

The annual March Meeting of the American Physical Society takes place this year in Denver, Colorado, amid the scenic Rocky Mountains. It will run from Monday, 5 March through Friday, 9 March, with pre-sessions scheduled for Saturday, 3 March and Sunday, 4 March. Some 7000 papers will be presented at more than 90 invited sessions and 550 contributed sessions. Among the highlights of this year's events are various tutorials and workshops, as well as meetings, social gatherings, and receptions. Specific information about all events is available at http://www .aps.org/meetings/march/index.cfm. All tutorials and many of the special workshops require preregistration.

The Colorado Convention Center, a state-of-the-art facility located in downtown Denver, will host the scientific sessions. The center is within walking distance of restaurants, shops, theaters, and museums. The nontechnical and satellite sessions will take place nearby at the headquarters hotel, the Adam's Mark.

Pre-meeting programs include a two-day Division of Polymer Physics short course, Advances in the Use of Atomic Force Microscopy for Studies of the Physics of Macromolecular Materials, offered Saturday, 3 March through Sunday, 4 March. A range of topics will be covered, including an overview of AFM, its use for biological and synthetic systems, new advances, and the challenges involved. Several half-day tutorials on Sunday will cover nanoscale magnetism, statistical and thermal physics, quantum error correction, spintronics, quantum turbulence, the physics of graphene, and other related topics.

Two workshops also take place on Sunday, 4 March. The 4th APS Workshop on Opportunities in Biological Physics will include a discussion of new techniques in biomedicine, extensive

tutorial overviews, and a lunch with the speakers. The second Sunday workshop, Professional Skills Development for Women Physicists, will cover communication skills and negotiation techniques for women physicists in industry and government.

A special field trip to the Colorado School of Mines in Golden is planned for Sunday afternoon and evening, from 3:30 to 9:00pm. Hosted by three major research universities—CSM, Colorado State University, and the University of Colorado at Boulder—the outing boasts an open house and lecture centering on research into renewable and alternative energy sources, followed by a reception and buffet.

The APS Education and Diversity department is sponsoring a High School Teachers' Day on Tuesday, 6 March, at the Adam's Mark Hotel. This event is open, at no cost, to local physics teachers, who will attend presentations, workshops, and a lunch. The program introduces current research and presents innovative hands-on activities teachers can use in their classrooms; it serves as a social vehicle to meet other physicists, university faculty, and fellow teachers in the area.

The annual job fair will run Monday-Wednesday, 5-7 March in the Convention Center Exhibit Hall. Job seekers can network, post resumés, and interview with employers on-site, while employers can showcase their companies, advertise positions, and meet and interview prospective employees. Physics-related products, services, books, and journals will be exhibited at the annual show, which also runs from 5 to 7 March.

Numerous social activities are also planned. For companions of the attendees, a complimentary welcome breakfast will be available on Monday, 5 March, from 8:30 to 10:00am at the

Adam's Mark Hotel. The breakfast will include presentations by the Denver Metro Convention and Visitors Bureau about where to go and what to see in Denver. Monday evening from 5:30 to 6:30pm is the annual Awards Program in the Convention Center. A Welcome Reception for all attendees will follow.

On Tuesday, 6 March, from 7:30 to 9:30am, the Committee on the Status of Women in Physics and the Forum on Industrial and Applied Physics are cosponsoring a networking breakfast at the Convention Center, and they invite both men and women to participate. Tuesday afternoon will offer an opportunity to meet and talk with the editors of American Institute of Physics and APS journals at the APS Journal Editors Panel Discussion, 2:30-3:30pm, followed by a Meet-the-Editors Reception, 3:30-5:30pm, also in the Convention Center. In addition, various alumni reunions hosted by universities, laboratories, and companies are planned for the Adam's Mark Hotel.

Tuesday evening the Convention Center is the site for a student reception, from 5:30 to 6:30pm, with refreshments and a physics trivia quiz. Students will have another opportunity to connect at the Convention Center during a complimentary box lunch on Wednesday, 7 March, 1:00-2:30pm, where they can participate in an informal discussion with an expert on a variety of topics.

Tuesday night is topped off by a Physics Sing-Along from 8:30 to 9:30pm in the Adam's Mark Hotel. The 2006 March Meeting in Baltimore hosted the first-ever of this event, where whimsical physics lyrics are sung to popular tunes, such as last year's "I Got Physics" sung to the tune of "I Got Rhythm" by George Gershwin. Everyone can participate, since according to last year's promotion, no singing ability is required.

