

List of contributions accepted for ICSSUR'09 and FF'09, June 22-26, Olomouc, Czech Republic

Status to April 30, 2009

title	author	presenting	affiliation	form	remark
Quantum treatment of the time-dependent coupled oscillators under the action of a random force	M. S. Abdalla and M. M. Nassar	M. S. Abdalla	King Saud University, Saudi Arabia	oral	
Quantum correlations and device-independent quantum information protocols	A. Acin	A. Acin	ICFO, Spain	oral	invited
Conditional preparation of optical non-classical states via coherent-state superpositions	P. Adam(1), T. Kiss(1), J. Janszky(1), Z. Darazs(1) and I. Jex(2)	P. Adam	(1)Research Institute for Solid State Physics and Optics, Hungarian Academy of Sciences, H-1525 Budapest, P. O. Box 49, Hungary (2)Department of Physics, FJFI CVUT, Brehova 7, 11519 Praha1- Stare Mesto, Czech Republic	poster	
Mixed spin state entanglement and generalised Schwinger model.	S. Sirsi and V. Adiga	V. Adiga	University of Mysore, Indian Physics Association, India	poster	
Geometric spin Hall effect of light	A. Aiello, N. Lindlein, Ch. Marquardt and G. Leuchs	A. Aiello	Max Planck Institute for the Science of Light, Guenter-Scharowsky-Str. 1/Bau 24, 91058 Erlangen, Germany	oral	
Quantum tunneling and the time contraction, according to the new relativity theory of AlMosallami	A. K. AlMosallami	A. K. AlMosallami	The Science Center for Studies and Research,	poster	
Photon statistics in the macroscopic realm: methods to beat the lack of photon-counters	A. Andreoni(1), M. Bondani(2) and A. Allevi(3)	A. Andreoni	(1)Dipartimento di Fisica e Matematica, Universita' degli Studi dell'Insubria and C.N.I.S.M., I-22100, Como, Italy (2)National Laboratory for Ultrafast and Ultraintense Optical Science - C.N.R.-I.N.F.M., I-22100, Como, Italy, (3)C.N.I.S.M., I-20131, Milano, Italy	oral	invited
Quantum mechanics on phase space and star products: a group-theoretical approach	P. Aniello	P. Aniello	Dip. di Scienze Fisiche, Univ. di Napoli 'Federico II', and INFN - Sez. di Napoli, Italy	oral	
Quantum time	J. Ashmead	J. Ashmead	University of Pennsylvania, U.S.A.	oral	
Characterization of non-classical light sources for quantum information technologies	W. Wasilewski(1), P. Wasylczyk(1), C. Radzewicz(1), P. Kolenderski(2), M. Kacprowicz(2), R. Frankowski(2) and K. Banaszek(2)	K. Banaszek	(1) Institute of Experimental Physics, University of Warsaw, Poland, (2) Institute of Physics, Nicolaus Copernicus University, Torun, Poland	oral	invited
Quantum uncertainty, and graviton production	A. W. Beckwith	A. W. Beckwith	American institute of Beam Energy propulsion	poster	
Experimental proof of commutation rules by superpositions of quantum operators	V. Parigi, A. Zavatta, M. S. Kim, H. Jeong and M. Bellini	M. Bellini	Istituto Nazionale di Ottica Applicata - CNR, Florence, Italy	oral	
Extraction of a squeezed state in a field mode via repeated measurements on an auxiliary quantum particle	B. Bellomo(1), G. Compagno(1), H. Nakazato(2) and K. Yuasa(3)	B. Bellomo	(1)Dipartimento di Scienze Fisiche ed Astronomiche, Università di Palermo, via Archirafi 36, 90123 Palermo, Italy (2)Department of Physics, Waseda University - Tokyo 169-8555, Japan (3)Waseda Institute for Advanced Study, Waseda University, Tokyo 169-8050, Japan	oral	
Combinatorics of creation-annihilation	P. Blasiak, G. H. E. Duchamp, P. Flajolet, A. Horzela, K. A. Penson and A. I. Solomon	P. Blasiak	Institute of Nuclear Physics, Polish Academy of Sciences, Poland	oral	
The dynamics of Jaynes-Cummings model in rectangular structure	S. Bougouffa and S. Al-Awfi	S. Bougouffa	Department of Physics, Faculty of Science, Taibah University, P.O.Box 30002, Madina, Saudi Arabia	poster	
Controlling the speed of light for applications in quantum information science	R. W. Boyd	R. W. Boyd	The Institute of Optics and Department of Physics and Astronomy, University of Rochester, Rochester, NY 14627 USA	oral	invited
Emergence of quantum correlations from non-locality swapping	P. Skrzypczyk, N. Brunner and S. Popescu	N. Brunner	University of Bristol, United Kingdom	oral	
Quantum friction force on a moving atom	S. Y. Buhmann and S. Scheel	S. Y. Buhmann	Imperial College London, United Kingdom	oral	
Hamiltonian formulation of quantum dynamics with separability constraints	N. Buric	N. Buric	Institute of Physics, University of Belgrade, Serbia	oral	
Noise-assisted transport in biological quantum networks	F. Caruso, A. W. Chin, A. Datta, S. F. Huelga and M. B. Plenio	F. Caruso	Imperial College London, United Kingdom	oral	
Open-system dynamics of graph-state entanglement	D. Cavalcanti, L. Aolita, R. Chaves, L. Davidovich and A. Acin	D. Cavalcanti	ICFO-Institute of Photonic Sciences, Spain	oral	
Narrowband filter for quantum light	A. Cerè, F. Wolfgramm, M. Napolitano and M. W. Mitchell	A. Cerè	ICFO-Institut de Ciències Fotoniques, Mediterranean Technology Park, 08860 Castelldefels, Barcelona, Spain	oral	
Continuous-variable quantum error correction: possibilities and impossibilities	J. Niset, U. L. Andersen, N. J. Cerf and J. Fiurásek	N. J. Cerf	Université Libre de Bruxelles, Belgium	oral	
Unraveling the convex set of non-Gaussian mixed quantum states that are characterized by a classical probability distribution in phase space	N. J. Cerf	N. J. Cerf	Université Libre de Bruxelles, Belgium	oral	invited
