

APS March Meeting 2005

March 21-25, 2005

Los Angeles Convention Center

Los Angeles, California

General Information

Welcome to the Annual March Meeting of the American Physical Society. All scientific sessions will be held at the Los Angeles Convention Center. APS affiliated meetings and satellite meetings will be held at the Westin Bonaventure Hotel, headquarters hotel for the meeting. Consult the schedule of APS affiliated and satellite meeting schedules in this Bulletin for locations.

An outstanding scientific program has been planned by the March Meeting Program Committee. The five-day program consists of approximately 6,000 papers to be presented in invited, contributed, focus and poster sessions. A larger, enhanced exhibit show will complement the scientific program. Attendees are encouraged to visit with exhibitors who will be displaying the latest products, instruments and equipment, computer software, as well as science publications related to the research and application of physics.

Participating APS Units

Divisions: Condensed Matter Physics (DCMP); Materials Physics (DMP); Polymer Physics (DPOLY); Chemical Physics (DCP); Biological Physics (DBP); Fluid Dynamics (DFD); Computational Physics (DCOMP); Atomic, Molecular and Optical Physics (DAMOP).

Topical Groups: Instrument and Measurement Science (GIMS), Magnetism and Its Applications (GMAG), Quantum Information (GQI) and Statistical and Nonlinear Physics (GSNP).

Forums: Industrial and Applied Physics (FIAP); Physics and Society (FPS); History of Physics (FHP); International Physics (FIP); Education (FEEd); Graduate Student Affairs (FGSA).

Registration Location/Hours

West Lobby

Los Angeles Convention Center (LACC)

The APS Registration Desk will open and close at the following times.

Sunday, March 20 • 3:00pm - 7:30pm

Monday, March 21 • 7:00am - 4:30pm

Tuesday, March 22 • 7:00am - 3:30pm

Wednesday, March 23 • 7:30am - 2:30pm

Thursday, March 24 • 7:30am - 2:30pm

Friday, March 25 • 7:30am - 10:00am

Badge Monitoring

All attendees must register for the meeting. Attendees must wear their badges at all times. Security personnel will be checking for badges before allowing admission to the sessions. Attendees without badges will not be admitted to sessions or exhibits. If you have lost your badge, please go to the APS registration desk for a new one. We will give you one replacement badge free. After that replacement badges will cost \$10.00.

APS Job Fair

Exhibit Hall A (back of hall)

Monday, March 21 • 10:00am - 5:00pm

Tuesday, March 22 • 10:00am - 5:00pm

Wednesday, March 23 • 10:00am - 4:00pm

A beneficial feature of the meeting is the APS Job Fair. The purpose of the Fair is to facilitate communication between employers and job seekers.

Service to Employers

Job Fair registration includes posting positions, accessing resumes, with space provided for interviewing prospective candidates. Employment Recruiting Booths will also be available. If you are unable to attend, you may post jobs at the Fair.

Interested candidates will contact you directly. There is a modest fee for employer services.

Service to Job Seekers

The Job Fair is free of charge to candidates seeking employment. Your registration will allow you to post your resume, give you access to job listings, as well as the opportunity to talk informally with prospective employers in their employment booths. We will schedule interviews for you with prospective employers. Please bring at least 25 copies of your 1-3 page résumé. Attendees must register on-site.

Contact Congress

Monday - Thursday

9:00am - 6:00pm

Sponsored by DCMP and DMP

West Lobby, LACC

Worried about the slashing of NSF, DoE and NASA funding? Concerned about the dearth of science literacy in our high-schoolers? Anxious about where the country's security is heading? YOU can have an impact on national science policy! Come write your representatives in Congress to let them know how you feel about science issues of interest to you. The most important letters that a Member of Congress receives are the ones from his or her constituents—you elect them, and you matter.

The American Physical Society feels that it is incumbent on all of us to interact with the government, to offer technical assistance where we can, and to remind our Members of Congress that scientists have much to offer the country, in areas of basic science R&D funding, education, and energy policy. We have set up computers in the entrance area where you can send a letter to your Senators and Representatives—you can use our template or write your own letter on issues that matter to you.

APS Souvenir Store

West Lobby/LACC

Monday - Wednesday • **9:30am-5:00pm**

Thursday • **9:30am-1:00pm**

Come browse our T-shirts, bumper stickers, World Year of Physics items and more.

APS Exhibit Show/APS Lounge

Exhibit Hall A/LACC

Monday, March 21 • **10:00am - 5:00pm**

Tuesday, March 22 • **10:00am - 5:00pm**

Wednesday, March 23 • **10:00am - 4:00pm**

The exhibit show days are Monday through Wednesday. The exhibits are an important adjunct to the meeting, offering information on a wide variety of physics-related products and services. In addition, book and periodical publishers will be participating as exhibitors. The poster sessions and food concessions will be located in the exhibit hall, as will the E-mail Pavilion. A wine and cheese reception will be held in the exhibit hall on Monday and Tuesday from 4:00pm-5:00pm. Plan to stop by to visit the exhibits, view the posters, and enjoy the refreshments.

NOTE: *You must wear your badge to be admitted to the exhibit hall.*

APS Membership Booth

The APS Membership Booth is located near APS Registration in the West Lobby. Membership Department staff will be on hand to answer questions about APS Membership and journal subscriptions.

Wireless Connection at the Convention Center

The Los Angeles Convention Center has wireless internet connection available. Those wishing to use wireless connection to the internet can purchase what is called *WIFI on Demand* while in the building. When you double click on their internet browser you will get an internet splash page. Click "new user" and you will be prompted to indicate which type of service you would like to purchase either by the hour, day or event and pay by credit card.

E-mail Service

E-mail service will be available on Monday, Tuesday, and Wednesday in the Exhibit Hall during exhibit hours only. E-mail will be available on Thursday in the West Lobby. E-mail stations will be available for your use in the exhibit hall during the following hours:

Monday, March 21 • **10:00am - 5:00pm**

Tuesday, March 22 • **10:00am - 5:00pm**

E-mail Service continued

Wednesday, March 23 • 10:00am - 4:00pm
 Thursday, March 24 • 7:00am - 6:00pm
 (in West Lobby)
 Friday, March 25 • 7:00am - 1:00pm

Please be advised that e-mail access is provided as a service to attendees, and that we cannot provide unlimited access to e-mail stations, both in terms of the number of stations provided and the length of time they are available.

Speaker-Ready Room

Room 509ABC/LACC

The speaker-ready room will be open as follows:

Sunday, March 20 • 3:00pm-7:30pm
 Monday, March 21 • 7:00am-5:00pm
 Tuesday, March 22 • 7:00am-5:00pm
 Wednesday, March 23 • 7:00am-5:00pm
 Thursday, March 24 • 7:00am-5:00pm
 Friday, March 25 • 7:00am-12:00noon

Press Room

Press Room: Room 508BC/LACC

Monday through Wednesday • 8am-5:00pm
 Thursday • 8:00am-12:00noon

Phone: 213-743-6200

Fax: 213-743-6204

Press Conference Room

Room 508A

A schedule of news conferences can be obtained from the Press Room (Room 508BC)

City Information Desk

The Los Angeles Convention and Visitors Bureau will host an information desk in the West Lobby of the LACC, Sunday, March 20 through Tuesday, March 22. Stop by to inquire about restaurants in the city and sightseeing.

Business Office/LACC

The LACC business office is located off the West Lobby across from Exhibit Hall B. The business office offers a full range of services and is open Monday through Friday, 8:00am – 5:00pm.

Hotel List—March Meeting

Westin Bonaventure (HQ)

—*Bussing to convention center*

404 South Figueroa Street

\$167 Single/\$187 Double/\$212 Triple

All satellite meetings, reunions, and special evening sessions will be held at the Westin; wireless access in the lobby.

