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Wednesday, March 16, 2:30–5:30pm
Baltimore Convention Center, Hall C

Featured Speakers:

New Perspectives on Quantum Simulation With Ultra-Cold Atoms
Ana Maria Rey, University of Colorado Boulder

Illuminating Biology at the Nanoscale with Single-Molecule and Super-Resolution Fluorescence Microscopy
Xiaowei Zhuang, Harvard University

Making New Particles One By One
David A. Weitz, Harvard University

Plasmons, Hot Electrons and Nanoscale Heat Transfer
Naomi Halas, Rice University

Kavli Talk 5
John Grunsfeld, NASA
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Meet Program Director, Dr. Jarod Finlay at the APS Graduate School Fair, Table #15
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The APS Officers and Meetings Department Staff extend our sincere thanks to the unit program chairs, abstract sorters and focus session organizers who, during the past year, gave so generously of their time and expertise in sorting abstracts and organizing the program for the March Meeting 2016.

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APS gratefully acknowledges the following people for their time and effort in organizing focus sessions.

**Chemical Physics in Extreme Environments: From Combustion to Astrochemistry**
**ORGANIZERS:** Marsha Lester, University of Pennsylvania; Tim Zwier, Purdue University; Arthur Suits, Wayne State University

**Physics of Emerging Materials for Solar Energy Applications**
**ORGANIZERS:** Victor Klimov, Los Alamos National Laboratory; Alexander Efros, Naval Research Laboratory; Masaru Kuno, Univ of Notre Dame

**Plasmonics and Beyond**
**ORGANIZERS:** Eeri W. Odom, Northwestern University; Hrvoje Petek, University of Pittsburgh; Javier Garcia de Abajo, Institut de Ciencies Fotoniques

**Chemistry and Physics of Confined, Biological and Interfacial Water**
**ORGANIZERS:** Doub Tobias, University of California, Irvine; Nicolas Giovannattista, City University of New York-Brooklyn College; Songi Han, University of California, Santa Barbara

**Recent Advances in Density Functional Theory and Applications in Chemical Physics**
**ORGANIZERS:** Donald Truhlar, University of Minnesota; Neepa Maitra, Hunter College of the City University of New York; John Perdew, Temple University

**Disorder, Localization, and Many Body Localization in AMO Systems**
**ORGANIZERS:** DAMOP Program Committee

**Photonic Topological Materials**
**ORGANIZERS:** DAMOP Program Committee

**Hybrid Systems, Optomechanics, and Macroscopic Systems at the Quantum Limit**
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**Non-Equilibrium Physics with Cold Atoms**
**ORGANIZERS:** DAMOP Program Committee

**Advances and Applications of Numerical Methods in Cold Quantum Gases**
**ORGANIZERS:** DAMOP Program Committee

**Biopolymers in Confinement**
**ORGANIZERS:** Kevin Dorfman, University of Minnesota

**Physics of proteins: from experiments and computation to structure, dynamics, and functional mechanisms**
**ORGANIZERS:** Wouter Hoff, Oklahoma State University; Andrea Markelz, University of Buffalo; Corey O’Hearn, Yale University; Wei Wang, Nanjing University

**Physics of Genome Organizations: From DNA to Chromatin**
**ORGANIZERS:** Alexandre Morozov, Rutgers University; Leonid Mirny, Massachusetts Institute of Technology

**Information Processing in Cellular Signaling and Gene Regulation**
**ORGANIZERS:** Ilya Nemenman, Emory University

**Evolutionary Design Principles of Bio-Networks**
**ORGANIZERS:** Oleg Igoshin, Rice University; Gabor Balazsi, Stony Brook University

**The Physics of Cellular Organization**
**ORGANIZERS:** Michael Gramlich, Washington University, St. Louis

**Principles of Cell-to-Cell Communication**
**ORGANIZERS:** Ned Wingreen, Princeton University; Thibaud Taillefumier, Princeton University

**Cell Motility: From Single Cell to Collective Dynamics**
**ORGANIZERS:** Sima Setayeshgar, Indiana University; Thomas Gregor, Princeton University

**Physics of Cancer and Development**
**ORGANIZERS:** RANDIC FANNER, NATIONAL CANCER INSTITUTE, ARPITA UPADHYAYA, UNIVERSITY OF MARYLAND

**Soft mechanics in biological systems**
**ORGANIZER:** JEN SCHWARZ, SYRACUSE UNIVERSITY

**Stochastic Evolutionary and Population Dynamics**
**ORGANIZERS:** Michel Pleimling, Virginia Institute of Technology; Uwe Tauber Virginia Institute of Technology

**Neither Shaken or Stirred: Population Dynamics in 3+1 Dimensions**
**ORGANIZER:** ROBERT AUSTIN, PRINCETON UNIVERSITY

**Physics of sensorimotor neural circuits**
**ORGANIZER:** TATYANA SHARPEE, SALK INSTITUTE

**Neural control of behavior**
**ORGANIZERS:** Gordon Berman, Emory University; Greg Stephens, Wijentechnis Amsterdam & Okinawa Institute of Science and Technology

**Theory and Simulations of Novel Superconductors**
**ORGANIZERS:** Barry M. Klein, University of California, Davis; Warren E. Picket, University of California, Davis

**Predicting and Classifying Materials Via High-Throughput Databases and Machine Learning**
**ORGANIZERS:** Gus Hart, Brigham Young University

**Theory and Simulations of Strongly Correlated Systems With Disorder**
**ORGANIZERS:** Richard Scalettar, University of California, Davis

**Revealing New Physics with Petascale and Beyond Computational Resources**
**ORGANIZERS:** Barry Schneider, NIST; Jack Wells, Oak Ridge National Laboratory

**Electrons, Phonons and Electron-Phonon Scattering**
**ORGANIZERS:** David Singh, University of Missouri

**Theory and simulation of excited-state phenomena in semiconductors and nanostructures**
**ORGANIZERS:** Emmanouil Kipoukas, University of Michigan; Andre Schleife, University of Illinois, Urbana-Champaign

**Materials in Extremes: Bridging Simulation and Experiment**
**ORGANIZERS:** Ricky Chau, Lawrence Livermore National Laboratory; Timothy Gemmann, Los Alamos National Laboratory; Ivan Oleynik, University of South Florida

**Explicitly Correlated Methods and Quantum Few-Body Systems**
**ORGANIZERS:** Sergei Bubin, Nazarbayev University

**Chemical Physics in Extreme Environments: From Combustion to Astrochemistry**
**ORGANIZERS:** Tim Zwier, Purdue University; Arthur Suits, Wayne State University, Marsha Lester, University of Pennsylvania
PROGRAM ACKNOWLEDGMENTS

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Plasmonics and Beyond
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Chemistry and Physics of Confined, Biological & Interfacial Water
ORGANIZERS: Doug Tobias, University of California, Irvine; Nicolas Giammattei, City University of New York, Brooklyn College; Songi Han, University of California, Santa Barbara

Advances in Density Functional Theory
ORGANIZERS: Donald Truhlar, University of Minnesota; Neepa Maitra, Hunter College of the City Univ of New York; John Perdew, Temple Univ

Strongly spin-orbit coupled oxides/emergent entwinement
ORGANIZERS: James Analytis, University of California, Berkeley; Natalia Perkins, University of Minnesota; Xingjiang Zhou, Institute of Physics, Beijing

Dielectric and Ferroic Oxides
ORGANIZERS: Manfred Fiebig, ETH, Zurich; Dillon Fong, Argonne National Laboratory

Topological Materials: Synthesis and Characterization
ORGANIZERS: Peter Armitage, Johns Hopkins University; Feng Liu, University of Utah; Sean Oh, Rutgers University

Dopants and Defects in Semiconductors
ORGANIZERS: Christoph Boehme, University of Utah; Pat Lenahan, Pennsylvania State University

Fe-based Superconductors
ORGANIZERS: Ian Fisher, Stanford University; Peter Hirschfeld, University of Florida; Jenny Hoffman, Harvard University/University of British Columbia

2D materials: synthesis, defects, structure and properties
ORGANIZERS: Manish Chhowalla, Rutgers University; Saptarshi Das, Argonne National Laboratory; Chongwu Zhou, Univ of Southern California

2D materials: semiconductors
ORGANIZERS: Jeanie Lau, University of California, Riverside; Xiaodong Xu, University of Washington; Xiaobo Yin, University of Colorado

Devices from 2D materials: function, fabrication and characterization
ORGANIZERS: Xia Hong, University of Nebraska, Lincoln; Kin Fai Mak, Pennsylvania State University; Douglas R. Strachan, Univ of Kentucky

2D materials: metals, superconductors, and correlated materials
ORGANIZERS: Alexey Bezryadin, University of Illinois, Urbana-Champaign; Yong P. Chen, Purdue University; Xuan Gao, Case Western Reserve University

Carbon Nanotubes and Related Materials: Synthesis, Properties, and Applications
ORGANIZERS: Zhizhong Chen, Purdue University; Shu-Jen Han, IBM

Van der Waals Bonding in Advanced Materials
ORGANIZERS: Martin Head-Gordon, University of California, Berkeley; Jamie L. Manson, Eastern Washington University; John Singleton, Los Alamos National Laboratory

Computational Discovery and Design of New Materials
ORGANIZERS: Sahar Sharifzadeh, Boston University; Stephan Lany, National Renewable Energy Laboratory
PROGRAM ACKNOWLEDGMENTS

