The EAPS Weekly News

May 12, 2014

EAPS MEETINGS

Faculty and Staff Meet and Greet lunch with new faculty member, Marty Frisbee
Tuesday, May 14, 12:00 pm – 1:00 pm, HAMP 2201

EAPS PUBLICATIONS


EAPS NEWS

CLIMATE CHANGE SYMPOSIUM ANNOUNCEMENT

The 2014 Northwestern Climate Change Symposium has been announced. This year’s symposium theme, The Future of Carbon, will address various aspects of carbon management and mitigation, presented by seven accomplished scientists, experts on shale gas and fracking, geological storage of CO2, carbon capture and transport, biological carbon sequestration, geothermal use of supercritical carbon, and the overall technical and political challenges of carbon management.

For more information and to register, click here.

EASTERN SECTION AAPG STUDENT PRESENTATION TRAVEL GRANTS

The Eastern Section of the American Association of Petroleum Geologists (Eastern Section-AAPG) has a program to support the cost of students traveling to the annual Eastern Section meeting to present the results of research at the conference.

This year, the Eastern Section- AAPG Annual meeting will be held in London, Ontario, September 27-October 1, 2014.

All eligible students whose abstract is accepted for the AAPG Eastern Section meeting will receive some support; the amount available to applicants depends on the number of applicants each year.

For more information visit http://goo.gl/Qid5OP, and see below for travel grant application and guidelines.

DATA-INTENSIVE COMPUTING WORKSHOP OFFERED FOR STUDENTS, POST-DOCS, FACULTY, STAFF

Purdue will host a no-fee virtual summer school on data-intensive computing June 30 – July 2. The three-day workshop is for students, post-doctoral researchers, faculty and research staff looking to gain skills in managing, processing, and gaining insight from large amounts of data.

The sessions are designed for participants from almost any field who deal with large collections of data, including researchers from the physical, biological, economic, and social sciences as well as engineering.

For more information: http://goo.gl/ibXtGi
For questions: rcac-help@purdue.edu

CAMPUS NEWS

THE EIGHTH EIDITION OF THE PHILIP F. BAGWELL LECTURE SERIES

The upcoming Bagwell Lecture will be held on Wednesday, May 14th at 2:00 p.m. in MRGN 121. The lecture will be given by Fedrico Capasso and is titled, New Frontiers in Optics and Photonics with Designer Electronic and Optical Materials.

For more information, see the attached flier, below.

POSTDOCS AND GRADUATE STUDENTS

GRADUATE STUDENT INTERNATIONAL TRAVEL AWARDS

The College of Science is now accepting applications for 2014 College of Science Graduate Student International Travel Awards.
To apply you must be a full-time PhD student, and you must be making an oral or poster presentation at an international conference. The deadline to apply is June 2. Applications should be sent to Ranae Wetli. See attached flier for more information.

ENERGY GRAD STUDENT POSTER COMPETITION AT MIT

The MIT Energy Initiative is seeking posters from graduate students working in any discipline who are engaged in research that addresses clean energy policies, tools, or technologies that cities could be or are employing. This is a national competition. Finalists will be invited to present their work at the 2014 Clean Energy Education and Empowerment (C3E) Women in Clean Energy Symposium, Urban Strategies for a New Energy Future, on September 16-17 at MIT in Cambridge, MA. The symposium is a tremendous opportunity for networking and the competition will have two winners, one with a technology focus and one with a policy focus. Each winner will receive a $2,500 award.

The deadline for applications to submit a poster for consideration is June 1. Find more details attached, below.

UNDERGRADUATE AND GRADUATE STUDENT INFORMATION

THE GREEN PROGRAM NOW ACCEPTING APPLICATIONS

The GREEN Program is the premiere experiential learning program for future clean energy and sustainability leaders. The short-term immersion programs take students on adventures to the epicenters of clean tech, sustainability and innovative industries.

The GREEN Program and the Green Student Educators Program

-ICELAND-
Renewable Energy and Sustainability
Our marquee 10-day program. Learn how Iceland’s dynamic renewable energy portfolio powers the country on 100% renewables and is leading the way to Carbon Neutrality. Fully accredited by Reykjavik University.

-PERU-
Global Water Initiatives & Sustainability
The newest edition to our program portfolio. Lima, the second largest desert city in the world. Discover how the nine million people living there get their water for drinking, agriculture, and sanitation. Now accepting applications.

