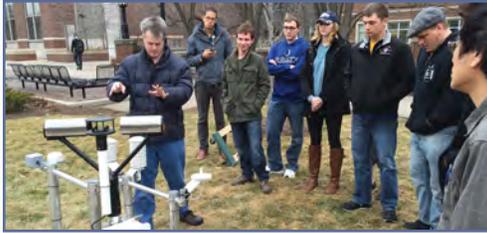


# INSIDE EAPS

Earth, Atmospheric, and Planetary Sciences at Purdue University - Spring 2016



Earth  
Atmospheric  
Planetary  
Sciences



## A Note From the Department Head

Greetings. I am delighted to present to you the latest issue of our alumni newsletter. You will find it full of exciting developments related to our students, faculty, and alumni. In 2015, we hired four new faculty, and are in the middle of a search for our Stephen and Karen Brand Endowed Professor of Unconventional Energy. We hope to bring a world-class researcher who can lead a new thematic area in the field of energy research. Needless to say, I am grateful to many of our alumni who are helping us by providing their input on this important faculty search.

We continue to improve in all areas of diversity. As an example, we now have seven female faculty in the department. Moreover, our faculty and students continue to get engaged in exciting learning, discovery, and outreach activities. Increasing the student numbers in our department and the number of credit hours taught by our faculty remain some of our top priorities. We have also started our own undergraduate student ambassador program with a cohort of six outstanding EAPS undergraduates to help us with the recruitment of prospective students.

I look forward to the EAPS Annual Awards Banquet and Annual Advisory Board Meeting in April. It is always a delight to see many of our alumni attend the awards banquet and present a multitude of scholarships to our students. Finally, the Advisory Board is actively involved with helping us plan the Black and Golden Jubilee celebrations set for September 2017, and we would love to hear your ideas and thoughts on how you would like to participate in this important landmark event.

Hail Purdue!

Best regards,  
*Indrajit Choudhary*  
Professor and Head



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## Congratulations to Our 2015 EAPS Outstanding Alumni Awardees

The Department of Earth Atmospheric and Planetary Sciences (EAPS) hosted an awards ceremony and reception for the 2015 EAPS Outstanding Alumni. The award was presented to Ms. Michele Gutenkunst Mouri (M.S. 2006) and Dr. Dibyajyoti (Diby) Tripathy (Ph.D. 2007). The two were honored for their outstanding professional achievements since graduating from Purdue.

Ms. Michele Gutenkunst Mouri has held a variety of positions within Chevron including assignments as an exploration, appraisal, development, and operations geologist. She has worked the shelf and deepwater of the Gulf of Mexico as well as deepwater Nigeria from both the Houston, TX and Covington, LA offices.

Ms. Mouri currently resides in Mandeville, LA and is the lead operations geologist for the new Big Foot deepwater development (Gulf of Mexico). She is responsible for all pre-drill pore pressure/fracture gradient modeling and hazard analysis across the field along with real-time drilling support. In addition to her job responsibilities, Ms. Mouri is a co-site leader for the Gulf of Mexico Women's Network as well as the Earth Science Recruiting Team Lead for both Purdue and Indiana Universities.

Dr. Dibyajyoti Tripathy received a M.S. in Geohydrology from Illinois State University (2002), and a M.S. in Applied Geology from Indian Institute of Technology, Bombay, India. Dr. Tripathy joined Chevron after graduating from Purdue. Currently, he is a team leader of Exploration and New Ventures for Chevron Mid-Continent Business Unit based in Houston.

Dr. Tripathy is a distinguished subject matter expert at Chevron in exploration and appraisal of unconventional resources (i.e., Shale Gas, Shale Oil or Tight Oil). He is recognized for outstanding contributions to developing and improving Chevron's proprietary standards, tools and workflows for evaluation, ranking, prioritization, and acquisition of Shale Gas and Tight Oil assets. Dr. Tripathy is a recipient of the selective Chevron North America Exploration and Production Company President's Award for his significant contributions to Chevron's acquisition of Shale Assets. Dr. Tripathy has also served as a member of the top corporate team that provides geotechnical consulting and leadership for Chevron's global exploration and new venture efforts.

Though relatively early in his career, Dr. Tripathy was promoted to a leadership position in 2014. His current team in Chevron Mid-Continent Business Unit is responsible for finding and maturing the next set of growth opportunities in unconventional resource plays. Dr. Tripathy actively mentors and serves as a role model for new and early career geotechnical employees in Chevron. Dr. Tripathy also actively contributes to Oil and Gas Industry publications and conferences as invited reviewer for acceptance of oral and poster submittals for AAPG conferences, judge for AAPG/SEG student expos, and as peer-reviewer for manuscripts in petroleum system modeling and unconventional resource exploration, appraisal, and development.

The two awardees were recognized at a departmental reception and ceremony. They both spoke about their careers and the role that their EAPS experiences have played in their lives. Ms. Mouri and Dr. Tripathy were also able to visit with EAPS faculty members and students. The Department was pleased to present them with this significant honor.