Polymer Dynamics: Insight from In Situ Scattering
ORGANIZERS: Chris Soles, NIST

Polymer Architecture: Control of Structure in Poly Olefins
ORGANIZERS: Rufina Alamo, FAMU-Florida State University; Chris Macosko, University of Minnesota; John Torkelson, Northwestern University

Mechanics of Bio Polymers: From Single Molecules to Active Assemblies
ORGANIZERS: Alex Levine, University of California, Los Angeles; Megan Valentine, University of California, Santa Barbara

Magnetic Nanostructures: materials and phenomena
ORGANIZERS: Bethanie Stadler, University of Minnesota; Kathryn Krycka, NIST; Sujoy Roy, Lawrence Berkeley National Laboratory

Emergent properties in bulk complex oxides
ORGANIZERS: Nandini Trivedi, Ohio State University; Stephen Wilson, University of California, Santa Barbara; Daniel Phelan, Argonne National Laboratory

Magnetic oxide thin films and heterostructures
ORGANIZERS: Ho Nyung Lee, Oak Ridge National Laboratory; Carmela Aruta, National Research Council CNR-SPIN Rome; Philip J. Ryan, Argonne National Laboratory

Spin transport and magnetization dynamics in metals-based systems
ORGANIZERS: Olof Karis, Uppsala University; Hans Nembach, NIST Boulder; William Bailey, Columbia University

Spin dependent phenomena in semiconductors
ORGANIZERS: Pengke Li, University of Maryland; Masashi Shiraishi, Kyoto University; Igor Zutić, University at Buffalo, State University of New York

Frustrated magnetism
ORGANIZERS: Oleg Starykh, University of Utah; Jayasimha Atulasimha, Virginia Commonwealth University; Kate Ross, Colorado State University

Spin-orbit mediated chiral spin textures
ORGANIZERS: Geoffrey Stephen Beach, Massachusetts Institute of Technology; Wanjun Jiang, Argonne National Laboratory; Christopher Marrows, University of Leeds

Low-dimensional and molecular magnetism
ORGANIZERS: Chris Landee, Clark University; Marco Affronte, University of Modena and Reggio Emilia (Italy); Mark Meisel, University of Florida

Towards Scalable Quantum Computers
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Hybrid Quantum Systems
ORGANIZERS: Guido Burkard, University of Konstanz

Adiabatic Quantum Computation and Quantum Annealing
ORGANIZERS: Daniel Lidar, University of Southern California

Finite-size Quantum Information Theory
ORGANIZERS: Mark Wilde, Louisiana State University

Quantum Characterization, Validation, and Verification
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Quantum Information and Thermodynamics
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Robophysics: Physics Meets Robotics
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From colloidal bots to reconstituted networks
ORGANIZERS: Cristina Marchetti, Syracuse University; Yuhai Tu, IBM

Collective phenomena in living systems
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Physics of bioinspired materials
ORGANIZERS: Qiming Wang, University of Southern California; Sung Hoon Kang, Johns Hopkins University

Clustering and gelation with competing interactions
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Continuum descriptions of discrete materials
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Simulating long timescale dynamics of soft condensed matter
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Sediment transport, geological flows, and avalanches
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Soft matter at interfaces
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Phase transitions and self-assembly in biological systems
ORGANIZERS: Jens Glaser, University of Michigan; Michael Hagan, Brandeis University

Geometric and dynamical nonlinear mechanics of slender structures
ORGANIZERS: James Hanna, Virginia Tech; Dominic Vella, Oxford University
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Welcome to the APS March Meeting 2016 in Baltimore, MD. The headquarters hotel is the Baltimore Hilton. The March Meeting technical sessions will be held in the Baltimore Convention Center and the Hilton Baltimore, which is connected to the Convention Center via an enclosed walkway.

An outstanding scientific program will be presented consisting of more than 105 invited sessions and approximately 600 contributed sessions at which over 9,100 papers will be presented. In addition, pre-meeting tutorials and workshops will be offered. As always, our exhibit show will round out the program during which attendees can visit vendors who will be displaying the latest products, instruments and equipment, and computer software, as well as scientific publications related to the research and application of physics.

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Divisions: Atomic, Molecular and Optical Physics; Biological Physics; Chemical Physics; Computational Physics; Condensed Matter Physics; Fluid Dynamics; Laser Science; Materials Physics; Polymer Physics

Topical Groups: Energy Research and Applications; Instrument and Measurement Science; Magnetism and Its Applications; Statistical and Nonlinear Physics; Quantum Information; and Shock Compression of Condensed Matter

Forums: Education; Graduate Student Affairs; History of Physics; Industrial and Applied Physics; International Physics; Outreach and Engaging the Public; and Physics and Society

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The APS wishes to take any steps required to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently due to the absence of auxiliary aids and services identified in the Americans with Disabilities Act.

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**CONVENTION CENTER, EXHIBIT HALL D**

- Sunday, March 13 .......... 2:00pm – 7:00pm
- Monday, March 14 ......... 7:00am – 5:00pm
- Tuesday, March 15 ........ 7:00am – 5:00pm
- Wednesday, March 16 .... 7:00am – 4:00pm
- Thursday, March 17 ...... 7:00am – 3:00pm
- Friday, March 18 .......... 7:00am – 12:00noon

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At the time you register you will be asked either for your printed registration confirmation or other form of ID.

**BADGE MONITORING**

All attendees must register for the meeting. Attendees must wear badges at all times. Security personnel will be checking for badges before allowing admission to the sessions and the exhibit show. Attendees without badges will not be admitted to sessions and exhibits. If you lose 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. Monday morning sessions may be attended without a badge. Security does not start until 11am on Monday.

**APS MEMBERSHIP BOOTH**

**CONVENTION CENTER, PRATT STREET LOBBY**

- Monday - Thursday ...... 9:00am - 6:00pm
- Friday .......................... 9:00am-12:00pm

The APS Membership Department staff will be on hand to answer questions about APS Membership, journal subscriptions and other new services.

**APS SOUVENIR STORE**

**CONVENTION CENTER, PRATT STREET LOBBY**

- Monday - Thursday ...... 9:00am - 6:00pm
- Friday .......................... 9:00am-12:00pm

Come browse our t-shirts, bumper stickers and more.

**BUSINESS CENTER AT CONVENTION CENTER**

**CONVENTION CENTER, PRATT STREET LOBBY**

Please check the Business Center for its hours.

**PARENTS’/CHILDREN’S QUIET ROOM**

**CONVENTION CENTER, PRATT STREET SHOW OFFICE EAST** *(LOCATED NEAR THE MAIN ENTRANCE ON PRATT STREET)*

At the March Meeting APS will designate a small room for parents who are bringing young children to the meeting. The purpose of the room is to provide a quiet place for parents of infants and young children to come for quiet time and relaxation with their children. This is not intended to be a playroom. The room will be furnished with comfortable furniture and water. There will also be a private area for nursing mothers.
MARCH MEETING 2016

SPEAKER-READY ROOM
CONVENTION CENTER, 330
The speaker-ready room will be open as follows:
Sunday, March 13 .......... 4:00pm - 7:00pm
Monday, March 14 .......... 7:00am - 5:00pm
Tuesday, March 15 ......... 7:00am - 5:00pm
Wednesday, March 16 .. 7:00am - 5:00pm
Thursday, March 17 ....... 7:00am - 4:00pm
Friday, March 18 .......... 7:00am - 12:00noon

AUDIO VISUAL EQUIPMENT
All rooms will be equipped with an LCD projector, screen, lavalier microphone, and pointer. If you plan on doing a PowerPoint presentation, please bring your program on your own laptop computer, and be sure to visit the Speaker-Ready Room to run through your presentation to ensure that it goes smoothly during the session. When you arrive at the session in which you are speaking, if you are using the LCD projector, please have your laptop turned on and ready to go. If you require additional equipment it can be rented by ordering directly through APS’s contracted A-V company servicing the meeting during the meeting. The cost of additional equipment must be covered by the speaker. If you prefer to use an overhead projector, YOU MUST NOTIFY US IN ADVANCE OF YOUR SESSION. Note: you are not allowed to bring/use your own projectors at the meeting.

MARCH MEETING MOBILE APP
APS is pleased to again offer a March Meeting Mobile App for your phone or tablet. Abstracts and other program information will be available directly on your device. Instructions on how to download the app are available at the APS Information Booth and on the March Meeting website.

WIRELESS SERVICE
APS will sponsor free wireless in the designated “hot spots” and the exhibit hall in the Convention Center. Wireless service will not be available in the meeting rooms.
SSID: APS March Meeting   Password: apsmarch

APS VILLAGE
CONVENTION CENTER, PRATT STREET LOBBY
Monday, March 14-Thursday, March 17 9:00am-5:00pm
Friday, March 18 .......................... 9:00am-12:00pm

The APS Village brings together all of the APS Departments that offer services and programs for members. Stop by and visit with APS Staff who will be happy to answer questions about programs and member services. The APS Village will also have a free charging station so you can charge your mobile device. Stop by and chat with staff from these departments:
• Meetings and APS March Meeting Information
• Membership
• Development
• Communications and Social Media
• Education and Diversity
• Public Outreach
• Contact Congress and APS Public Affairs
• APS Journals

PRESS ROOM
CONVENTION CENTER, PRATT STREET LOBBY
Monday through Thursday .......................... 7:30am-5:00pm
Friday ............................................. 7:30am-12:00noon

PRESS CONFERENCE ROOM
CONVENTION CENTER, 313
A schedule of news conferences can be obtained from the Press Room.