Experimental realization of linear-optical two-photon gates	A. Černoč, J. Soubusta, L. Bartúšková, M. Dušek and J. Fiurásek	A. Černoč	Joint Laboratory of Optics, Palacky University and Institute of Physics of AS CR, Olomouc, Czech Republic	poster	
Wigner distributions for finite even dimensional systems without doubling	S. Chaturvedi, N. Mukunda and R. Simon	S. Chaturvedi	School of Physics, University of Hyderabad, Hyderabad 500046, India	oral	
Four-partite CV entangled states in aperiodical nonlinear photonic crystal	A. S. Chirkin and O. V. Belyaeva	A. S. Chirkin	Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow 119991, Russia	oral	
Atomic multiport beam splitters and their applications	J. Cooper, D. Hallwood and J. Dunningham	J. Cooper	University of Leeds, United Kingdom	poster	
Monogamy and strong superadditivity of the Rényi measure of entanglement	M. F. Cornelio and M. C. de Oliveira	M. F. Cornelio	Instituto de Física Gleb Wataghin, Universidade Estadual de Campinas, Brazil	poster	
Transfer of angular spectrum and quantum image formation with four-photons generated by a PPKTP crystal	O. Cosme(1), G. Lima(2), A. Delgado(2), C. H. Monken(1) and S. Padua(1)	O. Cosme	(1)Departamento de Física, Universidade Federal de Minas Gerais, Brazil (2)Departamento de Física, Universidad de Concepción, Chile	poster	
Role of squeezing in BEC interferometry	B. J. Dalton	B. J. Dalton	Centre for Atom Optics, Swinburne University, Australia	poster	
Generating and manipulating squeezed radiation field by an f-deformed Bose-Einstein condensate	M. Davoudi Darareh(1), M. H. Naderi(2) and M. Soltanolkotabi(2)	M. Davoudi Darareh	(1)Department of Physics, Faculty of Science, University of Isfahan, Hezar Jerib, Isfahan, 81746-73441, Iran (2)Quantum Optics Group, Department of Physics, Faculty of Science, University of Isfahan, Hezar Jerib, Isfahan, 81746-73441, Iran	poster	
State reconstruction of finite dimensional compound systems via local projective measurements and one-way classical communication	F. E. S. Steinhoff, M. C. de Oliveira	M. C. de Oliveira	Universidade Estadual de Campinas, Brazil	poster	
Bayesian reconstruction of quantum states: a Markov chain Monte Carlo approach	J. DiGuglielmo(1), Ch. Messenger(1), J. Fiurásek(2), B. Hage(1), A. Sambrowski(1), T. Schmidt(1) and R. Schnabel(1)	J. DiGuglielmo	(1)Max-Planck-Institut für Gravitationsphysik [Albert-Einstein-Institut], Germany (2)Department of Optics, Palacky University, Olomouc, Czech Republic	oral	
Emergence of quantum indeterminacy from special relativity	A. Dragan	A. Dragan	Imperial College London, United Kingdom; University of Warsaw, Poland	oral	
Formal one-parameter groups and combinatorial physics	G. H. E. Duchamp, K. A. Penson, A. Horzela, P. Blasiak and A. I. Solomon	G. H. E. Duchamp	LIPN, University of Paris XIII, France	oral	
Nonlocality of a single particle	J. Dunningham and V. Vedral	J. Dunningham	University of Leeds, National University of Singapore, Singapore	oral	
P, C and T for truly neutral particles	V. Dvoeglazov	V. Dvoeglazov	Facultad de Física, Universidad de Zacatecas, Ap. Postal 636, Suc. 3 Cruces Zacatecas 98064 Zac. Mexico	oral	
Deformation of Hopf algebras and pseudo-Feynman diagrams	G. H. E. Duchamp and A. I. Solomon	G. H. E. Duchamp	LIPN, University of Paris XIII, France	poster	
Heralded preparation and distillation of entangled light	J. Eisert	J. Eisert	University of Potsdam, Germany	oral	invited

Continuous-variable quantum key distribution in fibers and free space	D. Elser(1,2), Ch. Wittmann(1,2), B. Heim(1,2), C. Wiechers(1,2,3), J. Fürst(1,2), T. Bartley(1,4), D. Sych(1,2), Ch. Marquardt(1,2) and G. Leuchs(1,2)	D. Elser	(1)Institute of Optics, Information and Photonics, University of Erlangen-Nuremberg, Staudstr. 7/B2, 91058 Erlangen, Germany (2)Max Planck Institute for the Science of Light, Günther-Scharowsky-Str. 1, Building 24, 91058 Erlangen, Germany (3)Instituto de Física de la Universidad de Guanajuato, Lomas del Bosque 103, 37150 León, Guanajuato, Mexico, (4)Physics Department, Blackett Laboratory, Imperial College, London SW7 2BZ, United Kingdom	oral	
Persistent entanglement of two coupled SQUID rings in the quantum to classical transition	M. J. Everitt	M. J. Everitt	Loughborough University, United Kingdom; the British University in Egypt, Egypt	oral	
Detector tomography	J. S. Lundeen, A. Feito, H. Coldenstrod-Ronge, K. L. Pregnell, C. Silberhorn, T. C. Ralph, J. Eisert, M. B. Plenio and I. A. Walmsley	A. Feito	Imperial College London, United Kingdom	oral	
Tests of multimode quantum non-locality with homodyne measurements	A. Acín, N. J. Cerf, A. Ferraro, J. Niset	A. Ferraro	ICFO – The Institute of Photonic Sciences, Mediterranean Technology Park., Av. del Canal Olímpic s/n, 08860 Castelldefels (Barcelona), Spain	oral	
Mapping of field correlations from squeezed vacuum on atoms	Z. Ficek and L. Horvath	Z. Ficek	The National Centre for Mathematics and Physics, KACST, P.O. Box 6086, Riyadh 11442, Saudi Arabia	oral	
Entanglement in a Raman-driven cascaded system	Ch. Di Fidio and W. Vogel	Ch. Di Fidio	Universitaet Rostock, Germany	poster	
Quantumness tests and witnesses in the tomographic-probability representation	S. N. Filippov	S. N. Filippov	Moscow Institute of Physics and Technology, State University, Russia	poster	
