

Edited by Sam Bader



A Division of the American Physical Society

# DCMP Newsletter

The Division of Condensed Matter Physics

Summer 2011

### IMPORTANT DEADLINES & DATES

DCMP Invited Symposia Nominations | Tuesday, September 6, 2011

Voting Starts for DCMP Executive Committee | Friday, October 14,

Contributed Abstracts Deadline | Friday, November 11, 2011 (5 pm EST)

Contributed Abstracts, Post Deadline, Friday | Friday, December 23, 2011 (5 pm EST)

APS Fellow Nominations | Wednesday, February 1, 2012

Boston APS March Meeting | February 27 - March 2, 2012

## A Note from the DCMP Chair

This issue of the DCMP Newsletter contains useful information to help you in early preparation for the APS March Meeting in 2012. As physicists are known to be over-achievers, we will start the March Meeting in February this time. Make plans to participate, February 27 to March 2, 2012 at the Boston Convention Center. DCMP will do its best to sponsor or participate in bringing timely events to you, including invited symposia, community outreach lectures and discussions, the student-oriented “Lunch with the Experts” program, and special topics concerning funding and the future of our field.

The DCMP Executive Committee has been busy this year taking an introspective look at DCMP. We are doing this while the APS as a whole has been undergoing its own exercise in strategic planning. DCMP has worked to significantly cut its operating costs so that its limited resources could be focused on critical areas of interest, such as outreach programs. We are even looking at our name to see if it still reflects our mission and embraces all of our diverse community. We became a unit of APS in 1947, originally called the Division of Solid State Physics. After 31 years, we transitioned to the name DCMP in 1978. Since then 33 more years have passed. Is it time to revisit our identity again?

What else have we done, and what else is in store for the future? The DCMP website was successfully migrated to the aps.org platform. We now benefit from the extensive infrastructure provided by the APS in maintaining our website.

Please visit it, as highlighted elsewhere in this newsletter.

We participated in an effort to revise, streamline and modernize the abstract sorting categories for the March Meeting. A report submitted by DCMP Chair-Elect Barbara Jones appears within this newsletter.

We are looking into ideas to co-sponsor special themed sessions at the 2012 March Meeting. In 2011 the Superconductivity Centennial Sessions were outstanding. We thank the Kavli Foundation for their support to make those sessions such a success. These Centennial Sessions serve as a model for the future. 2013 will be designated the International Year of Crystallography, so a theme for that year is pretty obvious. But 2012 presents its challenges to uncover a topic that will resonate and inspire. Some have suggested memorializing the 1987 “Woodstock of Physics” event 25 years later, although we implicitly covered that topic in 2011. We are starting to look elsewhere... For the last ten years our community has joined with others to bask under the banner of “nano”. The focus on nano helped to communicate our mission, making our science more understandable and interesting to the public. There is now a move afoot to consider a transition in the next decade to a new banner that reinvigorates mesoscale physics. A new “meso” focus might

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## The 2012 March Meeting

The March Meeting will be held in Boston, Massachusetts from Monday, Feb. 27 to Friday, March 2, 2012. The meeting will be held in the Boston Convention Center, with the Westin Hotel as its headquarters hotel. DCMP will organize about 35 of the 100+ Invited Sessions. There will be over 40 parallel sessions. The complete bulletin will be available only in electronic form.

### Invited Symposia Nominations

Please help make the 2012 March Meeting a great success by submitting excellent nominations for invited DCMP Symposia. The deadline is Tuesday, September 6, 2011. To submit a nomination of an Invited Symposium for the March Meeting, go to: [http://meetings.aps.org/aps\\_invited/Invited/LoginForm.cfm?MT=MAR12&UNIT=DCMP](http://meetings.aps.org/aps_invited/Invited/LoginForm.cfm?MT=MAR12&UNIT=DCMP) or find it on the main DCMP web page at: <http://www.aps.org/units/dcmp>

A major role of DCMP is to organize Invited Symposia (about 35 of them). According to DCMP bylaws, the speakers are drawn from member nominations. Please create your symposium nomination, and then go to the link above to enter it into the database.

You must notify your speaker and session chair nominees beforehand and obtain their willingness to participate, if chosen, before you submit. Once you have completed the nomination—and will not make any more changes or additions—please click on “Complete Nomination.” This will initiate a notification email to the speakers and the chair of your nominated session to reconfirm their willingness and to serve as a check of the accuracy of their email address information. Via their timely responses (by Sept. 22) we will track their intention to participate in the 2012 March Meeting. You will also receive a confirmation of your session nomination.

