



DCMP Newsletter

APS Division of Condensed Matter Physics, DCMP Winter 2019 Newsletter

Important Deadlines and Dates:

Boston APS March Meeting	March 4 – March 8, 2019	Boston Convention and Exhibition Center (BCEC)
DCMP/DMP New Fellows & Award Winners Reception	5:30-7:30 pm, March 5, 2019	Westin Boston Waterfront, Grand Ballroom B
DCMP Business Meeting	7:00-8:00 pm, March 5, 2019	BCEC, Room 253B

A Note from the DCMP Chair

The March Meeting this year in Boston will be the biggest yet, with more than 11,000 abstracts submitted. There will be 1072 invited talks in 116 invited talk sessions, 453 Focus Sessions, 292 Oral Sessions, and three poster sessions, promising something to match all interests. In an effort to highlight the breadth and diversity of research appearing at this year's March Meeting, the Kavli Symposium, "From Unit Cell to Biological Cell," on Wednesday spans the length scales of the complex systems we study. A session focused on the National Quantum Initiative, "Enabling Quantum Leap," will be held on Monday evening. On Tuesday evening, you are invited to help us celebrate the newly elected DCMP fellows and to attend our DCMP business meeting. I hope you are looking forward to the meeting - see you there!

Paul Canfield

The 2019 APS March Meeting

The 2019 APS March Meeting will be held in Boston, Massachusetts from Monday, March 4 to Friday, March 8, 2019. The 2019 March Meeting headquarters hotel is the Westin Boston Waterfront, and the 2019 March Meeting venue is the Boston Convention and Exhibition Center (BCEC).

The complete 2019 March Meeting bulletin is available in electronic form. For more information, see: <http://www.aps.org/meetings/march/index.cfm>

For DCMP-sponsored sessions, see:

<http://meetings.aps.org/Meeting/MAR19/SessionIndex2?SponsorID=DCMP>

2018 DCMP Election Results

The results of the 2018 Division of Condensed Matter Physics election for Vice Chair, Secretary-Treasurer, and Members-at-Large of the executive committee are:

Vice Chair: David Campbell

Secretary-Treasurer: James Sauls

Members-at-Large: Marivi Fernandez-Serra, Pablo Jarillo-Herrero, Leo Radzihovsky

Approximately 12.5% of eligible DCMP members voted in the 2018 DCMP election. We would like to congratulate those elected and express our gratitude to all the DCMP members who agreed to stand as candidates during this election. The DCMP benefits greatly from those who are willing to run for office and serve the condensed matter physics community. We would also like to thank our colleagues who will be leaving office in March 2019: Meigan Aronson (past chair) and Erica Carlson, Stephen Nagler, and Doug Natelson (members-at-large) have provided outstanding service to DCMP and APS and will be missed. Finally, thanks to the members of the 2018 DCMP Nominating Committee—Peter Hirschfeld (chair), Meigan Aronson, Brad Marston, and Janice Musfeldt—for identifying a terrific and diverse slate of candidates, and to Allison Betz and her colleagues at MyDirectVote for the online and paper ballot distribution and counting.

DCMP Sponsored Events: DMP/DCMP Fellows and Awards Reception and DCMP Business Meeting

The Division of Condensed Matter Physics will sponsor the following events during the 2019 March Meeting. This is your opportunity to interact with the Executive Committee and to become informed of the activities of the Division.

Tuesday, March 5

DCMP/DMP New Fellows & Award Winners Reception

5:30 - 7:30 p.m.