Polarisation squeezing and entanglement in standard and photonic crystal fibres	M. Förtsch(1,2), J. Milanovic(1,2), R. Dong(1,2), M. Lassen(1,2), Ch. Gabriel(1,2), Ch. Marquardt(1,2), U. L. Andersen(3,1) and G. Leuchs(1,2)	M. Förtsch	(1)Max Planck Institute for the Science of Light, Günther-Scharowsky-Str. 1, 91058 Erlangen, Germany (2)Institute of Optics, Information and Photonics, University of Erlangen-Nuremberg, Staudstr. 7/B2, 91058 Erlangen, Germany (3)Department of Physics, Technical University of Denmark, 2800 Kongens Lyngby, Denmark	poster	
Quantum random number generator using homodyne detection	Ch. Gabriel(1,2), Ch. Wittmann(1,2), R. Dong(1,2), Ch. Marquardt(1,2), D. Sych(1,2), U. L. Andersen(2,3) and G. Leuchs(1,2)	Ch. Gabriel	(1) Max Planck Institute for the Science of Light, Günther-Scharowsky-Str. 1, 91058 Erlangen, Germany (2) Institute of Optics, Information and Photonics, University of Erlangen-Nuremberg, Staudstr. 7/B2, 91058 Erlangen, Germany (3) Department of Physics, Technical University of Denmark, 2800 Kongens Lyngby, Denmark	oral	
Quantum fluctuations in photon statistics distribution	J. Gao, D. Fan, Y. Bai, H. Zhang, Q. Niu and J. Zhang	J. Gao	Opto-electronics Institute, Shanxi University, China	poster	
X-entanglement: the non-factorable spatio-temporal structure of biphoton correlation	A. Gatti, E. Brambilla, L. Caspani, O. Jedrkiewicz and L. A. Lugiato	A. Gatti	INFM-CNR-CNISM, Dipartimento di Fisica e Matematica, Università dell'Insubria, Como, Italy	oral	invited
PDC correlations for quantum imaging	M. Genovese	M. Genovese	INRIM, Torino., Italy	oral	invited
Propagation of electromagnetic waves in vacuum with quantum fluctuations	A. S. Gevorkyan, A. A. Gevorkyan and K. O. Oganesyan	A. S. Gevorkyan	Institut for Informatics and Automation Problems NAS, Armenia	poster	
Exactly solvable model of quantum mechanics with random environment	A. S. Gevorkyan, A. A. Gevorkyan and K. O. Oganesyan	A. S. Gevorkyan	Institut for Informatics and Automation Problems NAS, Armenia	poster	
Volume thresholds for fault tolerance	G. Gilbert, Y. S. Weinstein, V. Aggarwal and A. R. Calderbank	G. Gilbert	MITRE Quantum Information Science Group	oral	
Space, time and quantum nonlocality	N. Gisin	N. Gisin	University of Geneva, Switzerland	oral	invited
Atomic and nuclear optics with manifestation of stochastic behaviour and photon-correlation effects	A. V. Glushkov	A. V. Glushkov	Odessa University, Odessa, Ukraine, and Russian Academy of Sciences, Troitsk, Russia	oral	
Atomic and nuclear optics with manifestation of photon-correlation effects, quantum chaos and entanglement	A.V. Glushkov	A.V. Glushkov	Odessa University, Odessa, Ukraine, and Russian Academy of Sciences, Troitsk, Russia	poster	
Preparation of distilled and purified continuous-variable entangled states	B. Hage	B. Hage	Institut für Gravitationsphysik, Leibniz Universität, Hannover, Germany	oral	invited
Understanding and uses of cold atom 'cat states'	D. Hallwood(1), J. Cooper(1), T. Ernst(2), J. Brand(2) and J. Dunningham(1)	D. Hallwood	(1) University of Leeds, UK, (2) Massey University, New Zealand.	poster	
Measurement of angle uncertainty of momentum correlations and spectral characteristics of the photons generated in parametric fluorescence	M. Hamar, A. Černoč, J. Soubusta, V. Michálek, J. Peřina-Jr and O. Haderka	M. Hamar	Joint Laboratory of Optics, Palacký University and Institute of Physics AS ČR	poster	
Non-classical nature of a quantum flux in a double SQUID	K. Takashima(1), T. Fujii(1), S. Matsuo(1), N. Hatakenaka(1), S. Kurihara(2) and A. Zellinger(3)	N. Hatakenaka	(1)Hiroshima University, Japan, (2)Waseda University, Japan, (3)University of Vienna, Austria	poster	
Continuous variable entanglement in open quantum systems	A. Isar	A. Isar	Institute of Physics and Nuclear Engineering, Bucharest-Magurele, Romania	poster	
Wave-particle duality of large molecules revealed	T. Juffmann, S. Truppe, P. Geyer, S. Deachapunya, A. Mayor, H. Ulbricht and M. Arndt	T. Juffmann	University of Vienna - Quantumoptics, Quantuminformation and Quantumnanophysics, Austria	oral	
The transactional nature of quantum information	S. Kak	S. Kak	Oklahoma State University, Stillwater, USA	oral	
Model of extended Newtonian dynamics and Feynman's path integrals	T. F. Kamalov	T. F. Kamalov	Moscow State Open University, Russia	oral	
Ostrogradsky dynamics and Feynman's transition amplitudes	T. F. Kamalov(1) and Yu. P. Rybakov(2)	T. F. Kamalov	(1)Physics Department, Moscow State Opened University, 107996 Moscow, 22, P. Korchagin str., Russia, (2)Department of Theoretical Physics, Peoples' Friendship University of Russia, 117198 Moscow, 6, Mikluho–Maklay str., Russia	poster	
Parallel bosonic Gaussian additive noise channels with a total input energy constraint.	N. J. Cerf, E. Karpov and J. Schäfer	E. Karpov	QULC, Université Libre de Bruxelles, Belgium	oral	
Wineland's squeezing parameter as a compatible parameter with time evolution of Q function	S. V. Kashanian	S. V. Kashanian	Zanjan University, Iran	poster	
Atomic parity nonconservation in heavy atoms and observing P and PT violation using NMR shift in a laser beam	O. Yu. Khetselius	O. Yu. Khetselius	Odessa University, Odessa, Ukraine	poster	
Prequantum classical field theory predicts violation of Born's rule	A. Khrennikov	A. Khrennikov	Vaxjo University, Sweden	oral	
