Dr. Lasher-Trapp was selected to be a Fellow of the Teaching Academy at Purdue.

The Academy strives to bring together the best teaching faculty across campus to create a collective voice for teaching and learning on campus. Faculty are nominated and selected by their peers to join this eclectic group of faculty. Faculty in the Teaching Academy contribute in a variety of ways, but even with the myriad activities their primary focus is to increase the effectiveness of all of the faculty at Purdue University.

Dr. Lasher-Trapp will be officially inducted into the Teaching Academy on September 25, 2013.

Congratulations Dr. Lasher-Trapp!

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Prof. Qianlai Zhuang gave an invited talk, entitled "A Modeling Analysis of Carbon and Water Cycles in Northern Eurasia during the Past and This Century" at Japan Geoscience Union (JpGU) annual meeting in Makuhari Messe, Japan, May 19-24.

Prof. Qianlai Zhuang, per invitation, participated in the XXXV MIT Global Change Forum, entitled "Water, Food and Energy in a Changing World ", 4-6 June, Cambridge, MA.

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Thoughts on Graduate Mentoring:

Jon Harbor recently gave a short speech at an event to recognize recipients of the Provost's Award for Outstanding Graduate Mentoring. Included in his remarks were the following five thoughts for current and future graduate faculty members:

1. It’s all about the students and their success. Spend time finding out about their goals, aspirations, strengths and weaknesses, and help them build a set of experiences that leverage their strengths, fill in the gaps in their knowledge, skills and experience, and that are focused on their goals.

2. It’s all about the students and their success. Spend time building a supportive community of learners – they help each other far more than you will ever have time to do, and in some ways better, and they learn a lot about mentoring from this.

3. It’s all about the students and their success. Show your students that it is possible to be productive, happy and have a balanced life – it helps them think about how they can balance the things they want to do in their lives. Spend time on other things – hobbies, family, sports, culture – whatever you enjoy, and make sure your students see how you value this and how it enriches your life.

4. It’s all about the students and their success. Spend time on former students as they move through their professional and personal paths – they still appreciate an outside opinion and some suggestions, and they are a fantastic support network for our current and future students.

5. It’s all about the students and their success. When you facilitate the success of a talented, diverse, and collaborative group of graduate students, the rewards are astounding. You suddenly realize that you are associated with some amazing research that gets funded and published in top journals, and that you have graduate students who are friends and colleagues that will always be a part of your life.
EAPS DEFENSES

Thursday, June 6, 1:30-4:30, HAMP 2201
Sara Top, The Effects of Elevated CO2 and O3 and Invasive Earthworm Activity on Forest Soils: A Molecular and Isotopic Approach.

Friday, June 14, 10:00-2:00, HAMP 2201
Elifuraha Saria, Contribution to Defining a Geodetic Reference Frame for Africa Geodynamic Implications.

Monday, June 17, 10:00-1:00, STEW 209
Angel Torres-Valcarcel, The Impacts of Land Use/Land Cover Changes in the Climate of Puerto Rico.

CAMPUS NEWS

Research computing coffee consultations for would-be, new and experienced users.

Weekly “Coffee Break Consultations” with ITaP Research Computing (RCAC) staff are informal meetings with benefits for new and experienced high-performance computing users or faculty, staff and students just thinking about adding the tool to their research toolbox. More information is available at www.itap.purdue.edu/newsroom/detail.cfm?newsld=2788 or by emailing rcac-help@purdue.edu.

Director of the Global Sustainability Institute

We seek to recruit a dynamic leader who is passionate about research, education and engagement to further develop the Global Sustainability Institute (GSI) at Purdue. As the overall leader for the GSI, the individual has the opportunity to capitalize on the unique interdisciplinary strengths of Purdue in energy, climate, the environment, water and food. This is a key leadership position for Purdue and Discovery Park, and the Director will be expected to raise the national and international profile of sustainability.

