

## PQE XXXV Participants

**Chris Adami**, Keck Graduate Institute/Caltech

*“Black holes conserve information in curved-space quantum field theory”*

**Roland E. Allen**, Texas A&M University

*“Response of benzene and dipicolinic acid to ultrafast laser pulses”*

**Esen E. Alp**, Argonne National Laboratory

*“Inelastic X-Ray Scattering Techniques and Their Applications”*

**Paul M. Alsing**, Air Force Research Laboratory

*“Ion Trap Simulation of the Unruh Effect”*

**Paul M. Alsing**, Air Force Research Laboratory

*“Laser Cooling of Semiconductors” (poster)*

**Petr Anisimov**, Texas A&M University

*““MAGIC-angle” technique for suppression of inhomogeneous broadening of Mossbauer spectra”*

**Anton Biryukov**, Texas A&M University

*“Nonlinear Wave Mixing in GaAs/InGaAs/InGaP Butt-Joint Diode Lasers” (poster)*

**Harry Atwater**, California Institute of Technology

*“Strong Coupling in Plasmonic Materials”*

**Yoav Avitzour**, Princeton University

*“Possibility for compact recombination XRLs using Optical Field Ionization”*

**Mark Baldo**, Massachusetts Institute of Technology

*“Molecular circuits from Photosynthetic complexes”*

**Victor S. Batista**, Yale University

*“Creating and Manipulating Electronic Coherences in Functionalized Semiconductor Nanostructures”*

**Guy Beadie**, Naval Research Laboratory

*“CARS Detection: How Can We Optimize Sensitivity?”*

**Thomas Becker**, Max-Planck Institut für Quantenoptik

*“Cavity QED with the Micromaser: From Fock-State Generation to Phase Diffusion”*

**Alexey Belyanin**, Texas A&M University

*“Coherent nonlinear optics with quantum-cascade structures”*

**Alexander A. Betin**, Raytheon

**Irving Bigio**, Boston University

*“Optical biopsy: noninvasive detection of cancer with elastic-scattering spectroscopy”*

**Jonathan Bird**, SUNY at Buffalo

*“Electron Waveguides for Quantum Computing: Spin & Wave-Based Approaches”*

**Steve Blair**, University of Utah

*“Molecular detection and nonlinear optics with metallic nanocavities”*

**Robert Boyd**, University of Rochester  
*“Progress in Quantum Lithography and Ghost Imaging”*

**Sergey Bozhevolnyi**, University of Aalborg, Denmark  
*“Polaritonics: photonics based on surface plasmon polaritons”*

**Danielle Braje**, Stanford University  
*“Nonlinear Optics Using Electromagnetically Induced Transparency in Cold Atoms”*

**Howard Brandt**, ARL  
*“Design for a Quantum Cryptographic Entangling Probe”*

**Mark Brongersma**, Stanford University  
*“Towards CMOS Compatible Nanophotonics and Plasmonics”*

**Paul Brumer**, University of Toronto  
*“Coherent Control of Radiationless Transitions”*

**Dmitry Budker**, University of California at Berkeley  
*“Selective addressing and applications of high-order atomic polarization moments”*

**Leonid Butov**, University of California at San Diego  
*“Experiments on Exciton Condensation and “Pattern Formation in Coupled Quantum Wells”*

**Federico Capasso**, Harvard University  
*“New frontiers in quantum cascade laser research”*

**Frank Caroll**, Vanderbilt U. Medical Center  
*“Applications of High Intensity laser-based X-ray imaging and therapy”*

**James J. Carroll**, Youngstown University  
*“An experimental perspective on releasing energy from nuclear isomers”*

**Gordon Cates**, University of Virginia  
*“Progress using Laser Polarized Noble Gases for Magnetic Resonance in Medicine”*

**Paul Champion**, Northeastern University  
*“Exploring Low-Frequency Modes in Biomolecules Using Femtosecond Coherence Spectroscopy”*