Quantum mechanics from classical mechanics with Hilbert phase space	A. Khrennikov	A. Khrennikov	International center for mathematical modeling in physics, engineering and cognitive science, University of Vaxjo, Sweden	poster	
Application of nonclassicality criteria to experiments	T. Kiesel	T. Kiesel	Institut für Physik, Univ. Rostock, D-18051 Rostock, Germany	oral	
Feynman and squeezed states	Y. S. Kim	Y. S. Kim	University of Maryland, U.S.A.	oral	
Coherent and squeezed states for discrete systems	A. B. Klimov, C. Munoz and L. L. Sanchez-Soto	A. B. Klimov	Universidad de Guadalajara, Mexico	oral	
Title missing	P. L. Knight	P. L. Knight	Imperial College London, UK	oral	invited
Neutrino masses from coupling split supersymmetry. to low scale gravity	M. A. Diaz, B. Koch and B. Panes	B. Koch	Pontificia Universidad Católica, Santiago de Chile, Chile	poster	
Spin-squeezed atomic vapors: Is there any gain or not?	I. Kominis	I. Kominis	University of Crete, Greece	oral	
Generation of squeezed states of light interacting with a laser cooled and trapped radiator	V. I. Koroli and A. Nisteanu	V. I. Koroli	Institute of Applied Physics, Academy of Sciences of Moldova, Academiei strasse 5, Kishinev MD-2028, Moldova	poster	
Two-photon squeezing properties of the quantized cavity field interacting with a pair of indistinguishable two-level atoms	V. I. Koroli and A. Nisteanu	V. I. Koroli	Institute of Applied Physics, Academy of Sciences of Moldova, Moldova	poster	
Ultra-sensitive spin-measurements below the standard quantum limit	M. Koschorreck, M. Napolitano, B. Dubost, N. Behbood and M. W. Mitchell	M. Koschorreck	ICFO - Institut de Ciències Fotoniques, Mediterranean Technology Park, 08860 Castelldefels, Barcelona, Spain	oral	
Heisenberg's uncertainties and the submicroscopic concept	V. Krasnoholovets	V. Krasnoholovets	Indra Scientific, Brussels, Belgium	poster	
The Bose-Einstein condensation and the submicroscopic concept	V. Krasnoholovets	V. Krasnoholovets	Indra Scientific, Brussels, Belgium	poster	

Continuous variables quantum erasure-correcting code	M. Lassen(1,3), M. Sabuncu(1,3), A. Huck(1), J. Niset(2), N. Cerf(2), G. Leuchs(3) and U. L. Andersen(1)	M. Lassen	(1)Department of Physics, Technical University of Denmark, Building 309, 2800 Lyngby, Denmark, (2)Quantum Information and Communication, Ecole Polytechnique, CP 165, Université Libre de Bruxelles, 1050 Brussels, Belgium, (3)Max Planck Institute for the Science of Light, Günther Scharowsky Strasse 1, 91058 Erlangen, Germany	oral	
Basic-hypergeometric quantum mechanics	A. Lavagno	A. Lavagno	Politecnico di Torino, Italy	poster	
The Ito formula in P.D.E	R. Leandre	R. Leandre	Université de Bourgogne, France	poster	
Conditions to preserve quantum entanglement of quadrature fluctuation fields in electromagnetically induced transparency media	Y. L. Chuang and R. K. Lee	R. K. Lee	Institute of Atomic and Molecular Sciences Academia Sinica, Taipei, Taiwan	oral	
Conditional preparation of arbitrary superpositions of atomic Dicke states	K. Lemr and J. Fiurášek	K. Lemr	Joint Laboratory of Optics of Palacký University and Institute of Physics of Academy of Sciences of the Czech Republic, Czech Republic	poster	
Geometrical properties of entangled states	G. Leuchs	G. Leuchs	University of Erlangen – Nurnberg, Germany	oral	invited
Unconditionally secure protocol for long-distance continuous-variable QKD with discrete modulation	A. Leverrier and P. Grangier	A. Leverrier	Telecom ParisTech, France	oral	
Some topics in quantum imaging	L. Lugiato, A. Gatti, E. Brambilla, L. Caspani, P. DiTrapani, O. Jedrkiewicz, F. Ferri and D. Magatti	L. Lugiato	Università dell'Insubria, Como, Italy	oral	invited
Angular momentum coherence and squeezing	J. R. Luthra	J. R. Luthra	Departamento de Física, Universidad de Los Andes, Bogota, Colombia	poster	
Geometric representation and quantum entanglement in multiple-qubit systems	P. A. Pinilla and J. R. Luthra	J. R. Luthra	Departamento de Física, Universidad de Los Andes, Bogota, Colombia	poster	
Super-fast cooling of trapped particles	S. Machnes(1), M. Plenio(2), A. Retzker(2), B. Reznik(1) and A. Steane(3)	S. Machnes	(1) Tel-Aviv University, Israel, (2) Imperial College London, UK, (3) University of Oxford, UK	oral	
A polynomial method to study the entanglement of pure N-qubit states	H. Makela and A. Messina	H. Makela	Dipartimento di Scienze Fisiche ed Astronomiche, Università degli Studi di Palermo, I-90123 Palermo, Italy	poster	
Experimental possibilities in view of the probability representation of quantum mechanics and quantum optics	V. I. Man'ko	V. I. Man'ko	P.N. Lebedev Physical Institute, Moscow, Russia	oral	
Quantum inequalities for tomographic entropies of qudit states	M. A. Man'ko	M. A. Man'ko	P.N. Lebedev Physical Institute, Moscow, Russia	oral	
Photon statistics of squeezed light in the probability representation of quantum optics	O. V. Man'ko	O. V. Man'ko	P.N. Lebedev Physical Institute, Moscow, Russia	oral	
Continuous variables quantum information with light	P. Marek, M. S. Kim, H. Jeong, J. Lee, J. Fiurášek and R. Filip	P. Marek	Palacký University Olomouc, Department of Optics, Czech Republic	poster	
Consistent entanglement measures for two-mode Gaussian states	P. Marian and T. A. Marian	P. Marian	Centre for Advanced Quantum Physics, University of Bucharest, P.O.Box MG-11, R-077125 Bucharest-Magurele, Romania	oral	
