



DCMP Newsletter

Dear DCMP Members,

The goal of the annual DCMP Newsletter is to share general interest information that is important to our members. The 2013 newsletter announces the fall 2012 DCMP election results, the winners of the Buckley, and Davison-Germer Prizes that will be awarded at the 2013 March Meeting, and the DCMP APS Fellows selected at the 2012 March meeting. The newsletter also provides a summary of the 2013 APS March Meeting events that DCMP either organized or is co-sponsoring. The 2013 March Meeting will take place in Baltimore from Sunday March 17 to Friday March 22. The DCMP invited sessions cover a wide variety of exciting scientific themes that reflect the vitality of our field, as well as award sessions and sessions devoted to innovative outreach or education efforts. We invite you to participate in our Tuesday afternoon DCMP-co-sponsored reception and in the business meeting which follows. The reception and business meeting will take place at the Hilton Baltimore in Ballrooms 5 and 2 respectively.

You can find detailed information about the 2013 APS March Meeting Program at www.aps.org. We would like to draw your attention to the Kavli Foundation Special Session on 'Forefront Physics for Real World Problems: Energy, Climate, and the Environment' which will be chaired by APS president Michael Turner and include a talk by former energy secretary Stephen Chu. Barbara Jones, the DCMP and March Meeting Chair, spearheaded the team that organized the 2013 Kavli Session, which will take place in the middle of the meeting on Wednesday afternoon March 20th from 2:30 – 5:30 pm. There have been special Kavli sessions at the past few March Meetings, and the intention is that they will become a regular feature. The DCMP executive welcomes member suggestions on attractive topics for the Kavli Session planned for the 2014 March meeting.

The DCMP invited symposia and special events listed below involve more than 200 invited speakers. DCMP members who enjoy the high quality of these sessions owe a debt of gratitude to those who have taken the time to provide thoughtful nominations. All

members are encouraged to consider making invited session nominations for the 2014 March meeting via the APS website. The deadline for nominations is the 2013 Labor Day weekend. The 2013 DCMP program will also include contributed sessions with thousands of additional presenters. You will be able to choose from almost 9,000 presentations overall.

The March Meeting is your meeting and the DCMP executive committee hopes that you will enjoy it. Suggestions for improvements are always welcome.

— *Allan MacDonald DCMP Chair-Elect & March Meeting Program Chair*

DCMP Election Results

Here are the results of the 2012 Division of Condensed Matter Physics election for Vice-Chair, Councilor, and Members-at-Large of the Executive Committee:

<i>Vice-Chair:</i>	Sharon Glotzer
<i>Members-at-Large:</i>	Andrew Kent
	Philip Kim
	Peter Littlewood

Approximately 20% of the 5,636 DCMP members voted in this election. I would like to congratulate those elected, and express my gratitude to all those who agreed to stand as candidates. The Division benefits greatly from our colleagues who are willing to run for office and serve the condensed matter physics community.

I would also like to thank our colleagues who will be leaving office in 2013: Sam Bader (Past Chair), Yves Chabal, Peter Johnson, and Charles Kane (Members-at-Large). All of them have performed valuable service for the Division.

Finally, sincere thanks to Andrea Liu, Chair of the Nominating Committee; to Shelley Yi, Jim Egan, Delong Yang and their IT colleagues at the APS for their help with the online component of the election; and to Leanne Poteet from APS Special Publications for preparing and mailing the paper ballots.

—*Nick Bonesteel, DCMP Secretary-Treasurer*

New DCMP Sponsored APS Fellows Selected in 2012

Aizenberg, Joanna [2012]

Harvard University

Citation: For research in biomineralization and the control of templated nucleation and growth of crystals

Balicas, Luis M. [2012]

Florida State University

Citation: For experimental studies of unconventional superconductors, heavy fermion materials, and frustrated magnetic systems

Bao, Wei [2012]

Renmin University of China

Citation: For neutron scattering studies of the magnetic structure and spin dynamics of highly correlated electron systems

Behnia, Kamran [2012]

LPEM-ESPCI

Citation: For high-resolution thermal transport measurements to understand unconventional quantum states of matter

Bunker, Bruce A. [2012]