Westin Boston Waterfront, Grand Ballroom B

DCMP Business Meeting

7:00 - 8:00pm

Boston Convention and Exhibition Center, Rm. 253B

DCMP Sponsored Prize Winners for 2019

Oliver E. Buckley Condensed Matter Prize

Alexei L. Efros, University of Utah

Boris I. Shklovskii, University of Minnesota

Elihu Abrahams, University of California, Los Angeles

For pioneering research in the physics of disordered materials and hopping conductivity

Davisson-Germer Prize in Atomic or Surface Physics

Randall Feenstra, Carnegie Mellon University

For pioneering developments of the techniques and concepts of spectroscopic scanning tunneling microscopy

Lars Onsager Prize

Christopher Jarzynski, University of Maryland, College Park

For seminal contributions to non-equilibrium thermodynamics and statistical mechanics that have had remarkable impact on experimental research in single-molecule and biological physics, engendering whole new fields of theoretical, numerical, and laboratory research, as well as for groundbreaking work on the thermodynamics of small systems

Richard L. Greene Dissertation Award in Experimental Condensed Matter or Materials Physics

Edbert Sie, Massachusetts Institute of Technology

Coherent light-matter interactions in monolayer transition metal dichalcogenides

Uri Vool, Harvard University

Engineering synthetic quantum operation

Division of Condensed Matter Physics Graduate Student Travel Awards

The DCMP Graduate Student Travel Award Program has been established to assist the professional development and careers of graduate student researchers. This year, we awarded ten \$500 DCMP Travel Awards and ten Honorable Mention recognitions to allow graduate student members of DCMP to participate in 2019 APS March Meeting sessions. The selection was based on merit and the committee consisted of members of the DCMP Executive Committee.

DCMP Graduate Student Travel Awards will be presented at the DCMP/DMP New Fellows and Award Winners Reception, Tuesday, March 5, Westin Waterfront, Grand Ballroom B

Recipients of the 2019 DCMP Graduate Student Travel Awards:

Name/Institution

Yujin Cho, University of Texas at Austin

Su Kong Chong, University of Utah

Hira Farooq, Texas Tech University

Supriya Gupta, Indian Institute of Technology, Delhi

Xiaoyu Ma, University of Notre Dame

Fatemeh Mostafavikhatam, University of Texas at Rio Grande

Parmeshwar Prasad, Indian Institute of Science

Zhenyi Qi, University of Wisconsin, Madison

Allen Scheie, Johns Hopkins University

Xiao Zhang, University of Illinois at Urbana-Champaign

Recipients of the 2019 DCMP Graduate Student Travel Honorable Mention Awards:

Name/Institution

Kaveh Ahadi, University of California, Santa Barbara

Rhonda Au Yeung, University of Surrey

Anurag Banerjee, Indian Institute of Science Education and Research

Sajib Barman, University of Texas at Arlington

Daniel Campbell, University of Maryland, College Park

Rebecca Cebulka, University of Central Florida

Ramakanta Chapai, Louisiana State University

I-Lin Liu, University of Maryland, College Park

Paul Sass, Rutgers University

Kavli Foundation Special Symposium: From Unit Cell to Biological Cell

Wednesday, March 6

2:30 p.m. - 5:30 p.m.

BCEC Ballroom East/West

Session P00

The Heusler System and How You Can Use It As a Lego Box to Build the States You are Interested In

Claudia Felser, Max Planck Society

The Design and Building of Layer-By-Layer 2-D Systems

Philip Kim, Harvard University

The Design and Growth of Ultra-Stable Glasses

Mark D. Ediger, University of Wisconsin

“Designer” Structures Built From Colloidal/Nanoparticle Systems

Sharon Glotzer, University of Michigan

Self Assembly of Biological Materials

Clifford Brangwynne, Princeton University

Imaginative Performances: 1- Quantum Voyages and 2- The History of Physics in 13 songs

Wednesday, March 6

8:00 p.m. – 10:00 p.m.

Westin Boston Waterfront, Commonwealth Room

The evening brings two original physics-based performance events created by collaborations between physicists and artists – Quantum Voyages and the History of Physics in 13 Songs. In Quantum Voyages, two voyagers, guided by the spirit of wisdom, enter the microscopic realm of atomic landscapes and quantum conundrums to discover a magnificent and baffling world foreign to everyday human experience. The piece weaves together dramatic performance, movement, music, and guest appearances by physicists. The History of Physics in 13 Songs highlights turning points in the history of Physics. The performance establishes theatrical interpretations by creating lyrics from the writings of some of the most prominent physicists and presents original songs based on these fragments.