Wilshire Grand Hotel

—*Bussing to convention center*

930 Wilshire Blvd

\$158 Single/Double /\$184Triple/ \$209 Quad

Award-winning hotel; complementary high-speed wireless internet access throughout the hotel

Hyatt Hotel

—*Bussing to convention center*

711 South Hope Street

\$165 Single/ \$185Double/ \$200Triple/ \$215Quad

Free wireless in the hotel lobby. Wireless cards on loan at the front desk with a refundable \$125 deposit.

Holiday Inn

—*Walking distance*

1020 South Figueroa Street

\$127 Single/Double/ \$127 Triple/ \$127 Quad

Hotel Figueroa

—*Walking distance*

939 South Figueroa

\$120 Single/Double

PRE-MEETING PROGRAMS

DPOLY Short Course: Charged Polymers

(no on-site registration—you must be pre-registered to attend this course)

Saturday, March 19 • **8:00am-5:00pm**
 Sunday, March 20 • **8:00am-5:00pm**
 Room 410/LACC

Tutorials

(no on-site registration—you must be pre-registered to attend a tutorial)

Sunday, March 20
 LACC

Morning Tutorials #1-4
8:30am-12:30pm

T1: Acoustics and the Perception and Reproduction of Music (Room 405)
 T2: Biophysics of Sensing and Learning (Room 404A)
 T3: Spintronics (Room 408A)
 T4: Computational Nanoscience (Room 407)

Afternoon Tutorials #5-8
1:30pm-5:30pm

T5: Jamming in Soft-condensed Matter (Room 405)
 T6: Opportunities in Biological Physics: Computational Analysis; Methods at the Boundaries (Room 404A)
 T7: Molecular Magnets (Room 407)
 T8: Understanding Electronic Transport in Carbon Nanotube Devices (Room 406B)

Workshop on Introductory Physics Teaching (Free)

Sunday, March 20
8:30am-12:30pm
 Room 409B/LACC

Come to a free workshop to learn about two new approaches to the calculus-based introductory physics course that emphasize contemporary physics. “Six Ideas that Shaped Physics” by Thomas Moore (McGraw-Hill, 2003; www.physics.pomona.edu/sixideas), and “Matter & Interactions,

by Ruth Chabay and Bruce Sherwood (Wiley 2002; www4.ncsu.edu/~rwchabay/mi) involve introductory-level engineering and science students in serious quantitative engagement with topics of genuine interest to research physicists and central to current developments in science and technology, such as condensed matter, nanoscience, astrophysics, and nuclear physics. Both curricula share a focus on physical model-building and take innovative approaches to helping students effectively apply their knowledge in realistic situations. If you (and your students) are bored with inclined planes and series resistance formulas, join us! No registration required.

Professional Skills Development for Women Physicists

Sunday, March 20
8:30am-5:00pm

Room: Santa Barbara/Westin
 Breakouts in Los Feliz and Los Cerritos
 Reception following the workshop:
 5:00pm-6:30pm

This one-day workshop will offer training on persuasive negotiation and communication skills for tenured women physicists. The workshop will be led by professional facilitators using an interactive format that encourages highly personal learning. Lunch will be provided and a reception for participants will follow the workshop. Must pre-register/registration is closed.

Special Plenary Session of the International Conference on Computational Physics

(CCP2005)

Sunday, March 20
9:00am - 8:30pm

Session Room: San Francisco/Westin
 Reception Room: Sacramento/Westin

The Division of Computational Physics of the APS is hosting this year's International Conference in Computational Physics in conjunction with the March Meeting of the American Physical Society.

PRE-MEETING PROGRAMS

CCP2005 Program—continued

The Sunday before the March meeting, March 20, there will be a special plenary session at the Westin Hotel. Any person pre-registered for the March meeting will be eligible to attend the special Sunday program free of charge. You must be pre-registered for the March Meeting to gain complimentary admission to the Sunday CCP program. *When pre-registering for the March Meeting check the box on the form for CCP2005.*

DCOMP will have March Meeting Bulletins available on Sunday before the plenary session begins, and badges for those who have pre-registered for the March Meeting.

For those wishing to attend only the Sunday plenary session (and not the March Meeting), there will be charge of \$190 registration fee, payable on-site at the door.

CCP2005 Sunday Program

The speakers have been chosen for their important contributions to computational physics or their broad perspective on the impact computational physics is having on research in physics in recent years.

9:00am - 9:45am

Uzi Landman: *Computations as Tools for Discovery: Physics and Chemistry in the Non-scalable and Emergent Regime*

9:45 am - 10:30 am

Philip Burke: *R-matrix Theory: Application to Atomic, Molecular and Optical Processes*

10:30 am - 11:00 am *Coffee Break*

11:00 am - 11:45 am

Michael Klein: *Coarse Grain Models for the Simulation of Soft Matter and Biomaterials*

11:45 am - 12:30 pm

David Vanderbilt: *Polarization, Electric Fields, and Dielectric Response in Insulators*

12:30 pm - 2:15 pm *Lunch*

2:15 pm - 3:00 pm

Marvin Cohen: *Conceptual and Computational Progress in Modeling Materials*

3:45 pm - 4:15 pm

Coffee Break

4:15 pm - 5:00 pm

Jeremiah Ostriker: *Topic to be announced*

5:00 pm - 7:00 pm

Dinner Break

7:00 pm - 7:45 pm

Leo Kadanoff: *Effective Scientific Simulations*

7:45 pm - 8:30 pm

Robert Laughlin: *The Physical Basis of Computability*

8:30 pm - 10:00 pm

Wine and Cheese Reception

New Faculty Workshop/Reunion

Sunday, March 20

Workshop: **10:00am - 5:45pm**

Santa Barbara C/Westin

Breakout in San Bernardino

Reception in Palos Verdes/Westin

Workshop/reunion for alumni of APS/AAPT/AAS New Faculty Workshops. Reception for participants immediately following.

Spinning Science for the Public: How to Write for the Critical Masses

Sunday, March 20

2:30pm - 4:00pm

Room 409A/LACC

Speakers:

Curt Suplee

Director, Office of Legislative and Public Affairs, National Science Foundation Former Science Editor, The Washington Post.

Francis Slakey

Associate Director of Public Affairs, APS Professor of Physics and Biology, Georgetown University.

Two pros will lead you through the thicket of journalistic writing, showing what works and what doesn't for science and public policy. Your guides will use case studies to illustrate their points. Come with your laptop—this will be an interactive session. The physics community needs your help in getting physics to the public, but space is very limited.

PRE-MEETING PROGRAMS

Career Workshop

Sunday, March 20

3:00pm-7:00pm

Room 153ABC, LACC

The APS will offer a career workshop free of charge to all APS attendees. The purpose of the workshop is to provide information on career choices in physics. Topics such as: How to Prepare an Effective Resume; Interviewing Skills; Networking; Job Search Skills; Clarifying Expectations; Diverse Options, and more will be covered at the workshop. Each workshop participant will receive a package of career development materials. No presign-up for the workshop is required.

APS MEETINGS/EVENTS

(In Chronological Order)

Awards Program

Monday, March 21
5:45pm-6:30pm
 Room 411/LACC

Prizes and awards will be bestowed on individuals for outstanding contributions to physics. Please plan on attending the Awards Program and join us in honoring these individuals. See page 17 for a list of award and prize winners. The Awards Program will be followed by the Welcome Reception at 6:30pm.

Welcome Reception

Monday, March 21
6:30pm-7:45 pm
 Petree D, LACC

All attendees are welcome to attend the reception following the Awards Program

Special Symposium

Paradigm Shifts: Breakthroughs and Advances that Shaped our Field

Session G1

Monday, March 21
8:00pm-10:00pm
 Room 152/LACC

The talks in this session will be aimed at highlighting some of the most important developments that gave rise to recent paradigm shifts in several different fields of physics. The areas to be covered include biophysics, astrophysics, particle physics, and condensed matter physics. The session will also highlight the World Year of Physics in that each topic chosen can trace some of its most important developments to the work of Einstein one century ago.