**Juntao Chang**, Texas A&M University  
*“Three qubit quantum phase gate based on cavity QED” (poster)*

**Connie Chang-Hasnain**, University of California at Berkeley  
*“50GHz VCSEL - no speed limit in sight”*

**Goong Chen**, Texas A&M University  
*“Generalized Two-Centered Orbitals in the Modeling of Diatomic Molecules and Relevant Asymptotics”*

**Kent Choquette**, University of Illinois  
*“Vertical Cavity Photonic Crystal Lasers”*

**Weng Chow**, Sandia National Laboratory

- Ignazio Ciufolini**, Universita' di Lecce, Italy  
*"Accurate measurement of frame-dragging using the LAGEOS satellites and the GRACE Earth gravity models"*
- Douglas Cline**, University of Rochester  
*"Nuclear structure studies of nuclear isomers and implications for controlled energy release"*
- Leon Cohen**, City University of New York (Hunter College)  
*"Time-Frequency Evolution of the Quantum Langevin Equation"*
- Paul Corkum**, National Research Council of Canada  
*"Attosecond Imaging: Using a Molecule's own Electrons to Image Molecular Orbitals"*
- Michael E. Crenshaw**, US Army RDECOM  
*"Quantum Electrodynamics Foundations of Continuum Electrodynamics"*
- Scott Crooker**, Los Alamos National Laboratory  
*"Imaging electron spin flows in semiconductors in the presence of electric, magnetic, and strain fields"*
- Barak Dayan**, Weizmann Institute of Science, Israel  
*"Nonlinear interactions with entangled photons and high-power down-converted light"*
- Barak Dayan**, Weizmann Institute of Science, Israel  
*"Sum-Frequency Generation and Temporal Shaping of Entangled Photons" (poster)*
- Dennis G. Deppe**, University of Texas at Austin  
*"Lithographically defined all epitaxial grating confined VCSELs and their applications to quantum-optics experiments"*
- Tiegang Di**, Texas A&M University  
*"Teleportation of Arbitrary Atomic Dicke States" (poster)*
- Arthur Dogariu**, NEC Laboratories America  
*"Correlated photons via cascaded four-wave mixing in microstructured fiber"*
- Jonathan P. Dowling**, Louisiana State University  
*"Quantum Optical Sensing, Imaging, and Computing"*
- Vladimir P. Drachev**, Purdue University  
*"Nonlinear Spectroscopy of Metal Quantum Dots"*
- Peter Drummond**, University of Queensland, Australia  
*"Atoms in optical lattices and the Fermi sign problem"*
- Sang-Kee Eah**, The University of Chicago and Argonne  
*"Scattered light interference of a single metal nanoparticle and its mirror image"*
- Matt Eisaman**, Harvard University  
*"Quantum Control of Single Photons using Electromagnetically Induced Transparency"*
- Matt Eisaman**, Harvard University  
*"Quantum Control of Single Photons using Electromagnetically Induced Transparency" (poster)*
- Ihab El-kady**, Sandia National Laboratory  
*"Thermal emission from photonic crystals: Does it exceed blackbody radiation?"*

**Elinor Irish**, University of Rochester  
*“Quantum Electro-Mechanics: Cavity QED beyond the rotating-wave approximation” (poster)*

**Francis Everitt**, Stanford University  
*“Gravity Probe B On-Orbit: Processing the Science Data”*

**James Franson**, Johns Hopkins University  
*“Linear Optics Quantum Computing”*

**Sabine Freisem**, University of Texas at Austin

**Edward S. Fry**, Texas A&M University  
*“Nonlocality in Quantum Mechanics”*

**Xinyong Fu**, Shanghai Jiao Tong University  
*“Realization of Maxwell’s Hypothesis”*

**Zitao Fu**, Shanghai Jiao Tong University

**Stephen A. Fulling**, Texas A&M University  
*“Review of some recent work on acceleration radiation”*

**Ildar Gabitov**, University of Arizona  
*“Nonlinear electrodynamics of ultrashort pulses in a medium with negative refractive index”*

