Winter 2014 Newsletter

A Message from the Chair

This Newsletter outlines the many DMP sessions and activities at the upcoming March Meeting, the recipients of the Adler Award and McGroddy Prize, the new APS Fellows who were nominated through the DMP, the DMP student travel award winners, and the newly elected members of the DMP Executive Committee.

Now is the time to propose new Focus Topics for the 2014 March Meeting by contacting John Mitchell, who will be the DMP Program Chair for the 2015 March Meeting in San Antonio, Texas. The DMP focus topics provide an opportunity to gather related talks in distinct and well-defined focus sessions on topics of intense interest; they also provide the opportunity to mix invited and contributed talks in the same forum. Your colleagues will appreciate and benefit from your suggestions, so please see the detailed instructions below and send John Mitchell (mitchell@anl.gov) your ideas. After the new focus topics are announced later this year, please consider suggesting invited speakers to the organizers, so that the sessions will include the best possible invited program.

This is also a time to nominate distinguished members of our community for the David Adler Lectureship Award in the Field of Materials Physics, and the James C. McGroddy Prize for New Materials. Both of these awards bring high visibility and recognition to the recipients, so please consider who among your colleagues might be deserving and then put together a nomination packet. See http://www.aps.org/programs/honors/ for details of the nomination processes.

As will be immediately evident from the March Meeting program, materials physics is an exciting and growing field. The DMP membership contributes enormously to every aspect of the field, and the DMP Executive Committee members are very pleased that we can play a role.

We all look forward to seeing you in Denver,
David G. Cahill, Chair
Division of Materials Physics
Call for DMP Focus Session Topics for 2015 APS March Meeting

The Division of Materials Physics organizes a large number of Focus Topics for each APS March Meeting. A Focus Topic generally consists of a series of sessions, each of which is typically seeded with one invited talk, the remainder of the session being composed of contributed talks (see http://www.aps.org/units/dmp/newsletters/summer2013.cfm for a list of Focus Topics for the 2013 March Meeting). While many Focus Topics are continued from year to year, some are removed and some new topics are added in fields of current interest.

We are now soliciting new ideas for Focus Topics for the 2015 March Meeting, and we hope you will send suggestions. Your suggestions should provide the following information:

- Title of the Focus Topic
- The nominator’s name, affiliation, phone number and e-mail address
- Suggestions for possible organizers
- A brief description of the scope of the topic.

Please send your suggestions by March 15 to John Mitchell (mitchell@anl.gov), who will be the DMP Program Chair for the 2015 meeting. Suggestions received after March 15 will be reviewed by the DMP Executive Committee if time allows.

March Meeting: Location

The 2014 March Meeting of the APS will take place, March 3-7, 2014 in the Colorado Convention Center, Denver, Colorado. All scientific sessions will be in the Baltimore Convention Center but events and activities may be in Colorado Convention Center or the Hilton Baltimore Hotel. Check event details for time and place.

For further information see: http://www.aps.org/meetings/march/index.cfm

For the DMP sponsored sessions see: http://meetings.aps.org/Meeting/MAR14/sessionindex2?SponsorID=DMP

March Meeting: DMP Sponsored Meetings

The Division of Materials Physics will sponsor the following meetings during the 2014 March meeting in Denver, CO. This is your opportunity to interact with the Executive Committee and to become informed of the activities of the Division.

Tuesday, March 4
DCMP/DMP New Fellows & Award Winners Reception
5:30 p.m. - 7:00 p.m.
Sheraton Denver Downtown
Plaza Ballroom E

DMP Business Meeting
7:00-8:00pm
Sheraton Denver Downtown, Plaza Court 4
The American Physical Society-Division of Materials Physics
Ovshinsky Student Travel Awards

The Ovshinsky Student Travel Awards have been established to assist the career of student researchers. The Awards are named after Iris and Stanford Ovshinsky who had a very strong interest and commitment to scientific education. The awards have been endowed by the Ovshinsky family, their colleagues at Energy Conversion Devices (ECD) companies and all their numerous friends from many social, intellectual and business relationships.

The Ovshinsky Student Travel Awards will be presented at the DCMP/DMP New Fellows and Award Winners Reception, Tuesday, March 4, 5:30 p.m. in the Plaza Ballroom E, Sheraton Denver Downtown

We are extremely grateful to the Ovshinsky family for this award. Special thanks go to Prof. Brian Schwartz who has made this award possible and for all his efforts on behalf of Materials Physics over the years.