(See attached for more information)

Alfred P. Sloan Foundation Research Fellowships

These fellowships seek to stimulate fundamental research by early-career scientists and scholars of outstanding promise. Candidates must hold a Ph.D. (or equivalent) in chemistry, computational or evolutionary molecular biology, computer science, economics, mathematics, neuroscience, ocean sciences (including marine biology), physics, or a related field. Candidates must hold a tenure track (or equivalent) position and be no more than six years from completion of their most recent Ph.D. No more than three candidates from a department may be nominated. Please contact your department head ASAP to coordinate submission. Deadline: September 16

FULBRIGHT U.S. SCHOLAR OPPORTUNITIES IN SCIENCE, TECHNOLOGY AND INNOVATION IN BRAZIL, 2014-2015 AWARDS

The deadline to apply for the 2013-14 Fulbright U.S. Scholar competition is August 1, 2013. (See attached for details)

Building Research Collaborations: Electricity Systems Workshop

August 28-29, 2013
Burton D. Morgan, Room 121, Discovery Park Registration (no cost) is now open for the workshop on ‘Building Research Collaborations: Electricity Systems’ August 28-29, 2013 at Purdue. Attached is the tentative agenda. Please share it with your colleagues/students and encourage them to register/attend. Please contact Andrew Liu (andrewliu@purdue.edu) for technical questions or Pankaj Sharma (Sharma@purdue.edu) for general questions.

(See attached for tentative agenda)

NATIONAL RESEARCH COUNCIL of the NATIONAL ACADEMIES

The National Research Council of the National Academies sponsors a number of awards for graduate, postdoctoral and senior researchers at participating federal laboratories and affiliated institutions. These awards include generous stipends ranging from $42,000 - $80,000 per year for recent Ph.D. recipients, and higher for additional experience. Graduate entry level stipends begin at $30,000. These awards provide the opportunity for recipients to do independent research in some of the best-equipped and staffed laboratories in the U.S. Research opportunities are open to U.S. citizens, permanent residents, and for some of the laboratories, foreign nationals.

Detailed program information, including online applications, instructions on how to apply and a list of participating laboratories, is available on the NRC Research Associateship Programs Website (see link above). Questions should be directed to the NRC at 202-334-2760 (phone) or rap@nas.edu.

There are four annual review cycles.

Review Cycle: May; Opens March 1; Closes May 1
Review Cycle: August; Opens June 1; Closes August 1
Review Cycle: November; Opens September 1; Closes November 1
Review Cycle: February; Opens December 1; Closes February 1

Applicants should contact prospective Adviser(s) at the lab(s) prior to the application deadline to discuss their research interests and funding opportunities.
GRADS AND POST-DOCS’ NEWS

GCC2013
7th GRADUATE CLIMATE CONFERENCE

MIT’s Program in Atmospheres, Oceans, and Climate and the Woods Hole Oceanographic Institution.

**Who:** Graduate students studying climate

**What:** 7th Graduate Climate Conference

**When:** November 1-3, 2013

**Where:** Woods Hole Oceanographic Institution
Woods Hole, MA

**Email:** gcc-2013@mit.edu

**Website:** [http://gradclimateconf.mit.edu](http://gradclimateconf.mit.edu)

**Abstract Deadline:** June 7, 2013
(See flyer for more details)

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NASA Langley Research Center

The Langley Aerospace Research Student Scholars (LARSS) Research Internship Program

The NASA LARSS internship program is a paid (stipend) research experience open to U.S. citizens who are full-time undergraduate (juniors and seniors) and graduate students.

[http://www.nianet.org/larss](http://www.nianet.org/larss)

(See the attached flyer for details)

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**June Birthdays**

Saad Haq – June 1st
Melissa Guinn – June 5th

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**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](http://www.purdue.edu/eas/) to access active links as needed. Material for inclusion in the newsletter should be submitted to Wanitta Thompson (thompsow@purdue.edu) by Friday noon 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](http://www.purdue.edu/eas/info_tech/index.php).

Also, as an additional resource for information about departmental events, seminars, deadlines, etc., see our departmental calendar at [http://calendar.science.purdue.edu/eas/seminars](http://calendar.science.purdue.edu/eas/seminars).
Director of the Global Sustainability Institute

We seek to recruit a dynamic leader who is passionate about research, education and engagement to further develop the Global Sustainability Institute (GSI) at Purdue. As the overall leader for the GSI, the individual has the opportunity to capitalize on the unique interdisciplinary strengths of Purdue in energy, climate, the environment, water and food. This is a key leadership position for Purdue and Discovery Park, and the Director will be expected to raise the national and international profile of sustainability.