Please note that the Executive Committee as a whole selects invited talks only from those proposed by the community. It cannot substitute speakers of its own choosing. This procedure is unique among APS units. You are encouraged to submit joint nominations for invited sessions with other APS units when submitting to DCMP. In putting together proposals for invited symposia, please consider minority, female, and international candidates, who historically have been underrepresented among invited speakers at the March Meeting.

### Suggestions for Creating a Successful Proposal

**1. Propose a symposium on a timely topic with five excellent talks.**

Generally the Executive Committee favors symposia (preferably with five talks, rather than fewer) over individual invited talks. There are very few of the latter.

**2. Choose an appropriate title and provide a clear justification.**

This will aid the committee in making its decision.

**3. Choose titles of individual talks carefully.**

The speaker can revise the title later, but it is important to have the topic and intent of the presentation stated clearly.

**4. Provide an informative abstract for each talk.**

This will underpin the central theme of the symposium and aid the committee in reaching a decision. Speakers who are invited will be asked to submit their own abstracts later.

**5. Provide references to publications.**

This will aid the committee in determining whether the work is current and whether it has some level of acceptance by the scientific community. Electronically posted preprints are useful, though they do not have the same status as refereed publications.

**6. Include an alternate speaker.**

It is important to provide a substitute in the event that someone becomes unavailable. Please ask the alternate (like the main choices) to confirm availability.

**7. Enter the proposed symposium under a relevant sorting category.**

This will ensure that the correct subcommittee examines the proposal. Multiple submissions of a proposal are counterproductive and ineffective.

The deadline for the receipt of abstracts of contributed papers is Friday, November 11, 2011, 5:00 PM EST. Contributed abstract submission for the 2012 March Meeting will open in September 2011. Submission instructions can be found at <http://www.aps.org/meetings/abstract/instructions.cfm>

## List of Invited Symposia Sorting Categories

1. Polymers and Soft Matter
2. Soft Condensed Matter
3. Statistical and Nonlinear Physics
4. Biological Physics
5. Chemical Physics
6. Atomic, Molecular, and Optical Physics
7. Insulators and Dielectrics
8. Semiconductors
9. Superconductivity
10. Magnetism
11. Strongly Correlated Systems, including Quantum Fluids and Solids
12. Complex Structured Materials, including Graphene
13. Superlattices, Nanostructures, and other Artificially Structured Materials
14. Surfaces, Interfaces, and Thin Films
15. Metals and Metallic Alloys
16. General Theory
17. Quantum Information, Concepts, and Computation
18. High Pressure Physics
19. Instrumentation and Measurements
20. Physics of Beams
21. Fluids
22. Energy Research and Applications
23. Applications (IT, Medical/Bio, Photonics, etc.)
24. Physics Education
25. General

## Revised Sorting Categories

Report of the DCMP/DMP Subcommittee on Revising the March Meeting Sorting Categories

At the DCMP/DMP joint Executive Committee meeting in March 2011, a number of issues were raised with regard to the state of the March Meeting and the sorting categories for abstract submission in particular. The consensus at the meeting was that many of the categories were overlapping and that others were receiving very few abstracts and perhaps reflected topics that were no longer of significant interest to a substantial number of meeting attendees. A small subcommittee was created to recommend revisions of the sorting categories. The subcommittee, chaired by Barbara Jones (DCMP Chair-Elect), included Allan MacDonald (DCMP Vice Chair), Peter Schiffer (DMP Chair) and Darrell Schlom (DMP Chair-Elect).

The objectives of the subcommittee were to recommend changes that would make the abstract submission easier and to facilitate sorting of contributed abstracts into strong sessions. Input was obtained from former sorting category leaders and from the records of submissions to previous March Meetings (<http://abs.aps.org/reports/index.cfm?mtg=MAR11&t=13> and similar pages). The major recommended changes, approved by the Program Chair of the March Meeting, are listed below:

1. The order of major categories for sorting was changed to place topically similar major categories in closer proximity to each other. One major category (Quantum Fluids and Solids) was combined with another (Strongly Correlated Systems). Another major category (Fluids and Soft Matter) was split into two categories (“Soft Condensed Matter” and “Fluids”).

2. The Focus Topics in each major category were listed first, before the regular sorting categories, in order to more clearly distinguish them.