Wine and Cheese Reception

Monday and Tuesday • 4:00pm-5:00pm
 Exhibit Hall A/LACC

APS Journal Editors Panel Discussion

Session L44

Tuesday, March 22
2:30pm-3:30pm
 Room 518/LACC

All are invited to a panel discussion with the Editors of the American Physical Society journals. The panel will include Editors from *Physical Review Letters*, *Physical Review B*, and *Physical Review E*. They will briefly discuss some current issues facing the journals such as how to express appreciation for good refereeing, possible inclusion of popular abstracts in *PRL* to make Letters accessible to physicists in all fields, the challenge posed by open access, etc. The Editors look forward to hearing opinions on these and other issues. They will also respond to questions and comments.

The Panel Discussion will be followed by the Meet the Editors Reception.

Meet the Journal Editors of AIP and APS

Tuesday, March 22
3:30pm-5:30pm
 Concourse Foyer/LACC

The editors of the AIP and APS journals cordially invite you to join them for conversation and refreshments immediately following the Editors' Panel Discussion. Your questions, criticisms, compliments, and suggestions about the journals are welcome. We hope you will be able to join us.

Journals of the American Institute of Physics:

- *Applied Physics Letters*
- *Chaos*
- *Journal of Applied Physics*
- *The Journal of Chemical Physics*
- *Review of Scientific Instruments*

APS MEETINGS/EVENTS

(In Chronological Order)

Journals of The American Physical Society:

- *Physical Review B*
- *Physical Review E*
- *Physical Review Focus*
- *Physical Review Letters*

Session on Refereeing

Wednesday, March 23

10:00am-11:30am

Room 518/LACC

Editors from *Physical Review Letters* and the *Physical Review* will provide useful information and tips for referees. Following short presentations from the editors, there will be a moderated discussion where questions relevant to refereeing will be addressed. *Refreshments will be served.*

PUBLIC LECTURE:

The Nature of Discovery in Physics

Tuesday, March 22

7:30am-9:30am

Catalina Room/Westin

SPEAKER:

Douglas D. Osherhoff
Stanford University

SPECIAL SYMPOSIUM:

Einstein and Condensed Matter Physics

Session T1

Wednesday, March 23

7:30pm-9:00pm

San Francisco Room/Westin

Einstein made many contributions that have profoundly affected condensed matter physics. This session will highlight the effects of Einstein's work on 21st century research. Speakers will include Alex Zettl, UC Berkeley, Moses Chan, Penn State, and Zhi-Xun Shen, Stanford.

Physics and Sustainable Development

Sponsored by APS and the Forum on International Physics

Session P3

Wednesday, March 23

11:15am-2:15 pm

Room 515B/LACC

As part of the celebration of the World Year of Physics, the World Conference on Physics and Sustainable Development will be held in Durban, South Africa, 31 October-2 November 2005.

Participants from developed and developing nations will join together to formulate action-oriented plans for the contributions that physics and physicists can make to society.

This session will begin a discussion of the topics that will be further developed at the World Conference.

APS EVENTS FOR SPECIAL GROUPS

(In Chronological Order)

Monday, March 21

Companions Breakfast

8:00am-9:30am

San Fernando/Westin

Companions of the attendees of the March Meeting are invited to a complimentary breakfast to meet other companions and learn about the city of Los Angeles. Presentations will be made by a representative of the Los Angeles Convention and Visitors Bureau. At the breakfast you will receive information about the sites and attractions in the city.

Tuesday, March 22

CSWP/FIAP Networking Breakfast

7:30am-9:30am

San Fernando Room/Westin

Cost: \$20

Speaker:

Laura Smolier, Lightwave Electronics

CSWP and FIAP will co-sponsor a networking breakfast. This is a wonderful opportunity to hear an inspiring woman speaker and network with colleagues.

All are welcome, both men and women. Cost: \$20 (complimentary registration for physics students). Students are especially encouraged to attend. Pre-registration strongly advised as there is limited space for walk-ins. Details <http://www.aps.org/educ/cswp/index.cfm>

High School Physics Teachers Day

8:30 am to 3:45 pm

Beaudry B/Westin

In conjunction with the 2005 March Meeting, the APS Department of Education & Outreach is sponsoring a High School Physics Teachers' Day for teachers in the LA region.

For more information contact Ed Lee: lee@aps.org.

The day's program includes:

- Hands-on workshops presenting innovative, classroom-ready activities
- Research talks on cutting-edge physics

Tuesday, March 22

- A welcoming breakfast, and a chance to network with fellow teachers
- Lunch with a physicist

Student Social Hour

5:30pm-6:30pm

Petree C/LACC

All students are welcome. Plan to attend and socialize with your fellow students and enjoy the refreshments. The Forum on Graduate Student Affairs (FGSA) will present a short program.

FIP Reception

6:00pm-8:00pm

Los Feliz/Westin

DCMP/DMP/DCOMP Fellows & Awards Reception

5:30pm-7:00pm

Hollywood Room/Westin

Wednesday, March 23

Students Lunch with the Experts

1:00pm-2:30pm

Petree C/LACC

See page 15 for sign-up instructions and list of topics.

Estate Planning for Physicists: The Dangers of Tax Laws and Opportunities for Creative Arrangements

1:00pm-2:00pm

Room 518/LACC

Presenter:

Reynolds T. Cafferata,

Partner, Brigham McCutchen LLP. Los Angeles, CA

CSWP/COM Reception

6:00pm - 7:30pm

Santa Anita/Westin

SATELLITE MEETINGS

(ancillary events sponsored by non-APS groups)

Sunday, March 20

IOP Board Meeting

5:00pm-7:00pm
Palos Verdes, Westin

Socialize With Science

Sponsored by Oxford Instruments

7:00pm-10:00pm
San Gabriel/Westin

Monday, March 21

Oxford Sales Meeting

8:00am-9:30am
Los Cerritos/Westin

Chaos Editorial Board Meeting

12:00n-2:00pm
La Brea/Westin

ES2005 Meeting

Recent Developments in Electronic Structure Methods

Sponsored by Cornell University

8:00pm-10:00pm
Los Feliz, Westin

Tuesday, March 22

Alumni Reunions

6:00pm-8:00pm
Westin Hotel

- Berkeley Physics (*Santa Barbara A*)
- Brown University (*La Cienega*)
- University of Illinois (*Santa Anita AB*)
- Cornell University (*Beaudry A*)
- IBM (*San Bernardino*)
- Michigan State (*Santa Barbara B*)
- Purdue University (*San Gabriel A*)
- State of Florida University (*San Diego*)

Tuesday, March 22

Research Corporation Reception

5:00pm-7:00pm
San Pedro/Westin

Journal of Statistical Mechanics Meeting

5:30pm-7:30pm
San Fernando/Westin

IOP Publishing Reception

6:00pm-7:30pm
San Fernando/Westin

Veeco Users Group

6:30pm-9:30pm
San Pedro/Westin

Wednesday, March 23

RSI Editorial Meeting

12:00n-2:00pm
Palos Verdes/Westin

Funding Opportunities in NSF's Division of Materials Research

5:00pm-7:00pm
Room 511A/LACC

CMSN Meeting

Predictive Capabilities for Strongly Correlated Materials Coordinating Committee

7:00pm-10:00pm
Santa Anita A/Westin

APS UNIT BUSINESS MEETINGS

Tuesday, March 22 - 5:30pm - 6:30pm

DPOLY Business Meeting
Room 408A/LACC
FIAP Business Meeting
Room 405/LACC
DCP Business Meeting
511A/LACC
GIMS Business Meeting
518/LACC
GSNP Business Meeting
Room 502B/LACC
GMAG Business Meeting
Room 153B/LACC

Tuesday, March 22 - 6:00pm - 7:00pm

DBP Business Meeting
Room 409A/LACC

Tuesday, March 22 - 6:30pm - 7:30pm

DCMP Business Meeting
Los Cerritos/Westin

DMP Business Meeting
La Brea/Westin

Wednesday, March 23 - 5:30pm - 7:00pm

DCOMP Business Meeting
Palos Verdes/Westin

STUDENT LUNCH WITH THE EXPERTS TOPICS

Students Lunch with the Experts

Wednesday, March 23
1:00pm–2:30pm
Petree C/LACC

Students can sign up on-site to enjoy a complimentary box-lunch while participating in an informal discussion with an expert on a topic of interest to them. Topics are listed below. Sign-up will take place beginning on Monday, March 21 at 1:00pm at the APS registration desk, and will be on a first-come, first-served basis. Attendance is limited to eight students per topic/expert. You must show your ticket and badge at the door, and sit at the table for which you have a ticket.