University of Notre Dame

Citation: For contributions to the development of X-ray absorption spectroscopy and applications to complex nanoscale materials

Chi, Cheng-Chung [2012]

National Tsing Hua University

Citation: For studies of nonequilibrium superconductivity and quasiparticle dynamics using tunneling and ultrafast pulse experiments

Collins, Reuben T. [2012]

Colorado School of Mines

Citation: For contributions to understanding optical properties of high temperature superconductors, complex semiconductor heterostructures, porous silicon and hybrid organic-inorganic heterostructures

Deveaud, Benoit [2012]

Ecole Polytech Federal

Citation: For demonstration of Bose Einstein condensation of exciton polaritons in microcavities and developments in semiconductor ultrafast optics

Di Ventra, Massimiliano [2012]

University of California, San Diego

Citation: For contributions to the theory of electronic transport in nanoscale conductors

Eckern, Ulrich [2012]

University of Augsburg

Citation: For contributions to the theory of nonequilibrium superconductivity, quantum dissipation in Josephson junctions, and phase coherence in disordered and interacting mesoscopic systems

Eriksson, Mark A. [2012]

University of Wisconsin, Madison

Citation: For contributions to the understanding and development of nanodevices for spintronics and quantum information applications

Felser, Claudia [2012]

Johannes Gutenberg University

Citation: For creating and understanding new Heusler materials with spintronic and energy functionalities

Garg, Anupam K. [2012]

Northwestern University

Citation: For theory and predictions of molecular magnetism and macroscopic quantum phenomena

Govorov, Alexandre O. [2012]

Ohio University

Citation: For contributions to the understanding of optical properties of semiconductor and metal nanostructures, including elucidation of the optical Aharonov-Bohm and nonlinear Fano effects

Hau, Lene V. [2012]

Harvard University

Citation: For slowing, stopping, and storing light pulses in Bose-Einstein condensates of laser cooled atoms and converting light into a matter imprint then resurrecting the light

Heinrich, Andreas J. [2012]

IBM Almaden Research Center

Citation: For the development of scanning tunneling microscope methods to study individual magnetic atoms by spin-excitation spectroscopy and nanosecond pump-probe techniques

Julian, Stephen R. [2012]

University of Toronto

Citation: For research on unconventional metallic and superconducting states of heavy fermion metals and strongly correlated oxides

Kim, Yong-Baek [2012]

University of Toronto

Citation: For contributions to the theory of quantum spin liquids in frustrated magnets and correlated electron materials

Kunchur, Milind N. [2012]

University of South Carolina

Citation: For development of short-pulse techniques and studies of dissipation in superconductors

Morr, Dirk Klaus [2012]

University of Illinois, Chicago

Citation: For contributions to the theory of strongly correlated electron materials and complex phenomena at the nanoscale

Natelson, Douglas [2012]

Rice University

Citation: For experiments in atomic- and molecular-scale junctions

Popovic, Dragana [2012]

Florida State University

Citation: For experimental studies of glassy behavior in strongly correlated systems near the metal-insulator transition

Riseborough, Peter S. [2012]

Temple University

Citation: For contributions to quantum statistical mechanics of non-linear and non-equilibrium phenomena and correlated electron systems

Santos, Michael B. [2012]

University of Oklahoma

Citation: For growth of compound semiconductor nanostructures and spin transport

Schonenberger, Christian [2012]

University of Basel

Citation: For charge transport experiments in metallic, semiconducting and molecular nanoelectronics

Valla, Tonica [2012]

Brookhaven National Laboratory

Citation: For photoelectron spectroscopy studies of the electronic structure and collective dynamics of strongly correlated materials

Wang, Nan Lin [2012]

Chinese Academy of Science

Citation: For contributions to the understanding of correlated electron systems, particularly iron-based superconductors

Wolkow, Robert A. [2012]

University of Alberta

Citation: For contributions to atomic-scale characterization and fabrication processes with an emphasis on silicon surfaces

Xiong, Peng [2012]

Florida State University

Citation: For contributions to the understanding of magnetotransport in nanostructured superconductors, ferromagnets, and their hybrids

Yacoby, Amir [2012]

Harvard University

Citation: For experiments of low-dimensional coherent transport, local imaging, and quantum computation in mesoscopic devices

Zimanyi, Gergely T. [2012]

University of California, Davis

Citation: For contributions to the theory of strongly correlated systems, vortices, and magnetic hysteresis

DCMP-Sponsored Prize Winners for 2013

Oliver E. Buckley Prize (DCMP)

John Slonczewski, *IBM Research Staff Emeritus*

Luc Berger, *Carnegie Mellon University*

For predicting spin-transfer torque and opening the field of current-induced control over magnetic nanostructures.