**Alexander Gaeta**, Cornell University  
*“Slow Light in Optical Fibers”*

**Daniel J. Gauthier**, Duke University  
*“New techniques for ultra-low light-level nonlinear optics”*

**Joseph Giordmaine**, Princeton University  
*“Slowing the dephasing of molecular coherence”*

**Oliver Gloeckl**, University of Erlangen, Germany  
*“From phase measurements on intense light beams to entanglement generation by spatial separation of quantum sidebands”*

**Claire Gmachl**, Princeton University  
*“Intersubband transitions beyond QC lasers”*

**Stefanie Gräfe**, Wuerzburg University, Germany  
*“Instantaneous dynamics and quantum control fields: principle and numerical applications”*

**Stefanie Gräfe**, Wuerzburg University, Germany  
*“Quantum Control Fields from Instantaneous Dynamics” (poster)*

**Michel de Haan**, Université Libre de Bruxelles  
*“Field theory reformulated without self-energy parts”*

**Naomi Halas**, Rice University  
*“Plasmonic Nanosensors”*

**Dennis G. Harris**, The Boeing Co.

- Stephen E. Harris**, Stanford University  
*“Fourier Synthesis of Optical Waveforms”*
- Joseph W. Haus**, University of Dayton  
*“Nanophotonics”*
- Timothy F. Havel**, Massachusetts Institute of Technology  
*“Some Connections between Protein NMR Spectroscopy and NMR Quantum Computing”*
- Mark D. Havey**, Old Dominion University  
*“Mesoscopic Wave Dynamics in Ultracold Atomic Rb”*
- Daniel J. Heinzen**, University of Texas at Austin  
*“Superfluid and insulating states of a Bose gas in an optical lattice”*
- Philip Hemmer**, Texas A&M University  
*“VLSI quantum computer in diamond”*
- Peter Herman**, University of Toronto  
*“Ultrafast laser processing: controlling heat accumulation effects with variable repetition rate”*
- Hans Hertz**, Royal Institute of Technology, Stockholm  
*“Sources and optics for table-top biomedical x-ray imaging”*
- Mark Hillery**, Hunter College, CUNY  
*“Discriminating multipartite states”*
- Chris Hovde**, Southwest Sciences  
*“Earth-Field Atomic Magnetometry with Frequency-Modulated Light”*
- John Howell**, University of Rochester  
*“Time-Energy EPR Entanglement”*
- Paul S. Hsu**, Texas A&M University  
*“Nonlinear Magneto Optic Rotation at High Laser Intensity” (poster)*
- David H. Hughes**, Air Force Research Laboratory
- Geoffrey Hunter**, York University  
*“Experimental Confirmation of the Photon as an Ellipsoidal Soliton”*
- Geoffrey Hunter**, York University  
*“No Spooky Actions at a Distance in the Kim-Shih Realization of Popper’s EPR Experiment” (poster)*
- David Hyland**, Texas A&M University  
*“Quantum Optics and Exosolar Planet Detection”*
- Elinor Irish**, University of Rochester  
*“Quantum Electro-Mechanics: Cavity QED beyond the rotating-wave approximation”*
- Stephen Jesse**, Oak Ridge National Lab / UTK  
*“Modelling the evolution of surface micro-structures on laser irradiated silicon”*