The winners of the 2014 Ovshinsky Student Travel Awards for Materials Physics are:

<table>
<thead>
<tr>
<th>NAME</th>
<th>INSTITUTION</th>
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</thead>
<tbody>
<tr>
<td>M. Brahlek</td>
<td>Rutgers University</td>
</tr>
<tr>
<td>S. Chi</td>
<td>University of British Columbia</td>
</tr>
<tr>
<td>A. Larson</td>
<td>University of New Hampshire</td>
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<tr>
<td>D. Nieto Simavilla</td>
<td>Illinois Institute of Technology</td>
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<tr>
<td>A. O’Hara</td>
<td>The University of Texas at Austin</td>
</tr>
<tr>
<td>J. Song</td>
<td>Harvard University and MIT</td>
</tr>
<tr>
<td>J. Suh</td>
<td>University of California, Berkeley</td>
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<tr>
<td>I-C. Tung</td>
<td>Northwestern University</td>
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Award and Prize Winners

James C. McGroddy Prize for New Materials

Zhong Lin Wang  
Georgia Institute of Technology  
“For seminal contributions to the synthesis, fundamental understanding, and applications of ZnO nanostructures in sensing, energy harvesting, and piezotronics.”

David Adler Lectureship Award:

Paul Canfield  
Iowa State University  
"For his development and elucidation of superconductivity in magnesium diboride and iron pnictide compounds, and his outstanding mentoring and enthusiastic communication of the excitement and importance of Materials Physics.”
2013 Fellows nominated by DMP:

Berger, Claire  
Georgia Institute of Technology  
Citation: For seminal contributions to the development of epitaxial graphene electronics

Carroll, David  
Wake Forest University  
Citation: For pioneering studies in determining the electronic structure of nanoscale materials and their defects and interfaces through the use of scanning probes leading to applications in electroactive polymer nanocomposites

Fisher, Ian R.  
Stanford University  
Citation: For pioneering research in the electronic properties and crystal growth of quantum materials

Gruverman, Alexei  
University of Nebraska  
Citation: For pioneering contribution to the development of piezoresponse force microscopy as a probing and controlling tool of nanoscale phenomena in ferroelectric and piezoelectric heterostructures

Kagan, Cherie R.  
University of Pennsylvania  
Citation: For seminal contributions to the development of epitaxial graphene electronics

Krivaneck, Ondrej L.  
Nion Company  
Citation: For seminal contributions to advancing the microscopy and spectroscopy of materials through innovative electron optics

Kronik, Leenor  
Weizmann Institute of Science  
Citation: For path-breaking work relevant to central issues in interfacial and solid state science, which has led to new understandings in materials and interface physics

Li, Qiang  
Brookhaven National Laboratory  
Citation: For his contributions to both basic and applied aspects of high-temperature superconductivity

Liu, Jie  
Duke University  
Citation: For contributions to nanoscale chemistry, especially the controlled synthesis and chemical modification of carbon nanotubes with enhanced properties for numerous applications

McCarty, Kevin F.  
Sandia National Laboratories  
Citation: For pioneering experimental explorations of the dynamics of ceramic and metal surfaces
Neaton, Jeffrey B.
Lawrence Berkeley National Laboratory
Citation: For fundamental contributions to the understanding of phase behavior, electronic structure, and transport properties of condensed matter, particularly multiferroics, nanostructures, and materials for energy conversion and storage

Palstra, Thomas T.M.
University of Groningen
Citation: For pioneering experiments in superconductivity and magnetism giving rise to various discoveries in strongly-correlated oxides, heavy-fermion systems and organics

Pan, Xiaoqing
University of Michigan
Citation: For pioneering contributions and innovative application of electron microscopy to probe and understand the effects of boundary conditions on ferroelectricity, including polarization mapping and domain dynamics, with atomic resolution

Wang, Wei-Hua
Chinese Academy of Science
Citation: For significant contributions to the understanding of the physical properties of metallic glasses, in particular, the development of the microscopic mechanisms of metallic glass formation and their mechanical properties

Zinkle, Steven J.
Oak Ridge National Laboratory
Citation: For significant contributions to the fundamental understanding of radiation effects in metallic and ceramic materials