1. **Jerry Gollub**
Faculty Appointments and Research at Liberal Arts Colleges • **DFD**
2. **Mark Stiles**
Spintronics with Metals • **GMAG**
3. **Norm Birge**
Mesoscopic Physics • **GMAG**
4. **Robijn Bruinsma**
Self-assembly in Biological Physics • **DCMP**
5. **Michael Dennin**
Physics and Biology: Surviving in the World of Interdisciplinary Research • **DCMP**
6. **Art Epstein**
Physics of Organic Magnetic and Electronic Materials • **DCMP**
7. **Laura Greene**
Unconventional Superconductors • **DCMP**
8. **Art Hebard**
Thin Films and Planar Interfaces: A Playground for Two-dimensional Physics • **DCMP**

continue on next page

STUDENT LUNCH WITH THE EXPERTS TOPICS

9. Randall Kamien

Soft Matter Theory: Geometry and Self Assembly
• **DCMP**

10. Alessandra Lanzara

Strange Electrons in Correlated Systems • **DCMP**

11. Ka Yee Lee

Soft Matter at Interfaces - Biopolymers and Surfactants • **DCMP**

12. Kathryn Levin

Cold Fermi Gases • **DCMP**

13. Ricardo Lobo

Strongly Correlated Electrons from the Microwaves to the Ultraviolet: The Action is Everywhere • **DCMP**

14. Charles Marcus

Mesoscopic Physics and Quantum Information
• **DCMP**

15. Dennis M. Newns

Interacting Electrons and Model Hamiltonians
• **DCMP**

16. Richard Haglund

Femtosecond Optics in Nanoscale Solids • **DMP**

17. George Samara

Ferroelectrics and Dielectrics • **DMP**

18. Jeffrey Lynn

Properties of Colossal Magnetoresistive Oxides and Multiferroics • **DMP**

19. Robert Dynes

Industry, Academia, Administration • **FGSA**

20. Thomas A. Maier

Quantum Many-body Theory for Strongly Correlated Electron Systems, High Temperature Superconductivity, and High Performance Computing • **DCOMP**

21. Bob Eisenberg

Biophysics of Channel Proteins • **DBP**

22. Raymond Goldstein

Biological Fluid Dynamics • **DBP**

23. Ned Wingreen

Modeling Intracellular Networks in Bacteria • **DBP**

APS PRIZES AND AWARDS

Prizes and awards will be presented on **Monday, March 21 at 5:45pm. Room 411.**



David Adler Lectureship Award

Ramamoorthy Ramesh
University of California, Berkeley
Session B3

"For his contributions to materials physics that have enabled a deeper understanding of ferroelectric materials, the discovery of colossal magnetoresistance, and leadership in communicating the excitement of materials physics to a broad audience."



2004 Apker Award (Non Ph.D)

Nathan Hodas
Williams College
Session P1

"Asymmetry in RNA Pseudoknots."



Edward A. Bouchet Award

Godfrey Gumbs
Hunter College, CUNY
Session P1

"For pioneering contributions to our understanding of low-dimensional heterostructures; and for leadership in recruitment, retention, and mentoring of under-represented minority students."



Herbert P. Broida Prize

Hanna Reisler
University of Southern California
Session H3

"For theoretical insights and carefully executed experiments on the detailed dynamics of small molecules."



Oliver E. Buckley Prize

Gabriel Aeppli
University College, London
David Awschalom
University of California, Santa Barbara
Myriam Sarachik
City College of New York
Session P1

"For fundamental contributions to experimental studies of quantum spin dynamics and spin coherence in condensed matter systems."



Davisson-Germer Prize

Ernst C. Bauer
Arizona State University
Session B3

"For contributions to the science of thin-film nucleation and growth, and for the invention of the Low Energy Electron Microscope."



Dannie Heineman Prize

Giorgio Parisi
University of Rome, La Sapienza
Session H3

"For fundamental theoretical discoveries in broad areas of elementary particle physics, quantum field theory, and statistical mechanics; especially for work on spin glasses and disordered systems."

APS PRIZES AND AWARDS



Keithley Award

E. Dwight Adams
University of Florida
Session M4

"For the pioneering development of the capacitive pressure transducer, its application to the ^3He melting pressure thermometry, and other scientific uses."



James C. McGroddy Prize

Yoshinori Tokura
University of Tokyo
Session B3

"For pioneering work in the synthesis and characterization of transition metal oxides having unusual charge and spin order."



Irving Langmuir Prize

David Chandler
University of California, Berkeley
Session P34

"For the creation of widely used analytical methods and simulation techniques in statistical mechanics, with applications to

theories of liquids, chemical kinetics, quantum processes, and reaction paths in complex systems."



2004 Nicholson Medal

Joel Lebowitz
Rutgers University
Session H6

"For his tireless personal activism, throughout his superb career as a theoretical physicist, to help scientists and defend their human rights in

countries around the globe."



Maria Goeppert-Mayer Award

Yuri Suzuki
University of California, Berkeley
Session B3

"For her research in epitaxial oxide thin films, nanostructures and devices with tailored mag-

netic, electronic and optical properties."



Lars Onsager Prize

Valery Pokrovsky
Texas A&M University
Session H3

"For fundamental and original contributions to statistical physics, including development of the scaling theory for correlation functions near critical points

and of theories for commensurate-incommensurate phase transitions."



Nicholas Metropolis Award

Harald P. Pfeiffer
California Institute of Technology
Session P9

"For his outstanding research on determining initial data for the dynamics of black holes."



George E. Pake Prize

Cherry Murray
Bell Labs - Lucent Technologies
Session H3

"For fundamental studies in surface and scattering physics, and for leadership as Senior Vice President of Lucent Technologies overseeing Bell Laboratories at an

important time in its history."

APS PRIZES AND AWARDS



Earl K. Plyler Prize

Robert Tycko
National Institutes of Health
Session H35

"For the development of novel techniques in NMR spectroscopy and their application to a wide range of fundamental problems including work on Berry's phase,

fullerenes, quantum wells, and amyloid fibrils."



George E. Valley Prize

Ivo Souza
University of California,
Berkeley
Session B3

"For fundamental advances in the theory of polarization, localization and electric fields in crystalline insulators."



Polymer Prize

Thomas P. Russell
University of Massachusetts
Session H2

"For his pioneering research and fundamental elucidation of the surface and interfacial behavior of polymers."



John Wheatley Award

Steven Manson
Georgia State University
Session P3

"For building collaborations with scientists in Uzbekistan, India and Turkey; and for promoting research groups and supporting students in these countries."

I. I. Rabi Prize

Deborah Jin

"For her pioneering work in the production of degenerate Fermi gases and exploitation of their novel physical properties."



John H. Dillon Metal

Jan Genzer
North Carolina State
University
Session L40

"For his highly creative manipulation of surface properties via monolayer and macromolecular films"

Aneesur Rahman Prize

Uzi Landman

Georgia Institute of Technology
Session H3

"For pioneering computations that have generated unique insights into the physics of materials at the nanometer length scale, thereby fostering new theoretical and experimental research."