3. Multiple subcategories were eliminated, combined and modernized within major categories that are under the purview of DCMP. Special emphasis was placed on differentiating DCMP regular sorting categories and DMP sponsored or co-sponsored focus topics. In most cases where potential overlap existed, DCMP categories abstracts were tuned to center around phenomena, while the DMP sponsored or co-sponsored focus topics were centered more around synthesis and characterization. Other units that have responsibility for different major sorting categories were encouraged to similarly revisit their subcategories, and many of them made significant updates.

Both DMP and DCMP are committed to continuously refining this list in coming years, and to expanded engagement with the units that did not participate heavily in the process this year. The changes made this year will be necessarily revisited after the Fall sorters meeting, with careful consideration of how the process worked. DCMP expects to refine the new soft condensed matter category for the 2013 March Meeting through further discussions with DPOLY, DFP and GSNP.

The revised major sorting category list is shown above. For the full listing that includes all of the subcategories for contributed abstracts, please see: <http://www.aps.org/meetings/march/scientific/categories.cfm>

### THE DCMP WEB SITE

The DCMP website at <http://www.aps.org/units/dcmp/> provides general information and announcements of potential interest to members. The site also informs the general public of the role and value of condensed matter physics in their lives. There is an impressive collection of images in the on-line gallery. We welcome contributions to the site from the DCMP membership involving any subject matter that may help achieve the goals of DCMP.

Please submit images via: <http://www.aps.org/units/dcmp/gallery/submissions.cfm>

Please submit your comments or suggestions about the DCMP webpage via:

<http://www.aps.org/units/dcmp/meetings/suggestion.cfm>

Please send your comments and suggestions here: <http://www.aps.org/units/dcmp/comments.cfm>

## Nomination and Election of DCMP Executive Committee Members

Please participate in the election of DCMP officers and members-at-large of the Executive Committee. You will be asked to elect a new Vice Chair (who will become, in successive years, Chair Elect, Chair and Past Chair), and three Members-at-Large who serve 3-year terms. This year, the DCMP Councillor position will also be refilled. The deadline for nominations is *Sept. 1, 2011*. To submit a nomination please go to: <http://aps.org/units/dcmp/governance/nominations.cfm>. The election will open Oct. 14, 2011. Members will receive voting instructions from the APS. Candidate biographies and statements will be available on both the APS and DCMP web sites before and during the election. You can go to the DCMP web-site and click the link that will appear there shortly, or go to the link in an email that you receive from APS once the election site opens.

The DCMP Executive Committee performs several functions. One of its most important responsibilities is to lead the organization of the APS March Meeting. It is the body that selects the division's Invited Symposia from those nominated by the community. Thus a proper balance of expertise and diversity of the Committee are essential for a successful meeting. The Executive Committee helps to lobby Congress on science policy issues. Finally, the DCMP Members-at-Large choose potential new Fellows, from those nominated, to be considered by the APS Fellowship Committee and Council. The current membership of the Executive Committee appears at the end of this newsletter or can be found at:

<http://www.aps.org/units/dcmp/governance/officers/index.cfm>

## APS Fellowship Nominations

Fellowship is a distinct honor signifying recognition by one's professional peers. Members are encouraged to nominate outstanding scientists for Fellowship in the APS, especially those from under-represented groups. DCMP each year can sponsor 0.5% of its current membership (which is 6,040 at present). Nominations can be submitted at any time, but must be received by the Feb. 1, 2012 deadline to be considered for sponsorship, where the award would take place at the 2013 March Meeting. See the following for deadlines, instructions, and tips to prepare an effective case: <http://www.aps.org/programs/honors/fellowships/index.cfm>

Nominations are active for two years. Updated information from sponsors, as needed, is welcomed before the second-year deadline. The DCMP Fellowship Committee consists of the DCMP Councillor and Members-at-Large. The committee meets before the March Meeting and makes recommendations to the APS Fellowship Committee.

## Tips for Successful Nominations

The selection process is highly competitive. When preparing nominations, the sponsor should ensure that the achievements of the candidate are properly reflected in the material submitted. The Fellowship Committee looks for sustained contributions to the field. Successful nominees generally have over ten years of professional experience beyond the Ph.D. The eight representative publications and ten other contributions listed in the application should be chosen with care. The committee is helped considerably by support letters that evaluate the candidate's work, highlighting exceptional achievements.