Zuo, Jian-Min
University of Illinois
Citation: For major contributions to the development of electron nanodiffraction and coherent diffraction for quantitative atomic structural analysis, and to their applications in fundamental understanding of nanoscale structural physics in solids, solid interfaces and surfaces
March Meeting: DMP Sponsored Symposia & Special Events

Sponsoring Units: DMP
Room: 205; Monday, March 3, 2014 2:30PM – 5:30PM

2:30PM
D12.00001: Oxide Materials
Invited Speaker: Mark Asta, Univ of California - Berkeley

3:06PM
D12.00002: Using your own computer to search for novel materials (with a little help from the aflowlib.org consortium online library)
Invited Speaker: Stefano Curtarolo, Duke University

3:42PM
D12.00003: Computational Discovery and Design of Two-Dimensional Materials for Energy Technologies
Invited Speaker: Richard G. Hennig, Cornell University

4:18PM
D12.00004: Random search - a tool for exploring dense matter
Invited Speaker: Chris Pickard, University College London

4:54PM
D12.00005: The `Missing Compounds' affair in functionality-driven material discovery
Invited Speaker: Alex Zunger, University of Colorado

II. Lunch with the Experts (Graduate Students)
Room: Four Seasons Ballroom 2-3; Tuesday, March 4, 2014 12:30 PM - 2:00 PM

Graduate students may sign up to enjoy a complimentary box-lunch while participating in an informal discussion with an expert on a topic of interest to them.

Division on Materials Physics (DMP) Sponsored Topics:
Multifunctional materials and spintronics
Chris Palmstrøm, University of California, Santa Barbara
Physics of Cancer
Clare Yu, University of California, Irvine
Functional Materials
Ivan Schuller, University of California, San Diego
Superconducting Materials Growth and Design
Athena Safa-Sefat, Oak Ridge National Laboratory
Computational Materials Design
Bruce Harmon, Iowa State and Ames Laboratory
III. Session J55: Invited Session: Buckley / McGroddy / Adler / IUPAP
YSP/ Nicholson Prize Session
Sponsoring Unit: DCMP, DMP
Room: Four Seasons Ballroom I; Tuesday, March 4, 2014 2:30PM - 5:30PM

2:30PM
J55.00001: Oliver E. Buckley Prize: Graphene and Beyond
Invited Speaker: Philip Kim, Columbia University

3:06PM
J55.00002: James C. McGroddy Prize: Piezotronics of ZnO Nanomaterials
Invited Speaker: Zhong Lin Wang, Georgia Institute of Technology

3:42PM
J55.00003: David Adler Lectureship Award: A Chance to Grow
Invited Speaker: Paul Canfield, Iowa State University

4:18PM
J55.00004: IUPAP Young Scientist Prize: Neutron scattering in magnetism
Invited Speaker: Clarina de la Cruz, Oak Ridge Nat Lab

4:54PM
J55.00005 : Dwight Nicholson Medal Lecture: Science and Society
Invited Speaker: E. Dan Dahlberg, University of Minnesota

IV. Session K61: DMP Business Meeting
Sponsoring Unit: DMP
Room: Sheraton Denver Downtown Plaza Court 4; Tuesday, March 4, 2014 7:00PM – 8:00PM

7:00PM
K61.00001: DMP Business Meeting

V. Session M14: Invited Session: Physics for Everyone
Sponsoring Units: DMP
Room: 301, 303; Wednesday, March 5, 2014 11:15AM – 2:15PM

11:15AM
M14.00001: The Universe: Beginnings, Ending and Our Miserable Future
Invited Speaker: Lawrence Krauss, Arizona State University

11:51AM
M14.00002: Attosecond Physics - Probing and Controlling Matter on Its Natural Time Scale
Invited Speaker: Anthony F. Starace, University of Nebraska

12:27PM
M14.00003: Quantum Matter Meets Living Matter
Invited Speaker: Ronald Walsworth, Harvard University

1:03PM
M14.00004: Journey to the Center of the Earth
Invited Speaker: David Stevenson, Caltech

1:39PM
M14.00005: Higgs and Beyond
Invited Speaker: James Proudfoot, Argonne National Laboratory
VI. Session T40: Invited Session: Collective Excitations in Cuprates
Sponsoring Unit: DCMP, DMP
Room: Mile High Ballroom 2B-3B; Thursday, March 6, 2014 11:15AM - 2:15PM

11:15AM
T40.00001: Pairing, Pair-Breaking, and the Critical Temperature in the Cuprate Superconductors
Invited Speaker: Theodore Reber, Brookhaven National Lab