# **Sessions with Invited Speakers**

### Monday, 5 March

#### mornina

DCMP: Competing Order in High-T<sub>c</sub> Superconductors. Abbamonte, Kohsaka, Homes, Tranquada, Franz

FIAP: Future of Fossil Fuels. Wilson, Fan, Lackner, Collett, Schmitt DCMP: Electronic States in Graphene. Basov, Zhang, Berger, Lanzara,

DPOLY/DMP/GSNP: Responsive and Adaptable Polymeric Materials. Vaia, Zauscher, Hansma, Wirtz, Grosberg

DBP: Mechanisms and Landscapes of Cellular Networks. Tyson, Shapiro, Davidson, Bialek, Cross

DCOMP: Frontiers in Computational Materials. Williamson, Godby, Ceder, Zunger, von Allmen

DCMP: Unconventional Transport and Magnetic Properties of Hexaborides. Degiorgi, Cooper, Denlinger, Pereira, Calderon

DMP: Novel Superconductors I: Doping and Impurities in MgB<sub>2</sub>. Daghero DMP: Superconductivity: Thermodynamic and Doping Effects. Bonn

GMAG/DMP/FIAP: Spin Hall Effect. Awschalom DMP/GMAG: Multiferroics I. Ederer

GMAG/DMP/FIAP: Spin-Dependent Tunneling I. Miller GMAG: Spin Freezing on Frustrating Lattices. Ueland

DPOLY/DMP: Photophysics of Electronic Polymers. Vardeny DCP: New Frontiers in Imaging I. Bluemich, Fukushima, Gladden

FED: Physics Education Research. Redish

GSNP: Éconophysics. Farmer DMP/DCOMP: High Pressure I:Earth and Planetary Materials. Iota DPOLY: Particle Dynamics and Organization: Polymer Mediated, Polymer Particles, and Anisotropic Particles. Granick

DPOLY: Mechanical Properties, Fracture, and Adhesion. Van Vliet DCP/DBP: Protein Folding: Theory and Simulations I. Wolynes, Pande, Shakhnovich

DMP/DCOMP: Computational Nanoscience I: Methods and Applications.

DMP: Carbon Nanotube Optics I. Kono

DFD: Colloids I. Weeks

DAMOP: Rotating Quantum Gases. Viefers

GQI/DAMOP: Quantum-Limited Measurements. Geremia

GIMS: Acoustic and Optical Instrumentation. Diebold

FIAP: Phase Transitions and Domains in Ferroelectric Nanostructures I. Spanier

DMP: Quantum Size Effects in Metallic Thin Films. Shih

FIAP/DMP: Physics of Thermoelectric Materials and Phenomena I. Zhang DMP: Nanoscale Transport: Wires, Dots, Point Contacts. Rokhinson

FHP: 20th Anniversary of High T<sub>c</sub> Superconductivity "Woodstock" Session. Bednorz, Chu, Scalapino, Grant, Cava, Cohen, Tanaka, Greene, Kapitulnik, Finnemore

GMAG: Spin-Transfer-Driven Magnetic Excitations. Stiles, Suzuki, Sankey, Acremann, Klaui

DCMP: Phonons and Magnetic Frustration in Pyrochlores. Bergman,

Tchernyshyov, Dodge, Gaulin, Lee DAMOP: Population-Imbalanced Superfluid Fermi Gases. Li, Shin, Sheehy, De Silva, Chen

DBP: Adaptation in Biological Systems. *Endres, Fairhall, Brenner, Desai* GSNP/DPOLY: Control and Architecture in Directed Macromolecular

Self-Assembly. Bowick, Pine, Stone, Wooley, Alexandridis DCMP: Emergent Patterns in Geophysical Processes. Goldenfeld, Morris, Short, Betterton, Shinbrot

DMP: Novel Superconductors II: CeColn<sub>5</sub> and Na<sub>2</sub>CoO<sub>2</sub>. Klein

