesner, Elisabeth Rieper and Vlatko Vedral

*Sharpening Occam’s Razor with Quantum Mechanics*

P1-48 D. Pitkanen, M. Piani, R. Kaltenbaek and **N. Lütkenhaus**

*Linear-optics realization of channels for single-photon multimode qudits*

P1-49 J. P. Harrison, J. P. Hadden, A. C. Stanley-Clarkand, **L. Marseglia** and J.G. Rarity

*Solid immersion lenses in diamond fabricated by focused ion beam etching.*

P1-50 M. Vasilyev, N. Stelmakh and **P. Kumar**

*Non-classical states for photon-number-efficient transmission of information*

P1-51 **K. Murr**, A. Kubanek, M. Koch, C. Sames, M. Balbach, M. Apel, A. Ourjoumtsev, P. W. H. Pinkse and G. Rempe

*Feedback control of a single-atom trajectory with single photons*

P1-52 **Oo-Kaw Lim**, Gideon Alon, Zachary Dutton, Saikat Guha, Michael Vasilyev and Prem Kumar

*Optical Resolution Enhancement with Phase-Sensitive Preamplification in Direct Image Detection*

P1-53 Milja Medic, Joseph B. Altepeter, Matthew A. Hall, **Monika Patel** and Prem Kumar

*Fiber-based telecom-band source of degenerate entangled photons*

P1-54 **Seiji Armstrong**, Jean-François Morizur, Lachlan Nicholls, Pu Jian, Kate Wagner, Magnus Hsu, Warwick Bowen, Nicolas Treps, Jiri Janousek and Hans-A. Bachor

*Experimental demonstration of computer reconfigurable multimode entanglement*

P1-55 **F. Kaneda**, H. Suzuki, R. Shimizu, Y. Mitsumori, H. Kosaka and K. Edamatsu

*Frequency entanglement of photons generated by two-period quasi-phase matched parametric down-conversion*

P1-56 **K. T. McCusker** and P. G. Kwiat

*A Pseudo-Deterministic Down-Conversion-Based Single-Photon Source*

P1-57 **K. Tsujino**, Y. Miyamoto, J. Kataoka and A. Tomita

*Experimental demonstration of photon detector based on InGaAs APD with sub-Geiger mode operation*

P1-58 **H. M. Wiseman**, D. J. Saunders, S. J. Jones and G. J. Pryde

*Experimental EPR-Steering of Bell-local States*

P1-59 **Toyohiro Tsurumaru**

*Squash Operator and Symmetry*

P1-60 **Lev B. Levitin** and Tommaso Toffoli

*Work recoverable from two-particle information*

P1-61 JianWei Lee, Syed Abdullah Aljunid, Martin Paesold, **Gleb Maslennikov** and Christian Kurtsiefer

*Towards Raman Cooling of a Single Atom in a Tightly Focused Optical Tweezer*

P1-62 **B. M. Sparkes**, D. P. Parrain, H. M. Chrzanowski, T. Symul, B. C. Buchler and P. K. Lam

*A Scalable, Self-Analysing Digital Locking System for use on Quantum Optics Experiments.*

P1-63 **M. R. Hush**, A. R. R. Carvalho and J. J. Hope

*Number Phase Wigner Representation for Efficient Stochastic Simulation*

P1-64 **Charles P. Meaney**, Ross H. McKenzie and G. J. Milburn

*Quantum entanglement in a dissipative nonlinear nanomechanical system*

P1-65 **C. Teo** and V. Scarani

*Coupling focused light to single atoms*

P1-66 **D. L. McAuslan** and J. J. Longdell

*Spectral Properties of Rare-Earth-Ion Doped Whispering Gallery Mode Resonators*

P1-67 **A. Chia** and H. M. Wiseman

*A Quantum Theory of Multiple-Input Multiple-Output Feedback Control*

P1-68 **S. S. Szigeti**, M. R. Hush, A. R. R. Carvalho and J. J. Hope

*Quantum control of an interacting Bose-Einstein condensate*

P1-69 **P. S. Turner**, T. Sugiyama and T. Rudolph

*Testing for multipartite indistinguishability*

P1-70 **T. Gaebel**, C. Bradac, M.J. Sellars, A.S. Barnard, T. Plakhotnik, A.V. Zvyagin and J.R. Rabeau

*Optical properties of nitrogen vacancy centres in isolated 5 nm nanodiamonds*

**Poster session 2**

P2-1 **Joshua Combes**, Alexandr Sergeevich, Anushya Chandran, Jason F. Ralph, S. D. Bartlett and Howard M. Wiseman