CONTACT CONGRESS - DON’T TAKE YOUR GRANT FOR GRANTED
CONVENTION CENTER, PRATT STREET LOBBY
Sponsors: Division of Condensed Matter Physics (DCMP) and Division of Materials Physics (DMP)

Contact Congress Hours
Monday, March 14-Thursday, March 17 9:00am-6:00pm
Friday, March 18 .................................. 9:00-12:00pm

Q: What’s the best-spent minute at the March Meeting?
A: Stopping by the Contact Congress booth to send a letter to your Congressional delegation on the importance of federal funding for basic research. It takes only a minute. By doing so, you are making your voice heard in Washington and helping to influence the funding levels for physics research and education. To amplify the impact, the APS Washington Office follows up each letter with a call or visit to congressional staff. The strongest and most persuasive advocates on Capitol Hill come from a Senator or Representative’s constituents. That means you! If you live in the United States, you are qualified to write to your members of Congress. Contact Congress is overseen by the APS Washington Office. If you have any questions about what is happening in D.C., just stop by the Contact Congress desk to ask the experts.

APS JOURNALS BOOTH
CONVENTION CENTER, PRATT ST LOBBY & EXHIBIT HALL EF
Editors of the APS journals and members of the technical and marketing staff will be on hand at the APS Journals Booth located in the exhibit hall to answer questions on all matters pertaining to the APS journals. Access to the
MARCH MEETING 2016

online journals will be available. Your ideas, concerns, and suggestions are welcome. We look forward to interacting with you on any journal matters, and to the opportunity to thank you in person for your contributions as an author or a reviewer. We are always pleased to receive feedback on our journals, to hear your ideas and concerns, and to learn more from our community about all aspects of physics research. We hope you will be able to drop by! The APS Booth will be open throughout the Exhibit Show for information on the APS and its journals.

SPECIAL SESSIONS

SESSION A56: KEYNOTE REMARKS BY SECRETARY ERNEST MONIZ
Monday, March 14 • 9:30am
CONVENTION CENTER, ROOM 205
Keynote remarks by United States Secretary of Energy, Dr. Ernest Moniz

SESSION P1: KAVLI FOUNDATION SPECIAL SYMPOSIUM
Wednesday, March 16 • 2:30–5:30pm
CONVENTION CENTER, EXHIBIT HALL C
Xiawei Zhuang, Harvard University
David Weitz, Harvard University
Naomi Halas, Rice University
John Grunsfeld, NASA

SESSION R20: UPDATE FROM DOE’S OFFICE OF SCIENCE
Thursday, March 17 • 10:00am
CONVENTION CENTER, ROOM 319
Invited Speaker: Cherry Murray
TWEET UP #APSMARCH
Sunday, March 13 • 8:00–10:00 pm
PRATT STREET ALE HOUSE
Gather with online friends, meet new contacts, and connect with the people who will be tweeting throughout the March Meeting. You can also pose with the 2016 Flat Physicist and pick up your own to snap pics of throughout the week. Light refreshments will be provided. And, special guest Jennifer Ouellette (@JenLucPiquant) will give a brief talk on Twitter for scientists.

SESSION D1: APS PRIZES & AWARDS
CEREMONIAL SESSION
Monday, March 14 • 5:45–6:45 pm
HILTON BALTIMORE, KEY BALLROOM 11/12
All attendees are welcome! Prizes and awards will be bestowed on several individuals for outstanding contributions to physics. Please plan on attending the Awards Program and join us in honoring these individuals. See page xxx for complete information on prizes and awards.

APS WELCOME RECEPTION
Monday, March 14 • 6:45–8:00 pm
CONVENTION CENTER, EXHIBIT HALL EF
All attendees are invited. Come preview the Exhibit Show and meet up with friends and colleagues.

MEET THE EDITORS OF APS
Tuesday, March 15 • 4:30–6:00 pm
CONVENTION CENTER, BALLROOM FOYER
Wednesday, March 16 • 10:45–11:30 am
CONVENTION CENTER, EXHIBIT HALL EF

APS EXHIBIT SHOW & APS LOUNGE
CONVENTION CENTER, EXHIBIT HALL EF
Tuesday, March 15 ....... 10:00am–5:00pm
Wednesday, March 16 ... 10:00am–5:00pm
Thursday, March 17 ...... 10:00am–4:00pm
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 are located in the exhibit hall, as is the Email Pavilion. A wine and cheese reception will be held in the exhibit hall on Tuesday and Wednesday from 4:00–5:00pm. Plan to visit the exhibits, view the posters and enjoy the refreshments. You must display your badge to be admitted to the exhibit hall.

INDUSTRY DAY
Wednesday, March 16
CONVENTION CENTER
Sponsored by: Division of Polymer Physics (DPOLY) & Forum on Industrial and Applied Physics (FIAP)
Industry Day will focus on the use of polymers in industry and the development of new advanced manufacturing methods, such as 3D-printing and nanocomposites. Speakers include industry R&D leaders and senior scientists both academic and industrial labs such as Dow Chemical, IBM, DuPont, ExxonMobil, GE, Boeing, and more.

SESSION R50: A STAGED READING OF THE PLAY: NO NO NOBEL
Wednesday, March 16 • 8:00–9:30 pm
HILTON BALTIMORE, KEY BALLROOM 9
In biology, what discovery is considered the most important breakthrough of the 20th century? In chemistry, what pattern development enabled chemists and physicists to understand the nature of and ultimately the atomic physics of the elements? In physics, what experiment and theory in nuclear physics led to the most important journalistic story of the 20th century? In cosmology, what theory was developed that enabled the understanding of the now named Big Bang theory and the evolution of the universe? In science education, what graduate student made a most important observation and ultimately the identification of a remnant of a supernova explosion?

Join us for a dramatic staged reading of No No Nobel and find out what unifies all the above questions. The playwright is the science historian David Cassidy and the staged reading is performed by the Baltimore Improv Group. After the performance, the playwright, the director Mike Harris, and the actors will be available for a talk-back audience discussion. Produced by Brian Schwartz, Brooklyn College and the Graduate Center of the City University of New York.

ROCK ’N ROLL PHYSICS SING-ALONG
LISTENING-ALONG ENCOURAGED
Wednesday, March 16 • 9:00-10:30 pm
HILTON BALTIMORE, HOLIDAY BALLROOM 6
Like to learn new favorites? Wish you had some snappy songs that teach physics? Just want to sing and laugh or listen and laugh? Join us for an evening of fun physics tunes set to familiar rock, blues, and swing tunes. Light refreshments will be served.
COMPANION EVENTS

COMPANIONS WELCOME BREAKFAST
Monday, March 14 • 9:00am - 10:30am
HILTON BALTIMORE, PEALE ROOM
Available to companions and families of attendees only. Companions of the attendees of the March Meeting are invited to a complimentary breakfast to meet other companions and learn about the city of Baltimore. Presentations will be made by a representative of the Baltimore Convention and Visitors Bureau. At the breakfast you will receive information about the sites and attractions in the city. The breakfast is restricted to companions and families only. Registered meeting attendees not admitted.

CAREER EVENTS

JOB EXPO
CONVENTION CENTER, EXHIBIT HALL EF
All job postings, resume searches, and interview scheduling will be coordinated online. Participating employers will be available at their exhibit booths for pre-scheduled interviews during Exhibit Hall hours. To schedule an interview, job seekers must register for the event through the APS Online Job Center and coordinate with the employer through the messaging center. More information is available in the APS Physics Job Center.

MEET YOUR FUTURE: AN INTERACTIVE SESSION ON INDUSTRIAL CAREERS FOR PHYSICISTS
Monday, March 14 • 12:00–2:15 pm
HILTON BALTIMORE, KEY 3/4
The APS Forum on Industrial and Applied Physics (FIAP) will host a special lunchtime session, in which representatives from industry will provide information about physics careers in the private sector. Topics will include research opportunities for physicists in industry, strategies for successfully pursuing industrial jobs, and advice on how to thrive in this exciting and challenging work environment.

UNDERGRADUATE PROFESSIONAL SKILLS WORKSHOP FOR NON-ACADEMIC CAREERS
Monday, March 14 • 5:45–7:00 pm
CONVENTION CENTER, ROOM 303
Out of 100 physics bachelors, fewer than 4 will actually go on to hold permanent academic physics jobs. In this interactive workshop, students will learn about the key aspects of a successful transition into non-academic tracks, such as career planning and self-assessment, networking, effective resume writing, and more. Students will have plenty of time to ask questions, and will even get the opportunity to practice writing a skills-based resume for actual industry jobs on the APS job board. Light refreshments will be served.

SESSION E53: THE FUTURE OF PHYSICS: CROSSING DISCIPLINES AND COLLABORATING
Tuesday, March 15 • 8:00–9:48 am
HILTON BALTIMORE, HOLIDAY BALLROOM 4
Sponsored by FGSA

CAREERS IN PHYSICS WORKSHOP: PUTTING YOUR SCIENCE TO WORK
Wednesday, March 16 • 12:00–3:00 pm
In this informative workshop, career coach and author Peter Fiske will provide advice and strategies for taking your physics job search to the next level. Topics of the workshop include:
- Career planning and self-assessment
- Networking
- Resumes and CVs
- Interviewing and negotiation skills

STUDENT EVENTS

SPS UNDERGRADUATE RESEARCH PRESENTATIONS
Sponsor: Society of Physics Students (SPS)
At APS sessions for undergraduates, judges will evaluate the presentations and provide feedback for students. Winning poster and oral presentations will be recognized at the Student Reception and Award Ceremony on Tuesday evening.