GMAG/DMP/FIAP: Spin Injection. Jiang

DMP/GMAG: Cobaltates and Manganites. Rosenkranz

GMAG/DMP: Magnetic Nanowires, Nanodots, Multilayers. Bolotin

GMAG/DCOMP/DMP: Spin Transport and Orbital Polarization Effects. Rocha

DPOLY/DMP: Pentacene and Field-Effect Transistors. Frisbie

DCP: New Frontiers in Imaging II. Kimmich, Song

DMP: Properties of Ferroelectrics and Relaxors. Nelson

DMP/DCOMP: High Pressure II: Earth and Planetary Materials. Jackson

DPOLY: Reversibly Associating Polymers: Theory and Experiments. Percec DPOLY: Adhesion, Swelling, and Elastic Properties of Thin Polymer Films. Attard DCP/DBP: Protein Folding: Theory and Simulations II. Thirumalai, Hummer,

Orland DMP: Carbon Nanotube Optoelectronics. Avouris, Lee

GQI: Quantum Foundations I. Spekkens

GIMS/DBP: Bioinstrumentation and Biophotonic Technologies. *Telenkov* FIAP/DMP: Materials and Applications for Solar Energy I. Nozik, Klimov

DMP: Kinetics of Self-Assembly at Surfaces. *Pimpinelli* DMP: Materials for Quantum Information Processing I. *Simmons* 

DMP: Nanoscale Transport: Molecules I. Venkataraman

#### afternoon

DCMP: Induced Superconductivity in Carbon Nanotubes and Graphene.
Kouwenhoven, Beenakker, Schoenenberger, Lindelof, Hakonen
GQI: Jon Traps for Scalable Quantum Computation. Chuang, Wineland, Monroe, Slusher, Berkeland

DMP: DMP Prize Symposium. Miller, Epstein, Harris, Bader

DPOLY: Polymer Crystallization: 50 Years of Chain Folding. Geil, Khoury, Lotz,

FIAP: Pake Prize Symposium: Magnetic Storage and Applications. Kryder, Bertero, Tehrani, Wittig, Meisner
 DCOMP: Computational Challenges in Describing Mechanical Phenomena at the Nanoscale. Greaney, Lukes, Cahill, Bernholc, Mingo
 DCMP: Signatures of Non-abelian Quantum Hall States. Read, Nayak,

Grosfeld, Hormozi, Feldman

DMP: Correlated Electron Superlattices. *Pentcheva* GMAG/DMP/FIAP: Spin Dynamics and Magnetism in Quantum Dots. *Fabian* 

DMP/GMAG: Computational Study of Complex Oxides. Smith

GMAG/FIAP: MRAM and Magnetic Devices. Engel GMAG: Triangular Lattice Antiferromagnetism. Starykh

DMP/GMAG: Multiferroics II. Bibes

DCP: New Frontiers in Imaging III. Warren, Squier DMP: Ferroelectric and Other Oxides. Cohen

DMY: Ferroelectric and Oriter Oxides. Conen GSNP/DMP: Fracture. Bonamy DMP/DCOMP: High Pressure III: Earth and Planetary Materials. Lee DCP/DBP: Protein Folding: Theory and Simulations III. Onuchic, Henry DMP: Carbon Nanotube Optics II. Wang

DFD: Colloids II. Dinsmore

DAMOP: Fermi Gases with Unequal Spin Populations or Masses. Chevy

DBP: Cell-Level Patterning During Embryonic Development. Little

DBP: Biological Networks. Hasty

FIAP/DMP: Materials and Applications for Solar Energy II. Marti DMP: Spin and Nonlinear Dynamics in Optical Nanostructures. Scheibner

DCMP: Fifty Years of BCS Theory. Scalapino, Rowell, Baym

# Tuesday, 6 March

#### mornina

DCMP: DCMP Prize Session. Eisenstein, Girvin, MacDonald, Himpsel DPOLY: Polymer Physics Prize. Fredrickson, Kramer, Bates, Mezzenga, Milner DCMP: Anomalous Hall Effect: Theory and Experiments. Onoda, Lee, Sales,

DCOMP/DCMP/DMP: Recent Advances in Quantum Monte Carlo Simulations. Zhang, Casula, Mitas, Needs, Sorella

Abbreviations preceding each entry denote the sponsoring committee (c), division (d), forum (f), or topical group (g):

COM: Minorities in Physics (c)

DAMOP: Atomic, Molecular, and Optical (d)

DBP: Biological Physics (d)

DCMP: Condensed Matter Physics (d) DCOMP: Computational Physics (d)

DCP: Chemical Physics (d) DFD: Fluid Dynamics (d) DMP: Materials Physics (d) DPB: Physics of Beams (d) DPOLY: Polymer Physics (d)