The Director provides leadership and vision for the GSI which includes the following: Energy Center, Center for the Environment, Purdue Climate Change Research Center, Purdue Water Community, Purdue Center for Global Food Security, and the U.S.-China Ecopartnership for Environmental Sustainability. The Director will foster a team oriented approach focused on sustainability and is expected to effectively communicate the Institute's achievements and vision to a variety of stakeholders, including the public, NGOs, policy makers, government leaders, industry and scientists in other disciplines. The Director is responsible for all aspects of the GSI operations, including budget, staff, and coordination of the Centers and Institute initiatives. The Director is expected to utilize the unique infrastructure and investment of Discovery Park to integrate research and engagement among the centers to sustain and grow a world class Institute. The Director of the GSI reports to the Executive Director of Discovery Park and works closely with academic Deans, Department Heads, Discovery Park researchers, and the GSI Center Directors in the administration of the program.

Qualifications

Individuals must hold the rank of Professor at Purdue West Lafayette and have a PhD in a sustainability-related field, a broad knowledge of global sustainability research opportunities, and a successful track record of research leadership, engagement, and scholarly achievement in an area directly related to global sustainability. She or he must have demonstrated capability to bring together and facilitate interdisciplinary groups. The individual must be self-motivated, enjoy new challenges and opportunities, and engage effectively with faculty and a variety of stakeholders across many disciplines.

Applications are welcome until September 16th or until a suitable candidate is identified. This position is a 5 year appointment with the potential for renewal after review. Potential applicants are encouraged to discuss their interest with their department head, as the Directorship is a 75% appointment in the Global Sustainability Institute with a 25% academic appointment in the individual’s home department. Applicants should submit a letter articulating their experience and vision for GSI, as well as a current CV, electronically to Wendy Field (wfield@purdue.edu).

If you have questions about the details of the position, please contact Al Rebar (rebar@purdue.edu). If you have questions about the search, please contact Karen Plaut (kplaut@purdue.edu).

Purdue University is an Equal Opportunity/Equal Access/Affirmative Action Employer fully committed to achieving a diverse workforce.
2014-2015 Fulbright U.S. Scholar Opportunities in Science, Technology, and Innovation in Brazil

Approximately 50 grants are available in the 2014-2015 competition for U.S. academics, professionals, and mid-career researchers to teach and/or conduct research in Brazil. The governments of the United States and Brazil, through the U.S.-Brazil Fulbright Commission, have expanded teaching and research exchange opportunities in science and technology through the Fulbright-Brazil Scientific Mobility Program.

2014-2015 Awards Include:

Fulbright-ALCOA Distinguished Chair in the Environmental Sciences and Engineering (#4456)

Fulbright-FACEPE Distinguished Chair in the Oil and Gas Sciences and Engineering (#4460)

Fulbright-Brazil Scientific Mobility Program Distinguished Chair (#4458)

Fulbright-Brazil Scientific Mobility Program (#4457)

U.S. applicants must be affiliated with an accredited PhD graduate program or accredited research network in Brazil and should seek affiliation by contacting the appropriate program coordinator at the institution of their interest.

Grant lengths vary by award and range from 3 to 9 months, beginning August 2014 or March 2015. Proficiency in Portuguese or Spanish is not required for awards in science and technology.

Visit http://www.iie.org/cies to access the Catalog of Awards, online application and guidelines. The application deadline for the 2014 – 2015 competition is August 1, 2013.

For information contact Alisha Scott at ascott@iie.org or (202) 686-6014 or Katrin DeWindt at kdewindt@iie.org or 202.686.6254.
The goal of this workshop is to identify Purdue capabilities and build research collaborations in the area of electricity systems. Knowledge gaps and challenges addressing the Eastern region will be discussed.

Five working sessions on electricity systems include:

- Security of Energy Infrastructures,
- Data Management and Analytics,
- Regional Issues,
- Workforce Training,

Three breakout sessions, and a poster session also are planned.

The workshop is co-sponsored by the colleges of Engineering, Science, Technology, and Health and Human Sciences, and Discovery Park’s Cyber and Energy Centers.

Two continental breakfasts and two lunches are provided and a heavy hors d’oeuvres/reception on the first evening of the workshop.

There is no registration fee, however registration is required. Please use the following link to register.

