

Division of Atomic, Molecular and Optical Physics NEWSLETTER

A Division of The American Physical Society

November 1995

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James Lawler Wins Penning Award

Professor James E. Lawler of the University of Wisconsin received the Penning Award at the 22nd International Conference on Phenomena in Ionized Gases in Hoboken, NJ on July 31, 1995. The Penning Award is supported by Philips Lighting, and is "in recognition of his distinguished work in the fields of plasma physics and the behavior of ionized gases". He has carried out extensive experimental and theoretical work on opto-galvanic effects in glow discharges, on the cathode region of glow discharges, on plasma-assisted chemical vapor deposition of diamond films, and on lighting plasmas. He currently serves as chair of the Physics Department at the University of Wisconsin in Madison. Congratulations to Jim!

Patricia Dehmer Appointed to DOE Associate Directorship

We are informed by Joe Martinez that DAMOP member, Patricia Dehmer of Argonne National Laboratory, has been named Associate Director of the Office of Basic Energy Sciences (BES) of the U.S. Department of Energy. As such, she will be the top level officer for BES that had a fiscal year 1995 budget outlay of nearly \$700 million for support of basic research. Serving in this capacity, Dehmer will report directly to Martha Krebs, Director of the Office of Energy Research (ER). Prior to Dehmer's selection, Louis Ianniello and Iran Thomas served consecutive terms as Acting Associate Director following the retirement of Donald Stevens more than four years ago. A significant fraction of the AMO physics supported by DOE is administered by BES. We wish Pat great success in her new position!

Call for Nominations of DAMOP Officers

The DAMOP Nominating Committee, chaired this year by Joe Dehmer, welcomes your suggestions of candidates *that are willing to serve*. The 1996 slate of candidates for Vice-Chair, Secretary-Treasurer, Divisional Councillor and Executive Committee (2) will be developed by the committee during November, so please be prompt in sending nominations to: Joseph Dehmer, Room E361, Building 362, Argonne National Laboratory, Argonne, IL 60439. FAX: (708) 252-3222. E-mail: joe_dehmer@qmgate.anl.gov

Chair's Corner

... by Rick Freeman

This is an outstanding year of accomplishment for members of our Division. The observation of Bose-Einstein condensation using trap technology developed over the years by DAMOP scientists is one of the "once-in-a-life-time" happenings that we can all take great pride in. I would like to take this opportunity to invite all of you, especially those of you who do not regularly attend the Division meeting, to Ann Arbor this May. We are extending the meeting for an additional half day to have a special Plenary Session on the discovery of Bose-Einstein Condensation. Many, if not all, of the principal players in this field will be there, so you all will have a chance to learn first hand of the efforts that have gone into this magnificent accomplishment. The meeting promises to be the largest, most diverse meeting that DAMOP has fielded, so please come and be a part of one of the most productive and exciting Divisions of the APS.

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1996 DAMOP MEETING, 15-18 MAY, 1996 ANN ARBOR, MICHIGAN

General Information

The 27th Annual Meeting of the Division of the Atomic, Molecular and Optical Physics (DAMOP) of the American Physical Society will be held on the campus of the University of Michigan in Ann Arbor, Michigan, on Wednesday through Saturday, 15-18 May, 1996. A welcoming reception will be held on the evening of Tuesday, May 14th. The local organizing committee consists of representatives from the Physics and Chemistry Departments, as well as the Center for Ultrafast Optical Science. The meeting this year has been extended to 4 days to accommodate an increasing number of oral and contributed papers, as well as a special symposium on Saturday on Bose-Einstein Condensation. Lodging is available in hotels, university guest houses and university dormitories, all conveniently located near the meeting rooms.

Travel to Ann Arbor

Detroit Metro International airport is located approximately 25 miles from Ann Arbor. Taxi and minivan service from the airport is readily available. Ann Arbor is located about 40 miles from Detroit near the intersection of Interstate 94 and U.S. Highway 23. There are several public parking structures near the university.

Ann Arbor

Ann Arbor is home to the main campus of the University of Michigan. The city has many excellent cafes, restaurants and bookstores within a short walk from campus. The temperature in mid-May is usually in the mid to high 60's during the day and mid to high 40's in the evening.