*Efficient methods for the characterisation of qbit Hamiltonian dynamics*

P2-2 **Eric G. Cavalcanti** and Nicolas C. Menicucci

*Quantum mechanics on closed timelike curves: the linearity trap and proper vs. improper mixtures*

P2-3 M. Broome, **M. P. Almeida**, A. Fedrizzi and A. G. White

*Improving Linear Optics Quantum Gate Performance: an Inexpensive Approach*

P2-4 **J. Wallman**, Y. C. Liang and S. D. Bartlett

*Deterministic observation of quantum nonlocality with random measurements*

P2-5 **C. Bradac**, T. Gaebel, N. Naidoo, M.J. Sellars, J. Twamley, L. Brown, A.S. Barnard, T. Plakhotnik, A.V. Zvyagin and J.R. Rabeau

*Processing 5-nm nanodiamonds containing nitrogen-vacancy centres*

P2-6 **D. W. Utami** and J. Twamley

*Super-Heisenberg displacement measurement using entangled coherent states and nonlinear dynamics*

P2-7 **Jun Zhu** and Guihua Zeng

*Clock synchronization through second order coherence of thermal light*

P2-8 **N. Killoran**, H. Häseler and N. Lütkenhaus

*Quantum throughput: Estimating the quantumness of optical devices using homodyne measurements*

P2-9 S. Euler, M. Beier, M. Sinther and **Th. Walther**

*A QKD-Setup without active polarization control*

P2-10 **M. Mičuda**, M. Hendrych, A. Valencia and J. P. Torres

*Controlling the frequency correlations of entangled photons*

P2-11 **M. Razavi**

*Multiple-access quantum-classical passive optical networks*

P2-12 **Eduin Esteban** and Hernandez Serna

*Quantum Key Distribution Protocol with Private-Public Key*

P2-13 **J.-H. Schönfeldt**, J. Twamley and S Rebić

*Single NV center quantum phase gate*

P2-14 **B. Heim**, D. Elser, C. Wittmann, T. Bartley, C. Marquardt and G. Leuchs

*Free Space Quantum Comunication with Continuous Polarization Variables*

P2-15 **P. M. Ledingham**, S. E. Beavan, J. J. Longdell and M. J. Sellars

*Coherent Characterization of Amplified Spontaneous Emission*

P2-16 Christian Gabriel, Christoffer Wittmann, Denis Sych, Ruifang Dong, Wolfgang Mauerer, Ulrik L. Andersen, **Christoph Marquardt** and Gerd Leuchs

*A Continuous Variable Generator of Unique Random Numbers*

P2-17 **Nicolas C. Menicucci**, Steven T. Flammia and Peter van Loock

*Graphical calculus for Gaussian pure states*

P2-18 **Ryosuke Shimizu** and Keiichi Edamatsu

*Two-photon interference of biphotons with controlled frequency entanglement*

P2-19 **J. U. Fürst**, D. V. Strekalov, D. Elser, A. Aiello, U. L. Andersen, C. Marquardt and G. Leuchs

*Second Order Nonlinear Processes in a Whispering Gallery Mode Resonator as a Source of Nonclassical Light*

P2-20 **Anil Shaji**

*Position dependent phases in BEC based quantum metrology*

P2-21 **C. Bény** and O. Oreshkov

*Approximate reversal of quantum channels*

P2-22 R. N. Stevenson, **A. R. R. Carvalho** and J. J. Hope

*Multipartite entanglement production using feedback*

P2-23 C. Facer and **J. Cresser**

*Heat Flow in Open Quantum Systems: The Double-Dot Qubit Model*

P2-24 **E.I. Babourina-Brooks**, A.C. Doherty and G.J. Milburn

*Dispersive interaction of a nanomechanical resonator with a superconducting qubit*

P2-25 **C. H. Yang**, W. H. Lim, F. A. Zwanenburg and A. S. Dzurak

*Spin filling in a few-electron Si quantum dot*

P2-26 **D. Hayes**

*Quantum Information Experiments with Trapped Ions*

P2-27 **S. S. Ivanov**, P. A. Ivanov, I. E. Linington and N. V. Vitanov

*Scalable quantum search using trapped ions*

P2-28 **E. W. Streed**, B.G. Norton, T. J. Weinhold and D. Kielpinski

*Imaging trapped ions with an integrated microfabricated optic*

P2-29 Ivan Capraro, Andrea Tomaello, Alberto Dall’Arche, Stefano Bonora and **Paolo Villoresi**

*Adaptive Wavefront Stabilization in Free-Space Quantum Links*

P2-30 Andrea Tomaello, Alberto Dall’Arche, Cristian Bonato and **Paolo Villoresi**