- Nikolai Kalugin**, Texas A&M University  
*“Multi-phonon Infrared Spectra of thin polycrystalline films and monocrystals of dipicolinic acid”*
- Masayuki Katsuragawa**, University of Electro-Communications, Japan  
*“Ultrashort pulse generation using coherent molecular oscillation”*
- Peter D. Keefe**, Keefe & Associates  
*“Does the Adiabatic First Order Phase Transition of a Type I Superconductor Particle Pose a Quantum Limit to the Second Law?”*
- Peter D. Keefe**, Keefe & Associates  
*“Intellectual Property for Scientists” (poster)*
- Peter D. Keefe**, Keefe & Associates  
*“Does the Adiabatic First Order Phase Transition of a Type I Superconductor Particle Pose a Quantum Limit to the Second Law?” (poster)*
- Michael Key**, Lawrence Livermore National Laboratory  
*“Physics of the fast Ignitor”*
- Jacob Khurgin**, Johns Hopkins University  
*“Parametric Slow Light Structures”*
- Wolfgang Kiefer**, Wuerzburg University, Germany  
*“Femtosecond coherent four-wave mixing spectroscopy and applications”*
- Jean-Claude Kieffer**, INRS Canada  
*“Phase contrast radiography with Ultrafast laser based X-ray source alser baser”*
- Fam Le Kien**, University of Electro-Communications, Japan  
*“Atom traps and waveguides using evanescent light fields around subwavelength-diameter fibers”*
- Peter G. Kik**, CREOL, University of Central Florida  
*“Resonant near-field excitation of surface plasmons for applications in imaging and optical interconnects”*
- Barnabas Kim**, Texas A&M University  
*“Introduction to Dimensional Scaling in Simple Molecules” (poster)*
- Jungsang Kim**, Duke University  
*“Optical Networking and Quantum Communication Networks” (poster)*
- Derek Kimball**, University of California at Berkeley  
*“Can a Quantum Nondemolition Measurement Improve the Sensitivity of an Atomic Magnetometer?”*
- Manfred Kleber**, Technische Universität München  
*“Imaging Atoms with Evanescent Waves”*
- Manfred Kleber**, Technische Universität München  
*“Fermi Gases in External Fields” (poster)*
- Olga Kocharovskaya**, Texas A&M University  
*“Laser manipulations of nuclear transitions”*
- Vitaly Kocharovsky**, Texas A&M University  
*“Interband Nonlinear Mixing Lasers for Mid/Far-Infrared Generation”*

**Roman Kolesov**, Texas A&M University

*“Influence of electromagnetic radiation on the Mossbauer spectra through co-dopants.”*

**Karl L. Kompa**, Max-Planck Institut für Quantenoptik

*“Molecules as Nanoscopic Information Devices”*

**Junichiro Kono**, Rice University

*“Optical Signatures of the Aharonov-Bohm Phase in Carbon Nanotubes”*

**Junichiro Kono**, Rice University

*“Light Emission from Excitons under Intense Laser Excitations in Strong Magnetic Fields” (poster)*

**Alexander Korotkov**, University of California at Riverside

*“Quantum feedback control in solid-state mesoscopics”*

**Petr Kral**, University of Illinois at Chicago

*“Control of catalytic activity of proteins in vivo”*

**Norbert Kroó**, Hungarian Academy of Sciences

*“Near field microscopy with surface plasmons and their statistical properties”*

**Makoto Kuwata-Gonokami**, University of Tokyo

*“Optical manipulation of cold excitons in a quantum degenerate regime”*

**Makoto Kuwata-Gonokami**, University of Tokyo

*“Optical manipulation of cold excitons in a quantum degenerate regime” (poster)*

**Alex Kuzmich**, Georgia Institute of Technology

*“Quantum networking with atomic ensembles”*

**Elena Kuznetsova**, Texas A&M University

*“Solitary waves in amplifying media with excited-state absorption”*

**Elena Kuznetsova**, Texas A&M University

*“Solitary waves in amplifying media with excited-state absorption” (poster)*

**Jaan Laane**, Texas A&M University

*“Spectroscopic Investigations of Molecular Structures in Electronic Excited States”*