FOCUS SESSIONS

DAMOP:

Session P36: BCS-BEC Physics in Fermi Gases

DAMOP/DCMP (Joint Sponsorship):

Session A36: Novel States of Matter in Atomic Gases

DAMOP/DCOMP/DMP (Joint Sponsorship):

Session A25: Computational Nanoscience I

Session B25: Computational Nanoscience II

DAMOP/DCOMP/GQI (Joint Sponsorship):

Session S33: Pathway to Practical Quantum Computing

DBP:

Session A21: Dynamics of Transcription

Session B22: Fluctuations and Fluctuation Analysis in Biological Systems

Session D22: Protein Folding

Session L21: Intracellular Calcium Dynamics in Myocytes

Session N21: Single Molecule Nanobiology

DBP/DFD/GSNP (Joint Sponsorship):

Session A23: Biological Hydrodynamics I

Session P23: Biological Hydrodynamics II

DBP/GSNP (Joint Sponsorship):

Session H23: Brownian Motion and Stochastic Dynamics in the 100 Years Since Einstein

Session N23: Methods of Statistical Physics in Population Dynamics and Epidemiology

Session W22: Microtubules and Molecular Motors

DCMP/DAMOP (Joint Sponsorship):

Session A36: Novel States of Matter in Atomic Gases

DCMP/DCOMP (Joint Sponsorship):

Session B32: Superconductivity: Theory and Computation I

Session J32: Superconductivity: Theory and Computation (Mostly Triplet)

Session L32: Superconductivity: Superconductivity (Mostly Electron-Phonon)

Session N32: Superconductivity: Theory and Computations

Session S12: Superconductivity: Theory and Computation II

Session V32: Superconductivity: Theory and Computation III

Session W32: High Tc Cuprates: Theory and Computation

DCMP/DMP (Joint Sponsorship):

Session A40: Morphology and Evolution at Surfaces: Structure and Organics

Session B17: Materials and Device Physics for Quantum Computing I

Session D40: Morphology and Evolution at Surfaces: Epitaxy

Session H40: Morphology and Evolution at Surfaces: Persistence and Islands

Session J17: Materials and Device Physics for Quantum Computing

Session N40: Morphology and Evolution at Surfaces: Ion Beams and Instabilities

Session P17: Materials and Device Physics for Quantum Computing II

Session P25: Novel and Complex Oxides: Multiferroic and Other

Session S40: Morphology and Evolution at Surfaces: Wires and Self-Assembly

Session V40: Morphology and Evolution at Surfaces: Phase-field and Ge/Si

Session W40: Morphology and Evolution at Surfaces: Instabilities and Patterned Substrates

Session X40: Morphology and Evolution at Surfaces: Defects and Transport

DCMP/DMP/FIAP (Joint Sponsorship):

Session H15: Dilute Nitride Semiconductors: From Atoms to Devices I

Session L15: Dilute Nitride Semiconductors: From Atoms to Devices II

DCMP/GSNP/DFD (Joint Sponsorship):

Session N36: Granular Liquids and Gases II

DCOMP:

Session A32: Novel Computational Algorithms: From Materials to the Universe I

FOCUS SESSIONS

DCOMP/DAMOP/GQI (Joint Sponsorship):

Session S33: Pathway to Practical Quantum Computing

DCOMP/DCMP (Joint Sponsorship):

Session B32: Superconductivity: Theory and Computation I

Session J32: Superconductivity: Theory and Computation (Mostly Triplet)

Session L32: Superconductivity: Superconductivity (Mostly Electron-Phonon)

Session N32: Superconductivity: Theory and Computations

Session S12: Superconductivity: Theory and Computation II

Session V32: Superconductivity: Theory and Computation III

Session W32: High T_c Cuprates: Theory and Computation

DCOMP/DMP/DAMOP (Joint Sponsorship):

Session A25: Computational Nanoscience I

Session B25: Computational Nanoscience II

DCOMP/DMP/GMAG (Joint Sponsorship):

Session D9: Theory of Magnetic Semiconductors

Session H9: Low Dimensional Magnetism

Session J9: Spin Transport/Magnetism Theory

Session L9: Exchange Interactions and Magnetization

DCOMP/DMP/GSCCM (Joint Sponsorship):

Session D11: Simulations of Matter at Extreme Conditions I

Session H11: Simulations of Matter at Extreme Conditions II

DCP/DMP (Joint Sponsorship):

Session B40: Transport Properties of Nanostructures I: Contacts

Session D17: Transport Through Molecules: Scanned Probe Methods

Session D20: Transport Properties of Nanostructures II: Molecules & Surfaces

Session H17: Transport Through Molecules: Single Molecule Junctions

Session J40: Transport Properties of Nanostructures III: Semiconductors & Surfaces

Session P40: Transport Properties of Nanostructures IV: Wires

Session S16: Molecular Materials: Electronic Transport and Growth

Session U40: Transport Properties of Nanostructures V: Molecules

DCP/FIAP (Joint Sponsorship):

Session A14: Molecular-Scale Electronics and Sensors I

Session B14: Molecular-Scale Electronics and Sensors II

DFD:

Session N37: Microfluidic Physics II: Electrokinetics

Session P37: Microfluidic Physics III: Surface Effects and Flows

Session V37: Microfluidic Physics IV: Particles, Drops, and Mixing

DFD/GSNP (Joint Sponsorship):

Session L36: Granular Gases and Liquids I

DFD/DBP/GSNP (Joint Sponsorship):

Session A23: Biological Hydrodynamics I

Session P23: Biological Hydrodynamics II

DFD/GSNP/DCMP (Joint Sponsorship):

Session N36: Granular Liquids and Gases II

DMP:

Session A16: Nano-optical Plasmonics

Session A26: Nanotubes and Nanowires: Carbon Nanotube Transistors

Session A27: Carbon Nanotubes: Optical Properties I

Session B26: Nanotubes and Nanowires: Synthesis and Properties of Nanowires

Session B27: Carbon Nanotubes: Optical Properties II

Session D26: Nanotubes and Nanowires: Electronic Properties

Session D27: Carbon Nanotubes: Raman Spectroscopy

FOCUS SESSIONS

Session H16: Tip-enhanced Nano-optics and Spectroscopy of Quantum Dots

Session H20: Properties of Complex Oxides and Interfaces I

Session H25: Novel and Complex Oxides: Na_xCoO₂ Experiment and Theory

Session H26: Nanotubes and Nanowires: Theoretical Studies

Session H27: Carbon Nanotubes: Electronic Properties I

Session H28: Metallic Glasses and Liquids I

Session J16: Nano-spectroscopy of Quantum Dots

Session J18: Wide Band Gap Semiconductors I

Session J25: Novel and Complex Oxides: Ruthenates and Osmiumates

Session J27: Carbon Nanotubes: Electronic Properties II

Session J28: Metallic Glasses and Liquids II

Session L18: Wide Band Gap Semiconductors II

Session L27: Carbon Nanotubes: Devices

Session L39: Intrinsic Inhomogeneity in Multiferroic Materials

Session N16: Optical Properties of Subwavelength Apertures and Nanoparticle Arrays

Session N18: Wide Band Gap Semiconductors III

Session N25: Novel and Complex Oxides: Cobaltites and Manganites

Session N27: Carbon Nanotubes: Functionalization I

Session N28: Mechanical Properties of Metals

Session P16: Optical Resonances and Techniques in Nano-Optics

Session P27: Carbon Nanotubes: Functionalization II

Session S18: Wide Band Gap Semiconductors IV

Session S27: Carbon Nanotubes: Theory

Session U18: Wide Band Gap Semiconductors V

Session U27: Carbon Nanotubes: Growth

Session W27: Carbon Nanotubes: Growth and Manipulation

Session X27: Carbon Nanotubes: Mechanical Properties

Session Y27: Carbon Nanotubes: Spectroscopies

DMP/DCMP (Joint Sponsorship):