Monday, March 14
CONVENTION CENTER, ROOM 303
Session A7: Undergraduate Research/Society of Physics Students I
Session B7: Undergraduate Research/Society of Physics Students II
Session C7: Undergraduate Research/Society of Physics Students III

Tuesday, March 15
CONVENTION CENTER, ROOM 303
Session E7: Undergraduate Research/Society of Physics Students IV
Session F7: Undergraduate Research/Society of Physics Students V

Tuesday, March 15 • 2:00–5:00 pm
CONVENTION CENTER, EXHIBIT HALL EF
Session G7: Undergraduate Poster Session
APS EVENTS FOR SPECIAL GROUPS
(In chronological order)

SESSION B60: MEET YOUR FUTURE: AN INTERACTIVE SESSION ON INDUSTRIAL CAREERS FOR PHYSICISTS

Monday, March 2 • 12:00–2:15pm
HILTON BALTIMORE, KEY 3/4

The APS Forum on Industrial and Applied Physics (FIAP) will host a special lunchtime session, in which representatives from industry will provide information about physics careers in the private sector. Topics will include research opportunities for physicists in industry, strategies for successfully pursuing industrial jobs, and advice on how to thrive in this exciting and challenging work environment.

GRADUATE SCHOOL FAIR

Monday, March 14 • 6:45–8:00pm
Tuesday, March 15 • 10:00–5:00pm
CONVENTION CENTER, EXHIBIT HALL EF

Meet with representatives from various physics departments in a casual, low-key environment and learn more about graduate programs and research opportunities while enjoying coffee, drinks, and light snacks.

GRADUATE STUDENTS LUNCH WITH THE EXPERTS

Tuesday, March 15 • 12:30–2:00pm
CONVENTION CENTER, EXHIBIT HALL C

Cost: Free. Graduate students may sign up to enjoy complimentary box-lunch while participating in an informal and stimulating discussion with an expert on a topic of interest to them. Sign-up will open Sunday, March 13 at 3:00 p.m., in Pratt Street Lobby. Registration will be on a first-come, first-served basis. Attendance is limited to eight students per topic.

DCOMP-Sponsored Tables
1. Quantum Computing
   Matthias Troyer, ETH Zurich
2. Computational Materials Science: Opportunities and Challenges
   Gus Hart, Brigham Young University
3. Predictive First Principles Calculations For Energy Problems
   Giulia Galli, University of Chicago and Argonne National Laboratory

DMP-Sponsored Tables
4. Molecular Structure and Self-assembly of Polymers
   Rachel A. Segalman, UC Santa Barbara
5. Computational Polymer Physics in Industry
   Pieter J. in’t veld, BASF SE

DBIO-Sponsored Tables
6. Physics of Behavior
   Joshua W. Shaevelitz, Princeton
7. Soft Matter and Cellular Biophysics
   Jennifer Ross, UMass
8. Physics of Cancer
   Robert Austin, Princeton University

DCMP-Sponsored Tables
9. STM and Fe-based Superconductors
   Jennifer Hoffman, University of British Columbia
10. Exotic Twisters- What Can We Learn from Studies of Superconducting Vortices?
    Morten Ring Eskildsen, University of Notre Dame
11. Experimental Quantum Computing/Hybrid Quantum Systems
    David Schuster, University of Chicago
12. Hybrid Quantum Systems: Low Dimensional Electrons on Helium
    Johannes Pollanen, Michigan State University
13. Many Body Physics: The Unfinished Revolution
    Piers Coleman, Rutgers University
14. Electrons Subjected to Extreme Conditions
    Benjamin Hunt, Carnegie Mellon University
15. Materials Genome Approach in Searching for New High-Temperature Superconductors
    Laura Greene, Florida State University

GSOFT-Sponsored Tables
25. Particles at Interfaces: Open Challenges and Applications
    Lucio Isa, ETH Zurich
26. Lorentz-force Electron Microscopy
    John Cumings, University of Maryland

GSNP-Sponsored Tables
27. Statistical Physics of Active Matter
    Apama Baskaran, Brandeis University
28. Collective Behavior in Biological Networks
    David J. Schwab, Northwestern University

Plus 7 topics on Industrial & Applied Physics, sponsored by FIAP
GRADUATE SCHOOL FAIR RECEPTION
Tuesday, March 15 • 1:00 – 3:00 pm
CONVENTION CENTER, EXHIBIT HALL EF
Graduate school representatives will be available to meet with students to discuss graduate opportunities and programs. Coffee and light snacks will be served. For more information on the Graduate School Fair, including a full listing of hours, please visit our Graduate School Fair page.

STUDENT RECEPTION & AWARD CEREMONY
Tuesday, March 15 • 5:30–8:00pm
CONVENTION CENTER, EXHIBIT HALL C
Graduate and undergraduate students may mingle with working physicists at the special student reception with light fare from 5:30 until 7:00 p.m. Immediately following, all students who presented at the March Meeting in the Undergraduate Research Sessions will be recognized, and students with outstanding presentations will also receive a special prize.

DIVERSITY EVENTS
SESSION F47: SEXUAL AND GENDER DIVERSITY ISSUES IN PHYSICS – A C-LGBT AD HOC COMMITTEE REPORT
Tuesday, March 15 • 11:15am–12:30pm
CONVENTION CENTER, ROOM 312
In 2014 the Executive Officer of the American Physical Society (APS), Kate Kirby, created and Ad-Hoc Committee on LGBT Issues (C-LGBT) charged with reporting on the obstacles to inclusion of LGBT physicists, a term which for the purpose of this report refers to persons who self-identify as lesbian, gay, bisexual, transgender, queer, questioning, intersex or asexual, as well other sexual and gender minorities. Please join us for the committee's report on their efforts towards greater LGBT inclusion in physics, and for the panel discussion to follow. Questions? Contact us at lgbt.physicists@gmail.com or visit us at http://lgbtphysicists.org

CSWP NETWORKING EVENT
Wednesday, March 16 • 5:30–6:30pm
HILTON BALTIMORE, LATROBE
Unwind after a long day of sessions by networking with women physicists from the APS Committee on the Status of Women in Physics. Learn about the new statement on women in physics and other programs designed for women physicists.

JOINT TASK FORCE ON UNDERGRADUATE PHYSICS PROGRAMS
Wednesday, March 16 • 5:45–6:45pm
HILTON BALTIMORE, HOLIDAY BALLROOM 1
This session will focus on the guidelines and recommendations being developed by the APS/AAPT Joint Task Force on Undergraduate Physics Programs. J-TUPP is studying how undergraduate physics programs might better prepare physics majors for diverse careers. The guidelines and recommendations will focus on curricular content, flexible tracks, pedagogical methods, research experiences and internships, the development of professional skills, and enhanced advising and mentoring for all physics majors.

NATIONAL SOCIETY OF BLACK PHYSICISTS
Wednesday, March 16 • 5:00–6:00 pm
HILTON BALTIMORE, JOHNSON A

NATIONAL SOCIETY OF HISPANIC PHYSICISTS
Wednesday, March 16 • 5:45–6:45 pm
HILTON BALTIMORE, JOHNSON B
The National Society of Black Physicists (NSBP) and National Society of Hispanic Physicists (NSHP) meetups will provide opportunities for NSBP and NSHP members and those interested in the work of the societies to gather, network, and learn about NSBP and NSHP initiatives. All are welcome. Students and postdoctoral researchers are especially encouraged to attend.

DIVERSITY NETWORKING RECEPTION
Wednesday, March 16 • 7:00–8:30pm
HILTON BALTIMORE, PEALE
Join us at the APS Diversity Reception to relax, network with colleagues, and learn about APS diversity programs and initiatives for women, underrepresented minorities, and LGBT physicists. You’ll have a great time meeting friends in a supportive environment and making connections.

UNIT & ALUMNI EVENTS
DCMP/DMP NEW FELLOWS AND AWARD WINNERS RECEPTION
Tuesday, March 15 • 5:30–7:00pm
HILTON BALTIMORE, KEY BALLROOM 9/10
Join DCMP and DMP as they congratulate the DCMP and DMP award winners and newly elected fellows.
APS EVENTS FOR SPECIAL GROUPS
(In chronological order)

APS BUSINESS MEETINGS
Tuesday, March 15 • 5:45–6:45pm
- FIAP Business Meeting .................. Room: 327
- GIMS Business Meeting .................. Room: 328
- DCOMP Business Meeting ............... Room: Hilton Baltimore, Holiday
- DCP Business Meeting ................... Room: 332
- GMAG Business Meeting ................. Room: 314
- GPC Business Meeting ................... Hilton, Holiday 2
- GERA Business Meeting ................ Room: 340
- GQI Business Meeting ................... Room: 341
- DPOLY Business Meeting ............... Room: 336
- GSNP Business Meeting ................. Room: 343
- DBIO Business Meeting ................ Room: 342

Tuesday, March 15 • 7:30–8:30pm
- DCMP Business Meeting ............... Hilton, Holiday 2
- DMP Business Meeting ................ Room: Hilton, Holiday 1

Wednesday, March 16 • 5:45–6:45pm
- GSCCM Business Meeting ............. Room: 315
- GSOF Business Meeting ................ Room: 340

ALUMNI REUNIONS
Tuesday, March 15 • 6:00–8:00pm
HILTON BALTIMORE
- Yale University ......................... Hilton, Key 11
- University of Pennsylvania .......... Hilton, Johnson A
- Michigan State University .......... Hilton, Key 12
- Dartmouth College .................... Hilton, Key 3
- MagLab (FSU/UF) ....................... Hilton, Key ½
- Johns Hopkins University .......... Hilton, Key 6
- Cornell University .................... Hilton, Key 5
- University of Illinois ................ Hilton, Key 8
- Penn State .......................... Hilton, Key 4

Tuesday, March 15 • 6:00–9:00pm
SHERATON INNER HARBOR
Institute of Physics, Chinese Academy of Sciences

Wednesday, March 16 • 6:30–9:30pm
HILTON BALTIMORE, KEY BALLROOM 1-6
Five Chinese Universities (Tsinghua University, Peking University, Fudan University, Nanjing University, University of Science and Technology of China)

FORUM ON INTERNATIONAL PHYSICS (FIP) RECEPTION
Tuesday, March 15 • 6:00–8:00pm
HILTON BALTIMORE, LATROBE
Please join us as we honor the FIP/APS Fellows! Co-sponsors will also be giving out awards. The FIP reception is a wonderful opportunity to interact with speakers, officers of the American Physical Society, members of the co-sponsoring organizations, and your fellow FIP members!