FED: Education (f)

FGSA: Graduate Student Affairs (f)

FHP: History of Physics (f)

FIAP: Industrial and Applied Physics (f)

FIP: International Physics (f) FPS: Physics and Society (f)

GIMS: Instrument and Measurement Science (g) GMAG: Magnetism and Its Applications (g)

GQI: Quantum Information (g)

GSNP: Statistical and Nonlinear Physics (g)

DCOMP: Exact-Exchange-Based DFT Functionals Meet Quasiparticle Energy Calculations: Exciting Prospects for Condensed Systems. Pulci, Shirley, Scuseria, Kresse, Goerling

FIAP: Physicists as Entrepreneurs. Wyatt, Elings, Woollam, Wyant

FPS: Nuclear Weapon Missions in the 21st Century. Brooks, Kehler, Tarter, Drell, Oelrich

DMP: Novel Superconductors III: Mostly  $MgB_2$ . Li

DMP: Multiferroic Heterostructures. Schlom GMAG/DMP/FIAP: Spin Transport. Weiss

GMAG: 2D Quantum Magnetism. Fernandez-Baca

DCP: New Frontiers in Imaging IV. Springer Jr, Navon DBP: Medical Radiation Biology. Britten, Brenner

DCP: Nonadiabatic Molecular Dynamics and Control at Conical Intersections I. Matsika, Miller

DMP/DCOMP: Computational Nanoscience III: DNA Translocation/Nanopores. Bhattacharya

DMP: Graphene I. Ando

GQI: Superconducting Qubits I. Gambetta
DBP: DNA and Protein Analysis with Nanofluidics. Craighead

GIMS: X-Ray and Neutron Instruments and Sciences I. Sato FIAP: Phase Transitions and Domains in Ferroelectric Nanostructures II. Prosandeev, Roytburd

FIAP/DMP: Physics of Thermoelectric Materials and Phenomena II. Shakouri DMP: Optical Properties of Nanocavities and Structured Materials. Williams

#### midday

DCMP: Cuprate Superconductors: Underdoping and Pseudogaps. Ong, Loram, Norman, Hirschfeld, Balatsky

DCP/DCOMP/GSNP: Prize Session. Somorjai, Frenkel, Zwier, Havlin, Huang DCMP/DMP: Emerging Science of Solid-State Lighting. Craford, Burrows, Simmons, Malliaras, Misewich

DPOLY/FIAP: Polymer-Based Composite Materials. Char, Krishnamoorti, Mack-

ay, Schweizer, Kim
FED: Topics from the Gordon Research Conference on Teaching Electricity and

Magnetism. Shaffer, Belcher, Patton, Spalding
FIP/FPS: Scientific Cooperation in the Middle East. Feldman, Mansouri,
Rabinovici, Greene, Turekian

DMP: Novel Superconductors IV: Intercalated Graphites and Related. Kim GMAG/DMP/FIAP: Spin Control and Dynamics in Quantum Dots. *Gywat* GMAG/DMP/FIAP: Domain Wall Motion and Spin Dynamics. *Thomas* 

GMAG: Frustrated 1D Magnetism. *Enderle* GMAG/DMP: Molecular Magnets. *Ardavan* 

DCP/DCOMP: Frontiers in Electronic Structure Theory I. Becke, Gill

DBP: Medical Physics: Approaches to Cancer Treatment. Paganetti, Ma GSNP/DFD: Collective Dynamics of Self-Driven Particles. Ramaswamy

DPOLY: Hybrid Organic, Inorganic Nanomaterials: Synthesis, Assembly. Emrick DCP: Nonadiabatic Molecular Dynamics and Control at Conical Intersections II. Cederbaum, Krylov

DMP: Carbon Nanotube Optics III. Jorio

DFD/GSNP: Granular Flows I. Kumaran

DFD: Characterizing Spatiotemporal Complexity in Fluids and Materials. Mischaikow

FIAP/DMP: Hydrogen Storage I. *Yaghi* DMP: Materials for Quantum Information Processing II. *Santori* 

DMP: Optical Properties of Nanocrystals. Htoon, Wang

#### afternoon

DCMP/DMP: Basic Research Needs for Superconductivity. Sarrao, Eckstein, Kwok, Pickett, Malozemoff

FIAP/DPOLY: Organic and Molecular Bistability and Memory Devices. Yang, Scott, Jabbour, Forrest, Heath

