

IPST Newsletter



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J.R. Dorfman Prize for Undergraduate Research

In honor of our former Dean, the College of CMPS is calling for nominations for the J.R. Dorfman Prize for Undergraduate Research.

The prize (\$1,000) will be awarded for the best research project conducted by one of our current undergraduate majors.

Nominees will be required to provide a written report of their work (on or off campus) and include two letters of recommendation - one from their mentors (on or off campus) and one from another faculty member.

The abstract of research should contain a clear statement of its importance. The work may have been submitted elsewhere for support, a grade or prizes.

Candidates will be judged by a small committee of CMPS faculty. The prize will be awarded at the CMPS Spring Academic Festival on Friday,

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Upcoming Events

- **FAR & OPA Reports** due to Denise Abu-Laban by Monday, March 9, 2009.
- **IPST Faculty Meeting**, Wednesday, March 11, 2009, 3 p.m. in the IPST Building Conference room 1116.
- **University Spring Break**, Monday-Friday, March 16 - 20, 2009 for students; IPST Business Offices and University CLOSED March 16 & 17, 2009.
- **Chemical Physics & Biophysics Spring Reception**, Friday, April 3, 2009, 4301 CSS. RSVP to Caricia Fisher by Wednesday, March 23, 2009 at cjfisher@umd.edu.
- **CMPS Spring Academic Festival**, Friday, April 24, 2009.
- **Maryland Day**, Saturday, April 25, 2009.
- **Symposium on Cell Mechanics and Motility**, Thursday, May 7, 2009, Time to be announced. Sponsored by the Maryland Biophysics Program.
- **IPST Spring Assembly Meeting**, Monday, May 11, 2009, 10 a.m. to 12 noon, IPST Building Conference Room.
- **Spring Commencement**, Thursday, May 21, 2009, 7 p.m. at the Comcast Center.
- **CMPS Commencement**, Friday, May 22, 2009.
- **Memorial Day**, Monday, May 25, 2009 - University CLOSED.
- **Fourth of July**, celebrated Friday, July 3, 2009 - University CLOSED.
- **Labor Day**, Monday, September 7, 2009 - University CLOSED.

Milestone Letters

Throughout 2008, Physical Review Letters presented a series of “milestone letters” to celebrate 50 years of the journal. Over the course of the year, the series worked its way from 1958 to 2000, selecting one or a few Letters published each year that made long-lived contributions to physics, either by announcing significant discoveries, or by initiating new areas of research. We are pleased to announce that four papers authored by members of IPST are featured. They are:

1997:
Nonequilibrium Equality for Free Energy Differences
 C. Jarzynski
 Phys. Rev. Lett. 78, 2690 (1997)
http://prola.aps.org/pdf/PRL/v78/i14/p2690_1

1990:
Controlling chaos
 Edward Ott, Celso Grebogi, and James A. Yorke
 Phys. Rev. Lett. 64, 1196 (1990)
http://prola.aps.org/pdf/PRL/v64/i11/p1196_1

1988:
Observation of Atoms Laser

Cooled below the Doppler Limit

Paul D. Lett, Richard N. Watts, Christoph I. Westbrook, William D. Phillips, Phillip L. Gould, and Harold J. Metcalf
 Phys. Rev. Lett. 61, 169 (1988)
http://prola.aps.org/pdf/PRL/v61/i2/p169_1

1972:
Critical Exponents in 3.99 Dimensions
 Kenneth G. Wilson and Michael E. Fisher, Phys. Rev. Lett. 28, 240 (1972)
http://prola.aps.org/pdf/PRL/v28/i4/p240_1

FAR and OPA Submissions DUE!

It's that time again—the FAR and OPA reports are due to Denise Abu-Laban by Monday, March 9, 2009. These cover the time period of January 1, 2008–December 31, 2008. OPA is accessed through the FAR website (for faculty), and is now operational.

Go to <https://apra.umd.edu>, log

in and click on the link that says “Faculty Activity Report”. All professorial faculty and all other full-time personnel with faculty titles (Research Scientist, Research Associate, and FRA’s) are required to fill this out.