Reception Co-Sponsors:
- APS Office of International Affairs
- Overseas Chinese Physics Association (OCPA)
- Association of Korean Physicists in America (AKPA)
- American Chapter of the Indian Physics Association (ACIPA)
- Iranian-American Physicists Group Network (IrAP)

EDITORIAL EVENTS
MEET THE EDITORS OF APS
Wednesday, March 15 • 4:30–6:00pm
CONVENTION CENTER, BALLROOM FOYER

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

SESSION K54: TUTORIAL FOR AUTHORS AND REFEREES
Wednesday, March 16 • 8:00–9:30am
HILTON BALTIMORE, HOLIDAY BALLROOM 5

Editors from Physical Review Letters and Physical Review will provide information and tips for less experienced referees and authors. Topics for discussion will include advice on how to write good manuscripts, similarities and differences in writing referee reports for PRL and PR, and other ways in which authors, referees, and editors can work together productively. Following a short presentation from the editors, there will be a moderated discussion. A light breakfast of bagels, pastries, coffee, and tea will be served.
SATELLITE MEETINGS
(events sponsored by non-APS groups)

SATURDAY, MARCH 12
8:00am-4:00pm  Journal of Chemical Physics Editors Meeting ........................................... Hilton—Johnson

SUNDAY, MARCH 13
7:30am-5pm  Annual Reviews of Condensed Matter Physics Editorial Committee ....... Hilton—Marshall Boardroom
8:00am-4:00pm  Journal of Chemical Physics Editors Meeting ........................................... Hilton—Johnson
8:00am-6:30pm  Spring Conference of the AIP Journal Editors ........................................... Hilton—Tubman
1:30-5:30pm  Integrating Computation in the Undergraduate Physics Curriculum ........ BCC—329
2:00-5:00pm  Korean Physics Symposium ............................................................................. Hilton—Poe AB

MONDAY, MARCH 14
7:00-11:00pm  Planning Meeting for the 28th Annual Electronic Structure Workshop ... Hilton—Calloway AB

TUESDAY, MARCH 15
8:30-10:30am  RSI Editorial Board Meeting ................................................................. Hilton—Paca
5:00-7:30pm  attoCUBE Systems User Meeting at APS .................................................... Hilton—Tubman
5:30-7:30pm  Taylor & Francis Reception ........................................................................... Hilton—Peale A
5:30-7:30pm  Research Corporation for Science Advancement Reception ....................... Hilton—Peale B
5:45-7:00pm  aLPHA Open Meeting ................................................................................ BCC—304
6:00-8:00pm  RHK Technology Reception ........................................................................... Hilton—Peale C
6:00-8:00pm  Yale University Alumni Reception ............................................................... Hilton—Key 11
6:00-8:00pm  University of Pennsylvania Alumni Reception ........................................... Hilton—Johnson A
6:00-8:00pm  Michigan State University Alumni Reception .............................................. Hilton—Key 12
6:00-8:00pm  Dartmouth College P&A Social ................................................................. Hilton—Key 3
6:00-8:00pm  MagLab (FSU/UF) ....................................................................................... Hilton—Key 1/2
6:00-9:00pm  Johns Hopkins University Alumni Reception ............................................. Hilton—Key 6
6:00-8:00pm  Cornell University Alumni Reception ......................................................... Hilton—Presidio
6:00-8:00pm  University of Illinois Alumni Reception ..................................................... Hilton—Texas A
6:00-8:00pm  Penn. State Alumni Reception ....................................................................... Hilton—Bonham E
6:00-8:00pm  Anacapa Society Meeting ............................................................................. Hilton—Armistead
6:00-9:00pm  Institute of Physics, Chinese Academy of Sciences Alumni Reception ...... Sheraton Inner Harbor
6:30-9:30pm  Chaos Editorial Advisory Committee .......................................................... Hilton—Paca

WEDNESDAY, MARCH 16
12:00-2:00pm  Research in Germany Science Lunch ....................................................... BCC—Exhibits Theater (Hall EF)
5:00-10:00pm  AIP Advances Editors Meeting ............................................................... Hilton—Poe AB
5:30-7:00pm  Hertz@APS: Meet and Greet for Hertz Foundation Fellows ....................... Hilton—Calloway B
5:45-7:45pm  Ethiopian Physics Society in North America ............................................... BCC—331
6:00-9:00pm  Five Chinese Universities Dinner ............................................................... Hilton—Key 1-6

THURSDAY, MARCH 17
10:30am-12:00  Origin Software: New Features in Version 2016 ................................. BCC—Exhibits Theater (Hall EF)
## Invited Sessions

### (by Unit)

- **DAMOP**
  - E13: Exploring Topological Physics with Cold Atoms
  - L13: New Phenomena in 2D Fermi Gases
  - R13: Atomtronics
- **DAMOP / DCOMP**
  - K13: Application of Monte Carlo Techniques to Cold Atom Systems
- **DBIO**
  - A55: Quantitative Immunology
  - B55: Complex Microbial Communities
  - E55: Delbruck Prize Session
  - H55: Theoretical Physics and Networks of Real Neurons
  - L13: Beyond Darwin: Evolution in Single Cells
- **DBIO / DCOMP / DPOLY**
  - Y55: Physics of Proteins: Pushing the Envelope on Understanding and Designing Function
- **DBIO / DFD / GSOFT**
  - P55: Active Fluids in Living Matter: Collective Cell Motility
- **DBIO / GSNP**
  - S55: Inference in Biophysics
  - X55: Principles of Cell to Cell Communication
- **DBIO / GSNP / DPOLY**
  - V55: DNA Physics and Chromatin Organization
- **DBIO / GSOFT**
  - F55: Brain Morphology and Mechanics: From Cortex Folding to Neuronal Growth to Compression Stiffening
  - K55: Physics of Cancer Metastasis
- **DCMP**
  - A1: Charge Order and the Pseudogap in the Underdoped Cuprates
  - B1: Condensed Matter Physics at NSF/DMR and DOE/BES: Challenges and Opportunities
  - B3: Symmetry Breaking in Unconventional Superconductors
  - C1: New Developments in Iron Chalcogenide Superconductors
  - C2: Novel Electronic Phenomena in Graphene
  - E1: Recent Developments in Hybrid Semiconductor-Superconductor Junctions
  - H1: Hidden Order in URu2Si2 Revealed by Advanced Spectroscopies
  - K1: Visualization of Vorticity in Quantum Fluids
  - L1: Design and Control of the Superconducting Order Parameter in Low Dimensions
  - L2: Physics of Interacting Particles in Two Dimensional Electron Systems at Half-Filling
  - R1: 3D Dirac Materials
  - S1: Topological Mysteries in Kondo Insulating SmB6
- **DCMP / DAMOP**
  - A2: Frontiers in the Theory of Non-Equilibrium Physics: From Nanosystems to Cold Atoms
  - F2: Topology and Localization in Floquet Systems
  - X2: Recent Advances in Many Body Localization
  - Y1: Orbital Angular Momentum of Light and Matter
- **DCMP / DMP**
  - V1: Non-Equilibrium Aspects of Electron-Boson Coupling in High Temperature Superconductors
- **DCMP / DMP / GMAG**
  - H2: Emergent Topological Phenomena in Pyrochlore Iridates II
  - K2: Kitaev Spin Liquid Physics in Honeycomb and Related Lattice Materials
  - Y2: Spin and Valley Pseudo-Spin Transport in Strongly Spin-Orbit Coupled Systems
- **DCMP / GMAG**
  - A3: Recent Progress on “Order by Disorder” Phenomena
  - R2: Advances in Collective Effects in Organic Semiconductors
  - X1: Complex Oxide Interfaces at the Nanoscale: Electronic, Magnetic and Superconducting Properties
  - Y3: Skyrmions in Chiral Magnets
- **DCMP / GQI**
  - H3: Charge Noise Mitigation in Multiple Quantum Dot Qubits
- **DCMP / GSNP**
  - F1: Pattern Formation
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<td>V4 Where Morphology Meets Functionality: Light and Electron Transporting Polymeric Complexes</td>
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## Focus Sessions

### DAMOP

- C50....Many-Body Localization in Atomic Systems I
- F50 ....Non-Equilibrium Physics with Cold Atoms
- H52 ....Optomechanics and Hybrid Systems II: Metrology and Other Topics
- R50 ....Quantum Gases in Reduced Dimension, Ladders, and other Novel Geometries
- S52 ....Photonic Topological Materials