-PHILADELPHIA-
Sustainable Design & Urban Regeneration
Our cutting edge domestic program, bringing the magic of GREEN to the US. Exploring one of the “greenest” cities in the country. Learn how sustainable design and urban planning is leading Philadelphia to become the USA’s “greenest” city.

-ICELAND-
Leave No Trace: Sustainable Wilderness Travel
Discover Iceland on foot and backpack through lava fields, canyons, glaciers, and volcanoes. GREEN has evolved our educational model to certify our most physically active students in outdoor ethics, & sustainable wilderness travel. Achieve the international “Leave No Trace Certification.”

-ICELAND-
GREEN Faculty & Educators Program
GREEN’s specialty program for Educators, Faculty, and Young Professionals that gives you the chance to experience Iceland’s renewable energy innovations, culture, and “bucket-list” excursions with a professional, global network. Gain industry insights and connections to incorporate into your work.

-Student Testimonials-
Jacquie, ME, Brown University
“Having completed the two weeks abroad, I can truthfully admit that I was completely blown away by the program. The lectures were among the most engaging I have ever experienced – rivaling those at Brown. The program exposed me to incredible opportunities I otherwise would not have experienced. It was a perfect balance of education, fun, and adventure.

Application and Registration
You will be notified within 24 to 48 hours of submitting an application if you are accepted into the program. Registration is rolling, there is not a deadline as to when you can apply, but program space is limited. If interested, please submit your application or please visit here for more information.
A NOTE FROM OUR ACADEMIC COUNSELOR

CONGRATULATIONS TO THE MAY 2014 EAPS UNDERGRADUATE CANDIDATES FOR GRADUATION

Nicholas J. Barber
James A. Bruns
Joseph A. Coffman
Matthew V. Degollado
Blake E. Cotcamp
Ryan A. Dennis
Kaitlin N. Dickman
Joshua R. Gimbel
Hilarie M. Hahus
Chin Chai Huan
Michael R. Kula
Tyler A. McDonald
Austin J. McGlannan
Grant R. McKercher
Dylan T. Pike
Gino F. Recchia
Matthew T. Schall
Alexander Torres
Colin S. Tully
Melissa N. Valentino
Trevor M. Williams

College of Science Commencement is Sunday, May 18, 2014 at 9:30 a.m. in the Elliott Hall of Music.

LIVE STREAM OF SPRING 2014 COMMENCEMENT CEREMONIES
A live stream of each of the Purdue University Spring 2014 Commencement ceremonies will be available May 16-18. The URL link to these live streams is: http://www.kaltura.com/tiny/wdhme
The URL will be active approximately 40 minutes before each ceremony begins. Additional sites to view the ceremony are LWSN Commons and the study lounges in the PMU.

Upcoming Birthdays

Dan Shepardson – May 26th
IMPORTANT NOTICE ABOUT THIS NEWSLETTER
This newsletter is used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Individual email announcements will no longer be sent unless the content is time-sensitive. We will continue to include our publications, presentations and other recent news items as well. Those using paper copies of the newsletter should go to our newsletter archive on the EAPS website at www.purdue.edu/eas/ and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Amy Cooper (ancooper@purdue.edu) by 5:00pm Thursday of each week for inclusion in the Monday issue.

If it is in the newsletter, we assume you know about it and no other reminders are needed. For answers to common technology questions and the latest updates from the EAPS Technology Support staff, please visit http://www.purdue.edu/eas/info_tech/index.php.

Also, as an additional resource for information about departmental events, seminars, etc., see our departmental calendar at http://eaps.purdue.edu.
Application for Student Travel Grant

Student Name: ____________________________________

Academic institution: _____________________________________________

Department: _____________________________________________

Department chairman name and phone number: ________________________

Student Academic Address: _____________________________________________

Student Home Address: _____________________________________________

Phone Number _________________________ Email Address  ______________________

Student Major:_____________________ Academic Rank:________________

Title of abstract submitted for presentation: _____________________________________________

Is the research to be presented a result of:

Senior Honors Thesis___ M.S. Thesis ____ PhD Dissertation: ___

Other (explain)___

Estimated meeting travel expenses:

Transportation: ___Air ___Personal Vehicle ___School Vehicle

Cost: ______ (If driving, list estimated mileage)

Hotels: ______ (list numb er of nights and rate)

Meals: ______

Student Registration: ______

Other: ____ Explanation:

*Deadline for application is 30 days prior to Eastern Section AAPG Meeting start.