DCMP: Novel Phenomena in Granular Systems with Complex Interactions. Gollub, Kudrolli, Snezhko, Cebers, Tsimring

DCMP/GQI: Prize Session. Siddiqi, Wootters, Loh, Churchill, Malik

DCMP: Spin Manipulation in Semiconductors and Metals for Spintronics. Hankiewicz, Stern, Samarth, Lou, Ohno

COM: Minorities in Medical Physics. Gonzalez, Ewell, Gueye, Avery, McKetty FED: Physics Education Award: PSSC. Haber-Schaim, Holbrow, Smith-Williams,

King GMAG/DMP/FIAP: Magnetic Semiconducting Oxides. Venkatesan DMP: Interfacial Ordering. Chakhalian DMP: Interfacial Ordering. Chakhalian GMAG/FIAP: Patterned and High-Anisotropy Films for Data Storage. Albrecht DCP/DCOMP: Frontiers in Electronic Structure Theory II. Reining, Van Voorhis

GSNP: Structure and Dynamics of Complex Networks. Sneppen

DPOLY: John H. Dillon Award Symposium. Pochan

DPOLY/DMP: Organic Spintronic Materials and Nano-Spintronic Materials. Kronik

DCP: Nonadiabatic Molecular Dynamics and Control at Conical Intersections III. Ashfold, Sussman

DMP: Carbon Nanotube Optics IV. Prezhdo

DAMOP: BEC/BCS Crossover. Trivedi

DBP: Virus-Inspired Supramolecular Structures. Zandi, Douglas

DMP: Nanoscale Transport: Molecules II. Burke

#### Wednesday, 7 March

#### morning

DCMP: Quantum Electronics in Silicon. Lyon, Eriksson, Rogge, Hollenberg GQI/DCMP: Progress in Superconducting Quantum Computing. Wilhelm, Hime, Houck, Steffen, Mooij

DAMOP: Frontiers in Ultracold Gases in Optical Lattices. Liu, Moritz, Ho, Cornell, Lobo

DPOLY: Novel Approaches Aimed at Rational Design of Functional Polymeric Materials. Knokhlov, Tew, Kiick, Kane, Hawker DFD: The Generation of Magnetic Fields in the Cosmos and the Role of

Turbulence. Lathrop, Cowley, Pinton, Brummell, Mininni
FHP/DPB: Condensed-Matter Physics at Synchrotron Facilities: History as
Prologue to the Future. Stohr, Sette, Robinson, McWhan, Sinha

DCMP: Nonlinear Rheology and Dynamics of Soft Materials. Lubensky, Wyss, Squires, Burki

DMP: Novel Superconductors V: Borides, Organics, and Others. Curtarolo GMAG/DMP/FIAP: Diluted Magnetic Semiconductors I. Kuroda, Priour Jr GMAG/DMP/FIAP: Current Induced Magnetization Dynamics and Spin Transfer. Tserkovnyak

GMAG/DCOMP/DMP: Spin and Magnetization Dynamics. Canali DCP/DCOMP: Frontiers in Electronic Structure Theory III. Carter, Stengel

GSNP: Jamming I. Dennin, Cipelletti
DPOLY/DMP: Organic LEDS and Light Emission. Bradley
DPOLY/DBP: Biopolymers I: Mechanical Properties. Kalinin

DCP: Nonadiabatic Molecular Dynamics and Control at Conical Intersections IV. Brixner, Jonas

DMP/DCOMP: Computational Nanoscience IV: Nanoparticles. Tiago

DMP: Graphene II. Jarillo-Herrero

DMP: Carbon Nanotubes: Synthesis. Hayashi

DMP: Carbon Nanotubes: Sensors and Adsorption. Collins

DBP: Brownian Motors in Physics, Chemistry, and Biology. Linke

DBP/DCP: Time-Resolved Structural Investigations on Protein Folding and Function. Hoff, Rousseau

GIMS: Advances in Scanned Probe Microscopy II: Force Methods. Ternes FIAP: Emerging Research Devices and Materials for the Microelectronics Industry I. Zollner

DMP: STM of Surface-Based Nanostructures. Gao

FIAP/DMP: Physics of Thermoelectric Materials and Phenomena III. Tritt

# midday

DCMP: Recent Advances in Magnetization Dynamics. Fischer, Kent, Bailey, Hoefer, Liu

