Tuesday Morning January 3 2006

Plenary Session, George R. Welch, Chair

7:25 **George R. Welch**, *Texas A&M University*, Welcoming Remarks

7:30 **Frank K. Tittel**, *Rice University*, "Semiconductor laser based trace gas sensor technology: advances and opportunities"

8:00 **Tamar Seideman**, *Northwestern University*, "Toward coherent control in the nanoscale"

8:30 **Hans Schuessler**, *Texas A&M University*, "Sympathetic cooling of molecular ions in rf-ion traps"

	Optoelectronics Frank K. Tittel, Chair	*Toward Coherent Control in the Nanoscale* Tamar Seideman, Chair	*Measurements on Cold Molecules* Hans Schuessler, Chair	*Negative Index Materials 1* Viktor A. Podolskiy, Chair
9:10	**Claire Gmachl**, *Princeton University*, "Multi-wavelength and nonlinear Quantum Cascade lasers"	*(Change:)* **Norbert F. Scherer**, *University of Chicago*, "Ultrafast Nonlinearities, Spatially Localized Responses and Optical Manipulation of Single Nanoparticles and Clusters"	**Jochen Küpper**, *Fritz-Haber-Institut der MPG, Berlin*, "Deceleration and trapping of neutral molecules for spectroscopic applications"	**Evgenii E. Narimanov**, *Princeton University*, "Surface states in non-magnetic materials with negative refractive index"
9:30	*(Change:)* **Alexey Belyanin**, *Texas A&M University*, "Quantum cascade structures: from lasers to detectors"	**Atsushi Kubo**, *University of Pittsburg*, "Femtosecond microscopy and coherent control of surface plasmons on a silver film"	**Wes Campbell**, *Harvard University*, "Loading a Magnetic Trap from a Molecular Beam of NH Radicals"	**Gennady Shvets**, *University of Texas at Austin*, "Optical Metamaterials: from Antireflective Coatings to Molecular Spectroscopy"
9:50	**Andrew J. Steckl**, *University of Cincinnati*, "Rare Earth Doped Gallium Nitride - At Long Last Lasing"	**Geoff Steeves**, *University of Victoria*, "Ultrafast Scanning Tunneling Microscopy in Quantum Electronic Systems"	*(Change:)* **Edward Eyler**, *University of Connecticut*, "Formation, Trapping, and State-Specific Detection of Ultracold Polar KRb Molecules"	**Nader Engheta**, *University of Pennsylvania*, "Metamaterials for nanoelements and nanodevices in optics"
10:10				**Richard Ziolkowski**, *University of Arizona*, "Subwavelength-thin optical sources"

— Break —

Plenary Session, David Voss, Chair

10:50 **Yanhua Shih**, *University of Maryland, Baltimore County*, "Can two-photon correlation of chaotic light be considered as correlation of intensity fluctuations?"

11:20 **Gershon Kurizki**, *Weizmann Institute of Science, Israel*, "Was Zeno right after all?"

	"Ghost" Imaging and Quantum Imaging Yanhua Shih, Chair	*Zeno and Anti Zeno* Gershon Kurizki, Chair	*Measurements on Cold Atoms and Molecules* Hans Schuessler, Chair	*Quantum Superposition and Entanglement* Noam Erez, Chair
12:00	**Giuliano Scarcelli**, *University of Maryland, Baltimore County*, "Quantum magic mirror"	**Akira Shimizu**, *University of Tokyo*, "Quantum Zeno effect by general measurements"	**Thomas Udem**, *Max-Planck Institut für Quantenoptik*, "Spectroscopy with frequency combs and the possible variation of the fundamental constants"	**Francesco De Martini**, *Università "La Sapienza", Rome*, "Realization of a Decoherence-free, optimally distinguishable mesoscopic quantum superposition. A Schroedinger Cat."
12:20	**Milena D'Angelo**, *European Lab of Nonlinear Spectroscopy, Florence*, "Remotely prepared single-photon time-encoded ebits: homodyne thomography and Bell's inequality test"	**Mark Raizen**, *University of Texas at Austin*, "Experimental study of quantum tunneling; from single-atom to many-body physics"	**Mark D. Havey**, *Old Dominion University*, "Time dependent population and polarization dynamics in ultra cold atomic Rb"	**Dzmitry Matsukevich**, *Georgia Institute of Technology*, "Entanglement of remote atomic qubits"
12:40	**John Howell**, *University of Rochester*, "High Information Bandwidth Quantum Communication"	**Saverio Pascazio**, *Università di Bari, Italy*, "Quantum Zeno dynamics and control of decoherence"	**Vitaly Kocharovsky**, *Texas A&M University*, "Nonequilibrium BEC"	**Andrew N. Jordan**, *University of Geneva and Texas A&M*, "Continuous quantum measurement in the solid state"