Register for Event

For more information contact Pankaj Sharma (sharma@purdue.edu)
A Workshop on
Building Research Collaborations: Electricity Systems
Purdue University, West Lafayette, IN 47907
28-29 August 2013

Day 1
7:00-8:00 am Registration/breakfast
8:00-9:00 am Inauguration and keynote presentations
9:00-9:15 am Break
9:15-10:45 am Panel Session #1: Security for Energy Infrastructures (Lead: E. Bertino)
Synopsis: Novel energy infrastructures are characterized by large and complex software systems able to support a more intelligent management of the infrastructures. This however makes the infrastructures vulnerable to cyber-attacks, including injection of malicious data, disclosure of privacy-sensitive data, and denial of service attacks. Conventional security solutions are inadequate as they are unable to deal with very large complex systems with real-time requirements as it is the case of energy infrastructures. The deployment of smart meter infrastructures is also introducing privacy issues related to the unauthorized or improper use of energy consumption data. This session will identify challenges and develop a research roadmap towards addressing these challenges.
Suggested Keynote Speaker: Dan DeLaurentiis (AAS, Purdue)
Suggested Panelists:
- Ninghui Li (CS, Purdue)
- Rick Sheldon (Oakridge)
- Scott Peters (Sypris)

10:45-11:00 am Break
11:00-12:30 pm Panel Session #2: Data Management and Data Analytics for Energy Infrastructures (Lead: E. Bertino)
Synopsis: Modern energy infrastructures will require the management and integration of different data types, including spatial and temporal data. Also data will likely have uncertainty. The management of these data must be done in real time in order to provide actionable information to the infrastructure control systems. Also effective and efficient data analytics techniques are crucial in such context. Quality of data is also an important challenge that requires solutions that take into account specific aspects of energy infrastructures. This session will identify challenges concerning data management and analytics and develop a research roadmap towards addressing these challenges.
Suggested Keynote Speaker: Leon Reznik (CS, RIT)
Suggested Panelists:
- Peter Baker (Cyber Center, Purdue)
- Sunil Prabhakar (CS, Purdue University)
- Walid Aref (CS, Purdue University)
- Athula Kulatunga (CoT, Purdue University)
- Michael Zhu (Stat, Purdue University)
12:30-2:00 pm  Lunch and Luncheon speaker
2:00-2:15 pm   Break
2:15-3:45 pm   Panel Session #3: Regional Issues with National and Global Impacts
(Lead: R. Kramer)
Synopsis: The Midwest region, and especially Indiana, is at the crossroads of major energy flows in the Eastern United States. Traditionally issues that have arisen in this area have been representative of many of the issues associated with energy, reliability and transport that have arisen across the nation and the world. As we transition to new scenarios in the production, use and transportation of energy, it is critical that region wide issues be considered for both the energy system and the customers that rely upon it as a key element necessary for their operations and productivity. In the future, if these issues are not considered in a timely and effective manner, the transition to a new national energy profile may be impeded. Long-term issues include transmission infrastructure investments to connect the large amount of wind resources located mainly in rural areas in this region, the transition from a coal-dominated power generation portfolio to a more diversified, sustainable portfolio and the interrelation between natural gas sources and transportation for electric generation. Other issues include maintaining system reliability given a diverse resource mix and regional coordination such as that between MISO and PJM. This session will provide solutions to the main issues faced by the Midwest electricity system, and to discuss the broader application of the solutions to address similar issues at the national and global scale.
Suggested Keynote Speaker: Doug Gotham (State Utility Forecast Group)
Suggested Panelists:
• Bob Pauley (Eastern Interconnection States' Planning Council)
• Jameson Smith (Midwest ISO)
• Robert Kramer (Purdue Calumet)
• Arcelor Mittal

3:45-4:00 pm  Break
4:00-5:30 pm   Panel Session #4: Smart Grid Workforce Training and Education
(Lead: E. Dietz)
Synopsis: The development of the future electricity grid requires a highly-trained and flexible workforce to fully realize the advanced grid technologies’ promise and benefits. The future workforce will be vital to reaching our goal to build a sustainable, reliable and efficient energy system. Growing and training the smart grid workforce will require close collaboration between industry and academia. This session will discuss and propose education and training programs to minimize the education-workforce gap in the electric energy sector, and to discuss the challenges of recruitment, retention, graduation and employment.
Suggested Keynote Speaker: Eric Dietz (CIT, Purdue)
Day 2

6:00-8:00 pm  Reception and posters

7:00-8:00 am  Breakfast

8:00-9:30 am  Advanced Grid Modeling, Simulation and Computing (Lead Alex Pothen)

9:30-10:00 am  Overview and break for group discussion

The US Power Grid is highly complex—and its complexity is growing at a rate faster than ever before due to the continuous integration of renewable energy sources, emerging storage technologies and intelligent loads into the Grid. The reliable and efficient operation of the next generation power grid will require developing new advanced modeling, simulation and analysis capabilities. These include real-time and near real-time network wide dynamic simulation and state estimation; reliable, validated, static and dynamic models of complex network components; and analysis of a large number of contingencies fast enough to provide timely options to system operators. This session seeks to identify the most critical, high-priority computational challenges that need to be addressed to attain the majority of progress towards building these new capabilities. Main focus will be laid on scientific computing algorithms and the use of high-performance computing platforms.