DBP: Nanopore World: From Single Molecules to Bionanotechnology Prospects. Ling, Bezrukov, Keyser, Timp

DCMP: Advances in Nanostructured Materials for Electronics. Johnston-Halperin, Martensson, Pierce, Belcher, Bezryadin

GMAG: Magnetic Bose-Einstein Condensation. Fisher, Batista, Zapf, Takano,

DCMP: Entanglement Entropy in Condensed-Matter Physics. Levin, Moore, Refael, Vidal

FIAP/DPB: Condensed-Matter Physics and Future Accelerator-based Light Sources. Gibson, Brock, Moncton, Stephenson, Schneider

FGSA: Science Meets Policy: Careers and Advocacy. Bosler, Slakey, Dresselhaus, Sonnert

DMP: Novel Superconductors: Miscellaneous Materials. Massidda GMAG/DMP/FIAP: Spin-Orbit Coupling. Sih

DMP/GMAG: High-T<sub>c</sub> Cuprates and Nickelates. *Macridin, Wilson*GMAG/DMP: Magnetic Nanostructures I. *Schwarz*GMAG/DCOMP/DMP: Current- and Magnetization-Driven Effects. *Guo* DCP/DCOMP: Frontiers in Electronic Structure Theory IV. Chan, Tomanek

GSNP: Social Dynamics and Scaling. Vespignani DPOLY/DMP: Organic Heterojuncture Photovoltaics. Bredas

DPOLY: Dynamics and Structure in Polymer Melts and Glasses. Robbins DCP: Electron and Ion Solvation in Clusters and the Condensed Phase I. Schwartz, Hynes, Bradforth

DMP: Graphene III. Son

DFD: Granular Flows II. Hrenya

DFD: Rheology and Hydrodynamics of Wormlike Micellar Fluids. Olmsted DBP/GSNP/DPOLY: Cytoskeletal Dynamics and Cell Migration I. Waterman-Storer

FIAP/DMP: Hydrogen Storage III. Antonelli DMP: Biological and Chemical Self-Assembly at Surfaces. Brinker

DMP: Materials for Quantum Information Processing III. Levy

DMP: Nanoscale Transport: Metals. Altomare

#### afternoon

DCMP: Magnetic Excitations in High-T<sub>c</sub> Superconductors. Dai, Keimer, Kitaoka, Hayden, Dahm

GMAG: Symposium on Exchange Bias. Krivorotov, Nogues, Morales, O'Grady, Binek

DCMP: 1D Electrons Outside the Luttinger Liquid Paradigm. Glazman, Yamamoto, Fogler, Kindermann

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DAMOP: Disordered Quantum Gases. Inguscio, Aspect, Santos, Castin, Mueller DBP: Quantum Mechanics/Molecular Mechanics: Developments and

Applications. Friesner, Warshel, Roitberg, Jorgensen, Gascon GIMS: X-Ray Synchrotron Instrumentation. Maser, Chu, Williams, Macrander

GSNP: Percolation. Gruzberg, Falkovich, Serrano, Kleban, Vojta
DMP: Surfaces of Correlated Electron Systems. Renner
GMAG/DMP/FIAP: III-Mn-V Ferromagnetic Semiconductors. Moreo

DMP/GMAG: 4d and 5d Transition-Metal Oxides. Hiroi GMAG/DMP/FIAP: Spin Transfer Torque. Fullerton

DMP: Nanoscale Ferroelectrics, Switching, and Domains. Tenne DPOLY/DBP: Interaction of Polymers with Biological Structures. Olvera de la Cruz

DCP: Electron and Ion Solvation in Clusters and the Condensed Phase II. Neumark, Jordan, Turi

DMP: Carbon Nanotubes: Devices. Léonard

FIAP: Negative Index Materials: Concepts to Applications I. Brongersma

FIAP/DMP: Hydrogen Storage IV. Wu

DBP: Simplifying Biological Complexity. Banavar, Duke, Cieplak

# Thursday, 8 March

### morning

DCMP: RNA Folding at the Crossroads Between Molecular Biology and

Statistical Physics. Zee, Bundschuh, Tang, Wiese GQI/DCMP: Quantum Cryptography and Quantum Communication I. Zeilinger, Pan, Hughes, Luetkenhaus, Kuzmich

DCMP: Quantum Chaos in Condensed-Matter Physics. Fyodorov, Weaver, Anlage, Kottos, Rahav

DPOLY/DBP: Interfaces Between Synthetic and Biological Polymers. Leckband, Kumar, Kannan, Szleifer, Abbott

FIAP: Pharmaceutical Materials Science. Cima, Shalaev, Reutzel-Edens, Pikal, Muzzio

DCOMP/DCP: Recent Progress in Computational Approaches for Rare Events.