Experimental entanglement distillation of mesoscopic quantum states	R. Dong(1,2), M. Lassen(1,2), J. Heersink(1,2), Ch. Marquardt(1,2), R. Filip(1,3), G. Leuchs(1,2) and U. L. Andersen(1,2,4)	Ch. Marquardt	(1)Max Planck Institute for the Science of Light, Günther-Scharowsky-Str. 1, 91058 Erlangen, Germany, (2)Institute of Optics, Information and Photonics, University of Erlangen-Nuremberg, Staudstr. 7/B2, 91058 Erlangen, Germany, (3)Department of Optics, Palacký University, 17. listopadu 50, 77200 Olomouc, Czech Republic, (4)Department of Physics, Technical University of Denmark, 2800 Kongens Lyngby, Denmark	oral	
Extra phase noise from phonon scattering degrades quantum correlations in nonlinear systems	J. E. S. Cesar(1), A. S. Coelho(1), K. N. Cassemiro(2), A. S. Villar(3), M. Lassen(3), P. Nussenzweig(1) and M. Martinelli(1)	M. Martinelli	(1)Instituto de Física, Universidade de São Paulo, Caixa Postal 66318, 05315-970 São Paulo, SP, Brazil, (2)Max Planck Junior Research Group, Günther Scharowskystr. 1 / Bau 24, 91058 Erlangen, Germany, (3)Max Planck Institute for the Science of Light, University of Erlangen-Nuremberg, Staudstr. 7/B2, 91058 Erlangen, Germany	oral	
Estimation of photonic multipolar coupling ranges among quantum dots on the basis of time-energy uncertainty	H. Matsueda	H. Matsueda	Teikyo University, Japan	poster	
Dynamic entanglement and separability criteria for quantum computing bit states	H. Matsueda and D. W. Cohen	H. Matsueda	Teikyo University, Japan	oral	
Quantum dot realization of quantum information processing	H. Matsueda	H. Matsueda	Teikyo University, Japan	oral	invited
Exact dynamics of entanglement and entropy in structured environments	L. Mazzola, S. Maniscalco, J. Piilo and K.-A. Suominen	L. Mazzola	Department of Physics and Astronomy, University of Turku, FI-20014 Turun Yliopisto, Finland	oral	
One-way quantum computation in the optical frequency comb	N. C. Menicucci(1), S. T. Flammia(1) and O. Pfister(2)	N. C. Menicucci	(1)Perimeter Institute for Theoretical Physics, U.S.A. (2)The University of Virginia, U.S.A.	oral	
Localizable entanglement in three coupled spins in a thermal state	D. Teresi, A. Napoli and A. Messina	A. Messina	Dipartimento di Scienze Fisiche ed Astronomiche, Università di Palermo, Italy	poster	
Experimental realization of programmable quantum gate	M. Micuda, M. Ježek, M. Dušek and J. Fiurášek	M. Micuda	Department of Optics, Palacký University, 77200 Olomouc, Czech Republic	poster	
Non-classical correlations of two interacting qubits coupled to independent reservoirs	R. Migliore(1,2), M. Scala(2,3), M. A. Jivulescu(2), M. Guccione(2), L. L. Sánchez-Soto(3) and A. Messina(2)	R. Migliore	(1)CNR-INFM, UdR CNISM of Palermo, Italy, (2)Dipartimento di Scienze Fisiche ed Astronomiche, University of Palermo, Italy, (3)Departamento de Óptica, Universidad Complutense, Madrid, Spain	oral	
Generation of hybrid cluster states using non-demolition measurements	D. Milne and N. Korolkova	D. Milne	University of St Andrews, UK	poster	
Solid-state quantum memory for photons at telecommunication wavelength	J. Minář, B. Lauritzen, H. de Riedmatten, M. Afzelius, C. Simon and N. Gisin	J. Minář	University of Geneva, Group of Applied Physics-Optics, Switzerland	oral	
Higher-order squeezing and sub-Poissonian photon statistics of squeezed Kerr state	D. K. Mishra	D. K. Mishra	Department of Physics, V. S. Mehta College of Science, Bharwari, Kaushambi-212201, U. P., India	poster	
Separability and entanglement: what symmetries and geometry can say	H. Braga, S. Souza and S. S. Mizrahi	S. S. Mizrahi	Universidade Federal de São Carlos, São Carlos, Brazil	oral	
Phase estimation with Gaussian states	M. Aspachs, E. Bagan, J. Calsamiglia, A. Monras and R. Muñoz-Tapia	R. Muñoz-Tapia	Dept of Physics, Universitat Autònoma de Barcelona, Spain	oral	
Dynamics of spin systems coupled to bosonic baths beyond the Markov approximation	I. Sinaysky(1), F. Petruccione(1), E. Ferraro(2), A. Napoli(2) and A. Messina(2)	A. Napoli	(1)Quantum Research Group, School of Physics, University of KwaZulu-Natal, Durban, South Africa, (2)Dipartimento di Scienze Fisiche ed Astronomiche, Università di Palermo, Italy	poster	
Better-than-Heisenberg scaling of sensitivity in metrology	M. Napolitano, N. Behbood, B. Dubost, M. Koshorreck and M. W. Mitchell	M. Napolitano	ICFO - Institut de Ciències Fotoniques, Mediterranean Technology Park, 08860 Castelldefels, Barcelona, Spain	poster	
Experimental three-color continuous-variable entanglement	A. S. Coelho(1), F. A. S. Barbosa(1), K. N. Cassemiro(2), A. S. Villar(3), M. Martinelli(1) and P. Nussenzweig(1)	P. Nussenzweig	(1)Instituto de Física, Universidade de São Paulo, Brazil, (2)Max Planck Junior Research Group, Erlangen, Germany, (3)Max Planck Institute for the Science of Light, University of Erlangen-Nuremberg, Erlangen, Germany	oral	
Quantum information science with photons on a chip	J. L. O'Brien	J. L. O'Brien	Centre for Quantum Photonics, H. H. Wills Physics Laboratory and Department of Electrical and Electronic Engineering, University of Bristol, UK	oral	invited
Bayesian noisy phase estimation in qubit systems: from theory to experiment	S. Olivares	S. Olivares	CNISM UdR Milano Università - Dipartimento di Fisica dell'Università di Milano, Italy	oral	