Contributed Papers

The receipt deadline for abstracts of contributed papers in the areas of atomic, molecular and optical physics is February 2, 1996. Abstracts received after this date will not be included in the regular program that is published in the Bulletin, but will be included in the supplementary program if received before April 30, 1996, and if space permits. Please indicate your preference for an oral or poster session. For the first time you may choose to submit your abstract either by mail or electronically, using the APS e-mail template. Electronic submission has been used with great success by APS with the annual March and April Meetings, and by some divisions. You are strongly encouraged to try e-mail submission because there are several advantages:

- * You will receive an e-mail acknowledgment, letting you know that your abstract was transmitted to APS.
- * You will receive an e-mail notice assigning you a log number, once the abstract has passed all of the automated technical check points of the template.
- * Once the program has been arranged, you will receive a message letting you know the assigned day and time of your presentation.
- * When the program has been finalized and posted on the DAMOP Homepage, you will have access to your abstract and those of your colleagues who submitted electronically. Abstracts submitted by mail will be listed by title and author only.

E-mail Submission:

There are several ways to receive e-mail submission information and the template. Go to the APS Homepage (<http://aps.org>) and to the subheader "Meetings Information" and then to "electronic Submission of Contributed Abstracts." From that point, you will be able to view all the instructions needed to successfully download the files and complete the template. You can also receive all of the same information by sending an e-mail message to "abs-info@aps.org" and include the word "info" in the text of the message. You will receive five files of information, including the template.

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Other Upcoming Meetings

Tenth Topical Conference on Atomic Processes in Plasmas

The purpose of this conference is to provide a forum for those involved in research in areas of overlap between atomic physics and plasma physics. The conference furthers the interaction between atomic and plasma physicists that is essential for applied research in inertial fusion energy, magnetic fusion energy, astrophysics and x-ray lasers. The topics have traditionally included atomic and molecular processes in laboratory and astrophysical plasmas, atomic theory and experiment, atomic data compilation, dense plasma physics, diagnostics based on atomic processes, fusion energy applications and x-ray lasers. The conference will be held at the Grand Hyatt Union Square Hotel in downtown San Francisco on 14-18 January, 1996. Abstracts for contributed papers should be submitted before December 1, 1995. For further information, contact:

William H. Goldstein
Lawrence Livermore National Laboratory
Mail Code L-47, P.O. Box 808
Livermore, CA 94550
Tel.: (510) 422-2515
Fax: (510) 423-0246
E-Mail: goldstein3@llnl.gov

1996 Conference on Precision Electromagnetic Measurements

The 1996 Conference on Precision Electromagnetic Measurements (CPEM 96) will be held in Braunschweig, Germany, 17-20 June, 1996. Laboratory visits to the Physikalisch-Technische Bundesanstalt (PTB) in Braunschweig and Berlin are scheduled for Friday, June 21. CPEM is being organized by the PTB, the national metrology institute of Germany, and the sister institution of the national Institute of Standards and Technology here in the United States. This series of biennial conferences has earned an outstanding reputation over more than three decades as an international forum for precision electromagnetic measurements. The topics covered by CPEM include cryoelectronics, quantum metrology, lasers and optoelectronics, time scales and frequency standards, and units and fundamental constants. The conference language will be English. Abstracts and summaries of contributed papers will be due 15 January, 1996. For further information contact:

Sabine Rost, Conference Secretary
Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany
Tel.: 49 531 592 2129
Fax: 49 531 592 2105
E-Mail: erich.braun@ptb.de

Proposed APS Topical Group on Low Temperature Plasma Science

The growth of interest in plasma processing has identified many research challenges in low temperature plasma science. However this is a highly interdisciplinary field, involving atomic, molecular, optical and plasma physics, gas-phase and surface chemistry, as well as electrical, chemical and mechanical engineering. The APS has suggested the formation of a new topical group to inform and assist physicists interested in this field. This suggestion is being pursued by the organizers of the Gaseous Electronics Conference, in consultation with DAMOP, DPP and the Forum on Industrial Applications. DAMOP members who wish to become founding members of this Group should contact Norman Bardsley, by e-mail at bardsley1@llnl.gov, or by FAX at (510) 424-4320.

Newsletter Input, DAMOP Homepage, etc...

Please send news or announcements for the DAMOP Newsletter to Ron Phaneuf at the address on page 1 (e-mail is most convenient). This newsletter is also being posted on the DAMOP homepage, which may be located under "Divisions" at <http://aps.org>. Please consult the DAMOP homepage for other information and announcements. The protocol for posting information is still being worked out, so please be patient!

Students: *Don't forget that the first year of APS membership for students is still free. This includes membership in three divisions and/or topical groups.*

1996 Award for Outstanding Doctoral Thesis Research in Atomic, Molecular, or Optical Physics

Purpose:

To recognize doctoral thesis research of outstanding quality and achievement in atomic, molecular, or optical physics, and to encourage effective written and oral presentation of research results.

