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 (FEd); 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
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/sixidears), 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.
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-scallable 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.
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
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.
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.

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

Annual 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)

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<th>Sunday, March 20</th>
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<tr>
<td><strong>IOP Board Meeting</strong>&lt;br&gt;5:00pm-7:00pm&lt;br&gt;Palos Verdes, Westin</td>
<td><strong>Research Corporation Reception</strong>&lt;br&gt;5:00pm-7:00pm&lt;br&gt;San Pedro/Westin</td>
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<td><strong>Socialize With Science</strong>&lt;br&gt;<strong>Sponsored by Oxford Instruments</strong>&lt;br&gt;7:00pm-10:00pm&lt;br&gt;San Gabriel/Westin</td>
<td><strong>Journal of Statistical Mechanics Meeting</strong>&lt;br&gt;5:30pm-7:30pm&lt;br&gt;San Fernando/Westin</td>
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<tr>
<td><strong>Monday, March 21</strong></td>
<td><strong>IOP Publishing Reception</strong>&lt;br&gt;6:00pm-7:30pm&lt;br&gt;San Fernando/Westin</td>
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<td><strong>Oxford Sales Meeting</strong>&lt;br&gt;8:00am-9:30am&lt;br&gt;Los Cerritos/Westin</td>
<td><strong>Veeco Users Group</strong>&lt;br&gt;6:30pm-9:30pm&lt;br&gt;San Pedro/Westin</td>
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<tr>
<td><strong>Chaos Editorial Board Meeting</strong>&lt;br&gt;12:00n-2:00pm&lt;br&gt;La Brea/Westin</td>
<td><strong>Wednesday, March 23</strong></td>
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<td><strong>ES2005 Meeting</strong>&lt;br&gt;<strong>Recent Developments in Electronic Structure Methods</strong>&lt;br&gt;<strong>Sponsored by Cornell University</strong>&lt;br&gt;8:00pm-10:00pm&lt;br&gt;Los Feliz, Westin</td>
<td><strong>RSI Editorial Meeting</strong>&lt;br&gt;12:00n-2:00pm&lt;br&gt;Palos Verdes/Westin</td>
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<td><strong>Tuesday, March 22</strong></td>
<td><strong>Funding Opportunities in NSF's Division of Materials Research</strong>&lt;br&gt;5:00pm-7:00pm&lt;br&gt;Room 511A/LACC</td>
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<tr>
<td><strong>Alumni Reunions</strong>&lt;br&gt;6:00pm-8:00pm&lt;br&gt;Westin Hotel&lt;br&gt;• Berkeley Physics (Santa Barbara A)&lt;br&gt;• Brown University (La Cienega)&lt;br&gt;• University of Illinois (Santa Anita AB)&lt;br&gt;• Cornell University (Beaudry A)&lt;br&gt;• IBM (San Bernardino)&lt;br&gt;• Michigan State (Santa Barbara B)&lt;br&gt;• Purdue University (San Gabriel A)&lt;br&gt;• State of Florida University (San Diego)</td>
<td><strong>CMSN Meeting</strong>&lt;br&gt;<strong>Predictive Capabilities for Strongly Correlated Materials Coordinating Committee</strong>&lt;br&gt;7:00pm-10:00pm&lt;br&gt;Santa Anita A/Westin</td>
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**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

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**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*
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
Prizes and awards will be presented on Monday, March 21st 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 Pseudo-knots.”

**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.”

**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.”

**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.”

**Davisson-Germer Prize**
Ernst G. 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.”

**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.”

**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 magnetic, electronic and optical properties.”

**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.”

**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.”

**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.”

**I. I. Rabi Prize**
Deborah Jin  
“For her pioneering work in the production of degenerate Fermi gases and exploitation of their novel physical properties.”

**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.”

**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.”

**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”
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 Tc 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

DCOMP/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: NaxCoO2 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

**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 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/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

GIMS:
Session U44: Interfaces, Characterization, and Fabrication
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

GSVCM/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
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

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

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
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 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.

Guidelines for Speakers

Oroal 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.
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
GQI................ Topical Group on Quantum Information

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