Spatial entanglement analysis of biphotons	D. Korn, D. Puhlmann, C. Henkel and M. Ostermeyer	M. Ostermeyer	Institut für Physik und Astronomie, Universität Potsdam, Karl-Liebknecht-Str 24/25, 14476 Potsdam, Germany	oral	
Quantum interference of a biphoton at a blazed grating	D. Puhlmann, D. Korn, M. Ostermeyer	M. Ostermeyer	University of Potsdam, Institute of Physics and Astronomy, Nonlinear Optics Group, 14476 Potsdam / Germany	oral	
Experimental proof of commutation rules by superpositions of quantum operators	M. S. Kim, H. Jeong, A. Zavatta, V. Parigi and M. Bellini	V. Parigi	LENS - European Laboratory for Non-Linear Spectroscopy, Florence, Italy	poster	
Events and probabilities in quantum theories	C. Parmeggiani	C. Parmeggiani	Mathesis - Università di Milano, Italy	oral	
Recent developments in the study of higher-order non-classical states	A. Pathak and A. Verma	A. Pathak	Jaypee Institute of Information Technology, University Noida, India	poster	
Photon-number statistics of twin beams and their non-classical properties	J. Peřina-Jr(1), J. Peřina(1), O. Haderka(1), J. Křepelka(1), M. Hamar(1), V. Michálek(1), M. Bondani(2), A. Alevi(3) and A. Andreoni(3)	J. Peřina-Jr	(1)Joint Laboratory of Optics, Palacký University and Institute of Physics of AS CR, Olomouc, Czech Republic, (2)National Laboratory for Ultrafast and Ultraintense Optical Science C.N.R.-I.N.F.M., Via Valleggio 11, 22100 Como, Italy, (3)Department of Physics and Mathematics, University of Insubria and C.N.R.-I.N.F.M., Via Valleggio 11, 22100 Como, Italy	poster	

Nonlinear layered media as promising sources of entangled photon pairs	J. Peřina-Jr(1), M. Centini(2), C. Sibilia(2), M. Bertolotti(2) and M. Scalora(3)	J. Peřina-Jr	(1)Joint Laboratory of Optics, Palacký University and Institute of Physics of AS CR, Olomouc, Czech Republic, (2)Dipartimento di Energetica, Universita La Sapienza di Roma, Italy, (3)Charles M. Bowden Research Center, RD 1& EC, Alabama, USA	poster	
Quantitative wave-particle duality and sensitivity of phase measurement	A. Lukš and V. Peřinová	V. Peřinová	Joint Laboratory of Optics, Palacký University and Institute of Physics of AS CR, Olomouc, Czech Republic	poster	
Geometric representation and quantum entanglement in multiple-qubit systems	P. A. Pinilla and J. R. Luthra	P. A. Pinilla	Universidad de los Andes, Bogotá, Colombia	poster	
Experimental work on entangled photon holes	T. B. Pittman, J. Liang and J. D. Franson	T. B. Pittman	UMBC, U.S.A.	oral	
Quantum memory for light	E. Polzik	E. Polzik	Niels Bohr Institute, Copenhagen University, Denmark	oral	invited
Generalized Barut-Girardello coherent states for mixed states with arbitrary distribution	D. Popov, N. Pop and M. Costache	N. Pop	Politehnica University of Timisoara, Department of Physical Foundations on Engineering, B-dul Vasile Parvan No. 2, 300223, Timisoara, Romania	poster	
Characterization of bipartite states: From theory to experiment	V. D'Auria, S. Fornaro, A. Porzio, S. Solimeno, S. Olivares and M. G. A. Paris	A. Porzio	CNISM and Università di Napoli - CNISM and Università di Milano, Italy	oral	
Rubidium resonant squeezed light from a diode-pumped optical-parametric oscillator	A. Predojević, Z. Zhai, J. M. Caballero and M. W. Mitchell	A. Predojević	ICFO-The Institute of Photonic Sciences, Spain	poster	
Entanglement in multiple-quantum NMR experiments	E. B. Feldman and A. N. Pyrkov	A. N. Pyrkov	Institute of problems of chemical physics RAS	poster	
Noiseless linear amplification	T. C. Ralph, A. P. Lund, G. Xiang and G. J. Pryde	T. C. Ralph	University of Queensland and Griffith University, Brisbane, Australia	oral	
Scattering-quantum-walk searches on highly symmetric graphs	D. Reitzner, M. Hillery, E. Feldman and V. Bužek	D. Reitzner	Research Center for Quantum Information, Slovak Academy of Sciences, Slovakia	oral	
Quantum optics with ultracold molecules	G. Rempe	G. Rempe	Max-Planck Institute for Quantum Optics, Garching, Germany	oral	invited
Postselection as a tool in quantum information	R. Renner	R. Renner	ETH Zurich, Switzerland	oral	invited
Quantum simulation in Ion traps and BECs	A. Retzker	A. Retzker	Imperial College London, UK	oral	invited
Full quantum tomography of twisted photons	L. L. Sanchez-Soto(1), I. Rigas(1), A. B. Klimov(2), J. Reháček(3) and Z. Hradil(3)	I. Rigas	(1) Departamento de Óptica, Facultad de Física, Universidad Complutense, 28040 Madrid, Spain, (2) Departamento de Física, Universidad de Guadalajara, 44420 Guadalajara, Jalisco, Mexico, (3) Department of Optics, Palacký University, 17. listopadu 50, 772 00 Olomouc, Czech Republic	oral	
Entanglement generated by a Dicke phase-transition	I. Saenz, A. B. Klimov and L. Roa	L. Roa	Universidad de Concepción, Concepcion, Chile	poster	
Squeezed entangled state generated by a Dicke phase-transition	I. Saenz, A.B. Klimov and L. Roa	L. Roa	Universidad de Concepción, Concepcion, Chile	poster	
Transfer of the internal atomic states between two trapped ions and its dependence on the vibrational phonons	F. K. Nohama and J. A. Roversi	J. A. Roversi	Instituto de Física 'Gleb Wataghin' - Universidade Estadual de Campinas, Campinas, Brazil	poster	
Minimal energy cost for quantum information processing: measurement and information erasure	T. Sagawa(1) and M. Ueda(1,2)	T. Sagawa	(1)University of Tokyo, Japan, (2)ERATO-JST, Japan	poster	