### DBIO

- B35 ....The Physics of Cellular Organization
- K35 ....Physics of Sensorimotor Neural Circuits I
- P35 ....Physics of Sensorimotor Neural Circuits II
- R41 ....Neural Control of Behavior
- X39 ....Method in Molecular Biophysics: DBIO Doctoral Thesis Award
- H41 ....Biopolymers in Confinement II

### DBIO / DPOLY

- H41 ....Biopolymers in Confinement II

### DBIO / DPOLY / DCOMP

- A39 ....Physics of Proteins: Bio Meets Quantum
- C41 ....Biopolymers in Confinement: I
- K41 ....Physics of Proteins: Protein-Protein Interactions
- P41 ....Physics of Proteins: Structure and Dynamics I
- S41 ....Physics of Proteins: Protein Structure and Interactions
- V41 ....Physics of Proteins: Mechanics and Forces
- X41 ....Physics of Proteins: Structure and Dynamics II

### DBIO / DPOLY / GSNP

- R39 ....Physics of Genome Organization: from DNA to Chromatin I
- S39 ....Physics of Genome Organization: from DNA to Chromatin II

### DBIO / GSOFT

- F41 ....Maximum Entropy Models: A Promising Link Between Statistical Physics, Inference, and Biology

### DBIO / GSOFT

- B39 ....Physics of Cancer and Development I
- C39 ....Physics of Cancer and Development II
- E39 ....Cell Motility: From Single Cell to Collective Dynamics I
- F39 ....Cell Motility: From Single Cell to Collective Dynamics II
- H39 ....Cell Motility: From Single Cell to Collective Dynamics III

### DBIO / GSOFT / GSNP

- A35 ....Active Matter: Collective Phenomena in Living Systems I
- C35 ....Active Matter: Collective Phenomena in Living Systems II
- R35 ....Active Matter: Collective Phenomena in Living Systems III
- S35 ....Active Matter: Collective Phenomena in Living Systems IV
- V35 ....Active Matter: Collective Phenomena in Living Systems V

### DCMP

- L46 ....Metals II

### DCMP / DMP

- E17 ....Strained Graphene
- H29 ....Two-dimensional Topological Insulators: InAs/GaSb Quantum Wells and Beyond

### DCOMP

- A22 ....Electrons, Phonons, and Electron-Phonon Scattering I
- B22 ....Theory and Simulation of Excited-State Phenomena in Semiconductors and Nanostructures I
- C22 ....Electrons, Phonons, and Electron-Phonon Scattering II
- E22 ....Predicting and Classifying Materials via High-Throughput Databases and Machine Learning I
- F22 ....Theory and Simulation of Excited-State Phenomena in Semiconductors and Nanostructures II
- H22 ....Theory and Simulations of Novel Superconductors
- K20 ....Quantum Many-Body Systems and Methods I
- L20 ....Quantum Many-Body Systems and Methods II
- L22 ....Theory and Simulations of Strongly Correlated Systems with Disorder
- S22 ....Revealing New Physics With Petascale and Beyond Computational Resources
FOCUS SESSIONS
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DCOMP / GSCCM / DMP

F20.....Materials in Extremes: High-pressure Synthesis of New Materials
X24.....Nicholas Metropolis Award: Materials in Extremes

DCP

A31.....Advances in Density Functional Theory I
B31.....Advances in Density Functional Theory II
B32.....Emerging Nanomaterials for Solar Energy Conversion I
C32.....Device Characterization of Nanostructured Devices and Heterostructures
E31.....Advances in Density Functional Theory III
F53.....DCP Plyler and Jankunis Prize Session
H31.....Advances in Density Functional Theory IV
H32.....Theoretical Modeling of Materials for Solar Energy Conversion
K31.....Advances in Density Functional Theory V
K32.....Plasmonics and Beyond I: Resonant Coupling
L31.....Advances in Density Functional Theory VI
L32.....Dynamic Interactions Between Nanostructures
P31.....Water at Interfaces: From Spectroscopy Techniques to Computer Simulations
R32.....Plasmonics and Beyond II: Ultrafast Dynamics
S32.....Chemical Physics of Extreme Environments I
V31.....Plasmonics and Beyond III: Materials and Structures
V32.....Chemical Physics of Extreme Environments II
X32.....Plasmonics and Beyond IV: Single particle dynamics
Y32.....Chemical Physics of Extreme Environments III

DCP / GERA

E32.....Emerging Nanomaterials for Solar Energy Conversion II

DCP / GSOFT

S31.....Ice Nucleation, Amorphous Ices and the Role of Interfaces
X31.....Nanoconfined and Interfacial Water

DMP

A11.....Pairing Interaction and Gap Symmetry in Fe-based Superconductors
A16.....2D Devices: Sensors and Detectors
A17.....Graphene: Growth and Synthesis
A23.....Novel Plasmonic Effects and Devices
A24.....Electronic Transport through Individual Nanostructures
A26.....Experimental Advances in Strongly Spin-orbit Coupled Oxides
A27.....Carbon Nanotube & Related Materials: Growth, Separation, and Assembly
B11.....Superconductivity in Monolayer FeSe/SrTiO3
B16.....2D Devices: Plasmonics and Optoelectronics
B17.....Graphene: Synthesis, Properties, and Defects
B24.....Optical Effects Near Metallic Nanostructures
B28.....Topological Kondo Insulators
B30.....Ferroelectric Walls, Heterostructures and Superlattices
C23.....Acoustic, Thermal, and Photonic Metamaterial Concepts
C24.....Time-resolved Energy Transfer and Exciton Transport in Nanostructures
C26.....2D Devices: Low-dimensional Properties and Contacts
C28.....Quantum Anomalous Hall Effect I
E15.....2D Devices: Mobility and Energy Relaxation
E16.....Graphene and Graphene Nanoribbons
E23.....Metamaterial Devices and Applications
E28.....Topological Superconductivity
E30.....Topological and Correlation Effects in Oxide Heterostructures
F11.....Nematicity in Fe-based Superconductors
F16.....Exciton Dynamics in 2D Semiconductors
F17.....2D Devices: Superconductors, Charge Density Waves, Phase Transitions
F23.....Synthesis, Fabrication and Characterization of Nanostructures
F24.....Electronic and Optical Properties of Nanoparticle Assemblies
F27.....Carbon Nanotube & Related Materials: Optical & Other Properties
F28.....Topological Insulator Thin Films
F30.....Orbital and Electronic Transitions in Oxide Heterostructures
H11.....Correlations and Superconductivity in Fe Chalcogenides I
H15.....2D and Graphene - Electronic and Atomic Structure
H16.....2D Devices: Electronics and Optoelectronics
H17.....Transition Metal Dichalcogenides: Defects and Degradation
H24.....Many-Body Perturbation Theory for Electronic Excitations: Excitonic Phenomena
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L23.....Computational Materials Discovery and Design - Graphene and 2D Materials
P23.....Computational Materials Discovery and Design - Defects and Interfaces
R26.....Complex Structured Materials - Computational

DMP / FIAP
E51.....Dopants and Defects in Semiconductors: Theory
H7......Dopants and Defects in Semiconductors: Spin Related Transport
K7......Dopants and Defects in Semiconductors: Nitrides
L7......Dopants and Defects in Semiconductors: Novel experimental techniques
P7......Dopants and Defects in Semiconductors: Oxides
V7......Dopants and Defects in Semiconductors: Silicon and Germanium
X7......Dopants and Defects in Semiconductors: Compound Semiconductors

DMP / GERA / DCMP
R23.....Thermoelectrics-Nanostructures
P32.....Quantum Thermoelectric Systems
S23.....Thermoelectrics Theory I
V11.....Thermoelectrics: McGroddy Prize and Novel Materials
X23.....Thermoelectrics Theory II
Y23.....Thermoelectrics, Low Dimensional Materials

DMP / GMAG
E11.....Electronic Structure and Magnetism in Fe-based Superconductors I
K11.....Electronic Structure and Magnetism in Fe-based Superconductors II
L33.....Kitaev Physics in Honeycomb Iridates
X8......Organic Inorganic Perovskite Spintronics

DPOLY
B33.....Polymers in Batteries
C33.....Polymers in Batteries and Electrochemical Capacitors
C34.....The Physics of Confined Structured Fluids I
F33.....The Physics of Confined Structural Fluids II
H4......Dillon Medal Symposium
K42.....Polymmer Dynamics - Insight from In-Situ Scattering

P33.....Organic Electronics and Photonics - Structure-Property Relationships
P34.....Biopolymers and Biohybrid Polymers - Assembly and Thermodynamics
P42.....Small Molecule Transport in Polymers and Polymer Nanocomposites I
R33.....Organic Electronics and Photonics - Organic Photovoltaics
R42.....Small Molecule Transport in Polymers and Polymer Nanocomposites II
V33.....Block Copolymer Thin Films: Directed Self-Assembly
V42.....Polymer Architecture, Control of Structure and Dynamics in Polyolefins
X38.....Block Copolymer Thin Films: Directed Assembly
Y42.....Renewable and Sustainable Polymers

DPOLY / DBIO
S38.....Mechanics of Biopolymers: Networks and Assemblies
V38.....Mechanics of Biopolymers: Single Polymer Dynamics

DPOLY / DBIO / GSOFT
R38.....Biopolymers and Biohybrid Polymers: Networks and Hydrogels

DPOLY / DCOMP
V34.....Where Simulation, Theory, and Experiments Meet Across Length Scales II