Tuesday Evening January 3 2006

Plenary Session, Edward S. Fry, Chair

19:00 **Erich P. Ippen**, *Massachusetts Institute of Technology,* "Optical Clockworks and Arbitrary Electric Field Waveforms"

19:30 **Victor S. Batista**, *Yale University,* "Coherent Quantum Control of Electronic Excitations in Sensitized Semiconductors"

20:00 **Esen E. Alp**, *Argonne National Laboratory,* "Applications of nuclear resonant spectroscopy in nanoscience"

— Break —

	Femtosecond Optical Clocks and Arbitrary Waveforms Erich P. Ippen, Chair	*Coherent Quantum Control with Multiple Pulses* Victor S. Batista, Chair	*Measurements on Cold Atoms and Molecules* Mark D. Havey, Chair	*X-ray Optics* Esen E. Alp, Chair
20:50	**Franz Kaertner**, *Massachusetts Institute of Technology,* "Octave-spanning lasers and optical phase control"	**Luis G. C. Rego**, *Universidade Federal de Santa Catarina, Brazil,* "Coherent quantum control of electronic states in functionalized semiconductors"	**Frank A. Narducci**, *Naval Air Systems Command,* "Effects of Frequency Chirping in Electro-magnetically induced transparency"	**Olga Kocharovskaya**, *Texas A&M University,* "Laser Manipulations of Mossbauer Spectra: from theory to experiment"
21:10	**Jun Ye**, *JILA, NIST and University of Colorado,* "Optical atomic clock based on ultracold fermionic strontium atoms"	**Lorenza Viola**, *Dartmouth College,* "Randomized Decoupling Techniques for Coherent Quantum Control"	*(Change:)* **Daniel J. Heinzen**, *The University of Texas at Austin,* "Raman photoassociation of a Mott insulator"	**Eric Collet**, *University of Rennes 1,* "Opportunities to probe photoinduced phase transition by ultra-fast x-ray diffraction"
21:30	**Kaoru Minoshima**, *AIST, Japan,* "Phase-locked widely tunable optical single-frequency generator based on a femtosecond comb"	**Kazuhiko Misawa**, *Tokyo University of Agriculture and Technology,* "Quantum wave-packet control on a two-dimensional potential energy surface"	**Moochan Kim**, *Texas A&M University,* "Approximate solution of the Condensate Master Equation in BEC"	**Jörg Maser**, *Argonne National Laboratory,* "High-resolution X-ray Optics - where is the limit?"
21:50	**Alfred Leitenstorfer**, *University of Konstanz, Germany,* "Ultrabroadband femtosecond fiber systems and applications"	**Rogerio de Sousa**, *University of California at Berkeley,* "Coherence control of solid state quantum bits"		

Wednesday Morning January 4 2006

Plenary Session, Eric Mazur, Chair

7:30 **Stefan W. Hell**, *Max Planck Institute for Biophysical Chemistry, Göttingen*, "Breaking Abbe's barrier: Far-field fluorescence microscopy with diffraction-unlimited resolution"

8:00 **Moshe Shapiro**, *Weizmann Institute*, "Quantum Control on the Nanoscale"

8:30 **Charles Townes**, *University of California at Berkeley*, "Early Non-linear Optics and Beyond"