Simultaneous generation and frequency up-conversion of entangled optical images	M. Yu. Saigin	M. Yu. Saigin	M. V. Lomonosov Moscow State University, Faculty of Physics, Russia	poster	
Towards Einstein-Podolsky-Rosen quantum channel multiplexing	B. Hage, A. Sambrowski and R. Schnabel	A. Sambrowski	Institut für Gravitationsphysik, Leibniz Universität Hannover and Max-Planck-Institut für Gravitationsphysik (Albert-Einstein-Institut), Callinstr. 38, 30167 Hannover, Germany	oral	
Wigner functions and path integrals	J. H. Samson and N. Lindsey	J. H. Samson	Department of Physics, Loughborough University, Loughborough, Leics LE11 3TU, UK	oral	
Quanta in a black-box	V. Scarani	V. Scarani	National University of Singapore, Singapore	oral	invited
Classical capacity of a bosonic memory channel with Gauss-Markov noise	J. Schäfer, D. Daems, E. Karpov and N. J. Cerf	J. Schäfer	QuIC, École Polytechnique, CP 165, Université Libre de Bruxelles, 1050 Bruxelles, Belgium	poster	
Experimental implementation of the Quantum Private Queries with linear optics	F. DeMartini(1), V. Giovanetti(2), S. Lloyd(3), L. Maccone(4), E. Nagali(1), L. Sansoni(1) and F. Sciarrino(1)	F. Sciarrino	(1)Dipartimento di Fisica dell'Università 'La Sapienza', Roma 00185, Italy, (2)NEST-CNR-INFM and Scuola Normale Superiore, Piazza dei Cavalieri 7, 56126, Pisa, Italy, (3)MIT, RLE and Dept. of Mech. Engin. MIT 3-160, 77 Mass.-Av., Cambridge, MA, 02139, USA, (4)Institute for Scientific Interchange, 10133 Torino, and QUIT, Dip. A.Volta, 27100 Pavia, Italy	poster	
Quantum manipulation of orbital angular momentum photonic states by coherent coupling with polarization	E. Nagali(1), F. Sciarrino(1), F. De Martini(1), B. Piccirillo(2), E. Karimi(2), L. Marrucci(2) and E. Santamato(2)	F. Sciarrino	(1)Dipartimento di Fisica dell'Università 'La Sapienza' and Consorzio Nazionale Interuniversitario per le Scienze Fisiche della Materia, Roma 00185, Italy, (2)Dipartimento di Scienze Fisiche, Università di Napoli 'Federico II', Compl. Univ. di Monte S. Angelo, 80126 Napoli, Italy	oral	
Propagation of quantum light through the turbulent atmosphere	A. A. Semenov(1) and W. Vogel(2)	A. A. Semenov	(1)Institute of Physics, NAS of Ukraine, Ukraine, (2)Institut fuer Physik, Universitaet Rostock, Germany	oral	
The quantum theory of the Early Universe and some consequences from it	A. Shalyt-Margolin	A. Shalyt-Margolin	National Center of Particles and High Energy Physics, Republic of Belarus	poster	
Weak values with decoherence	Y. Shikano and A. Hosoya	Y. Shikano	Tokyo Institute of Technology, Japan	oral	
Generation of polarization squeezed light in PPNC	R. Singh	R. Singh	General Physics Institute of Russian Academy of Sciences, Russia	poster	
Heisenberg uncertainty relations can be replaced by stronger ones	V. Kapsa and L. Skála	L. Skála	Charles University, Prague, Czech Republic	oral	
Intensity-field correlation of single-atom resonance fluorescence	S. Gerber, D. Rotter, L. Slodička, J. Eschner, H. Carmichael and R. Blatt	L. Slodička	Institut für Experimentalphysik, Universität Innsbruck, Austria	poster	
Identification of continuous variable entanglement and optimized quasi-probabilities	J. Sperlring	J. Sperlring	Universitaet Rostock, Institut fuer Physik, Universitaetsplatz 3, 18051 Rostock, Germany	poster	
Families of bipartite states classifiable through PPT criterion and LOCC	F. E. S. Steinhoff and M. C. de Oliveira	F. E. S. Steinhoff	Universidade Estadual de Campinas, Campinas, Brazil	poster	
Single-photon single-ion interaction in free space configuration in front of a parabolic mirror	M. Stobinska(1,2), R. Alicki(1) and G. Leuchs(1)	M. Stobinska	(1)Erlangen-Nuremberg University, Max-Planck Institute for the Science of Light, Germany, (2)University of Gdansk, Poland	oral	
Continuous variable quantum key distribution based on Einstein-Podolsky-Rosen entangled states	X. Su, W. Wang, Y. Wang, X. Jia, C. Xie and K. Peng	X. Su	State Key Laboratory of Quantum Optics and Quantum Optics Devices, Institute of Opto-electronics, Shanxi University, Talyuan, 030006, People's Republic of China	oral	
Generation of entangled photon pairs in chirped periodically-poled nonlinear crystals	J. Svozilik and J. Peřina-Jr	J. Svozilik	Joint Laboratory of Optics of Palacký University and Institute of Physics of Academy of Sciences of the Czech Republic, 17. listopadu 50A, 772 07 Olomouc, Czech Republic	poster	
Quantum uniqueness	D. Sych and G. Leuchs	D. Sych	Max Planck Institute for the Science of Light, Germany	oral	
Practical coherent state quantum key distribution with multi letter alphabets	D. Sych and G. Leuchs	D. Sych	Max Planck Institute for the Science of Light, Germany	oral	
Distillation of continuous variable entanglement from Gaussian states	H. Takahashi, J. S. Neergaard-Nielsen, M. Takeoka, K. Hayasaka, A. Furusawa and M. Sasaki	H. Takahashi	National Institute of Information and Communications Technology, Japan	oral	
An approximate beamsplitter interaction between light and matter	R. Tatham, D. Menzies and N. Korolkova	R. Tatham	Department of Physics and Astronomy, University of St Andrews, St Andrews, Scotland	poster	
Multi-photon and entangled-photon imaging and lithography	M. C. Teich	M. C. Teich	Boston University and Columbia University, U.S.A.	oral	invited
How can we control the frequency and spatial properties of multiphoton quantum states?	J. P. Torres	J. P. Torres	ICFO, Spain	oral	invited