DPOLY / DCOMP / FIAP
B34.....Where Simulation, Theory, and Experiment Meet Across Length Scales I

DPOLY / FIAP
B38.....Nanocomposites from Nano to Meso
K33.....Polymers for Solar Energy Conversion
X33.....Organic Electronics and Photonics - Organic Electronic Devices

DPOLY / FIAP / DCOMP
H33 ....Where Simulation, Theory, and Experiment Meet Across Time Scales

DPOLY / FIAP / GSOFT
A38.....Polymer Nanocomposites, Active Particles and Applications
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# Focus Sessions

## (by Unit)

**B6** Dzyaloshinskii-Moriya Interaction  
**E6** Spin Excitations in Ultrathin Films, Nanostructures and Domain Walls  
**E18** Spin-Hall II  
**H19** Spin-Order and Half-Metallicity of Magnetic Thin Films  
**K18** Spin-Hall III  
**K19** III-V Magnetic Semiconductors  
**L6** Spin-Transport Phenomena: Oscillators and Spin-Injections I  
**L18** Ultrafast Magnetization Dynamics  
**P5** Spins in Two Dimensions: Graphene, 2DEGs and Quantum Wells  
**P18** Spin-Dynamics in Patterned Films and Devices  
**P19** Magnetic Materials  
**R11** Spin-Hall IV  
**R18** Spintransport Phenomena II  
**S18** Magnetic Thin Films  
**S19** Cooperative Phenomena: Spin-Orbit Coupling and Antiferromagnetism  
**Y5** Semiconductor Spin Qubits

**GPC / DFD / GSNP**

**H51** Climate as a Non-equilibrium and Stochastic System

**GQI**

**A45** Semiconductor Qubits: Si/SiGe Quantum Dots  
**B44** Quantum Characterization, Verification and Validation I  
**B45** Semiconductor Qubits: Multidot Qubits and Dynamical Control  
**C45** Adiabatic Quantum Computation and Quantum Annealing: Tunneling, Speedup and Noise Effects  
**E44** Quantum Characterization, Verification & Validation II  
**E48** Quantum Error Correction in Superconducting Qubits  
**F44** Gravity and Quantum Information  
**F45** Adiabatic Quantum Computation and Quantum Annealing: Energy Landscapes, Speedup and Embedding  
**K48** Novel Superconducting Qubits & Architectures  
**L45** Semiconductor Qubits: Quantum Dot Entanglement and Control  
**P44** Quantum Error Correction  
**P45** Semiconductor Qubits: Quantum Dot / Donor Devices and Readout  
**R44** Quantum Information and Thermodynamics  
**R48** Decoherence in Superconducting Qubits: Junctions and Fluxonium  
**V44** Quantum Information and Communication  
**V45** Semiconductor Qubits: Optical and Microwave Control

**GQI / DAMOP**

**E45** Hybrid Quantum Systems I  
**H45** Quantum Information with Ions, Photons and Spins  
**K45** Hybrid Quantum Systems II  
**R45** Hybrid Quantum Systems III

**GSCCM / DCOMP / DMP**

**H20** Materials in Extremes: Novel Energetic Materials  
**L21** Materials in Extremes: Energetic Materials  
**R21** Materials at Extremes: Dynamic Compression  
**S21** Materials at Extremes: Kinetics of Phase Transitions  
**V21** Materials at Extremes: Warm Dense Matter  
**X21** Materials in Extremes: Metals at High Strain Rates  
**Y21** Materials in Extremes: Metals at High Strain Rates II

**GSCCM / DCOMP / DMP / DCP**

**P21** Materials in Extremes: Energetic Materials and Reactive Chemistry

**GSNP**

**R40** Systems with Large Fluctuations and Strong Correlations I  
**R43** Nonlinear Dynamics in Networks I  
**S40** Systems with Large Fluctuations and Strong Correlations II  
**S43** Nonlinear Dynamics in Networks II  
**V43** Wave Chaos: Theory and Applications

**GSNP / DBIO**

**Y35** Principles of Cell-to-Cell Communication

**GSNP / DFD**

**B40** Fluids and Elasticity

**GSNP / GSOFT**

**A43** Avalanches in Granular and Other Particle-based Materials I  
**B43** Avalanches in Granular and Other Particle-based Materials II  
**E34** Continuum Descriptions of Discrete Materials I
FOCUS SESSIONS
(by Unit)

H40  .... Mechanical Metamaterials and Origami I
H43  .... Aging in the Jammed State
K40  .... Mechanical Metamaterials and Origami II
L40  .... Geometry and Dynamics of Slender Structures

**GSNP / GSOFT / DBIO**
V40  .... Robophysics: Physics Meets Robotics I
Y40  .... Robophysics: Physics Meets Robotics II

**GSNP / GSOFT / DFD**
C43  .... Sediment Transport, Geological Flows, and Avalanches

**GSOFT**
F37  .... Clustering and Gelation with Competing Interactions I
H36  .... Soft Matter at Interfaces (Surfactants)
H37  .... Clustering and Gelation with Competing Interactions II
K37  .... Soft Matter at Interfaces (Particles)
P36  .... Frontiers of Liquid Crystals: From Colloids to Chiral Liquid Crystals
S36  .... Soft Matter at Interfaces: Wetting and Thin Films

**GSOFT / DBIO / DPOLY**
F36  .... Physics of Bioinspired Materials II

**GSOFT / DBIO**
A37  .... Phase Transitions and Self-Assembly in Biological Systems I
B37  .... Phase Transitions and Self-Assembly in Biological Systems II
V37  .... Soft Mechanics in Biological Systems
Y36  .... Soft Mechanics in Biological Systems

**GSOFT / DBIO / GSNP / DFD**

**GSOFT / DBIO**
A34  .... Active Matter I
B36  .... Active Matter II
E38  .... Active Matter III
F34  .... Active Matter IV
H34  .... Active Matter V

**GSOFT / DPOLY**
C36  .... Soft Colloids: From Single Particle Properties to Bulk Phase Behavior and Dynamics

**GSOFT / DPOLY / DCOMP**
K36  .... Coarse-graining, Advanced Sampling and Multiscale Methods in Soft Matter
POSTER SESSIONS

G1: Tuesday, March 15 • 2:00–5:00 pm
EXHIBIT HALL EF

1-18 APPLICATIONS
19-76 SEMICONDUCTORS
77-150 UNDERGRADUATE RESEARCH
151-157 PHYSICS EDUCATION
158-159 OUTREACH AND ENGAGING THE PUBLIC
160-161 INTERNATIONAL ISSUES
162-163 HISTORY OF PHYSICS
164-209 SUPERLATTICES, NANOSTRUCTURES AND OTHER ARTIFICALLY STRUCTURED MATERIALS
210-230 SURFACES, INTERFACES AND THIN FILMS
231-268 ATOMIC, MOLECULAR AND OPTICAL PHYSICS
269–291 QUANTUM INFORMATION CONCEPTS AND COMPUTATION
292–304 MATTER AT EXTREME CONDITIONS
305–325 INSTRUMENTATION AND MEASUREMENTS
326–379 POSTDEADLINE

M1: Wednesday, March 16 • 11:30 am–2:30 pm
EXHIBIT HALL EF

1-161 POLYMER PHYSICS
162–168 FLUIDS
169–226 SOFT CONDENSED MATTER
227–252 STATISTICAL AND NON-LINEAR PHYSICS
253–319 BIOLOGICAL PHYSICS
320–342 ENERGY RESEARCH AND APPLICATIONS
343–391 POSTDEADLINE

T1: Thursday, March 17 • 1:00–4:00 pm
EXHIBIT HALL EF

1-21 GENERAL THEORY/COMPUTATIONAL PHYSICS
22-71 CHEMICAL PHYSICS
72-99 INSULATORS AND DIELECTRICS
100–167 COMPLEX STRUCTURED MATERIALS, INCLUDING GRAPHENE
168–209 STRONGLY CORRELATED SYSTEMS, INCLUDING QUANTUM FLUIDS AND SOLIDS
210–213 METALS AND ALLOYS
214–288 MAGNETISM
289–373 POSTDEADLINE
PROGRAM FORMAT

PROGRAM TIME-BLOCKS
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 “Z” designating the 11:15 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 4 = 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 29.
Tuesday poster session (2:00–5:00pm) = Sessions G1
Wednesday poster session (11:00am–1:00pm) = Sessions M1
Thursday poster session (2:00–5:00pm) = Sessions T1
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 beginning at 10:00am on the day of your poster presentation to which you have been assigned, and taken down immediately at the end of the day. You must be on hand at the beginning of the poster session (see page 37 for times). 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 to 5:00pm Monday, Tuesday; 10:00am to 4:00pm, Wednesday. Consult the Poster Session Schedule for exact times and a breakdown of poster topics (page 29).

GUIDELINES FOR SESSION CHAIRS
If you are experiencing technical problems in your session, please call 410-649-7420 and an A-V technician will be sent to your session.

• Prior to the session, check the Program Changes Board in the registration area to see if any papers in the session you are chairing 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. Technicians will be on hand to assist. If you encounter problems, you should immediately alert the staff at APS Registration or Information Desk and/or the A-V specialist stationed near the meeting rooms.

• 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 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, you must wait 12 minutes before going on to the next speaker. 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. A second abstract submitted by the same author is automatically assigned to a poster.