11:51AM
T40.00002: Lattice, spin, and charge excitations in cuprates
Invited Speaker: Wei-Sheng Lee, Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory

12:27PM
T40.00003: Doping evolution of the magnetic excitations in the cuprates and its implications for high temperature superconductivity
Invited Speaker: Mark P.M. Dean, Brookhaven National Laboratory

1:03PM
T40.00004: Fluctuating Charge Density Waves in a Cuprate Superconductor
Invited Speaker: Nuh Gedik, Massachusetts Institute of Technology

1:39PM
T40.00005: Quasiparticle dynamics and competing order in cuprate superconductors
Invited Speaker: Joseph Orenstein, University of California, Berkeley/Lawrence Berkeley Lab

VII. Session W39: Invited Session: Emergent Symmetries in Magnetic and Ferroelectric Systems
Sponsoring Units: DCMP, DMP
Room: Mile High Ballroom 2A-3A; Thursday, March 6, 2014 2:30PM - 5:30PM

2:30PM
W39.00001: Critical Properties of the Kitaev-Heisenberg Model
Invited Speaker: Natalia B. Perkins, University of Wisconsin

3:06PM
W39.00002: Spin dynamics in layered honeycomb iridates: implications for Kitaev physics
Invited Speaker: Sungkyun Choi, University of Oxford

3:42PM
W39.00003: Emergent Criticality and Ricci Flow in a 2D Frustrated Heisenberg Model
Invited Speaker: Peter P. Orth, Karlsruhe Institute of Technology (KIT)

4:18PM
W39.00004 : Z₂ x Z₃ Symmetry of Multiferroic Vortices
Invited Speaker: Sang-Wook Cheong, Rutgers University

4:54PM
W39.00005: Hidden Monopolar Order in Magnetoelectrics
Invited Speaker: Nicola Spaldin, ETH Zurich
March Meeting: APS Special Symposia & Events

Session B36: Invited Session: Visa and Immigration Policies for 21st Century Science
Sponsor: FIP
Chair: Amy Flatten, Director of International Affairs, American Physical Society
Room: 703; Monday, March 3, 2014 11:15AM – 2:15PM

11:15AM
B36.00001: George Washington University Visa Project--Streamlining Our Visa and Immigration Systems for Scientists and Engineers
Invited Speaker: Albert H. Teich, George Washington University

11:51AM
Invited Speaker: Kathie Bailey, Director, Board on International Scientific Organizations, National Academy of Sciences

12:27PM
B36.00003: Improvements to the Visa Application System: Serving the S\&T Community, Promoting The American Economy and Keeping Us Safe
Invited Speaker: Mathew Gillen, Visa Office, Bureau of Consular Affairs, U.S. Department of State

1:03PM
B36.00004: Panel Discussion and Audience Q&A
Invited Speaker: George Crabtree, Argonne National Laboratory, Univ. of Illinois at Chicago

Session B38: Invited Session: Women and the Manhattan Project
Chair: Margaret Murnane, University of Colorado Boulder
Room: 709/711; Monday, March 3, 2014 11:15AM – 2:15PM

11:15AM
Invited Speaker: Denise Kiernan, Author, Touchstone/Simon & Schuster

11:51AM
B38.00002: Women and the Hanford Site
Invited Speaker: Michele Gerber, Gerber Group Consulting

12:27PM
B38.00003: After the War: Stories of the women who did scientific and technical work on the Manhattan Project
Invited Speaker: Ruth Howes, Retired

1:03PM
Abstract: B38.00004: Preserving the Manhattan Project
Invited Speaker: Cynthia Kelly, Atomic Heritage Foundation

1:39PM
B38.00005: Then and Now: Women Respond to the Manhattan Project -- an illustrated talk
Invited Speaker: Olivia Fermi, M.A.
Session D38: Invited Session: Secrecy and Science
Sponsor: FPS
Chair: Arian Pregezer
Room: 709/711; Monday, March 3, 2014 2:30PM - 5:30PM

2:30PM
D38.00001 : Secrecy versus Openness: Historical Perspectives
Invited Speaker: George Dyson

3:06PM
D38.00002 : The Growing Tension Between Openness and Risk in the Life Sciences
Invited Speaker: David A. Relman, Stanford University

3:42PM
D38.00003 : Intellectual Property and Corporate Research: Threats to Scientific Openness
Invited Speaker: Paul McEuen, Cornell University

4:18PM
Abstract: D38.00004 : Espionage and Science
Invited Speaker: Bruce Held, NNSA

4:54PM
D38.00005 : Classified Peer Review: Challenges and New Opportunities
Invited Speaker: William (Brad) Martin, National Security Agency

Session E1: Prizes & Awards Ceremonial Session
Sponsor: APS
Room: 301-303; Monday, March 3, 2014 5:45PM – 6:45PM

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. The names of the awards and awardees will be included in the Meeting Program (Preamble). You may get a print version at the Meeting or view it online in February.