*On the Measurement of the Mueller Matrix of a Space Quantum Channel*

P2-31 **N. Namekata**, T. Kono and S. Inoue

*Sinusoidally gated InGaAs/InP avalanche photodiode operated in a low temperature regime*

P2-32 Yangjia Li, **Runyao Duan** and Mingsheng Ying

*Local Unambiguous Discrimination with Remaining Entanglement*

P2-33 C. Vitelli, **N. Spagnolo**, L. Toffoli, F. Sciarrino and M. De Martini

*Enhanced resolution of lossy interferometry by amplification of single photons*

P2-34 **N. Spagnolo**, C. Vitelli, L. Toffoli, F. Sciarrino and F. De Martini

*Quantum to classical transition via fuzzy measurements on high gain spontaneous parametric down-conversion*

P2-35 P. Raynal, **A. Kalev**, J. Suzuki and B.-G. Englert

*Encoding many qubits in a rotor*

P2-36 **L. Gyongyosi** and S. Imre

*Information Geometrical Solution to Additivity of Non-Unital Quantum Channels*

P2-37 **A. Mirza** and F. Petruccione

*Recent Findings from the Quantum Network in Durban*

P2-38 **Stefanie Barz**, Gunther Cronenberg, Anton Zeilinger and Philip Walther

*Recent Results and Future Challenges of Photonic Quantum Computation*

P2-39 **A. Yoshizawa**, Y. Xue and H. Tsuchida

*4-photon Mandel-dip measurement with a 77.6% visibility using two periodically poled*

*lithium niobate waveguides operating at 1550 nm*

P2-40 **A. Denney** and C. Moore

*Finding centers of high-dimensional spheres using Schrödinger’s equation*

P2-41 **B.T. Torosov** and N.V. Vitanov

*Ultrahigh-fidelity quantum gates using smooth composite pulses*

P2-42 **G.Ts. Genov**, B.T. Torosov and N.V. Vitanov

*Composite pulses for three-state quantum systems*

P2-43 **S. Colin** and W. Struyve

*Equilibrium issues in de Broglie-Bohm theories*

P2-44 **Thomas Jennewein**, Hannes Hübel, Deny R. Hamel, Alessandro Fedrizzi, Sven Ramelow and Kevin J. Resch

*Observation of single photon pumped parametric down conversion*

P2-45 N. Tischler and **J.F. Corney**

*Novel fibres for generating nonclassical states of light*

P2-46 J. T. Barreiro, P. Schindler, O. Gühne, T. Monz, M. Chwalla, **C. F. Roos**, M. Hennrich and R. Blatt

*Experimental multiparticle-entanglement dynamics induced by decoherence*

P2-47 **I. Sinayskiy**, N. Pumulo and F. Petruccione

*Dynamics of nonequilibrium thermal entanglement for simple spin chains*

P2-48 **W. Fairbank**, S.A. Lee, W. Czajkowski and J. Kluck

*A laser-cooled single-atom-on-demand source for Si quantum computing*

P2-49 **J. B. Altepeter**, E. R. Jeffrey, M. Medic, N. N. Oza and P. Kumar

*Multiple qubit quantum state visualization*

P2-50 E. Mascarenhas, B. Teixeira, D. Cavalcanti, M. O. Terra Cunha and **M.F. Santos**

*Local entanglement protection from environment continuous monitoring*

P2-51 **M. S. Tame** and M. S. Kim

*A scalable method for demonstrating the Deutsch-Josza and Bernstein-Vazirani algorithms using cluster states*

P2-52 **S. Gleyzes**, C. Sayrin, B. Peaudecerf, X. Zhou, I. Dotsenko, M. Brune, J.M. Raimond and S. Haroche

*Quantum non-demolition measurement and preparation of non-classical states of the light*

P2-53 **Miloslav Dušek**, Lucie Čelechovská, Michal Mičuda, Jaromír Fiurášek, Miroslav Ježek, Radim Filip, Karel Lemr, Antonín Černoch, Jan Soubusta, Konrad Kieling and Jens Eisert

*Linear-optical quantum information processing – a few experiments*

P2-54 **T. Kono**, N. Namekata, S. Kurimura and S. Inoue

*Distribution of porarization entangled photon pairs using sinusoidally gated InGaAs/InP*

*avalanche photodiodes*

P2-55 T. Monz, P. Schindler, **J. T. Barreiro**, M. Chwalla, W. A. Coish, M. Hennrich and R. Blatt