Bolhuis, Dellago, Geissler, Vanden-Eijnden, Parrinello

GSNP/FED: Teaching Nonequilibrium Statistical Mechanics for the Needs of 21st-Century Physicists. Dufty, Sethna, Schmittmann, Kardar, Goldenfeld DMP: Superconductivity and Magnetism. Klapwijk

GMAG/DMP/FIAP: Diluted Magnetic Semiconductors II. Jamet DMP/GMAG: Manganites, Titanates, and Vanadates. Solovyev GMAG/DMP/FIAP: Magnetization Dynamics and Half Metals. Stoll DCP: Ultrafast Dynamics Using X-Rays and Electrons I. Bucksbaum,

Sokolowski-Tinten DCOMP: General Theory: Density Functional Theory and Beyond. Niu GSNP/DMP: Friction. Salmeron

DPOLY: Phase Transitions in Polymeric Systems I. Han

DCP: Charge Transport in Nanostructures I. Di Ventra, Yacoby

DFD: Fluid Dynamics of Animal Motion. Shelley DAMOP: Novel Phases in Quantum Gases. Reimann

DBP: Nonequilibrium Fluctuations in Biomolecules. Frauenfelder

DBP/GSNP/DPOLY: Cytoskeletal Dynamics and Cell Migration II. Edelstein-Keshet

FIAP: Emerging Research Devices and Materials for the Microelectronics Industry II. Zhirnov

DMP: Optical Properties of Metallic Nanostructures: Theory. Gray

#### midday

DCMP: New Developments in Supersolids. Dorsey, Reppy, Balibar, Huse, Alles DCMP: Nanowire Quantum Devices. Thelander, Kodambaka, Meyer, Vidan, Bleszynski

DCMP: Detection and Applications of NMR and MRI at Microtesla Magnetic Fields. Moessle, Burghoff, Appelt, Espy, Romalis

DPOLY: Dynamics in Polymeric Systems. Ediger, Lodge, Larson, Dutcher,

DCMP: Unusual Transport Phenomena in Chalcogenides. Abrikosov, Husmann,

Parish, Cava, Hu

DBP: Cell Motility. Mahadevan, Ryu, Julicher, Goldstein, Fletcher
FPS: Current Issues in Climate Change. Solomon, Nychka, Randall, Kiehl

GMAG/DMP/FIAP: Magneto-optics and Spin Dynamics. Pacuski GMAG/FIAP: High-Anisotropy Magnetic Nanoparticles and Composite Materials. Chepulskyy

GSNP/DBP: Nonequilibrium Thermodynamics of Small Systems. Ritort DCP: Ultrafast Dynamics Using X-Rays and Electrons II. Chergui, Chen, Anfinrud DMP: Superlattices and Oxides on Silicon. Nakhmanson

GSNP: Jamming II. van Hecke

DPOLY: Phase Transitions in Polymeric Systems II. Wang

DPOLY/DMP: Organic Based Magnetism and Organic Spintronics. Awaga DCP: Charge Transport in Nanostructures II. Samuelson, Schoeller

DMP/DCOMP: Computational Nanoscience VIII: Nanotransport, Contact, and Conduction. Ghosh

DMP: Carbon Nanotubes: Chemistry. Strano

DBP: Nonlinear Dynamics of Neuronal Systems. van Hemmen

GIMS: Instrumentation and Metrology for Fundamental Physics. Schwab

FIAP: Negative Differential Resistance I. Kiehl

#### afternoon

DCMP: Quantum Coherence in Superconducting Devices. Clarke, Oliver, Semba, Il'ichev, Bauch

DBP: Molecular Motors (Biophysical Society Symposium). Johnson, Patel, Smith,

DCMP: Magnetotransport in Organic Conductors and Semiconductors. Bussmann, Lupton, Wohlgenannt, Hu, Bergeson DPOLY/DCOMP: Computational Challenges in Simulations of Macromolecular