**Jean-Pierre Leburton**, University of Illinois at Urbana-Champaign

*“Charge stability and exchange engineering in coupled quantum dots”*

**Kotik Lee**, Booz Allen Hamilton

**M. Howard Lee**, University of Georgia

**Wim Leemans**, Lawrence Berkeley National Laboratory

*“Laser Plasma-based accelerators: their potential for High Energy Physics”*

**Kevin Lehmann**, Princeton University

*“Cavity Ring-down Spectroscopy”*

**Gerd Leuchs**, University of Erlangen, Germany

*“Continuous Variable Quantum Algorithms”*

- Leonid Levitov**, Massachusetts Institute of Technology  
*“theory of exciton condensation and pattern formation in coupled quantum wells”*
- Fuli Li**, Texas A&M University  
*“Coherence induced entanglement”*
- Michal Lipson**, Cornell University  
*“Manipulating light using highly confining nanophotonic structures”*
- Michael G. Littman**, Princeton University  
*“Beating Diffraction with a Binary Mask – Shaped Pupil Coronagraph and the Optical Search for Planets about Nearby Stars”*
- Robert Lucht**, Purdue University  
*“Nonperturbative Modeling of Coherent Anti-Stokes Raman Scattering with Ultrafast Lasers”*
- Jeff Lundeen**, University of Toronto  
*“Applications of a nonlinear photon switch to Hardy’s Paradox and Bell-state determination”*
- Allan MacDonald**, University of Texas at Austin  
*“Excitonic Bose Condensation in Quantum Hall Bilayers”*
- Joe Mait**, U.S. Army Research Laboratory  
*“A Historical Perspective of Imaging”*
- Lute Maleki**, Jet Propulsion Laboratory  
*“Hyper parametric oscillation and squeezing in crystalline whispering gallery mode resonators”*
- Metin S. Mangir**, HRL Laboratories  
*“Coherent, Self-organized Fiber Laser Arrays” (poster)*
- Marlan O. Scully et al.**, Texas A&M University  
*“Charge-Exchange X-Ray Lasers”*
- Andrey Matsko**, Jet Propulsion Laboratory  
*“Magnetometer based on the opto-electronic microwave oscillator”*
- Anne Matsuura**, AFOSR
- Eric Mazur**, Harvard University  
*“Wrapping light around a hair”*
- J. Barry McManus**, Aerodyne Research, Inc.  
*“Trace gas measurements using pulsed QC lasers: atmospheric and environmental applications”*
- Ian McNulty**, Argonne National Laboratory  
*“X-ray coherence and microscopy”*
- Manjusha Mehendale**, Princeton University  
*“All UV time resolved coherent anti-Stokes Raman scattering”*
- John Miao**, University of California at Los Angeles  
*“Coherent Imaging and Its Applications”*



- Eugeniy Mikhailov**, Massachusetts Institute of Technology  
*“Development of a stable low-frequency squeezed vacuum source for precision position measurement”*
- Richard Miles**, Princeton University  
*“Spectral Methods for Imaging High-Speed Fluid Flow”*
- Kazuhiko Misawa**, Tokyo University of Agriculture and Technology  
*“Real-time wave-packet dynamics and wave-packet engineering”*
- G rard Mourou**, U. of Michigan and LOA ENSTA/Ecole Polytechnique Fr.  
*“Relativistic Optics”*
- Tobias Mueller**, Universit t Hannover  
*“Sagnac Interferometry with Cold Atoms” (poster)*
- Robert Murawski**, Texas A&M University  
*“Optical Modulation of a Type I Quantum Cascade Laser” (poster)*
- Ashok Muthukrishnan**, Texas A&M University  
*“A global approach to quantum searching using the quantum FFT” (poster)*
- Tanya L. Myers**, Pacific Northwest National Laboratory  
*“Quantum Cascade Laser Transmitters for Sensors and Other Applications”*
- Kyungsun Na**, University of Texas at Austin  
*“Chaos Assisted STIRAP”*
- Frank Narducci**, Naval Air Systems Command  
*“Atomic Magnetometry with Laser-Trapped Atoms”*
- Evgenii E. Narimanov**, Princeton University  
*“Chaotic Microlasers Based on Dynamical Anderson Localization”*
- John Nees**, University of Michigan  
*“Relativistic Optics: A route to high intensity attosecond pulses”*
- Cun-Zheng Ning**, NASA Ames Center for Nanotechnology  
*“Possibility of two-photon lasing using intersubband transitions in semiconductor nanostructures”*
- Cun-Zheng Ning**, NASA Ames Center for Nanotechnology  
*“Induced transparency, two-photon lasing, and many-body interaction in intersubband transitions in semiconductor nanostructures” (poster)*
- Julien Niset**, Ecole Polytechnique and Universite Libre de Bruxelles  
*“Quantum cloning with continuous variables”*
- Noam Erez**, Texas A&M University  
*“Surrealistic Bohmian Trajectories” (poster)*
- Mikhail Noginov**, Norfolk State University  
*“Effect of silver nanoparticles on luminescence of Eu<sup>3+</sup> ions in organic and inorganic materials”*
- Irina Novikova**, Harvard Smithsonian Center for Astrophysics  
*“Study of the three-photon absorption resonances as a challenger for the atomic clock”*