Session E2: Building Your Undergraduate Physics Career
Sponsor: APS
Room: Sheraton Denver Downtown Plaza Ballroom E; Monday, March 3, 2014 6:00PM – 8:00PM

In this interactive event for undergraduates, students will learn important lessons about career preparation, including skill building, networking, and developing "soft skills." Our expert panel of working physicists will be on hand to answer questions, offer advice, and share their stories. Light

Session E3: Welcome Reception
Sponsor: APS
Room: Four Seasons Ballroom; Monday, March 3, 2014 6:45PM - 8:15PM

Join colleagues and other meeting attendees to network and mingle. Light refreshments will be provided.
Session K0: Meet the APS Editors Reception  
Sponsor: APS  
Room: Sheraton Denver Downtown Plaza Court 4; Tuesday, March 4, 2014 7:00PM – 8:00PM  

The APS Journal Editors invite you to join them for conversation and light refreshments. The Editors will be available to answer questions, discuss your ideas, and listen to your comments about the journals. All are welcome to attend.

Session K61: DMP Business Meeting  
Sponsor: DMP  
Room: Grand Concourse; Tuesday, March 4, 2014 4:30PM – 6:00PM

Sponsor: FPS  
Chair: Micah Lowenthal, National Academy of Sciences  
Room: 709; Tuesday, March 4, 2014 8:00AM – 11:00AM  

8:00AM  
Abstract: F38.00001: 40 years of Landsat images: What we learned about science and politics  
Invited Speaker: Jeff Dozier

8:36AM  
F38.00002: Bringing the Crowd to Environmental Investigation and Monitoring  
Invited Speaker: John Amos

9:12AM  
F38.00003: Nuclear Verification from Space? Satellite Imagery in Support of Non-Proliferation and Arms Control  
Invited Speaker: Irmgard Niemeyer

9:48AM  
F38.00004: Earth Science Serving Society: Using NASA's environmental satellites to improve quality of life and strengthen the economy  
Invited Speaker: Lawrence Friedl

10:24 AM  
F38.00005: Panel Discussion

Session G36: Invited Session: Condensed Matter Physics in China  
Sponsor: FIP  
Chair: Esen Alp, Argonna National Laboratory  
Room: 703; Tuesday, March 4, 2014 11:15AM – 2:15PM  

11:15AM  
G36.00001: History, Present and Future of IoP and Solving the unsolvable integrable models  
Invited Speaker: Yupeng Wang

11:51AM  
G36.00002: Surface Studies of Ice  
Invited Speaker: Enge Wang
12:27PM
G36.00003: Pressure tuned novel states of new quantum materials
Invited Speaker: Changqing Jin

1:03PM
G36.00004: Introduction of BASIC (Beijing Advanced Sciences and Innovation Centre)
Invited Speaker: Hong Ding

1:39PM
Invited Speaker: Lu Yu

**Session G38: Invited Session: Graduate Education: Sustaining Thriving Programs by Embracing Challenges and Opportunities in the 21st Century**
Sponsoring Units: FEd
Chair: *Theodore Hodapp, American Physical Society*
Room: 709/711; Tuesday, March 4, 2014 11:15AM – 2:15PM

11:15AM
G38.00001: Highlights From the Second Conference on Graduate Education in Physics
Invited Speaker: Renee Diehl

11:51AM
G38.00002: Increasing Diversity in Physics at the PhD Level and Beyond
Invited Speaker: Keivan Stassun

12:27PM
G38.00003: The Landscape of Graduate Admissions: Surveying Physics Programs about Doctoral Admissions Practices
Invited Speaker: Geoff Potvin

1:03PM
G38.00004: The future of the graduate physics curriculum and exam structure
Invited Speaker: Michael Thoennessen

1:39PM
G38.00005: Preparing Graduate Students for Non-Academic Careers
Invited Speaker: Lawrence Woolf