## Join DCMP

Please encourage others to join APS and DCMP. Also, make sure that your own membership is current. The more members we have, the more invited symposia that we can sponsor at the March Meeting, and the more nominations to be a Fellow of the Society that we can sponsor. Thus, an increase in our membership benefits our community. Student membership in DCMP is free. Otherwise, it costs \$8 to join DCMP. You can join at any time. To join APS, go to: <http://www.aps.org/membership/join.cfm>. For APS members to join DCMP, go to: <http://www.aps.org/membership/units/join-unit.cfm>

## Message from PRB

The American Physical Society is conducting an international search for a successor to the current Editor of *Physical Review B* (PRB). The position is that of the senior Editor of the journal, responsible for editorial standards, policies and direction of the journal, and leadership of the staff of about 15 editors. *Physical Review B* is the largest and most comprehensive international journal specializing in condensed matter and materials physics and is the most highly cited journal in these areas. The ideal candidate should possess many of the following qualifications: stature in field of research within the scope of PRB; stature in the PRB author community; experience with scholarly journals; management and interpersonal skills to deal effectively with an international array of authors, referees, and editors and with the APS; ability to continue to guide PRB in the online era; advocacy, integrity, and wisdom to lead the journal in responding to important matters and issues. The Editor may maintain his/her present appointment and location and devote at least 20% of his or her time to the position. A higher level of commitment would be desirable in the initial year of service; several possible levels of long-term commitment, from 20% up to and including full time, are possible. The initial appointment is for three years with renewal possible after review. Salary is negotiable and dependent

on time commitment. The desired starting date is 1 January 2012 or sooner. The APS is an equal employment opportunity employer and specially encourages applications from or nominations of women and minorities. The search is not limited to residents of the United States. Inquiries, nominations, and applications should be sent by November 1, 2011 to: Sue Coppersmith, Search Committee Chair, edsearch@aps.org.

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**Note from the Chair** continued from page 1

help to attract or create new research opportunities, which are especially desirable during these difficult economic and political times. Thus, we should do our best to both learn about and define the “meso” possibilities. We would need to engage, to explore, and to join together for our own benefit to reinvent meso. And in so doing, we would hope to help stimulate a new wave of scientific innovation that can ultimately help contribute to worldwide economic revitalization. Let’s see if we can launch a program at the March Meeting that seeks to define a new pathway that we can present to our policy makers.

The newsletter also tells about the forthcoming DCMP elections, and provides the annual guidance on how to prepare successful nominations for invited session symposia, and for APS Fellows sponsored by DCMP. There is also a message to pass to colleagues on how to join APS and affiliate with DCMP.

Also, *Physical Review B* is seeking a new senior editor. Their ad is copied at the end of the newsletter. Peter Adams is stepping down as the *PRB* Senior Editor after making a monumental impact over the years on the publication of physics research. I am sure that there will be events at the March Meeting and elsewhere to honor his extraordinary service.

Enjoy the newsletter, and let us know how to better serve you and our scientific community. It is an honor for me to occupy this office, and it is an honor and a great pleasure to work so closely with such talented members of the APS staff and DCMP Executive Committee.

-Sam Bader  
(bader@anl.gov)

## DCMP Executive Committee Roster

**Chair: Sam Bader (03/11 - 03/12)**

Argonne Natl Lab

**Chair-Elect: Barbara Jones (03/11 - 03/12)**

IBM Almaden Res Ctr

**Vice Chair: Allan MacDonald (03/11 - 03/12)**

Univ of Texas, Austin

**Past Chair: Warren Pickett (03/11 - 03/12)**

Univ of California - Davis

**Secretary/Treasurer: Nicholas Bonesteel (03/11 - 03/15)**

Florida State Univ

**Councillor: Arthur Epstein (01/08 - 12/11)**

Ohio State Univ - Columbus

**Member-at-Larges:**

**Shirley Chiang (03/09 - 03/12)**

Univ of California - Davis

**Melissa Hines (03/09 - 03/12)**

Cornell Univ

**Heinrich Jaeger (03/09 - 03/12)**

Univ of Chicago

**Yves Chabal (03/10 - 03/13)**

Univ of Texas, Dallas

**Peter Johnson (03/10 - 03/13)**

Brookhaven Natl Lab

**Charles Kane (03/10 - 03/13)**

Univ of Pennsylvania

**James Sauls (03/11 - 03/14)**

Northwestern Univ

**Nandini Trivedi (03/11 - 03/14)**

Ohio State Univ - Columbus

**Nai-Chang Yeh (03/11 - 03/14)**

Cal Inst of Tech (Caltech)

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The articles and opinion pieces found in this issue of the APS Division of Condensed Matter Physics Newsletter are not peer refereed and represent solely the views of the authors and not necessarily the views of the APS.