- Irina Novikova**, Harvard Smithsonian Center for Astrophysics  
*“The effect of atomic diffusion on slow and stored light in Rb vapor” (poster)*
- Maxim Olshanii**, University of Southern California  
*“Interatomic Interactions and Interference”*
- Chong H. (Raymond) Ooi**, Texas A&M University  
*“Enhanced Nonlinear CARS Backscattering via Quantum Coherence for Remote Detection of Anthrax Spores”*
- Andreas Ostendorf**, Laser Zentrum Hannover  
*“Patterning of silicon surfaces by ps and fs laser pulses”*
- Leonard Parker**, University of Wisconsin at Milwaukee  
*“Cosmology and Quantum Field Theory in the Curved Spacetime of General Relativity”*
- Anil K. Patnaik**, Texas A&M University  
*“Raman Photon Pair Correlations Via the Onsager Regression Theorem”*
- Claudio Pellegrini**, University of California at Los Angeles  
*“Status of development of X-Ray FEL and some new ideas”*
- John Pendry**, Imperial College  
*“Metamaterials Open New Vistas in Optics”*
- Peter S. Pershan**, Harvard University  
*“X-ray optics of liquid surfaces”*
- Dmitry Pestov**, Texas A&M University  
*“Femtosecond CARS on organic molecules”*
- Dmitry Pestov**, Texas A&M University  
*“Femtosecond CARS on organic molecules” (poster)*
- Loren Pfeiffer**, Bell Laboratories  
*“Design considerations of GaAs samples intended to demonstrate excitonic BEC”*
- Kim Ta Phuoc**, LOA ENSTA/Ecole Polytechnique Fr.  
*“Generation of X-ray beams using lasers from the acceleration of energetic electrons”*
- Todd B. Pittman**, Johns Hopkins University  
*“Heralding single photons from pulsed down-conversion”*
- E. E. Narimanov and V. A. Podolskiy**, Princeton University  
*“The materials with giant (THz) anisotropy for negative refraction” (poster)*
- Viktor A. Podolskiy**, Oregon State University  
*“Nanostructured non-magnetic left-handed composites”*
- Eric O. Potma**, Harvard University  
*“Biology seen through the window of CARS”*
- De-Kui Qing**, Texas A&M University  
*“Delay-Time-Bandwidth Product in Slow Light”*