Session A40: Morphology and Evolution at Surfaces: Structure and Organics

Session B17: Materials and Device Physics for Quantum Computing I

Session D40: Morphology and Evolution at Surfaces: Epitaxy

Session H40: Morphology and Evolution at Surfaces: Persistence and Islands

Session J17: Materials and Device Physics for Quantum Computing

Session N40: Morphology and Evolution at Surfaces: Ion Beams and Instabilities

Session P17: Materials and Device Physics for Quantum Computing II

Session P25: Novel and Complex Oxides: Multiferroic and Other

Session S40: Morphology and Evolution at Surfaces: Wires and Self-Assembly

Session V40: Morphology and Evolution at Surfaces: Phase-field and Ge/Si

Session W40: Morphology and Evolution at Surfaces: Instabilities and Patterned Substrates

Session X40: Morphology and Evolution at Surfaces: Defects and Transport

DMP/DCMP/FIAP (Joint Sponsorship):

Session H15: Dilute Nitride Semiconductors: From Atoms to Devices I

Session L15: Dilute Nitride Semiconductors: From Atoms to Devices II

DMP/DCOMP/DAMOP (Joint Sponsorship):

Session A25: Computational Nanoscience I

Session B25: Computational Nanoscience II

DMP/DCOMP/GMAG (Joint Sponsorship):

Session D9: Theory of Magnetic Semiconductors

Session H9: Low Dimensional Magnetism

Session J9: Spin Transport/Magnetism Theory

Session L9: Exchange Interactions and Magnetization

DMP/DCOMP/GSCCM (Joint Sponsorship):

Session D11: Simulations of Matter at Extreme Conditions I

Session H11: Simulations of Matter at Extreme Conditions II

DMP/DCP (Joint Sponsorship):

Session B40: Transport Properties of Nanostructures I: Contacts

FOCUS SESSIONS

Session D17: Transport Through Molecules: Scanned Probe Methods

Session D20: Transport Properties of Nanostructures II: Molecules & Surfaces

Session H17: Transport Through Molecules: Single Molecule Junctions

Session J40: Transport Properties of Nanostructures III: Semiconductors & Surfaces

Session P40: Transport Properties of Nanostructures IV: Wires

Session S16: Molecular Materials: Electronic Transport and Growth

Session U40: Transport Properties of Nanostructures V: Molecules

DMP/FIAP (Joint Sponsorship):

Session J14: Anisotropic Building Blocks: Synthesis and Assembly

Session L20: Properties of Complex Oxides and Interfaces II

Session N14: Multifunctional Oxides II

Session N20: Ferroelectrics

Session S20: Ferroelectric Thin Films

DMP/GMAG (Joint Sponsorship):

Session A10: Spin Transport Devices

Session A43: Spin Transfer Effect I

Session B10: III-V Magnetic Semiconductors

Session B42: Magnetic Nanoparticles, Nanostructures & Heterostructures I

Session B43: Spin Transfer Effect II

Session D10: Spin Transport and Dynamics

Session D42: Magnetic Nanoparticles, Nanostructures & Heterostructures II

Session D43: Magnetic Tunnel Junctions I

Session H10: Magnetic Semiconductors: Electronic Structure

Session H42: Magnetic Nanoparticles, Nanostructures & Heterostructures III

Session H43: Magnetic Tunnel Junctions II

Session J10: Spin Dynamics in Semiconductors

Session J42: Magnetic Nanoparticles, Nanostructures & Heterostructures IV

Session L10: Magnetic Impurities in Semiconductors

Session L42: Magnetic Nanoparticles, Nanostructures & Heterostructures V

Session L43: Phase Complexity and Enhanced Functionality in Magnetic Oxides I

Session N10: Spin Transport and Dynamics in Quantum Dots

Session N42: Magnetic Nanoparticles, Nanostructures & Heterostructures VI

Session N43: Phase Complexity and Enhanced Functionality in Magnetic Oxides II

Session P10: Magnetic Semiconductors: Oxides

Session P42: Magnetic Nanoparticles, Nanostructures & Heterostructures VII

Session P43: Phase Complexity and Enhanced Functionality in Magnetic Oxides III

Session S10: Magnetic Semiconductor Heterostructures

Session S43: Phase Complexity and Enhanced Functionality in Magnetic Oxides IV

Session U10: Spin Hall Effect

Session U43: Phase Complexity and Enhanced Functionality in Magnetic Oxides V

Session V10: Spin Injection into Semiconductors

Session W10: Spin Transport and Spin Hall Effect

Session X10: Spin Transport/Novel Magnetic Semiconductors

DMP/GSNP (Joint Sponsorship):

Session B24: Friction, Fracture, and Deformation I

Session H24: Friction, Fracture, and Deformation II

Session L24: Friction, Fracture, and Deformation III

Session N24: Friction, Fracture, and Deformation IV

DPB:

Session X21: MultiScale Analysis of Ions in Solutions, Proteins, and Channels: Analysis

Session Y21: Multiscale Analysis in Biology: Computation

DPOLY/FIAP (Joint Sponsorship):

Session H14: Organic / Inorganic Hybrid Nanomaterials

Session W31: Interaction of Polymers with Biological Systems

FIAP:

Session A15: THz Devices and Materials I

Session B15: Inorganic Glasses

Session D14: Engineered Group IV Clathrates and Clusters

FOCUS SESSIONS

Session D15: THz Devices and Materials II

Session J15: Strained Si and Other Semiconductors for Device Applications

Session L14: Multifunctional Oxides I

Session N15: Theory of Nanostructures and Nanowires

Session P14: Hydrogen Storage I: Media

Session P15: Relaxation and Phonons in Nanostructures

Session S14: Hydrogen Storage II: Measurements

Session S15: Transport in Ensemble of Nanocrystals

Session U15: Synthesis and Doping of Nanostructures

Session V15: Plasmonics, Biological, Solar Cell QDs

Session W14: Electronic and Atomic Structures of Interfaces and Gate Stacks II

Session W15: Optical properties of QDs

Session Y14: Supercritical Carbon Dioxide Processing

FIAP/DCMP/DMP (Joint Sponsorship):

Session H15: Dilute Nitride Semiconductors: From Atoms to Devices I

Session L15: Dilute Nitride Semiconductors: From Atoms to Devices II

FIAP/DCP (Joint Sponsorship):

Session A14: Molecular-Scale Electronics and Sensors I

Session B14: Molecular-Scale Electronics and Sensors II

FIAP/DMP (Joint Sponsorship):

Session J14: Anisotropic Building Blocks: Synthesis and Assembly

Session L20: Properties of Complex Oxides and Interfaces II

Session N14: Multifunctional Oxides II

Session N20: Ferroelectrics

Session S20: Ferroelectric Thin Films

FIAP/DPOLY (Joint Sponsorship):

Session H14: Organic / Inorganic Hybrid Nanomaterials

Session W31: Interaction of Polymers with Biological Systems

FIAP/GIMS (Joint Sponsorship):

Session A18: Semiconductor Characterization

GIMS:

Session U44: Interfaces, Characterization, and Fabrication

GIMS/FIAP (Joint Sponsorship):

Session A18: Semiconductor Characterization

GMAG:

Session P25: Quantum Magnets in 2D

GMAG/DMP (Joint Sponsorship):