Davisson-Germer Prize (DAMOP & DCMP)

Geraldine L. Richmond, *University of Oregon*

For elegant elucidation of molecular structure and organization at liquid-liquid and liquid-air interfaces using nonlinear optical spectroscopies.

DCMP March Meeting Invited Sessions and Special Events

DCMP INVITED TALK SESSIONS

MONDAY MARCH 18

8:00	Spin Caloritronics (GMAG) Novel Superconductivity in Fe Selenide Superconductors Second Landau Level: Quantum Phases
11:15	Logical Spin Qubits for Quantum Computation 2D Charge Ordering in Under-doped Cuprates Frustration and Quantum Criticality Cold Atoms on Higher Orbital Bands
14:30	Spin-Orbit-Controlled Ground States in Single-Crystal Iridates Coulomb Drag and Exciton Condensation in Semiconductor and Graphene Double Layers
17:45	APS Prizes and Awards Ceremonial Session Hilton Baltimore / Key Ballroom 8
18:45	Welcome Reception Room: Exhibit Hall D
19:30	Special Outreach Session: Meso-physics Room 310

TUESDAY MARCH 19

8:00	Physics from the Laboratory to the Universe: Davisson Germer/Heineman/Onsager/Lilienfeld Prizes (GSPN) Low Energy Excitations in Iridates
11:15	Anderson-Higgs Boson in Condensed Matter Physics Superconductivity in Topological Insulators
14:30	Buckley Prize Session (GMAG) Topological States and Plasmonics in Graphene Colloidal Carbon Nanotubes (GSPN)
17:30	DCMP/DMP New Fellows and Award Winner Reception Hilton Baltimore / Key Ballroom 5
19:00	DCMP Business Meeting Hilton Baltimore/Holiday Ballroom 2

WEDNESDAY MARCH 20

8:00	Tunable, Intense, Coherent THz Emission From a High Temperature Superconductor Interaction-Driven Quantum Hall States in Graphene Novel Quantum Phases in Artificial Lattices and Networks
11:15	Quantum Computing With Diamond (GQI) Electron Matter in FE-Based Superconductors
14:30	Kavli Session: Forefront Physics for Real World Problems: Energy, Climate, and the Environment Controlling Magnetism Without Magnetic Fields (GMAG) New Developments in Organic Spintronics Nonequilibrium Relaxation and Aging in Materials (GSPN)

THURSDAY MARCH 21

8:00	Superfluids under Nanoscale Confinement Valley Polarization Physics From Cells to Tissues: The Material Properties of Living Matter
11:15	Topological Insulators: Surface State Transport Hidden Order in URu ₂ Si ₂ and Related Compounds (DCP) Application of the First-Principles and Atomistic Methods to Nuclear Detection Materials (DCOMP)
14:30	Quantum Reservoir Engineering and Feedback (GQI) Superconductivity at High Pressure (DMP) Theory of Interacting Topological Insulators Physics of Next Generation DNA Sequencing (DPOLY) Many Body Physics in Quantum Gases (DAMOP)
17:45	Nobel Prize Session: 2012 Nobel Prize Perspectives Convention Center Ballroom Foyer

FRIDAY MARCH 22

8:00	New Perspectives on Kondo Systems Magnetism and non-Fermi Liquid in Heavy Fermion Metals New Directions in Fractional Quantum Hall Phenomena (DCOMP)
11:15	Time- and Angle- Resolved Photoemission Spectroscopy of Complex Materials (GIMS) Jamming and Rheology of Disordered Systems (GSPN) Integration of Research and Teaching Excellence: Cottrell Scholars