- Mark Raizen**, University of Texas at Austin  
*“Quantum Dynamics and Transport in Low-Dimensional Bose Gases”*
- Ronen Rapaport**, Bell-Labs, Lucent Technologies  
*“Excitons in luminescent rings and artificial traps”*
- Ernst Rasel**, Universität Hannover  
*“Atom optics on ground and in space”*
- Aleksander Rebane**, Montana State University  
*“1-2-3 photon spectroscopy of NLO chromophores”*
- Linda Reichl**, University of Texas at Austin  
*“Electron waveguide quantum computers”*
- Margaret Reid**, University of Queensland, Australia  
*“Criteria for entanglement of macroscopic superpositions”*
- David Reis**, University of Michigan  
*“Picosecond resolved x-ray scattering”*
- Robert W. Byren**, Raytheon Company
- Jorge Rocca**, Colorado State University  
*“High repetition rate table-top and desk-top size soft x-ray lasers”*
- Mike Romalis**, Princeton University  
*“High-density alkali-metal magnetometers and their applications”*
- Yuri Rostovtsev**, Texas A&M University  
*“Electromagnetically Induced Coherent Scattering (EICS) in Backward Direction”*
- Chandrasekhar Roychoudhuri**, University of Connecticut  
*“Measuring properties of superposed light beams carrying different frequencies”*
- Edward (Ted) Sargent**, University of Toronto  
*“Infrared Colloidal Quantum Dots: Electroluminescent, Photovoltaic, and Modulation Devices”*
- Zoe-Elizabeth Sariyanni**, Texas A&M University  
*“Femtosecond CARS on molecules: Gaining Insight from a Theoretical Analysis”*
- Petra Sauer**, Texas A&M University  
*“Dissociation of organic benzene-like molecules under ultra-fast laser pulses” (poster)*
- Vladimir A. Sautenkov**, Texas A&M University  
*“UV coherent absorption spectroscopy for anthrax”*
- Vincenzo Savona**, Swiss Federal Institute of Technology-Lausanne  
*“Quantum complementarity of microcavity polaritons”*
- Michael Scalora**, U.S. Army Aviation and Missile Command  
*“Negative Refraction of Ultrashort Electromagnetic Pulses”*

- Giuliano Scarcelli**, UMBC  
*“Quantum imaging using thermal and Raman photon pairs”*
- Axel Scherer**, California Institute of Technology  
*“Photonic crystals - basics and prospects”*
- Wolfgang Schleich**, Universität Ulm  
*“New Frontiers in General Relativity”*
- Ulrich Schreiber**, Universität Essen  
*“Beyond the 6th decimal – High Precision Sagnac Interferometry”*
- Peter Schwindt**, NIST, Boulder  
*“Microfabricated Atomic Magnetometers”*
- James Scully**, American Airlines
- Judy Scully**, PQE
- Marlan O. Scully**, Texas A&M University  
*“Using Quantum Mechanics to Exorcise Maxwell’s Demon”*
- Chris Search**, Stevens Institute of Technology  
*“Quantum Atom Optics: Non-classical Dynamics of Matter-Waves Coupled to Light Fields”*
- Neil Shafer-Ray**, University of Oklahoma  
*“Proposed Measurement of CP violating effects using ultra-cold molecules confined to a Stark-Gravitational trap” (poster)*
- Vladimir M. Shalaev**, Purdue University  
*“Plasmonic Nanophotonics: Coupling Light to Nanoscale via Plasmons”*
- Gennady Shvets**, University of Texas at Austin  
*“Band engineering using electrostatic resonances: applications to super-lensing”*
- Torsten Siebert**, Wuerzburg University, Germany  
*“Optimizing population-transfer to excited vibrational states in femtosecond time-resolved coherent anti-stokes Raman Scattering for enhanced molecular recognition”*
- Jon Sjogren**, Air Force Research Laboratory
- Art Smirl**, University of Iowa  
*“Stopping, Trapping and Releasing Light in Doubly-Resonant Nanostructures”*
- Winthrop W. Smith**, The University of Connecticut  
*“Cold ion-neutral collisions in a hybrid trap” (poster)*
- Alexei Sokolov**, Texas A&M University  
*“Toward powerful single-cycle laser pulses”*
- Charles Stafford**, University of Arizona  
*“Spontaneous formation of nanoscale electron waveguides”*
- Mark I. Stockman**, Georgia State University  
*“Coherent, nonlinear, and quantum nanoplasmonics”*

**Gottfried Strasser**, Technical University of Wien  
*“Surface emitting quantum cascade lasers”*

**Dmitry V. Strekalov**, Jet Propulsion Laboratory  
*“Quantum-correlation metrology with biphotons: where is the limit?”*