Session A10: Spin Transport Devices

Session A43: Spin Transfer Effect I

Session B10: III-V Magnetic Semiconductors

Session B42: Magnetic Nanoparticles, Nanostructures & Heterostructures I

Session B43: Spin Transfer Effect II

Session D10: Spin Transport and Dynamics

Session D42: Magnetic Nanoparticles, Nanostructures & Heterostructures II

Session D43: Magnetic Tunnel Junctions I

Session H10: Magnetic Semiconductors: Electronic Structure

Session H42: Magnetic Nanoparticles, Nanostructures & Heterostructures III

Session H43: Magnetic Tunnel Junctions II

Session J10: Spin Dynamics in Semiconductors

Session J42: Magnetic Nanoparticles, Nanostructures & Heterostructures IV

Session L10: Magnetic Impurities in Semiconductors

Session L42: Magnetic Nanoparticles, Nanostructures & Heterostructures V

Session L43: Phase Complexity and Enhanced Functionality in Magnetic Oxides I

Session N10: Spin Transport and Dynamics in Quantum Dots

Session N42: Magnetic Nanoparticles, Nanostructures & Heterostructures VI

Session N43: Phase Complexity and Enhanced Functionality in Magnetic Oxides II

Session P10: Magnetic Semiconductors: Oxides

Session P42: Magnetic Nanoparticles, Nanostructures & Heterostructures VII

Session P43: Phase Complexity and Enhanced Functionality in Magnetic Oxides III

Session S10: Magnetic Semiconductor Heterostructures

Session S43: Phase Complexity and Enhanced Functionality in Magnetic Oxides IV

Session U10: Spin Hall Effect

Session U43: Phase Complexity and Enhanced Functionality in Magnetic Oxides V

FOCUS SESSIONS

Session V10: Spin Injection into Semiconductors
Session W10: Spin Transport and Spin Hall Effect
Session X10: Spin Transport/Novel Magnetic Semiconductors

GMAG/DMP/DCOMP (Joint Sponsorship):
Session D9: Theory of Magnetic Semiconductors
Session H9: Low Dimensional Magnetism
Session J9: Spin Transport/Magnetism Theory
Session L9: Exchange Interactions and Magnetization

GQI/DAMOP/DCOMP (Joint Sponsorship):
Session S33: Pathway to Practical Quantum Computing

GSCCM/DCOMP/DMP (Joint Sponsorship):
Session D11: Simulations of Matter at Extreme Conditions I
Session H11: Simulations of Matter at Extreme Conditions II

GSNP:

Session A24: Structure, Dynamics and Resilience of Complex Networks
Session P24: Jamming: Rheology and Failure
Session S24: Jamming: Effective temperature and Aging
Session V24: Non-equilibrium Dynamics of Adsorption Diffusion and Reaction

GSNP/DBP (Joint Sponsorship):
Session H23: Brownian Motion and Stochastic Dynamics in the 100 Years Since Einstein
Session N23: Methods of Statistical Physics in Population Dynamics and Epidemiology
Session W22: Microtubules and Molecular Motors

GSNP/DFD (Joint Sponsorship):
Session L36: Granular Gases and Liquids I

GSNP/DMP (Joint Sponsorship):
Session B24: Friction, Fracture, and Deformation I
Session H24: Friction, Fracture, and Deformation II
Session L24: Friction, Fracture, and Deformation III
Session N24: Friction, Fracture, and Deformation IV

GSNP/DFD/DBP (Joint Sponsorship):
Session A23: Biological Hydrodynamics I
Session P23: Biological Hydrodynamics II

GSNP/DFD/DCMP (Joint Sponsorship):
Session N36: Granular Liquids and Gases II

POSTER SESSIONS

Poster sessions will be held on Monday, Tuesday and Wednesday. Posters will be on display from 2:00pm to 5:00pm on Monday and Tuesday, and from 1:00pm to 4:00pm on Wednesday. Authors should be in attendance at the times listed below. APS is not responsible for poster materials that are left in the exhibit hall after the session is over. No A-V is allowed in poster sessions.

C1—Poster Session I**Monday, March 21****Authors in attendance from 2:00pm-5:00pm****Exhibit Hall**

Posters 1-4 Physics Education

Posters 5-8 General I

Posters 9-21 Artificially Structured Materials

Posters 22-26 Quantum Information, Concepts and Computation

Posters 27-35 Insulators and Dielectrics

Posters 36-49 Instrumentation and Measurements

Posters 50-60 Phase Transitions and Strongly Correlated Systems

Posters 61-72 Fluids

Posters 73-77 Multifunctional Oxides [Thin Films]

Posters 78-109 Semiconductors

Posters 110-127 Superconductivity

Posters 128-208 Polymeric and Organic Materials

R1—Poster Session III**Wednesday, March 23****Authors in attendance from 1:00pm-4:00pm****Exhibit Hall**

Posters 1-5 General II

Posters 6-23 Applications

Posters 24-39 General Theory (Theoretical Methods)

Posters 40-46 Artificially Structured Materials II

Posters 47-64 Atomic, Molecular & Optical (AMO) Physics

Posters 65-68 Quantum Fluids and Solids

Posters 69-107 Complex Structured Materials

Posters 108-161 Magnetism (Experiment, Theory, Applications)

Posters 162-248 Post-Deadline Posters

K1—Poster Session II**Tuesday, March 22****Authors in attendance from 2:00pm-5:00pm****Exhibit Hall**

Posters 1-21 Metals

Posters 22-47 Chemical Physics

Posters 48-63 Surface, Interfaces & Thin Films

Posters 64-85 Statistical and Nonlinear Physics

Posters 86-112 Biological Physics

Posters 113-195 Polymeric & Organic Materials II

PROGRAM FORMAT

Program Time-Blocks

Normally, contributed and invited sessions at APS general meetings are three hours in length—three sessions per day at 8:00am, 11:15am, and 2:30pm. The time blocks are designated in alpha order beginning with time-block “A” on Monday at 8:00am, and ending with “X” designating the 11:00am time-block on Friday.

Session Codes

The number following the alpha that designates the time-block represents the sequential numbering of the sessions within the time-block. Session A1 is one of several sessions taking place in parallel in the first time-block on Monday. The number following the decimal in the session code represents the sequence of the papers to be presented in that session. For example: B3.004 = Time-block B (Monday at 11:15am); Session 3 (of several) within that time-block; and the 4th paper to be presented in that session.

Poster Codes

The poster sessions will take place on Monday, Tuesday, and Wednesday in the Exhibit Hall. A breakdown of the topics presented in each category is listed on page 23.

Monday poster session = Session C1

Tuesday poster session = Session K1

Wednesday poster session = Session R1

Each poster presentation (board) within each poster session is numbered sequentially.

Guidelines for Speakers

Oral Presentations

Please arrive at least 15 minutes prior to the scheduled time of your talk. Contributed papers are allocated 12 minutes each—10 minutes for presentation and 2 minutes for questions from the audience, unless otherwise specified. Invited papers are allocated 36 minutes—30 minutes for presentation and 6 minutes for questions from the audience.

Note: Occasionally (and unfortunately) the chair for a session may not appear, in which case we ask that the first presenter serve as chair of the session.

Poster Presentations

If you are presenting a poster, please be sure to have your poster up prior to the start of the session to which you have been assigned, and taken down immediately at the end of the session. APS will not be responsible for posters left up after the end of each poster session. No A-V is allowed in the poster sessions. Posters will be on display between the hours of 10:00am and 5:00pm Monday, Tuesday; 10:00am and 4:00pm, Wednesday. Consult the Poster Session Schedule for exact times and a breakdown of poster topics.

Guidelines for Session Chairs

- Please check the Bulletin to determine if any supplementary papers have been assigned to the session you are chairing. Prior to the session, check the Corrigenda distributed with the Bulletin, as well as the Program-Changes Board in the registration area to see if any papers have been withdrawn.

- Arrive at the meeting room about 15 minutes prior to the start of the session and familiarize yourself with the controls for lights, microphones, A-V equipment and the timer. If you encounter problems, you should immediately alert the Meetings Manager and/or the A-V specialist.

- Start the session on time. Briefly introduce yourself, announce the first paper and author, and start the timer.

- Please adhere to the time schedule listed in the Bulletin, so that simultaneous sessions are as closely synchronized as possible. Many attendees move from session to session in order to hear specific papers.

Note: any time used by the speaker and/or technicians to set up laptops for LCD (Powerpoint) presentations is deducted from the time allocated for the talk.