*Experimental investigation of multiparticle entanglement decay*

P2-56 **J. Söderholm**, L. L. Sánchez-Soto, G. Björk and A. B. Klimov

*A hierarchy of unpolarized quantum states*

P2-57 **M. Takeoka**, K. Tsujino, D. Fukuda, G. Fujii, S. Inoue, M. Fujiwara and M. Sasaki

*Quantum detection technology with a transition edge sensor: Beyond simple homodyne and photon counting detectors*

P2-58 **F. Ahmed**, L.A. Stewart, C. Bradac, T. Gaebel, J.M. Dawes, M.J. Withford, M.J. Steel and J.R. Rabeau

*Emission lifetime distribution of nitrogen-vacancy centres on an opal photonic crystal*

P2-59 **Morgan P. Hedges**, Jevon J. Longdell, Yongmin Li and Matthew J. Sellars

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*Absolute calibration of photon-counting detection efficiency using photon pairs generated in optical fibers*

P2-62 **S.J. Devitt**, D. Markham, P. Van Loock, W.J. Munro and K. Nemoto

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P3-2 **M. A. Broome**, A. Fedrizzi, B. P. Lanyon, I. Kassal, A. Aspuru-Guzik and A. G. White

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P3-3 **Sheng Zhang**, Jian Wang, Chao-jing Tang and Quan Zhang

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P3-4 Jonathan Lavoie, **Rainer Kaltenbaek**, Bei Zeng, Stephen D. Bartlett and Kevin J. Resch

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P3-5 Wenbang Xu and **Jeffrey H. Shapiro**

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P3-6 **A. P. Lund** and H. M. Wiseman

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P3-7 **B. L. Higgins**, G. Y. Xiang, D. W. Berry, H. M. Wiseman and G. J. Pryde

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P3-18 **D. V. Dodin** and I. G. Kovalenko

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P3-19 **Asma Al-Qasimi** and Daniel F. V. James

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P3-20 Cristian Bonato, Stefano Bonora, Andrea Chiuri, Paolo Mataloni, Giorgio Milani, Giuseppe Vallone and **Paolo Villoresi**

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P3-21 **T. Tashima**, T. Kitano, Ş. K. Özdemir, T. Yamamoto, M. Koashi and N. Imoto

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P3-22 **Y. Kobayashi**, Y. Adachi, T. Yamamoto, M. Koashi and N. Imoto

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P3-23 **Masataka Iinuma**, Yutaro Suzuki, Gen Taguchi, Yutaka Kadoya and Holger F. Hofmann

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P3-30 **S. E. Beavan**, J. J. Longdell, P. M. Ledingham and M. J. Sellars

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P3-31 **Agata M. Brańczyk**, T. M. Stace and T. C. Ralph

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P3-34 **Uzma Akram** and G.J. Milburn

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P3-37 Nengkun Yu, **Runyao Duan** and Mingsheng Ying

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P3-38 **M. Fujiwara**, K. Yoshino, M. Toyoshima, Y. Nambu, M. Sasaki and A. Tomita

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P3-41 **Thomas B. Bahder**

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P3-42 **Y. Xue**, A. Yoshizawa and H. Tsuchida

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P3-44 **A. Syouji**, S. Nagano, R. Shimizu, K. Suizu and K. Edamatsu

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P3-45 **H. S. Park**, Y.-S. Kim, O. Kwon, S. M. Lee, H. Kim, S.-K. Choi and Y.-H. Kim

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P3-46 **V. D’Auria**, N. Lee, T. Amri, J. Laurat and C.Fabre

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P3-54 **H. Kosaka**, H. Shigyou, T. Inagaki, Y. Mitsumori, K. Edamatsu, T. Kutsuwa, M. Kuwahara, K. Ono, Y. Rikitake, N. Yokoshi and H. Imamura

*Spin coherent read, write, manipulation of electrons with light in solids*

P3-55 **Luca Marseglia**, J. P. Harrison, J. P. Hadden, A. Young, F. Jelezko, B. Naydenov, J. Meijer, A. C. Stanley-Clarke, Y.-L. D. Ho, J. L. O’Brien and J. G. Rarity

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P3-56 **Terry. G. McRae**, Kwan. H. Lee, Glen. I. Harris, Joachim. Knittel and Warwick. P. Bowen

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P3-57 **Y. Yeo** and D. Y. Liew

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P3-58 **K.J. Weegink**, E.D. van Ooijen, S.A. Haine, M.J. Davis and H. Rubinsztein-Dunlop

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P3-59 **N. Yao**, L. Jiang, A. Gorshkov and M. Lukin

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P3-60 **W. J. Spring**

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P3-61 **Joseph Spring**

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