*Pictured at awards presentation are, from L-R, Dr. Jeff Roberts, Dean of the College of Science, Ms. Michele Gutenkunst Mouri (M.S. 1990), Dr. Dibyajyoti Tripathy (Ph.D. 2007), and Dr. Indrajeet Chaubey, Department Head of Earth, Atmospheric, and Planetary Sciences. (Photo courtesy of John Underwood)*



## Report from the EAPS Alumni Advisory Board by Pat Sheetz and Herb Borenstein

# Save the Date

# EAPS 50<sup>th</sup> BLACK & GOLDEN JUBILEE

## September 21 - 23, 2017

This year, the EAPS Advisory Board is focused on planning for an upcoming milestone event that evokes pride in our faculty, students, and alumni; and, that engenders aspirations for a great forward-looking future. That event is the 50th anniversary of the EAPS Department. We've dubbed the event the 'Black and Golden Jubilee', and it has been slated for the weekend of September 22-24, 2017; the same weekend as Homecoming and the annual Purdue-Michigan football game. The Board is deeply engaged in engineering a host of activities that will attract alumni, students, faculty, and their families to return to Purdue for a weekend of festivities and, for many, a nostalgic retrospective immersion into the EAPS yesteryear. It will also offer a view of the future direction and offerings of the EAPS Department.

On behalf of the Advisory Board, we are excited to have you be part of this gala celebration, and we look forward to spending time with you at the event. Please mark it in your calendars.

### Alumni Profile: Joe Bauer

EAPS Alumnus, Mr. Joseph Bauer graduated in 2015 with a bachelor's degree in Atmospheric Science. Upon graduation, he accepted a position with AccuWeather Enterprise Solutions, a branch of the Accuweather Company, where he is a Storm Warning Meteorologist. The company is widely known through its phone app and website for specializing in weather forecasting, weather risk management, and extreme weather warning to all of North America.

The Wichita, KS location from where Mr. Bauer works focuses on forecasting hazards and extreme weather. He works with a group of 18 people who provide forecasting and storm warning information to their main office in State College, PA. They also provide specialized forecasting for industrial clients such as utilities, transportation, and manufacturing. The central office disseminates the data to its various output sources accessible to the public such as the AccuWeather website, app, and television.

Mr. Bauer said, "I knew going into the job, forecasting for all of North America would be a challenge." He thanks the EAPS department for setting him up for a successful career. He described Professor Mike Baldwin and Professor Jason Naylor's forecasting class and math discussion as priceless learning experiences that simulate his real life every day. Professor Sun's dynamics course, although difficult, especially aided him in understanding and forecasting of heavy winter systems. "The program did an excellent job getting me the theoretical knowledge necessary to succeed in Atmospheric Science."

As a past president of PUMA, Mr. Bauer, credits the networking opportunities afforded through attendance at the AMS and NWA conferences in helping him land his position. Boiler up!



Photo courtesy of Joe Bauer

### Alumni Updates

In our last newsletter, we invited you to share an update on what you have been doing, and we were delighted to hear from you! Please continue to share your news, and we will feature your updates in future newsletters. You may email your information to [eaps-alumni@purdue.edu](mailto:eaps-alumni@purdue.edu).

### Honorary Doctorate

Professor Jon Harbor received an honorary doctorate in Natural Science from Stockholm University on September 25, 2015. Harbor and his seven fellow honorees were chosen because they "contributed in distinctive ways to the University's activities in research and education." Harbor is a leading researcher in physical geography and an innovator in education and academic leadership.



## Meet Our New and Returning Faculty

### Daniel Chavas

Professor Chavas is originally from Madison, WI. He received his Ph.D. from the Massachusetts Institute of Technology (MIT) in Atmospheric Science, and he was a National Science Foundation Postdoctoral Research Fellow in Civil and Environmental Engineering at Princeton University. Prof. Chavas' research focus is the fundamental physics of extreme weather phenomena, particularly tropical cyclones, and their dependence on climate, with an eye towards applying this understanding to risk assessment. He works across theory, idealized numerical models, and observations. Dr. Chavas joins our faculty as an assistant professor of atmospheric science.



### Matt Huber

Professor Huber received his B.A. (1994) with honors in Geophysics from the University of Chicago, M.S. (1997) in Atmospheric Sciences from the University of California Santa Cruz, and Ph.D. (2001) in Earth Sciences from the University of California Los Angeles. He was an assistant research professor at the University of Copenhagen (2001-2002). He started in EAPS as an assistant professor (2002-2007), associate professor (2007-2011), and professor (2011-2013). He has held an adjunct position while working as a professor in Earth Sciences at the University of New Hampshire (2013-2015). His research interests include paleoclimate and regional climate modeling, climate change, global warming, paleoceanography, extreme weather events and heat stress. Welcome back!