General Information:

This award, which is given annually, consists of \$1,000 and a certificate citing the contributions made by the recipient. The permanent record of past winners is published annually as part of the program of the Annual Meeting of the Division of Atomic, Molecular, and Optical Physics.

The 1996 award will be presented at the Annual Meeting of the Division of Atomic, Molecular, and Optical Physics in May 1996. Nominees must submit an abstract for presentation at the meeting. The Selection Committee will choose finalists who will be required to present their work orally in a special invited paper session devoted solely to such presentations. The Selection Committee will choose the winner from among the finalists based on both the oral presentation and the written material described below. All finalists will receive a travel stipend of \$500. Nominees who are not selected as finalists may have their abstracts scheduled in a regular oral or poster session of the meeting if they so specify at the time of submission.

Rules and Eligibility:

Doctoral students at any university in the United States or abroad who have passed their thesis defense for the Ph.D. in the disciplines of atomic, molecular, or optical physics after 17 November 1993 and before 17 November 1995 are eligible for the award, except for those whose thesis advisors serve on the current Selection Committee. Any member of the American Physical Society may submit a nomination for this award.

Nomination Package:

The nomination package should include the following material prepared by the NOMINATOR:

1. A letter from the thesis advisor citing the specific contributions of the nominee and the significance of those contributions.
2. A brief curriculum vitae of the nominee, his or her graduate course record, and the date of the thesis defense.
3. At least two letters seconding the nomination.

The nomination package should also include the following material prepared by the NOMINEE:

1. A specially prepared 1,500 word manuscript describing the research to be presented. Submission of an entire thesis, a published paper, or a manuscript to be published will not be accepted in lieu of the 1,500 manuscript. [Figures, if desired, and references will not count towards the maximum word count].
2. One copy of the abstract in standard Bulletin INVITED-PAPER format. Indicate in a footnote where the work was done and the name of the thesis supervisor. Three additional copies of this abstract must be submitted in the usual manner to the address specified in the announcement of the Annual Meeting of the Division of Atomic, Molecular, and Optical Physics. Nominees who wish to have their abstracts slated for a regular oral or poster session if they are not chosen as a finalist should also include three copies of a modified abstract in standard Bulletin CONTRIBUTED-PAPER format.

The complete nomination package must be submitted by 17 November, 1995 to the Chair of the Selection Committee:

Dr. Philip C. Cosby
Molecular Physics Laboratory, PN-087
SRI International
333 Ravenswood Ave.
Menlo Park, CA 94025.

Inquiries may be addressed to cosby@mplvax.sri.com.

Submission by Mail:

Abstracts (one original and two copies) of contributed papers may also be submitted by mail in standard APS format (see recent issue of APS Meeting News) to:

DAMOP '96 Meeting
APS Meetings Department
One Physics Ellipse
College Park, MD 20740-3844

Please be sure to indicate that the abstract is submitted for the 1996 DAMOP Meeting.

Special Session on Undergraduate Research

There will be a special session featuring research performed by undergraduate students at the 1996 DAMOP Meeting. The papers will be 15 minutes long, including discussion. Interested students should submit an abstract for their talk in standard APS format and a one-page summary of principal findings by January 1, 1996. From the submitted abstracts, a committee will select four students to give talks in the special session. Participation is limited to currently enrolled undergraduate students. The participation of women and minority undergraduate students is especially encouraged. Abstracts should be sent by January 1, 1996 to:

Don Madison
Physics Department
University of Missouri-Rolla
Rolla, MO 65401
E-Mail: madison@physics.umsr.edu

Further Details

Further meeting program and abstract information, registration and hotel/university reservation forms, etc. will be available in the January issue of the APS Meeting News, as well as in the DAMOP Newsletter. If you have any questions, please contact:

Paul R. Berman, Chair
DAMOP Local Organizing Committee
Physics Department
University of Michigan
Ann Arbor, MI 48109-1120
FAX: (313) 764-6843
E-MAIL: damop@umich.edu.

Information is also available on the worldwide web at:

<http://hq.aps.org/meet/> or <http://www.umich.edu/~amophys/damop.html>

Future DAMOP Meetings

The 1997 DAMOP Meeting will be held in Washington, DC in conjunction with the APS Spring Meeting, as has been the custom for the last decade. The 1998 DAMOP Meeting will be hosted in Santa Fe, New Mexico. James Cohen of Los Alamos National Laboratory chairs the local committee.

The American Physical Society
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