- 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 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, screen, laser pointer and 2 lapel microphones—one for the chair and one for the speakers. Any additional A-V equipment must be rented by the speaker directly through APS’s designated A-V provider located in Room 209. 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 330 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.
2016 PRIZES AND AWARDS

OLIVER E. BUCKLEY PRIZE
SESSION L3
Eli Yablonovitch
University of California, Berkeley
For seminal achievements in solar cells and strained quantum well lasers, and especially for creating the field of photonic crystals, spanning both fundamental science and practical applications of that science.

MAX DELBRUCK PRIZE
SESSION E55
Stephen R. Quake
Stanford University
For invention of large-scale microfluidic integration and its use to gain new insights into protein crystallography, transcription factor binding, and microbial ecology, and for seminal discoveries in single cell and single molecule genome analysis.

2016 FRANK ISAKSON PRIZE FOR OPTICAL EFFECTS IN SOLIDS
SESSION C13
David Tanner
University of Florida
Dirk van der Marel
University of Geneva
For insightful experiments and analyses on a wide variety of quantum solids with strong electronic correlations in general, and cuprate superconductors in particular, using optical spectroscopy. For discovery and pioneering investigations of the superconductor-insulator transition, a paradigm for quantum phase transitions.

JULIUS EDGAR LILIENTHIEL PRIZE
SESSION L3
David Pines
University of California, Davis
For his contributions to our understanding of emergent behavior in quantum matter-plasmons, nuclear, celestial and unconventional superfluidity, heavy electron emergence-and for his effectiveness in communicating these discoveries and a new “emergent” paradigm to the broader scientific community.

GEORGE E. PAKE PRIZE
SESSION V12
Robert Doering
Texas Instruments
For outstanding leadership in research and development of semiconductor manufacturing technology and integrated circuit device scaling.

EARLE K. PLYLER PRIZE
SESSION F53
Donald G. Truhlar
University of Minnesota
For extraordinarily broad and seminal advances in chemical kinetics, dynamics, and spectroscopy through pioneering and incisive work in the development and application of variational transition state theory, electronic structure calculations, and quantum mechanical scattering methods.

POLYMER PHYSICS PRIZE
SESSION E4
Anna Balazs
University of Pittsburgh
For imaginative and insightful use of theory to understand multi-component polymeric systems.

ANEESUR RAHMAN PRIZE
SESSION H13
Matthias Troyer
ETH Zürich
For pioneering numerical work in many seemingly intractable areas of quantum many body physics and for providing efficient sophisticated computer codes to the community.
2016 PRIZES AND AWARDS

DAVID ADLER AWARD
SESSION C13
Harry A. Atwater
California Institute of Technology
For pioneering work in photonics, plasmonics, optical metamaterials, and photovoltaics, and for his outstanding presentations and outreach to the general audience.

JOSEPH F. KEITHLEY AWARD
SESSION S53
Albert Migliori
Los Alamos National Laboratory
For the development of Resonant Ultrasound Spectroscopy, used to study lattice and electronic phenomena in condensed matter physics, solving problems as diverse as the elastic properties of plutonium, to finding that the pseudogap state of cuprates is indeed a thermodynamic phase.

JOHN H. DILLON MEDAL
SESSION H4
Thomas Epps
University of Delaware
For significant advancement in the control, characterization, and understanding of polymer nanoscale-structure and energetics.

RICHARD L. GREENE DISSERTATION AWARD
SESSION C13
Susanne Baumann
IBM Almaden Research Center
For outstanding work in measuring and controlling the spin properties of individual magnetic atoms on surfaces by high-resolution scanning tunneling microscopy.

Alexander Steppke
University of St Andrews
For thermodynamic study of quantum criticality in Yb(Rh0.93Co0.27)2 and YbNi4(P1-xAsx)2.

AWARD FOR OUTSTANDING DOCTORAL THESIS RESEARCH IN BIOLOGICAL PHYSICS
SESSION X39
Quan Wang
Stanford University
For his thesis entitled “Enabling multivariate investigation of single-molecule dynamics in solution by counteracting Brownian motion.”

JUSTIN JANKUNAS DOCTORAL DISSERTATION AWARD IN CHEMICAL PHYSICS
SESSION F53
Peter Kraus
ETH Zürich
For his thesis entitled “Studies of Electronic and Nuclear Structure and Dynamics by High Harmonic Spectroscopy,” which he wrote under the direction of Prof. Hans Jakob Wörner at ETH Zürich.

NICHOLAS METROPOLIS AWARD FOR OUTSTANDING DOCTORAL THESIS WORK ON COMPUTATIONAL PHYSICS
SESSION X24
Rémi Lehe
Lawrence Berkeley National Laboratory
For the development, implementation, and application of new algorithms toward the improvement of laser-wakefield accelerators.

JUSTIN JANKUNAS DOCTORAL DISSERTATION AWARD IN CHEMICAL PHYSICS
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Lawrence Berkeley National Laboratory
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STANFORD R. OVSHINSKY SUSTAINABLE ENERGY FELLOWSHIP
SESSION P54
Richard R. Lunt
Michigan State University
MARCH MEETING 2016 EXHIBITORS & SHOW GUIDE

APS EXHIBIT HOURS
Monday, March 14 (Welcome Reception) 6:45pm–8:00pm
Tuesday, March 15 – Wednesday, March 16 10:00am–5:00pm
Thursday, March 17 10:00am–4:00pm

The following is a list of exhibitors participating in the March Meeting 2016. Please take time during your meeting to visit the exhibits. You must wear your badge to be admitted to the exhibit hall.

EXHIBITORS
AAAS Science & Technology Policy Fellowships
ACS Publications
Advanced Research Systems, Inc.
Aerotech
AIP Publishing
AIP Statistical Research Center
AJA International, Inc.
Almax easyLab Inc
American Institute of Physics
American Magnetics Inc.
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Janssen Precision Engineering
Kepco Inc.
Keysight Technologies (formerly Agilent Technologies)
Kimball Physics, Inc.
Kurt J. Lesker Company
Labber
Lake Shore Cryotronics Inc.
LDS Vacuum
Los Alamos National Laboratory
Low Noise Factory
Mad City Labs, Inc.
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Molmex Scientific, Inc.
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National Academies of Science, Engineering, and Medicine offers awards four times annually for graduate, postdoctoral and senior research in US federal laboratories. Further details and online applications at the website http://nationalacademies.org/rap

**National High Magnetic Field Laboratory** ............................ #216
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The National High Magnetic Field Laboratory is the largest, highest-powered, most interdisciplinary user facility magnet laboratory in the world. Together three institutions, Los Alamos National Laboratory in New Mexico, University of Florida in Gainesville and Florida State University in Tallahassee operate the lab, collaborating with a world wide user community to advance science, engineering and technology in the 21st century.

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R & D Funding-National Reconnaissance Office’s Director’s Innovation Initiative invests in advanced technologies, fosters innovation, and provides seed funding to push the boundaries of technology to dramatically improve our overhead reconnaissance capabilities. It presents an opportunity for developers not traditionally associated with the NRO to participate in building the National Reconnaissance Office of the 21st Century.

**National Science Foundation** ............................................ #211
www.nsf.gov
We will have Program Officers from the Condensed Matter Physics (CMP) program in the Division of Materials, and the Atomic, Molecular, and Optical Physics (AMO), Quantum Information Science (QIS), Computational Physics (CP), Integrative Activities in Physics (IAP), and the Physics of Living Systems (PoLS) programs in the Division of Physics.

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**Neutron Scattering Society of America** ............................. #325,327
www.neutronsociety.org
The Neutron Scattering Society of America (NSSA) was formed in 1992 and is an organization of persons who have an interest in neutron scattering research in a wide spectrum of disciplines

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Manufacturer of high vacuum components since 1962. Standard components: flanges, fittings, viewports, fed-throughs and flexhose; isolation and pressure control valves; thermal products; molecular sieve, particulate and cold traps; thin film components; pressure gauges and manipulators. Custom components: chambers, traps, manifolds, collars and baseplates from customer specifications. 3D Model Library available on-line. ISO 9001-2008 registered.

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Physical Society of Japan ............................................ #303
www.jps.or.jp/english/
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Physics Today Exhibitor Lounge ................................. #1134
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Princeton Scientific Corp. ................................................ #604
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Quantum Circuits, Inc. .................................................. #902
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Rigaku Americas Corporation ......................................................... #830
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The Royal Society journals offer rigorous, constructive peer review; open access options; promotion by a dedicated press office; and broad dissemination to an international audience. To find out more, please visit the Royal Society Publishing booth 217 where Raminder Shergill will be happy to answer your questions. Alternatively, visit our website at http://royalsociety.org/journals

SAES Group ............................................................................. #705
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Society of Physics Students ....................................................... #322
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The Society of Physics Students offers workshops, meetings and other resources that help to transform physics students into career scientists. SPS funnels hundreds of undergraduates into APS student memberships, and is managing the upcoming PhysCon 2016 meeting the world’s largest gathering of physics undergraduates November 3-5 in San Francisco, CA.

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Sumitomo (SHI) Cryogenics of America .................................. #711, 713
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Tabor Electronics is a world-leader in the test and measurement industry. The company’s extensive product portfolio includes signal amplifiers, pulse, function and arbitrary waveform generators, waveform creation software and more, in various platforms, interfaces and frequency ranges. Technologically advanced; featuring the highest levels of performance, reliability, and most of all, price-competitiveness, they are sought-after in a diverse array of applications. In the last 2 years, Tabor was the vendor of choice for many physics labs around the world, especially with our WX2184- four channels, 2.3G/s AWG.

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