## The AMS Student Perspective by Doug Miller

The American Meteorological Society's (AMS) 15th annual student conference took place on January 9th and 10th in New Orleans. Speakers from the private, broadcast, academic and government sectors discussed career options and recent research in the atmospheric sciences. A career fair allowed students to interact with employers and graduate schools. In addition, a poster session allowed scientists to present their current research projects to students and professionals.

Day one was full of information and networking opportunities, and the opening sessions set the mood for the rest of the conference. The following two hours allowed students to attend breakout sessions catered to their specific interest in research, operational, or communications. Following the breakout sessions, time slots were arranged to attend "conversations with professionals." Students were allowed to choose from 12 professionals with whom they wanted to interact. I attended the sessions of National Hurricane Center Warning Coordination Meteorologist Daniel Brown, Dr. Emily Fischer of Colorado State University, Michael Chapman of Intelligent Transportation Systems, and Dr. Bill Lapenta, the director of NOAA's NCEP. Later that night, the career fair opened for students to interact with possible future employers, as well as representatives from graduate schools.

Day two included a session led by Dr. Roger Wakimoto, the current assistant director of the National Science Foundation, regarding how to develop leadership skills. The session that impacted me the most was, "How to Succeed in Graduate School." As a current applicant of six graduate programs, hearing professors discuss tips on how to apply, how to succeed in graduate school, and how to approach life after graduate school is something that I hope helps me during my career. The AMS Annual Student Conference concluded with a talk by Dr. Louis Uccellini, the director of the National Weather Service (NWS), on the evolution of the NWS. The poster session occurred Sunday night, which provided me with the opportunity to present my research regarding the global circulation changes in response to Arctic amplification. This eye-opening experience allowed me to interact with some of the brightest minds in our field, both students and professors alike. Attending the AMS Annual Conference was one of the greatest experiences I have had as an undergraduate, making the 13-hour car ride worth every minute.



Pictured at AMS are, from L-R, Doug Miller and Dr. Mike Baldwin  
(Photo courtesy of Doug Miller)

## Alumni Profile: Andrea Stevens

Ms. Andrea Stevens graduated in 2011 with two bachelor's degrees, one in economics and another in geology and geophysics. She grew up outside of Fort Wayne in Hamilton, IN where she took college courses while in high school and had several credits when she started at Purdue in Economics. Having an avid curiosity and interest in all types of subjects, Ms. Stevens took the Intro to Geology class and fell in love with the discipline. She continued to take geology courses and declared her second major in geology her sophomore year.

Although she considered herself on the economics path, she performed internships in both fields to determine which she enjoyed most. A turning point for her began during a geology field trip out West. Ms. Stevens recalled an experience when the group of graduate and undergraduate students were asked to make introductions and describe their research involvement. Her reply was, "I'm Andrea, and I don't have a plan." One of the professors leading the trip, Ken Ridgway, followed up with her and together they discovered her research interests and passion for geology. "He took me under his wing and gave me direction," said Ms. Stevens.

Ms. Stevens, is currently a Ph.D. candidate and NSF Graduate Research Fellow at the University of Arizona. Her research focus is the rise of the Sierras Pampeanas Mountains in west-central Argentina. She plans to pursue a career in academia after graduation.



Photos courtesy of Andrea Stevens



## Fieldwork Enriches the Educational Experience

Field trips and research-based field work play an integral role in the academic experience for many EAPS students. They challenge students to apply the concepts learned in the classroom to what is seen in real life. One recent trip hosted by visiting Assistant Professor Jason Naylor tapped into the knowledge that student's garnered from classes such as Weather Analysis & Forecasting, Radar Meteorology, and Dynamic Meteorology. Below are some highlights that Prof. Naylor shared from the trip:

"On the first day, we were able to intercept a developing low precipitation supercell near Pueblo and observe it for several hours. Although this storm never came particularly close to producing a tornado, it was the first time many of the students had witnessed a storm of this nature. On the second day, we intercepted a classic, tornado-warned supercell just north of La Junta. We were able to get close enough to this storm to observe signs of rotation aloft as well as developing rotation near the surface." These types of trips create lifetime memories and a strong connection between what is taught in books vs. what is seen in the field.



Credit: Jason Naylor

## Upcoming Events - Mark Your Calendars!

**LPSC 2016: The Woodlands, Texas**  
March 21-25, 2016

**EAPS Annual Awards Banquet**  
Monday, April, 18, 2016

**EAPS Annual Advisory Board Meeting**  
Tuesday, April 19, 2016

**GSA 2016: Denver, CO**  
September 25-28, 2016

**SEG 2016: Dallas, TX**  
October 16-21, 2016

**AGU 2016**  
December 12-16, 2016

**EAPS Black and Golden Jubilee 50th Anniversary**  
**West Lafayette, Indiana**  
September 21-23, 2017

EAPS will hold a reception at some of the meetings listed above.  
The time and location is TBD. Please check for updates at  
[www.eaps.purdue.edu/alumni](http://www.eaps.purdue.edu/alumni).



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