Note: The Eastern Section Meeting Technical Program Committee Chairman must verify that the student abstract has been accepted for presentation prior to this application being considered for travel funding.
CALL FOR ABSTRACTS
42nd Annual Meeting of the ES-AAPG hosted by OPI
September 27 - 30, 2014 – Hilton London Ontario


- Hydraulic Fracturing: from technical innovations to public policy and politics
- Resource Plays: conventional and unconventional reservoirs
- Shale Oil: its play development and impact upon regional oil supply
- Marketing the Marcellus Shale: products to pipelines
- Utica Shale: move over Marcellus?
- Trenton-Black River: a northeast and mid-west update
- Basement Rocks and Structure: control on hydrocarbon traps
- Carbon Capture and Storage: where are we today?
- Water Management: source, transportation, recycling and disposal
- Salt: its geology, mining methods and use as a storage container
- The geology behind deep disposal of nuclear waste
- Legally Speaking: oil, gas and the law
- Formation Waters and Gases: geochemistry and hydrogeology
- Eastern Canada: onshore and offshore plays and developments
Abstract Guidelines

- Abstracts should cover the objectives, procedures, results and conclusions of the research and should be no more than 2500 characters in length, including spaces and punctuation. The title, authors and authors' affiliations are not included in the character limit.
- Abstracts are evaluated on the basis of relevance and timeliness of subject matter, advancement of knowledge, techniques or practice; and overall clarity, organization and presentation of ideas.
- Titles are required-- they should be brief and state the topic.
- In keeping with the spirit of the meeting, presenters must refrain from making subtle or blatant sales pitches including but not limited to: repeated use of product names, trade names or pictures, or repeated use of company logo.
- Student submissions are encouraged for all sessions. Please indicate if the presenter is a student.
- Submit your abstract in the form in which you would like it published. Abstracts will not be edited.
- Authors will be notified of acceptance or rejection in June, 2014. Authors of accepted abstracts will have the option to submit an extended version of their abstract by August 15, 2014, which will then be reproduced on the meeting CD.
- Final booth design will be announced in the poster kit sent to all poster presenters prior to the meeting.

- **Important:** ES AAPG has no funding for speakers. Do not submit an abstract unless at least one author is certain to attend the meeting. All session chairs, speakers and poster presenters must register to attend the meeting. No exceptions will be made.

- **Oral Sessions:** Single screen electronic presentations will be the only format available. Each session room will be equipped with the following: High intensity projector, computer, large format screen, speaker timer, laser pointer, lapel microphone and lectern microphone. Internet connections and dual screens will not be available. Detailed speaker information will be sent upon abstract acceptance.

- **Poster Session:** Half-day poster sessions are planned. Presenters are required to be present a minimum of two hours while their posters are on display. Detailed poster preparation instructions will be sent upon abstract acceptance.

- **Submit:** Abstracts for all sessions should be submitted via the meeting website: [www.esaapg2014.org](http://www.esaapg2014.org/)

- **Permission to publish your abstract is implied when you submit your abstract for consideration.** Abstracts will be posted on AAPG's Search and Discovery and available on the Search and Discovery Mobile App. Presenters can post their full presentations on Search and Discovery after the meeting.

Abstract Format

Abstracts for both oral and poster presentations are limited to 2500 characters or less. Skip a line between paragraphs. Lines must be single-spaced; justify the type to the left and right margins; no illustrations, references, or abbreviations. No corrections will be made, so PLEASE PROOFREAD your abstract.
New Frontiers in Optics and Photonics with Designer Electronic and Optical Materials

Wednesday
May 14
2 – 3 pm
BURLTON MORGAN
ROOM 121

THE CONTROL OF ELECTRONS AND PHOTONS in artificially structured materials at the nanoscale by quantum and electromagnetic design has opened unique opportunities for major advances in science and technology. I will present a tutorial account of some these developments. From the design of the electronic resonances and their coupling to light in nanometer thick materials a new class of light sources (quantum cascade lasers) has emerged that now cover almost the entire infrared and far-infrared spectrum, leading to an explosive growth in applications. By structuring surfaces at the sub-wavelength with nanoscale optical resonators and nanometer thin layers, “metasurfaces” have emerged that have led to powerful generalizations of the laws of reflection and refraction, new thin film interferences and new ways to generate light beams and surface optical waves with “arbitrary” wavefronts. Applications of this new “flat optics” will be presented. Finally, I will show how quantum fluctuations at the nanoscale can be designed to control macroscopic quantum electrodynamical phenomena such as attractive and repulsive Casimir forces and their interaction with micro/nanomechanical structures.