	Chiaofest 1: From Nonlinear Optics to Superconductivity Charles Townes, Chair	*Coherent Control* Moshe Shapiro, Chair	*Biophotonics* Stefan W. Hell, Chair	*X-ray Optics* Olga Kocharovskaya, Chair
9:10	**Ivan Deutsch**, *University of New Mexico*, "From diphotons to diatoms"	**Ilya Averbukh**, *Weizmann Institute of Science*, "Isotope-selective alignment of molecules"	**Eric Mazur**, *Harvard University*, "Subcellular surgery and nanoneurosurgery"	**Jos Odeurs**, *Katholieke Universiteit Leuven*, "Change of polarization and delayed gamma radiation using nuclear level mixing induced transparency"
9:30	**Marc J. Feldman**, *University of Rochester*, "Superconducting Circuitry for Control of Quantum Systems"	**Michael Spanner**, *University of Toronto*, "The absence of coherent mechanisms in case studies of liquid phase adaptive feedback control"	**Rebekah A. Drezek**, *Rice University*, "Immunotargeted Nanoshells for Imaging and Therapy of Cancer"	**Klaus Spohr**, *University of Paisley*, "Laser Induced Nuclear Physics: The Quest for Isomer Population & Future Developments Towards Counter-propagating Beams"
9:50	**Marlan O. Scully**, *Texas A&M and Princeton University*, "Quantum theory of the atom laser"	**Wolfgang Merkel**, *Universität Ulm*, "Factorization of numbers with chirped pulses"	**Peter So**, *Massachusetts Institute of Technology*, "High Resolution Wide-Field Microscopy Based on Standing Evanescence Waves"	**Petr Anisimov**, *Texas A&M University*, "Mossbauer spectroscopy in a spinning magnetic field"
10:10	**Paul Kelley**, *Tufts University*, "Self-trapping and the Myriad of Other Self-Action Effects"	**Pete Christopher**, *University of Toronto*, "Control of internal conversion in pyrazine: the overlapping resonances perspective in quantum control"	**Brian Pogue**, *Dartmouth College*, "Imaging human tissues with photons: Integration of near-infrared tomography with high field MRI"	

— Break —

Plenary Session, Kotic Lee, Chair

10:50 **Peter D. Keefe**, *Keefe & Associates*, "Intellectual Property for Scientists"

11:20 **Peter Milonni**, *Los Alamos National Laboratory*, "Photon Momentum in Dielectrics"

	Chiaofest 2: Photons in Matter Peter Milonni, Chair	*Correlation and Emission* Mikhail Noginov, Chair	*Gravity* Anil Patnaik, Chair	*Excitons and electron-hole plasma* Lu J. Sham, Chair
12:00	**Mohammad Mojahedi**, *University of Toronto*, "Dispersion Engineering: the Principles and Applications"	**Aristide Dogariu**, *CREOL & FPCE, University of Central Florida*, "Polarimetry of random electromagnetic fields"	**Lijun Wang**, *Max-Planck Research Group, Erlangen*, "Gravity aberration and its precise measurement"	**David Reitze**, *University of Florida*, "Superfluorescence from a quantized high density electron-hole system"
12:20	**Michael Stenner**, *University of Arizona*, "Information and communication in fast and slow light"	*(Change:)* **Ashok Muthukrishnan**, *Texas A&M University*, "Quantum microscopy beyond the Rayleigh limit: Exponential resolution using N-photon correlation"	**David Ottaway**, *Massachusetts Institute of Technology*, "Radiation-pressure induced optomechanical dynamics in suspended optical cavities"	**Hyatt M. Gibbs**, *University of Arizona*, "Excitonic photoliminescence in semiconductor quantum wells: Plasma versus excitons"
12:40	**Robert W. Boyd and Gershon Kurizki**, "Superluminal Propagation of Light: The Contributions of Ray Chiao and Some Recent Results"		**Eugeniy Mikhailov**, *Massachusetts Institute of Technology*, "EIT applications to GW detection"	**Leonid Butov**, *University of California at San Diego*, "Coherence of the macroscopically ordered exciton state"

Wednesday Evening January 4 2006

Plenary Session, Yuri Rostovtsev, Chair

19:00 **Jonathan Wurtele**, *University of California at Berkeley,* "Phase Space Manipulation and Cooling in Beams and Plasmas"