- The allotted time for contributed papers is 12 minutes; for invited papers—36 minutes. If you are chairing a session that includes both contributed and invited papers please be aware of the different times allocated for each and set the timer as follows:

Contributed papers—set timer for 8 minutes to give initial warning, then set the final bell to go off

PROGRAM FORMAT

2 minutes later. When this time is up, allow 2 additional minutes for questions relating to the paper, thank the speaker and promptly introduce the next paper and speaker.

Invited papers—set timer for 25 minutes for initial warning, and the final bell to ring 5 minutes later. Then set the timer for 6 additional minutes for questions from the audience.

Explain the timing system to the audience prior to the start of the session, and as often during the session as you think necessary.

- The By-Laws of the Society request that speakers be asked to stop when their allotted time is up in a courteous but firm manner. Keep in mind that the session must end on time, and that the last speaker has just as much right to an audience as does the first speaker.

- Should a speaker fail to appear, call the author of the first supplementary paper assigned to the session, if any. If that author is not in attendance, call the author of the following supplementary paper, and so on. If there are no supplementary papers assigned to your session, allow the preceding discussion to continue, or recess the session until it is time for the next scheduled paper. At the end of the session, call again for the regularly scheduled paper, if time allows.

- When two or more papers are submitted by an author, only one of these will be assigned a scheduled presentation time within that session. It is assumed that the first author listed in the abstract is the person who will present the paper at the meeting. Other papers with the same first author will be assigned as supplementary papers, to be called for if time permits. If you notice that an author who has already presented a paper rises to present another paper, you should request that this paper be presented at the end of the regular program as a supplementary paper, if time allows.

- If any problems arise that you are unable to handle relative to successfully chairing the session, please inform the A-V tech in the room, or go immediately to the APS registration desk to alert the APS staff.

General A-V Policy

In keeping with our legally binding contract with our A-V vendor, speakers are not permitted to bring their own projection equipment for use at the meeting.

Standard A-V in all Sessions

The standard A-V package consists of an LCD projector, overhead projector, screen, laser pointer and lapel microphone. Any additional A-V equipment must be rented by the speaker directly through APS's designated A-V provider located in Room 13A. The speaker is responsible for the cost of renting any additional equipment.

Policy and Guidelines on Use of LCD Projectors

The responsibility for a smooth, technically trouble-free presentation ultimately rests with the presenter. Speakers who plan to use LCDs must do the following:

- Bring your own laptop computer, power cord, and any proprietary cords required for your computer. Do not bring your own projector to the meeting. **NOTE:** *APS is not responsible for the security of personal laptop computers.*

- Visit the Speaker-Ready room located in Room 509 to run through the presentation to ensure a smooth and technically trouble-free talk. Testing your presentation in the Speaker-Ready room prior to your presentation is strongly recommended to minimize equipment compatibility difficulties. Remember that time used to set up equipment reduces the time you have to make your presentation.

- Bring a back-up vu-graph presentation in case there are set-up difficulties with the LCD equipment.

NOTE: *The APS strongly recommends that LCD projectors not be used for contributed talks (12 minute talks). The presentation schedule must be maintained, and as is too often the case, the set-up of the laptop/projector can be problematic, using up valuable presentation time.*

PROGRAM FORMAT & UNIT ACRONYMS

Divisions

DAMOP.....	Division of Atomic, Molecular and Optical Physics
DAP.....	Division of Astrophysics
DBP.....	Division of Biological Physics
DCP.....	Division of Chemical Physics
DCMP.....	Division of Condensed Matter Physics
DCOMP.....	Division of Computational Physics
DFD.....	Division of Fluid Dynamics
DLS.....	Division of Laser Science
DMP.....	Division of Materials Physics
DNP.....	Division of Nuclear Physics
DPB.....	Division of the Physics of Beams
DPF.....	Division of Particles and Fields
DPP.....	Division of Plasma Physics
DPOLY.....	Division of Polymer Physics

Topical Groups

GFBS.....	Few Body Systems Topical Group
GGR.....	Gravitation Topical Group
GHP.....	Topical Group on Hadronic Physics
GIMS.....	Instrumentation and Measurement Science Topical Group
GMAG.....	Magnetism and Its Applications Topical Group
GPAP.....	Topical Group on Plasma Astrophysics
GSNP.....	Statistical and Non-linear Topical Group
GFC.....	Precision Measurement and Fundamental Constants Topical Group
GSCCM.....	Shock Compression of Condensed Matter
GQI.....	Topical Group on Quantum Information=

Forums

FEEd.....	Forum on Education in Physics
FGSA.....	Forum on Graduate Student Affairs
FHP.....	Forum on History of Physics
FIAP.....	Forum on Industrial and Applied Physics
FIP.....	Forum on International Physics
FPS.....	Forum on Physics and Society

Committees

COM.....	Committee on Minorities
CSWP.....	Committee on the Status of Women in Physics

MARCH MEETING 2005 EXHIBITORS

The following is a list of exhibitors participating in the March Meeting 2005. For complete information on exhibiting companies and their booth numbers, consult the Pocket Epitome/Exhibitor Guide distributed at registration. Please take time during the meeting to visit the exhibits.

2005 APS Show Exhibitors

(as of 1/28/05)

A&N Corporation	Horiba Jobin Yvon Inc.	Ocean Optics Inc.
Advanced Research Systems	ICEoxford	OCI Vacuum Microengineering
AJA International	Inspec Inc.	Omicron NanoTechnology USA
Ambios Technology	Instec, Inc.	Originlab Corporation
American Association of Physics Teachers	International Cryogenics, Inc.	Oxford Applied Research
American Institute of Physics	IOP Publishing	Oxford Instruments
American Magnetics	JA Woollam	Oxford University Press
American Physical Society	Janis Research Company, Inc.	Perseus Books Group
Amuneal	John Wiley & Sons, Inc.	<i>Photonics Spectra</i>
Andeen-Hagerling Inc.	Keithley Instruments	Physics Academic Software
Applied Surface Technologies	Kimball Physics, Inc.	<i>Physics Today</i>
AR Worldwide	Kurt J. Lesker Company	PI (Physik Instrumente) LP
Asylum Research	Lake Shore Cryotronics	Princeton University Press
Atomate Corporation	Mackichan Software	PSIA Inc
attocube systems AG	Mad City Labs	Quantum Design
Blake Industries Inc.	Mantis Deposition	Raith USA, Inc.
Bruker BioSpin Corporation, EPR Division	MDC Vacuum Products/ Insulator Seal	RHK Technology
Cambridge Magnetic Refrigeration	Minus K Technology	Scientific Instruments, Inc.
CeramTec North America	Molecular Imaging	Signal Recovery
Comsol, Inc.	Molecular Metrology	Silk Scientific Inc.
Cryo Industries of America, Inc.	Nanomagnetics Instruments Limited	South Bay Technology Inc.
Cryogenic Control Systems, Inc.	Nano-Master Inc.	SPECS Scientific Instruments
Cryogenic Ltd	Nanonics Imaging Ltd	Springer
Cryomagnetics, Inc.	Nanoscience Instruments	Staib Instruments, Inc.
Cryomech, Inc.	Nanosensors	Stanford Research Systems, Inc.
EDP Sciences	National High Magnetic Field Laboratory	STAR Cryoelectronics
Elsevier	National Nanotechnology Infrastructure Network	Taylor & Francis
FEI	National Research Council of the National Academies	Teachspin Inc.
GMW Associates	Nature Publishing Group	Tristan Technologies, Inc.
Hamamatsu Corporation	Neocera Inc	University Science Books
Hinds Instruments, Inc.	Nor-Cal Products Inc.	Varian Inc.,
	nPoint	VAT
	NRC Research Press	Veeco Instruments
		VeriCold Technologies
		WebAssign
		WITec Instruments
		Wolfram Research
		World Scientific Publishing