**Szymon Suckewer**, Princeton University  
*“X-Ray Lasers via Optical Field Ionization”*

**Sune Svanberg**, University of Lund, Sweden  
*“Diagnostics and treatment of tumours using laser techniques”*

**Anatoly Svidzinsky**, Texas A&M University  
*“Bohr model analysis of diatomic molecules” (poster)*

**Phillip Szuromi**, Science Magazine

**Richard J. Tansey**, Lockheed Martin

**Henryk Temkin**, Texas Tech University  
*“Semiconductor Light Sources for the Ultraviolet”*

**Ioannis Thanopoulos**, University of British Columbia and  
*“Coherent Control of Nucleotide Base Pair Mutations”*

**Raanan Tobey**, University of Colorado  
*“Nonlinear High-Frequency Photoacoustic Spectroscopy using EUV Light”*

**Alfred U’Ren**, CISESE  
*“Applied Photon Entanglement with Multi-Element Sources”*

**William G. Unruh**, University of British Columbia, Vancouver  
*“Dumb Holes and Slow light– Testing Black Hole Physics in the Lab”*

**Kerry Vahala**, California Institute of Technology  
*“ $Q > 100$ -million optical micro-resonators on silicon and applications”*

**Edo Waks**, Stanford University  
*“Single Photon Sources”*

**Herbert Walther**, Max-Planck Institut für Quantenoptik  
*“Recent Advances in Cavity Quantum Electrodynamics”*

**James Weaver**, Massachusetts Institute of Technology  
*“Transport, sources and sinks: A multiscale, modular approach to modeling systems in biology and medicine”*

**Antoine Weis**, Université de Fribourg  
*“The human heart beat seen by cesium magnetometers”*

**Stephan Groeger and Antoine Weis**, Université de Fribourg  
*“Cesium magnetometers for a neutron EDM experiment” (poster)*

**David S. Weiss**, Pennsylvania State University  
*“Observation of a 1D Tonks-Girardeau gas”*

- George R. Welch**, Texas A&M University  
*“Enhanced coupling between optical and sound waves in the forward direction via ultra-slow light”*
- Jim Wolfe**, University of Illinois at Urbana-Champaign  
*“Excitons in Cu<sub>2</sub>O, To BEC or not to BEC?”*
- Matthais Wollenhaupt**, Universität Kassel  
*“Quantum Control Using Intense Shaped Pulses”*
- Jonathan S. Wurtele**, University of California at Berkeley  
*“Ultra-high intensity femtosecond laser via Raman Amplification for X-Ray Lasers”*
- Gerard Wysocki**, Rice University  
*“Quantum cascade laser based trace-gas sensors for human breath analysis”*
- Min Xiao**, University of Arkansas  
*“All-optical switching with enhanced Kerr nonlinearity in EIT system”*
- Rui-Hua Xie**, Texas A&M University  
*“Density functional study for characterization of dipicolinic acid” (poster)*
- Han Xiong**, Texas A&M University  
*“Correlated Spontaneous Emission Laser as an Entanglement Amplifier” (poster)*
- Steve Yalisove**, University of Michigan  
*“Ultrafast laser interaction with Si-SiO<sub>2</sub> interfaces”*
- Yoshihisa Yamamoto**, Stanford University  
*“Condensate of Polaritons in Microcavities”*
- Nan Yu**, Jet Propulsion Laboratory  
*“Ultra-low noise optical pulse generation through regenerative Q of the mode-locked laser”*
- Nan Yu**, Jet Propulsion Laboratory  
*“Ultra-low noise optical pulse generation through regenerative Q of the mode-locked laser” (poster)*
- Aihua Zhang**, Texas A&M University  
*“Diode-Pumped Rubidium Laser” (poster)*
- Yifu Zhu**, Florida International University  
*“Nonlinear wave mixing with EIT in cold atoms”*