**Session J38: Invited Session: Research and Opportunities at the DOE Nanoscaled Science and Research Centers**
Sponsoring Units: COM
Chair: *Fernando Camino, Brookhaven National Laboratory*
Room: 709/711; Tuesday, March 4, 2014 2:30PM – 5:30PM

2:30PM
J38.00001: Nanoscale Engineering of Structures and Devices on Surfaces
Invited Speaker: Esmeralda Yitamben

3:06PM
J38.00002: Computing Correlated Electrons: Roadmap and Roadblocks
Invited Speaker: Gonzalo Alvarez
3:42PM
J38.00003: The Role of Nanoscience and Nanotechnology in Addressing the World's Energy Challenges
Invited Speaker: James Dickerson

4:18PM
J38.00004: Nanoscience and nanofabrication at Argonne National Laboratory: The art of making small
Invited Speaker: Leonidas E. Ocola

4:54PM
J38.00005: Plasmonic Smart Windows: A New Invention from Berkeley's Molecular Foundry
Invited Speaker: Guillermo Garcia

Session L38: Invited Session: History of the Communication of Science to the Public
Sponsoring Units: FHP FOEP
Chair: Brian Schwartz, City University of New York
Room: 709/711; Wednesday, March 5, 2014 8:00AM – 11:00AM

8:00AM
L38.00001: The Establishment of Science Communication for the Public at the Royal Institution
Invited Speaker: Frank Burnet

8:36AM
L38.00002: Displaying Science: The Exhibits Revolution in Science and Natural History Museums, 1900-1990
Invited Speaker: Karen Rader

9:12AM
L38.00003: The Role of Living History in the Communication of Science to the Public
Invited Speaker: Susan Marie Frontczak

9:48AM
L38.00004: The Historical Role of the New York Times in the Communication of Science to the Public
Invited Speaker: Dennis Overbye

10:24AM
L38.00005: The Future of the New Media in the Communication of Science
Invited Speaker: Joseph Hanson

Session M33: Invited Session: Postdocs and the Application Process
Sponsoring Units: FGSA
Chair: David Anderson, University of Michigan
Room: 706; Wednesday, March 5, 2014 11:15AM – 1:03PM

11:15AM
M33.00001: Panel Discussion on Postdocs
Invited Speaker: Ronny Thomale

11:51AM
M33.00002: Participation in Panel Discussion
Invited Speaker: Candace Pfefferkorn
M33.00003: Panel Discussion on Postdocs
Invited Speaker: Paul Sokol
Session S12: Invited Session: Impacts of Physics Research on the Economy
Sponsoring Units: FPS
Chair: Pushpalatha Bhat, Fermi National Accelerator Laboratory
Room: 205; Thursday, March 6, 2014 8:00AM – 11:00AM

8:00AM
S12.00001: Physics for Knowledge and Economic Growth
Invited Speaker: Eric Isaacs

8:36AM
S12.00002: The Effects of Physics R\&D on the European Economy
Invited Speaker: David Lee

9:12AM
S12.00003: Lasers and their Economic Impact in the United States
Invited Speaker: Thomas Baer

9:48AM
S12.00004: Applications of Superconductivity and Impact on U.S. Economy
Invited Speaker: Venkat Selvamanickam

10:24AM
S12.00005: Panel Discussion

Session S38: Invited Session: Assessment Issues in Physics Education
Sponsoring Units: FEd
Chair: Eric Brewe, Florida International University
Room: 709/711; Thursday, March 6, 2014 8:00AM – 11:00AM

8:00AM
S38.00001: Foundations for Conceptualizing Assessment in Your Course
Invited Speaker: Eugenia Etkina

8:36AM
S38.00002: Research-based assessment instruments: Design, validation and interpretation
Invited Speaker: Wendy Adams

9:12AM
S38.00003: Colorado Learning about Science Survey for Experimental Physics (E-CLASS)
Invited Speaker: Heather Lewandowski

9:48AM
S38.00004: Using research-based assessment to improve teaching in your classroom and department:
New resources on the PER User's Guide
Invited Speaker: Adrian Madsen

10:24AM
S38.00005: TBA
Invited Speaker: Melissa Dancy
Session T38: Invited Session: Reichert Award Session: Preparing Students for the Transition from Instructional to Research Lab
Sponsoring Units: FEd
Chair: Heather Lewandowski, University of Colorado Boulder
Room: 709/711; Thursday, March 6, 2014 11:15AM – 2:15PM