March Meeting: Pre-meeting Workshops

DPOLY Short Course: X-ray and Neutron Scattering for Polymer Science

March 2 - 3, 2019, Location TBD

DBIO Short Course: Advanced Microscopy

March 3, 2019, Location TBD

GSOFT Short Course: Structures and Order in Soft Matter Physics

March 3, 2019, Location TBD

March Meeting Energy Research Workshop

March 3, 2019, Location TBD

March Meeting: Tutorials

Sunday, March 3

Morning Tutorials, 8:30 am – 12:30 pm

Tutorial #1: Hybrid Quantum Systems

Instructors: Paola Cappellaro, Massachusetts Institute of Technology; Mohammad Hafezi, University of Maryland; David Schuster, University of Chicago; Mukund Vengalattore, Cornell University

Tutorial #2: Medical Imaging: Physics, Technology and Algorithms

Instructors: Wojtek Zbijewski, Johns Hopkins University; Robert Jeraj, University of Wisconsin; Stephen Russek, NIST

Tutorial #3: Materials by Design: Computational Materials Approach

Instructors: Shyue Ping, University of California, San Diego; Matteo Giantomassi, Université Catholique du Louvain; Gian-Marco Rignanese, Université Catholique du Louvain; Shyam Dwaraknath, Lawrence Berkeley National Laboratory

Tutorial #4: Layered Materials

Instructors: Allan MacDonald, University of Texas at Austin; Kin Fai Mak, Cornell University; Michael McGuire, Oak Ridge National Laboratory; Andrea Young, University of California, Santa Barbara

Afternoon Tutorials, 1:30 pm – 5:30 pm

Tutorial #5: Superconducting Quantum Hybrid Systems

Instructors: Guido Burkhard, University of Konstanz; Jason Petta, Princeton University; Andreas Wallraff, ETH; Will Oliver, Massachusetts Institute of Technology

Tutorial #6: First-Principles Techniques for Interacting Electrons and Phonons

Instructors: Phil Allen, Stony Brook University; Atsushi Togo, Kyoto University; Gabriel Antonius, Université du Québec; Olle Hellman, Caltech

Tutorial #7: Nodal Semi-Metals in General (2D, Weyl, and Nodal Line Systems)

Instructors: S. Murakami, Tokyo Institute of Technology; B. Trauzettel, Universität Würzburg; C. Felser, MPI Dresden, J. Analytis, University of California, Berkeley

DCMP Executive Committee

The Executive Committee Officers and Members-at-Large for the 2018-2019 year (most terms begin after the March Meeting):

Officers:

Chair: Paul Canfield, (3/18 – 3/19)
Iowa State University

Chair-Elect: Daniel Arovas, (3/18 - 3/19)
University of California, San Diego

Vice Chair: Eva Andrei, (3/18 – 3/19)
Rutgers University

Past Chair: Meigan Aronson, (3/18 - 3/19)
Texas A&M University

Councilor: John Marston, (1/16 - 12/19)
Brown University

Secretary/Treasurer: Lance Cooper, (3/15 - 3/19)
University of Illinois, Urbana-Champaign

Members-at-Large:

Erica Carlson, (3/16 - 3/19)
Purdue University

Stephen Nagler, (3/16 - 3/19)
Oak Ridge National Laboratory

Douglas Natelson, (3/16 - 3/19)
Rice University

Mark Freeman, (3/17 - 3/20)
University of Alberta

Kathleen Stebe, (3/17 - 3/20)
University of Pennsylvania

Rashid Zia, (3/17 - 3/20)
Brown University

Leon Balents (3/18 - 3/21)
University of California, Santa Barbara

Shawna Hollen (3/18 - 3/21)
University of New Hampshire

Philip Phillips (3/18 - 3/21)
University of Illinois, Urbana-Champaign