Generation of macroscopic singlet states in atomic ensembles	G. Toth and M. W. Mitchell	G. Toth	Theoretical Physics, University of the Basque Country, Bilbao, Spain // Ikerbasque-Basque Foundation for Science, Bilbao, Spain	oral	
Comparison of uncertainty relations in quantum mechanics and signal processing	A. Udai, V. Kukk, E. Velmre and M. Klopov	A. Udai	Dept. of Computer Control, Tallinn University of Technology, Estonia	poster	
Multi-path entanglement of two photons	G. Vallone, A. Chiuri, A. Rossi, F. De Martini and P. Mataloni	G. Vallone	Centro Studi e Ricerche 'Enrico Fermi', Via Panisperna 89/A, Compendio del Viminale, Roma 00184, Italy, Dipartimento di Fisica, Sapienza Università di Roma, Roma, 00185 Italy, Consorzio Nazionale Interuniversitario per le Scienze Fisiche della Materia, Roma, 00185 Italy.	oral	
Nonadiabatic coherent evolution of two-level systems under spontaneous decay	F. O. Prado, E. I. Duzzioni, M. H. Y. Moussa, N. G. de Almeida and C. J. Villas-Bôas	C. J. Villas-Bôas	Max-Planck Institute for Quantum Optics, Germany, Universidade Federal de São Carlos, Brazil	oral	
Continuous-variable entanglement	W. Vogel	W. Vogel	Institut fuer Physik, Universitaet Rostock, Universitaetsplatz 3, D-18051 Rostock, Germany	oral	invited

Quantum systems with finite Hilbert space	A. Vourdas	A. Vourdas	University of Bradford, UK	oral	
Universal continuous variable quantum computation in the micromaser	R. Wagner, M. Everitt, N. Lovett, M. Jones and V. Kendon	R. Wagner	University of Leeds, UK	oral	
The photon and the vacuum cleaner	I. Walmsley	I. Walmsley	University of Oxford, Clarendon Laboratory, Parks Rd Oxford OX1 3PU, United Kingdom	oral	invited
Transferring single cesium atom between a MOT and a FORT	J. Wang, T. Zhang, J. He, J. Wang, B. Yang, J. Zhao and K. Peng	J. Wang	State Key Laboratory of Quantum Optics and Quantum Optics Devices, and Institute of Opto-Electronics, Shanxi University, 92 Wucheng Road, Taiyuan, Shanxi Province 030006, P.R.China	poster	
Optimal measurement on noisy quantum systems	Y. Watanabe, T. Sagawa and M. Ueda	Y. Watanabe	Department of Physics, University of Tokyo, Japan	poster	
Multiphoton entanglement - tools and toys	W. Wieczorek(1,2), R. Krischek(1,2), P. Michelberger(1,2), N. Kiesel(3), A. Ozawa(1), T. Udem(1,2), G. Toth(4), W. Laskowski(5), M. Zukowski(5) and H. Weinfurter(1,2)	H. Weinfurter	(1)Max-Planck-Institute for Quantum Optics, Garching, Germany, (2)University of Munich, Germany, (3)University of Vienna, Austria, (4)University of the Basque Country, Spain, (5)University of Gdansk, Poland	oral	invited
Heisenberg-limited interferometry - how easy can it get?	H. M. Wiseman, D. W. Berry, S. D. Bartlett, M. W. Mitchell, B. L. Higgins and G. J. Pryde	H. M. Wiseman	Griffith University, Brisbane, Australia	oral	
Near-optimal state discrimination of optical coherent states	Ch. Wittmann(1,2), K. N. Cassemiro(3), M. Takeoka(4), M. Sasaki(4), U. L. Andersen(1,2) and G. Leuchs(1,2)	Ch. Wittmann	(1)Institut für Optik, Information und Photonik, University of Erlangen-Nuremberg, Staudtstraße 7/B2 91058, Erlangen, Germany, (2)Max Planck Institute for the Science of Light, Günther-Scharowsky-Straße 1, 91058, Erlangen, Germany, (3)Instituto de Física, Universidade de São Paulo, Caixa Postal 66318, São Paulo, SP, Brazil, 05315-970, (4)National Institute of Information and Communications Technology, 4-2-1 Nukui-kitamachi, Koganei, Tokyo 184-8795, Japan	oral	
Nonlinear Faraday effect with cold atoms	A. Wojciechowski(1), E. Corsini(2), J. Zachorowski(1) and W. Gawlik(1)	A. Wojciechowski	(1)Center for Magneto-Optical Research, M. Smoluchowski Institute of Physics, Jagiellonian University, Reymonta 4, 30-059 Kraków, Poland, (2)Department of Physics, University of California, Berkeley 94720-7300, USA	oral	
Measurements incompatible in Quantum Theory cannot be measured jointly in any other local theory	M. Wolf	M. Wolf	Niels Bohr Institute, Denmark	oral	invited
Ultra-bright narrow-band down-conversion source for atom-photon interaction	F. Wolfgramm(1), X. Xing(2), A. Cerè(1), A. Predojević(1), A. M. Steinberg(2) and M. W. Mitchell(1)	F. Wolfgramm	(1) ICFO-Institut de Ciències Fotoniques, Mediterranean Technology Park, 08860 Castelldefels [Barcelona], Spain, (2) Centre for Quantum Information and Quantum Control and Institute for Optical Sciences, Dept. of Physics, 60 St. George St., University of Toronto, Toronto, ON, Canada	poster	
Protection of continuous variable entanglement via passive operations	A. Serafini and H. Yadsan-Appleby	H. Yadsan-Appleby	University College London, UK	poster	
Long-distance quantum entanglement experiments	A. Zeilinger	A. Zeilinger	Universität Wien, Austria	oral	invited
Generation of entangled photon pairs at the cesium D2 line from an OPO	Z. Li, Y. Li, D. Zhao, Y. Guo, G. Li, J. Wang and T. Zhang	T. Zhang	Institute of Opto-Electronics, Shanxi Univ. P.R.China	oral	
Investigation of continuous-wave squeezed state at a telecommunication wavelength	K. Zhang, J. Liu, Q. Liu, Y. Li and Y. Li	K. Zhang	State Key Laboratory of Quantum Optics and Quantum Optics Devices / Institute of Opto-Electronics, Shanxi University, Taiyuan 030006, P. R. China	oral	
Process POVM: A mathematical framework for description of quantum process experiments	M. Ziman	M. Ziman	Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia	oral	invited