19:30 **Vladimir M. Shalaev**, *Purdue University,* "Optical Metamaterials with Negative Refractive Index"

20:00 **Carlton M. Caves**, *University of New Mexico,* "GHZ correlations are just a bit nonlocal"

— Break —

	Chiaofest 3: Entanglement – When Two Photons are Better than One Carlton M. Caves, Chair	*Cooling of Beams and Phase-space Manipulations* Jonathan Wurtele, Chair	*Photonic Metamaterials* Vladimir M. Shalaev, Chair	*Coherence Effects and EIT* Frank A. Narducci, Chair
20:50	**Paul Kwiat**, *University of Illinois at Urbana-Champaign,* "Hyperentanglement: When One Degree of Freedom Isn't Enough"	**Dan Dubin**, *University of California at San Diego,* Anti-Hydrogen "Formation rates of antihydrogen in a Penning trap: the long march to the ground state via three body collisions and radiation"	**Nikolay Zheludev**, *University of Southampton, UK,* "Planar, nano-structured photonics meta-materials"	**Irina Novikova**, *Harvard Smithsonian Center for Astrophysics,* "Optimization of slow and stored light efficiency in Rb vapor cells"
21:10	**Colin McCormick**, *NIST, Gaithersburg,* "EIT enhancement of forward four-wave mixing in atomic vapor"	**Hiromi Okamoto**, *University of Hiroshima,* "Crystal beams"	**Xiang Zhang**, *University of California at Berkeley,* "Photonic metamaterials, nano-plasmonics, and superlens"	**Philip Hemmer**, *Texas A&M University,* "Solving the time-bandwidth problem in slow light"
21:30	**Morgan Mitchell**, *ICFO, Barcelona,* "Atom-ready photons for cold-atom light storage"	**Nat Fisch**, *Princeton Plasma Physics,* "Phase space control in plasmas"	**Igor Smolyaninov**, *University of Maryland,* "Super-resolution microscopy using surface plasmon polaritons"	**Elena Kuznetsova**, *Texas A&M University,* "Coherent population trapping with a train of pulses and its application to excited-state absorption suppression"
21:50	**Aephraim M. Steinberg**, *University of Toronto,* "Quantum tomography of atoms, photons, biphotons, and triphotons"	**Will Bertsche**, *Lawrence Berkeley National Laboratory,* "Persistent Spatially-Driven Kinetic Waves in Pure Electron Plasmas"	**Mark I. Stockman**, *Georgia State University,* "Extreme Nanoplasmonics: Spatio-Temporal Limits of Optical Processes in Nanostructured Systems"	**Anil Patnaik**, *Texas A&M University,* "Coherence effects on the Raman two-photon correlation and applications"

Thursday Morning January 5 2006

Plenary Session, Maria Allegrini, Chair

7:30 **David Reis**, *University of Michigan*, "Ultrafast X-ray Science"

8:00 **Award Lamb Medal**, "The presentation of the 2006 Willis E. Lamb medal for Laser Science and Quantum Optics"

	Ultrafast, Short-Wavelength Physics David Reis, Chair	*EPR* Roland Allen, Chair	*Novel Optics* Irina Novikova, Chair	*Femtosecond CARS of DPA* Zoe-Elizabeth Sariyanni, Chair
8:40	**Linda Young**, *Argonne National Laboratory*, "Probing optical strong-field processes with x-rays"	**Arkady Plotnitsky**, *Purdue University*, "EPR: How subtle is the Lord and how is the Lord subtle?"	**Nikolai Kalugin**, *Texas A&M University*, "Efficient generation of THz radiation in gases via quantum coherence"	**Arthur Dogariu**, *Princeton University*, "Femtosecond Ultraviolet CARS for discrimination of Dipicolinic Acid"
9:00	**Andrea Cavalleri**, *Oxford University*, "Phase transition dynamics in complex solids viewed with femtosecond x-rays"	**Gregg Jaeger**, *Boston University*, "Exploring multipartite entangled states"	**C. H. Raymond Ooi**, *Texas A&M University*, "Physics of Excimer Cornea Ablation"	**John Reintjes**, *Naval Research Laboratory*, "Fs-CARS of Dipicolinic Acid: Effect of Two-Photon Absorption"
9:20	**Martin Richardson**, *CREOL & FPCE, University of Central Florida*, "High power EUV light sources and lithography - laser micro-plasmas"	**Christopher A. Fuchs**, *Bell Labs, Lucent Technologies*, "Why I Never Understood Bohr's Reply to EPR, But Still Liked It"	**Andrea Burzo**, *Texas A&M University*, "Interplay of Raman molecular modulation technique and Stimulated Raman Scattering for generation of ultra-broadband radiation"	**Dmitry Pestov**, *Texas A&M University*, "UV-probe Coherent Raman Spectroscopy of DPA and its salts"