Assemblies. Shi, de Pablo, Fraaije, Balazs, Gersappe

FIAP: Crystallography Without Crystals. Ourmazd, Fuoss, Spence, Saldin, Elser GIMS: Keithley Award. Irwin, Kilbourne, Richards, Cabrera, Zink

DCMP: Novel Phenomena in Quantum Fluid Helium-3. Wolf, Kojima, Halperin, Okuda, Fisher

DMP: Superconductivity Theory: Phonons and Other Mechanisms. Kamimura

DMP/GMAG: Thin Films and Superlattices. Yamada

GMAG/DMP: Nanomagnetic Oxides. Ramesh

DCP: Ultrafast Dynamics Using X-Rays and Electrons. Weber, Corkum, Leone DPOLY: Microphysical Properties of Block Copolymer Aggregates: Going Beyond Structure. Spontak

DCP: Charge Transport in Nanostructures III. Rabani, McEuen

DMP: Carbon Nanotubes: Transport and Thin Films. Hong

FIAP: Negative Index Materials: Concepts to Applications II. Shalaev

FIAP: Negative Differential Resistance II. Pati, Sergueev

DMP: Nanoscale Transport: Mostly Quantum Dots. Amasha

# Friday, 9 March

#### morning

DCMP: Magnetic-Field-Driven Quantum Phase Transitions. Rosch, Sebastian, Ruegg, Park, v. Löhneysen

DBP: Understanding DNA and RNA Machines. Visscher, Croquette, Saleh,

DCMP: DNA Organization Within Chromosomes. Bloom, Heermann, Lionnet, Viovy, Poiriei

DCMP: Quantum Order in Chiral Magnets. Pfleiderer, Uchida, Binz, Wilhelm, Belitz

DBP: Elasticity of Biological Membranes: From Physical Principles to Biological Processes. Keller, Huang, Groves, Huber, Zimmerberg

GSNP/DBP: Networks in Genetic Regulation. Tang, Albert, Bassler, Mehta,

DCOMP: Computational Nonequilibrium Many-body Physics: From Classical to Quantum Simulation. Bonitz, Ruhl, Freericks, Schneider, Brandbyge DMP: Novel Superconductors VII: Triplet Pairing and Time Reversal Symmetry

Breaking. Xia
GMAG/DMP/FIAP: Anomalous Hall Effect and Spin Orbit Coupling. Cumings,

Sinitsyn

GMAG/DMP/FIAP: Spin-Polarized Transport. Tsoi

GSNP/DMP: Deformation and Fracture. Bulatov

DCP: Charge Transport in Nanostructures IV. Ratner

GQI/DAMOP: Quantum Information at the AMO/Condensed-Matter Interface. DeMarco

DBP: Nucleic Acid Protein Interaction. von Hippel

FIAP: Negative Index Materials: Concepts to Applications III. Stockman FIAP: Physics and Technology of III-V Semiconductors in IR and THZ Imaging I. Schneider

DMP: Nanoscale Transport: Molecules III. Raikh

#### midday

DCMP: Fractional Quantum Hall Effect: Spin Effects and Broken-Translational-Symmetry States. Muraki, Manfra, Pinczuk, Chen, Fertig

DBP: Collective Motions of Living and Nonliving Self-Propelled Particles. Bertozzi, Grunbaum, Hubler, Showalter, Kapral

DCMP: Exotic Electronic Structures of Complex Materials and Phases. Osterwalder, Miller, Shin, Rotenberg

DPOLY: Assembly and Organization in Polymeric Systems. Pojman, Hudson, Krausch, Eisenberg, Örtiz

GSNP/DCMP: Fluctuating Random Solids and their universal properties. DiDonna, Xing, Frey, Plischke

FIAP: Towards Medium-Temperature Proton Conductors for Fuel-Cell Applications. Angell, Gervasio, Benicewicz, Sayir, Berger

DBP: Nonequilibrium Thermodynamics. Jarzynski, Szabo, Crooks, Seifert, Gottschalk

DMP/GMAG: Charge/Orbital Order in Complex Oxides. Biermann

DMP/GMAG: Magnetic Nanostructures II. Mihajlovic

DPOLY/DCOMP: Multiscale Modeling in Polymeric Materials. Dobrynin

DCP: Charge Transport in Nanostructures V. Lindsay

FIAP: Emerging Research Devices and Materials for the Microelectronics Industry III. Xiong

FIAP: Physics and Technology of III-V Semiconductors in IR and THz Imaging II.