11:15AM
T38.00001: Jonathan Reichert and Barbara Wolff-Reichert Award: Updating Lab Curricula via the Tom Sawyer method of painting a fence
Invited Speaker: Gabriel Spalding

11:51AM
T38.00002: Building Scholars One Mistake at a Time
Invited Speaker: Marty Johnston

12:27 PM
T38.00003: Results from a model of course-based undergraduate research in the first- and second-year chemistry curriculum
Invited Speaker: Gabriela Weaver

1:03PM
T38.00004: Capitalizing on Community: the Small College Environment and the Development of Researchers
Invited Speaker: M.R. Stoneking

1:39PM
T38.00005: Using instructional laboratories and research experiences in physics to build better people
Invited Speaker: Sean Robinson

Session W36: Invited Session: Panel Discussion: Increasing the Participation of Women in Physics--The Conferences for Undergraduate Women in Physics (CUWiP)
Sponsoring Units: CSWP
Chair: Theodore Hodapp, American Physical Society
Room: 703; Thursday, March 6, 2014 2:30PM – 7:18PM

2:30 0PM
W36.00001: Overview and History of CUWiP
Invited Speaker: Kevin Pitts

3:06PM
W36.00002: Initial findings from CUWiP
Invited Speaker: Eric Brewe

3:42PM
W36.00003: Hosting a CUWiP -- the fun and the challenges
Invited Speaker: Mette Gaarde

4:18PM
W36.00004: Panel Discussion on the Conferences for Undergraduate Women in Physics
Invited Speaker: Nicole Johnson
4:54PM
W36.00005: Panel Discussion on the Conferences for Undergraduate Women in Physics
Invited Speaker: Hsiu-Chuan Hsu

5:30PM
W36.00006: Panel Discussion on the Conferences for Undergraduate Women in Physics
Invited Speaker: Shannon Glavin

6:06PM
W36.00007: Panel Discussion on the Conferences for Undergraduate Women in Physics
Invited Speaker: Noelle Stiles

6:42PM
W36.00008: Panel Discussion on the Conferences for Undergraduate Women in Physics
Invited Speaker: Laurel Winter

Session W38: Invited Session: 20th Century Chinese Physicists and Physics
Sponsoring Units: FHP FIP
Chair: Danian Hu, City College of New York, CUNY
Room: 709/711; Thursday, March 6, 2014 2:30PM – 5:30PM

2:30PM
W38.00001: Chien-Shiung Wu: An Icon of Physicist and Woman Scientist in China
Invited Speaker: Yuelin Zhu

3:06PM
Invited Speaker: Xiaodong Yin

3:42PM
W38.00003: Mao and physics research in China in the 1950s-1960s: the H-bomb project and the Straton model
Invited Speaker: Tian Yu Cao

4:18PM
W38.00004: Some problems in the competition of high-temperature superconductivity research during the late 1980s
Invited Speaker: Bing Liu

4:54PM
W38.00005: A Brief History of the Institute of Theoretical Physics in the Chinese Academy of Sciences since 1978
Invited Speaker: Liu Jinyan
March Meeting: Premeeting Workshops

Professional Skills Development Workshop
Sheraton Denver Downtown Governor's Square 10; Sunday, March 2, 8:00 AM- 6:30 PM
Professional Skills Development workshops are designed to provide women physicists with professional training in effective negotiation, communication and leadership skills, as well as a special opportunity for networking. The primary workshop goal is to produce more women leaders in physics and to help these women achieve their full potential in the top ranks of their profession.

Energy Research Opportunities Workshop
Convention Center Room 301/302; Sunday, March 2 8:30 AM - 6:30 PM
This is a one-day workshop for graduate students and postdocs that highlights the contributions physics-related research can make towards meeting the nation's energy needs in environmentally friendly ways. The workshop is aimed at young physicists who are concerned about the environment and who would like to find ways to use their scientific and quantitative skills to help meet the challenges that the world faces.

The workshop features plenary talks by leaders in the field of energy research. After an overview talk, there are talks on different cutting-edge research areas. Each talk is aimed at the level of physics graduate students who are not experts in energy research. The goal of the workshop is to provide information to physics graduate students and postdocs on how they can contribute to energy and environmental solutions while doing exciting scientific research.