FEDERICO CAPASSO is the Robert Wallace Professor of Applied Physics at Harvard University, which he joined in 2003 after a 27 years career at Bell Labs where he did research, became Bell Labs Fellow and held several management positions including Vice President for Physical Research. His research has spanned basic science and applications in the areas of electronics, photonics, nanoscale science and technology including plasmonics, metasurfaces and the Casimir effect. He pioneered bandstructure engineering of artificially structured materials and devices and invented the quantum cascade laser. He performed the first measurement of the repulsive Casimir force. He and his group recently discovered powerful generalizations of the laws of reflection and refraction applicable to metasurfaces and demonstrated that the latter can be used to design new planar optical components (flat optics). He is a member of the National Academy of Sciences, the National Academy of Engineering, and a fellow of the American Academy of Arts and Sciences. His awards include the King Faisal International Prize for Science, the American Physical Society Arthur Schawlow Prize, the Wetherill Medal of the Franklin Institute, the IEEE Edison Medal, the SPIE Gold Medal, the European Physical Society Quantum Electronics Prize, the Berthold Leibinger Zukunftsfpreis (the future prize), the Julius Springer Prize for Applied Physics, the Jan Czochralski Award of the European Material Research Society for lifetime achievements in Materials Science; the IEEE D. Sarnoff Award in Electronics, the IEEE/LEOS Streifer Award, the Optical Society of America Robert Wood prize, the Rank Prize in Optoelectronics, the Material Research Society Medal, the Welfler Medal, the Duddell Medal and Prize of the Institute of Physics (UK), the Newcomb Cleveland Prize of the American Association for the Advancement of Science, the “Vinci of Excellence” LMVH Prize and the New York Academy of Sciences Award.

CONTACT INFORMATION
capasso@seas.harvard.edu | School of Engineering and Applied Sciences, Harvard University, Cambridge MA 02138
2014 College of Science
Graduate Student International Travel Awards

Deadline: June 2, 2014
For travel between July 1, 2014 and December 31, 2014
~ 2 or 3 awards ranging up to $800 for international travel will be awarded~

Prerequisites:
• must be a full-time PhD student
• must be making an oral or poster presentation at an international conference

Priority will be given to:
• travel to make an oral presentation at a conference
• attendance at an interdisciplinary conference
• students who have passed their prelims

To apply, please send electronically as one file:
• CV (2 page limit)
• brief summary of research (1 page limit)
• brief statement of purpose for attending conference specifying whether your presentation is oral or poster
• provide web link to conference
• with a letter of support from research advisor as a separate electronic document

Send applications to Ranae Wetli at rjwetli@purdue.edu

As the national and international community works to advance clean energy solutions in the face of global climate change, states and local governments are becoming incubators of new ideas – demonstrating best practices to support systematic change. Their leadership comes as they intimately feel the effects of climate change, cope with urbanization and a mass of new people in their cities, and account for an increasing share of the world’s energy consumption. What innovative approaches are being explored in cities around the country and around the world? The symposium will be an opportunity for game-changing women to come together and discuss the road ahead for cities and clean energy.

C3E organizers welcome students to enter into a research poster competition. Submitted posters should focus on clean energy policies, tools, or technologies that cities could be or are employing. Posters will be judged in two broad categories: technology solutions and policy solutions. Finalists must attend the 2014 Women in Clean Energy Symposium: Urban Strategies for a New Energy Future on September 16th and 17th, 2014 in Cambridge, MA, where two winners will be chosen – one from each category.

Apply if you are: A female graduate student engaged in research in any department that addresses this theme.

The Prize: Finalists will be invited to attend the Symposium with expenses paid. This symposium is an excellent opportunity for networking, and two winners will each receive $2,500. Deadline to apply is June 1st. Find out more, and submit your work at C3Eawards.org.

The C3E Symposium: The goal of the Symposium is to provide women in clean energy with a range of perspectives, analysis, and data on clean energy challenges and opportunities. It also provides a unique forum for networking. It is our hope that it will help build a sustained national and international community of professionals dedicated to advancing the careers and goals of women in clean energy.

Other C3E Awards: As part of the U.S. C3E program, MITEI also invites nomination for mid-career women for outstanding work in clean energy for an $8,000 award in one of eight categories. The deadline to nominate an awardee is midnight on May 15, 2014. Nominate an awardee at C3Eawards.org.

Questions? Please contact C3Eawards@mit.edu for questions related to the Awards Program, the poster competition, or the C3E Symposium.