— Break —

Plenary Session, Marlan O. Scully, Chair

10:00 **Raymond Chiao**, *University of California at Berkeley*, "The Interface of Quantum Mechanics with General Relativity: Generation and Detection of Gravity Waves via Planck-mass Superfluid Systems with Electron Attachment"

10:30 **Roy Glauber**, *Harvard University*, "Foundations of Quantum Optics"

11:00 **Manfred Kleber**, *Technische Universität München*, "On the interplay between waves and trajectories in quantum dynamics"

	Chiaofest 4: The 21st Century Raymond Chiao, Chair	*Foundations of Quantum Optics* Roy Glauber, Chair	*Tunneling and Quantum Interference* Manfred Kleber, Chair
11:40	**Roland Winston**, *University of California at Merced*, "Paradigm for a wave description of optical measurements"	**Ennio Arimondo**, *Università di Pisa*, "Quantum Optics with Bose-Einstein condensates"	**Wolfgang Schleich**, *Universität Ulm*, "The quantum Ulm sparrow"
12:00	**Thierry Chaneliere**, *Georgia Institute of Technology*, "Storage and retrieval of single photons transmitted between remote quantum memories"	**Fritz Haake**, *Universitaet Duisburg-Essen*, "Decoherence bypass of Schrödinger cat states in quantum measurement"	**Christophe Blondel**, *Laboratoire Aimé Cotton, CNRS*, "Images of a photoelectron interfering with itself: the photodetachment microscope"
12:20	**Onur Hosten**, *University of Illinois at Urbana-Champaign*, "Counterfactual Quantum Computation via Quantum Interrogation"	**Hans J. Briegel**, *University of Innsbruck*, "Entanglement in open and noisy quantum systems"	**Dieter Bauer**, *Max-Planck-Institut fuer Kernphysik, Heidelberg*, "Emergence of Classical Orbits in Few-Cycle Laser Ionization of Atoms"
12:40	**Heidi Fearn**, *California State University at Fullerton*, "No signals faster-than-c, or The Anti-Scharnhorst effect"	**Elisabeth Giacobino**, *Ecole Normale Superieure and CNRS, Paris*, "Quantum optics with continuous variables: from Glauber coherent states to non classical and entangled states"	

Thursday Evening January 5 2006

Plenary Session, Howard Brandt, Chair

19:00 **Anatoly Svidzinsky**, *Texas A&M University,* "D-scaling, Bohr model and Chemical Physics"

19:30 **David Cory**, *Massachusetts Institute of Technology,* "Quantum Information Processing with Nuclear Spins"

20:00 **Sergey Bozhevolnyi**, *University of Aalborg, Denmark,* "Plasmon-Polaritonic Crystals - Metasurfaces for Nanophotonics"