DPOLY Short Course
Multiscale Computational Approaches for Simulating Polymers from Atomistic to Mesoscale
Convention Center Room 103/105; Sunday, March 2 9:00 PM- 5:00 PM
The course will present recent advances in simulating polymers capturing the multiple length and time scales that determine their properties. The challenges that arise from the nature of polymers, followed by introduction of computational techniques including Monte Carlo and molecular dynamics simulations carried out on multiple length scales from atomistic simulations to coarse grained models as well as density functional theory methods will be discussed. Coarse graining encapsulating simple bead-spring methods to new approaches, which capture the interactions on the atomistic scale and transpose them to a larger length scale will be presented. The basic concepts will be followed by presentations of numerical simulations packages and new computer architectures for practical advice for setting up and running simulations.

ISS Workshop
International Space Station (ISS) Research Results and Post-Graduate Research Opportunities in Physical Sciences
Convention Center Room 401/402; Sunday, March 2, 2014 1:30 PM - 6:00 PM
The purpose of this Workshop is to allow members of the APS, and in particular, students and postdocs, to gain some familiarity with the interesting gravity-dependent phenomena that have been discovered from physical sciences research carried out on the International Space Station (ISS). The speakers will cover recent results from experiments in fluid physics, complex fluids and combustion science.

The Workshop will provide a better understanding of existing and planned ISS research capabilities and current funding opportunities. Attendees will have an opportunity to interact with NASA flight experiment Principal Investigators and ISS Program Office staff in a panel discussion at the conclusion of the session. A noteworthy participant will be an ISS astronaut with experience in operating Physical Sciences experiments on the ISS.
Careers in Physics Workshop
Convention Center Room 404; Sunday, March 2 4:00 PM- 7:00 PM
Are you a physics PhD graduate or working towards a physics PhD, and thinking about your next steps? Are you looking for guidance on how to discover a career which will tap into your talents, abilities, and interests, as well as pay the bills? If so, don't miss out on this great presentation at the APS March Meeting in Denver.

March Meeting: Tutorials

Sunday, March 2
Convention Center
Tutorial Program Chair: March Meeting Program Chairs

Morning Tutorials
Convention Center
8:30 a.m. - 12:30 p.m.

Tutorial #1: Density Functional Theory
Room 201
Tutorial #2: Spintronics
Room 203
Tutorial #3: Photovoltaic Research Topics in a Changing World
Room 205
Tutorial #4: Graphene
Room 207

Afternoon Tutorials
Convention Center
1:30 p.m. - 5:30 p.m.

Tutorial #5: Assessing density functional theory and Many body perturbation theory from ABINIT
Room 201
Tutorial #6: Physics and the Brain Initiative
Room 203
Tutorial #7: Topological Materials – Registration Closed
Room 205
Tutorial #8: MATLAB for Physics Education and Research
Room 207

March Meeting: Editorial Events:

Session K0: Meet the APS Editors Reception
Sponsor: APS
Room: Sheraton Denver Downtown Plaza Court 4; Tuesday, March 4, 2014 7:00PM – 8:00PM

The APS Journal Editors invite you to join them for conversation and light refreshments. The Editors will be available to answer questions, discuss your ideas, and listen to your comments about the journals. All are welcome to attend.
DMP Executive Committee

The Executive Committee Officers for the 2014-2015 year, who begin their terms immediately following the March meeting in Denver, are:

Chair: Laura Greene (03/14-03/15)
Univ. of Illinois Urbana-Champaign
Chair-Elect: John Mitchell (03/14-03/15)
*Vice Chair: Michael Flatté (03/14-03/15)
Past Chair: David Cahill (03/14-03/15)
Univ. of Illinois Urbana Champaign
*Secretary/Treasurer: Robert Nemanich (03/14-03/17)
Councilor: James Robert Chelikowsky (01/13 - 12/16)
University of Texas, Austin

Members-at-Large:

Bruce Harmon (03/11 - 03/14)
Ames Laboratory
Charles Ahn (03/11 - 03/14)
Yale University
Mark Hybertsen (03/12 - 03/15)
Brookhaven National Laboratory
Susanne Stemmer (03/12 - 03/15)
University of California, Santa Barbara
Julie Borchers (03/13 - 03/16)
NIST
David Tanner (03/13 - 03/16)
University of Florida
* Emilia Morosan (03/14-03/17)
Rice University
*Jeffrey Neaton
University of California, Berkeley/Lawrence Berkeley National Laboratory

*Newly elected