Remember, if your tenure rests with other departments, you

must select to authorize IPST to access your report. This is done on the last tab of the FAR. Don't forget to send her your CV and Teaching Evaluations electronically.

“FAR, OPA, CV's and Teaching Evaluations due to Denise Abu-Laban by Monday, March 9, 2009.”

Cell Mechanics and Motility Symposium

The Biophysics Program will be presenting a symposium on Cell Mechanics and Motility on Thursday, May 7, 2009, to be held in the Marker Room in the Chemistry Building.

Speakers will be Josef A. Kaes, Biophysics, University of Leipzig; Denise Montell, Biological Chemistry, Johns Hopkins School of Medicine; David

Odde, Biomedical Engineering, University of Minnesota; Martin Schwartz, Biomedical Engineering, University of Virginia; Charles Wolgemuth, Cell Biology, University of Connecticut Health Center; and Kenneth Yamada, Laboratory of Cell and Developmental Biology, National Institutes of Health.

For more information about the content, please contact Arpita Upadhyaya (arpitau@umd.edu) or Wolfgang Losert (wlosert@umd.edu). For information about logistics, please contact Caricia Fisher (cjfisher@umd.edu). Please RSVP to cjfisher@umd.edu.

About IPST

The primary mission of the Institute for Physical Science and Technology (IPST) is to foster excellence in interdisciplinary research and education at the University of Maryland. The Institute strives to provide an environment in which both theoretical and experimental research can flourish. Current research programs are in the areas of Biophysics, Chaotic Dynamics, Chemical Physics, Optical Physics, Space and Upper Atmospheric Physics, Scientific Computation, and Statistical Physics. The Institute takes pride in the fact that one third of the Distinguished University Professors on campus hold appointments in IPST and that a number of its faculty are National Academy of Science members. A few of the research topics of current concern to Institute faculty are:

- Studies of the properties of fluids far from equilibrium. Theories for the properties of superfluids, fluids in glasslike states, and fluids near critical points are being developed.
- Studies of electrons in the upper atmosphere. The Institute has a radio telescope at the South Pole to support these studies.
- Computation and Visualization in Fluid Dynam-

ics and Magnetohydro-dynamics.

- A study of nonlinear mathematical systems which show very irregular or chaotic behavior.
- Studies of ionized gases in space varying from theoretical investigations of shock waves to experimental programs using packages on several spacecraft.
- Development and application of the tools of non-equilibrium statistical mechanics to the control of nano-structures on surfaces.

The Institute has approximately forty faculty members, most of whom hold a joint appointment with an academic unit. The majority of the joint appointments are with Physics, Mathematics, Chemistry, and Engineering. The Institute offers M.S. and Ph.D. degrees in Chemical Physics, Biophysics and Applied Mathematics & Statistics, and Scientific Computation, and provides financial support and faculty supervision for approximately sixty graduate students. Graduate students are drawn from various disciplines including Physics, Mathematics, Chemistry, and Engineering.

J.R. Dorfman Prize for Undergraduate Research (cont.)

April 24, 2009.

Deadline for submission is March 31, 2009.

Submit to:

Dr. James M. Purtilo
Associate Dean

College of Mathematical and Physical Sciences
3400 A.V. Williams Bldg.
College Park, MD 20742-3281

cmPS
at the edge of discovery ...

IPST Logo Contest

Do you know what IPST stands for? Do you feel you have a handle on where IPST should go into the future? Do you have an artistic bent?? Well, this is for you!!

IPST needs a logo that reflects the history, the identity and the vision for the future. We're

hoping for a logo that's simple, yet embodies the uniqueness that is IPST. The logo will be used in all public formats (web pages, newsletters, publications, etc.).

If you wish to assist in identifying and/or creating the logo, please submit your idea(s) and

logo model(s) by Sunday, March 22, 2009. Send your submissions to Sandy Ratke at sratke@umd.edu. The winner will receive a gift and be recognized at the IPST Assembly Meeting in May, where the new logo will be unveiled.

Faculty Staff Directories

In an effort to reduce waste and be responsible environmental stewards, the university is working toward eliminating the printed version of the faculty staff directory. This year the quantity was reduced by half. The online version of the directory is available from the university's homepage, www.umd.edu. Click on "Directories" on the left of the page. A PDF of the Academic & Administrative Listings (the front section of the book) is available.