Suggested Keynote Speaker:
Victor Zavala (Argonne)

Suggested Panelists:
Sven Leyffer (Argonne)
Ahmed Sameh (CS, Purdue)
Oleg Wasynczuk (ECE, Purdue)
Andrew Liu (IE, Purdue)

10:00-10:15 am  Break

10:15-12:00 pm  Breakout groups (Lead: A. Liu)

- **Breakout Group #1 – Demand Response, Smart Buildings, and Microgrids**
  Suggested Lead: Oleg Wasynczuk (ECE, Purdue)
  Suggested Discussion Points:
  - Current technology for smart homes and smart buildings
  - Microgrid plug-and-play and system stability
  - Market mechanism for demand participation to wholesale markets

- **Breakout Group #2 – Renewable Integration**
  Suggested Lead: Doug Gotham (find replacement) (State Utility Forecast Group)
  Suggested Discussion Points:
  - Business model for transmission investment
- Long-term planning and capacity value of renewable resources
- Flexible ramp product markets to increase system reliability with large amount of intermittent resources
- Forecasting techniques for renewable generation

➢ **Breakout Group #3 – Advanced Grid Modeling, Simulation and Computing**
  Suggested Lead: Victor Zavala (Argonne)
Suggested Discussion Points:
- Multiscale modeling
- Large-scale stochastic optimization
- Faster than real-time simulation
- Applications of high performance computing

12:00-2:00 pm Report back and working lunch
About the GCC
MIT’s Program in Atmospheres, Oceans, and Climate and the Woods Hole Oceanographic Institution are pleased to announce the 7th annual GCC, a unique conference for graduate students, organized and run by graduate students. The goal of the GCC is to provide a discussion forum for graduate students undertaking research on climate and climate change in an array of disciplines. The format is designed to encourage new climate scientists to become acquainted with the details of diverse areas of climate research and place their own research in the context of the climate science community.

Food, lodging and conference costs will be provided by our generous sponsors. Limited travel funding will be available on an as-needed basis. Applications open April 15 on our website.

Who: Graduate students studying climate
What: 7th Graduate Climate Conference
When: November 1-3, 2013
Where: Woods Hole Oceanographic Institution
        Woods Hole, MA
Email: gcc-2013@mit.edu
Website: http://gradclimateconf.mit.edu
Abstract Deadline: June 7, 2013

Potential Sessions:
Paleoclimate       Atmosphere/Ocean Dynamics
Cryosphere        Biogeochemical Cycles
Clouds/Aerosols   Ecosystems/Biosphere
Hydrology         Climate Change Impacts
Climate Policy    Atmosphere/Ocean Chemistry
The Langley Aerospace Research Student Scholars (LARSS)
Research Internship Program
http://www.nianet.org/larss

The NASA Langley Research Center (Hampton, VA) offers paid, year-round (3 sessions), highly competitive research internships for exceptional students to work with Langley engineers and scientists on some of the Nation’s most important, difficult, and challenging problems. The LARSS program emphasizes multi-disciplinary and collaboratively developed solutions to problems in such broad areas as (1) flight, including entry, descent, and landing, in all atmospheres; (2) Earth systems science, including the characterization of all atmospheres; (3) affordable, safe, and sustainable space exploration systems and technology; and (4) materials and structural concepts, analysis, and integration.

ELIGIBILITY REQUIREMENTS
- U.S. Citizenship
- Full-time student status at an accredited U.S. college or university
- Classification as a rising undergraduate junior or senior, or graduate student (master's or doctoral level)
- Cumulative 3.0 GPA on a 4.0 scale

PROGRAM SESSION DATES
  Application Deadline: Oct. 11, 2012
- 2013 Summer Session (10 weeks) June 4 – Aug. 9, 2013
  Application Deadline: Feb. 1, 2013
- 2013 Fall Session (15 weeks) Sept. 4 – Dec. 13, 2013
  Application Deadline: June 26, 2013

CONTACT INFORMATION
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Fax: 757-864-9701
Deborah.B.Murray@nasa.gov

Find additional LARSS information, application, and deadlines at
http://www.nianet.org/larss