— Break —

	D-scaling and Chemical Physics Anatoly Svidzinsky, Chair	*Quantum Information, Computation, and Communication* David Cory, Chair	*Negative Index Materials 2* Sergey Bozhevolnyi, Chair	*Nano-plasmonics, Nano-particles, Nano-droplets, and Nano-cavities* Mark D. Havey, Chair
20:50	**Gordon Chen**, *Texas A&M University,* "The Dimensional Scaling Method for the Excited States of the Helium Atom"	**James Franson**, *Johns Hopkins Applied Physics Laboratory,* "Entangled Photon Holes"	**Viktor A. Podolskiy**, *Oregon State University,* "Photonic funnels: Using anisotropy to compress and propagate light beyond diffraction limit"	**Mikhail Noginov**, *Norfolk State University,* "Mutual enhancement of optical gain and surface plasmon in composite metal-dielectric media"
21:10	**Sabre Kais**, *Purdue University,* "Entanglement as a measure of electron-electron correlation"	**Robert W. Boyd**, *University of Rochester,* "Quantum Imaging"	**Alexei L. Efros**, *University of Utah,* "Left-Handed Materials based upon Photonic Crystals"	**Sang-Kee Eah**, *RPI,* "Modification of a single metal nanoparticle's light scattering rate by a remote mirror"
21:30	**John Rui-Hua Xie**, *Texas A&M University,* "Simple three-parameter model potential for diatomic systems"	**Howard Brandt**, *US Army Research Laboratory,* "Entangled Eavesdropping on Quantum Key Distribution"	**Wounjhang Park**, *University of Colorado,* "Photonic Crystal Approach for Tunable Negative Refraction"	**Kevin Lehmann**, *University of Virginia,* "Excitations of superfluid helium nanodroplets"
21:50	**Robert Murawski**, *Texas A&M University,* "First order corrections to quantum number dimensional scaling for the excited states of atoms"	**Daniel Felinto**, *California Institute of Technology,* "Measurement-Induced entanglement between remote atomic ensembles"	**Ildar Gabitov**, *University of Arizona,* "Double resonance in nonlinear nanostructured materials: negative refraction and solitary waves"	**Josh Hendrickson**, *University of Arizona,* "Quantum optics in photonic crystal cavities"

Friday Morning January 6 2006

Plenary Session, Norbert Kro, Chair

7:30 **Jean-Claude Diels**, *University of New Mexico*, "Coherent interaction with ultrashort pulses"

8:00 **Hans Frauenfelder**, *Los Alamos National Laboratory*, "Protein Physics-Concepts and Promises"

8:30 **Lu J. Sham**, *University of California, San Diego*, "Restoring coherence lost"

	Coherent Interaction with Ultrashort Pulses Jean-Claude Diels, Chair	*Protein Physics: From Quantum Mechanics to Biology* Hans Frauenfelder, Chair	*Coherence in Exciton Systems* Leonid Butov, Chair	*Novel Optics* Peter D. Keefe, Chair
9:10	**Jens Biegert**, *ETH, Switzerland*, "Coherent control of higher order haromonic generation with intense fs pulse"	**Peter Hamm**, *Universität Zürich*, "Do nonlinear vibrational excitations exist in proteins?"	**Hailin Wang**, *University of Oregon*, "Exciton coherence and EIT"	**Leon Cohen**, *City University of New York (Hunter College)*, "Wigner distribution for operators at two different times"
9:30	**George Gibson**, *University of Connecticut*, "Adiabatic passage and coherent interactions on high-order multiphoton transitions"	**Robert H. Austin**, *Princeton University*, "Narrow States and Energy Trapping in Proteins?"	**David Citrin**, *Georgia Institute of Technology*, "Phase coherence effects on radiative lifetimes of excitons in QWs"	**Pat Loughlin**, *University of Pittsburgh*, "Wigner distribution approximation for filtered signals and waves"
9:50	**Leo Hollberg**, *NIST, Boulder*, "Precisions Measurements with Femtosecond Optical Frequency Combs"	**José Onuchic**, *University of California at San Diego*, "The energy landscape for protein folding and function"	**Maxime Richard**, *EPFL, Switzerland*, "The trapped polaritons"	*(Change:)* **Norbert Kroó**, *Hungarian Academy of Sciences*, "Surface Plasmons and Photon Statistics"
10:10	**Alexei Sokolov**, *Texas A&M University*, "Toward generation of isolated single-cycle optical pulses by parametric beating with Raman coherence"	**Charles Munnerlyn**, *Visx Inc.*, "Characteristics of corneal ablations with the 193 nm excimer laser"		

— Break —

Plenary Session, Philip Hemmer, Chair

10:50 **Herschel A. Rabitz**, *Princeton University*, "Exploring the Systematics of Controlling Quantum Systems with Photonic Reagents"

11:20 **Alexander Zholents**, *Lawrence Berkeley National Laboratory*, "X-ray free electron lasers demystified"