Plastic Recycling

The University of Maryland now accepts ALL TYPES OF PLASTIC! This means you can recycle microwavable lunch trays, yogurt containers, and all other plastic items! However, before you recycle, please rinse off/out plastic food containers. Beverage bottles do not have to be rinsed, but please remove the cap before recycling the bottle.

Don't forget to put all your plastic, glass, and metal in the same recycling bin. Paper needs to go into a separate bin, but all types of paper can be mixed together. For more information about this and other sustainability topics, please visit www.sustainability.umd.edu.



Green Opportunities

There are now two opportunities to be an even greener campus.

First, the annual Recyclemania contest has begun. This is a nationwide competition among colleges and universities to see who can recycle the most in a number of different categories. Between now and the end of March we will calculate the total amount of recyclables collected on campus. These numbers will be compared to what other campuses are doing.

Also, the University is competing in the America's Greenest Campus competition, a nationwide contest among colleges to reduce the carbon footprints of their students, faculty, alumni, and staff. Help the University win up to \$20,000 for campus greening projects by logging onto the America's Greenest Campus website

(www.americasgreenestcampus.com) using your UMD.edu email address and calculating your carbon footprint! Watch our progress in the contest on the "Leaderboard". Although it is early in the competition UMD was currently ranked #1 as of Friday, February 27! We CAN dominate with your participation.

5 Tips for Greener Paper Use

Here are five tips on how we can be wiser when using paper.

One: Reach for the right paper—recycled or certified paper.

Two: Be selective about what you print.

Three: User both sides of the paper.

Four: Go digital—read, send and store digital documents.

Five: Recycle the paper you use.



Disruptive Students

As we move forward with the spring semester, just a reminder that there are resources available for helping with a disruptive or potentially threatening student. It is most important to remember that early intervention is vital and that trained colleagues are prepared to assist. In addition, more information is available in a question and answer format at

<http://www.studentconduct.umd.edu/Faculty/Threat%20Assessment.aspx>.

1. Emotional or Psychological Distress - when students show signs of emotional or psychological distress, comprehensive evaluation and treatment are provided by the Counseling Center in Shoemaker Hall (301.314.7651) and Mental Health Services in the Health Center if immediate medical attention or hospitalization is needed (301.314.8106). The Department of Public Safety (301.405.3333 or 911) should be contacted if there is a threat of violence or medical transportation is required.
2. Disorderly or Disruptive Behavior - report student behavior that is disorderly, disruptive or poses a concern for violence to the Office of Student Conduct at 301.314.8204. Disruptive or disorderly students may be charged under the University's Code of Student Conduct and/or be referred to specific counseling or mental health interventions, if appropriate. Additional advice is provided in a Classroom Disruption Advisory issued by the Office of Student Conduct and may be found at <http://www.studentconduct.umd.edu/faculty/disruption.aspx>.
3. Immediate Threat of Violence or Substantial Disruption - The Department of Public Safety will respond to any act or threat of violence. To contact them, call 301.405.3333 or 911. The Office of Student Conduct is authorized to impose an immediate suspension from classes (pending a hearing) if a student engages in threatening or disruptive behavior. Procedures may be initiated by the Vice President for Student Affairs or the Director of Student Conduct to require an evaluation conducted by campus mental health professionals or to dismiss students who pose a "direct threat" to self or others.
4. Behavior Evaluation and Threat Assessment - In order to provide a coordinated response to student behavior assessment, the Vice President for Student Affairs created the Behavioral Evaluation & Threat Assessment (BETA) Team which provides evaluation, assessment, and consultation to faculty and staff. The Team is comprised of representatives from the departments of Public Safety, Mental Health, Counseling, and Student Conduct. If you would like to discuss a specific student behavioral concern, please contact John Zacker, BETA Team chair at jzacker@umd.edu or 301.314.8204.

"The Office of Student Conduct is authorized to impose an immediate suspension from classes (pending a hearing) if a student engages in threatening or disruptive behavior"

We're on the Web!!
www.ipst.umd.edu



College Park Cherry Blossoms

Institute for Physical Science & Technology

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August 14, 2009