	Coherent Quantum Control Herschel A. Rabitz, Chair	*Free Electron Lasers* Alexander Zholents, Chair	*Intense Fields* Alexei Sokolov, Chair	*Femtosecond CARS* Arthur Dogariu, Chair
12:00	**Alexei N. Markevitch**, *Temple University*, "Manipulating Hilbert Space for Fun and Profit"	**John Arthur**, *Stanford University*, "Applications of intense coherent x-ray pulses from LCLS"	**Alexander Litvak**, *Institute of Applied Physics, RAS*, "Self-focusing of ultra-short laser pulses in a dispersive medium"	**Yuri Rostovtsev**, *Texas A&M University*, "Nonlinear scattering in coherently prepared media: Manley-Rowe relations"
12:20	**Marcos Dantus**, *Michigan State University*, "Systematic Chemical Recognition Using Shaped Laser Pulses"	**John Corlett**, *Lawrence Berkeley National Laboratory*, "Proposals and Concepts for Future FELs"	**Wilhelm Becker**, *Max Born Institut Berlin*, "Attosecond electron thermalization by laser-driven electron recollision in atoms"	**Martin Fischer**, *Duke University*, "Multiphoton Microscopy with Shaped Laser Pulses"
12:40	**Thomas Weinacht**, *SUNY Stony Brook*, "Understanding learning control of molecular dynamics: The importance of dynamic resonances"	**Andrew Sessler**, *Lawrence Berkeley National Laboratory*, "Transverse-Longitudinal Correlations: FEL Performance and Emittance Exchange"	**Miaochan Zhi**, *Texas A&M University*, "Application of ultra-short and super-intense laser field – molecular approach to fusion?"	**Zoe-Elizabeth Sariyanni**, *Texas A&M University*, "Femtosecond Spectroscopy on Molecular Solutions"

Friday Evening January 6 2006

Plenary Session, Robert W. Boyd, Chair

19:00 **Lute Maleki**, *Jet Propulsion Laboratory,* "Low contrast whispering gallery mode resonators and their applications"

19:30 **Wim Leemans**, *Lawrence Berkeley National Laboratory,* "Intense beams produced by laser-plasma interactions"

— Break —

	High-Q Photonic Resonators Lute Maleki, Chair	*Highly Tailored Radiation Pulses Using Laser Plasma Interactions* Wim Leemans, Chair	*Applications of Molecular Spectroscopy* Kevin Lehmann, Chair	*Photonics* Nikolai Kalugin, Chair
20:20	**Dmitry V. Strekalov**, *Jet Propulsion Laboratory,* "The progress of EIT-based clock and magnetometer at JPL".	**Thomas Cowan**, *University of Nevada,* "Laser Generated Ion Beams"	**Jaan Laane**, *Texas A&M University,* "A Chemist's view of the vibrational spectra of DPA and its calcium salts"	**Kent Choquette**, *University of Illinois at Urbana-Champaign,* "Tunable and coherent coupling of multiple defect photonic crystal vertical cavity lasers"
20:40	**Nan Yu**, *Jet Propulsion Laboratory,* "Coupled optoelectronic oscillator: from ultra-low phase noise to ultra-high frequency stability"	*(Change:)* **Yoav Avitzour**, *Princeton University,* "Feasibility of X-Ray Laser within the "Water Window" at 3.4 nm"	**Roland Allen**, *Texas A&M University,* "Vibrational modes of dipicolinic acid, and their role in the response to femtosecond-scale laser pulses"	**Weng W. Chow**, *Sandia National Laboratory,* "Active photonic lattices: is greater than blackbody intensity possible?"
21:00	**Anatoliy Savchenkov**, *Jet Propulsion Laboratory,* "Raman lasing and four wave mixing in ultrahigh-Q fluorite whispering gallery mode resonators"		**Alexander Kolomenski**, *Texas A&M University,* "Two-photon absorption of DPA observed via stimulated Raman scattering"	**Jason Fleischer**, *Princeton University,* "Random-phase solitons in nonlinear photonic lattices"
21:20			**Robert P. Lucht**, *Purdue University,* "Electronic resonance CARS"	