

INSIDE EAPS

Earth, Atmospheric, and Planetary Sciences at Purdue University - Fall 2015



Earth
Atmospheric
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Sciences



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Save the Date

EAPS 50th BLACK & GOLDEN JUBILEE

September 21 - 23, 2017

A Note From the Department Head

Greetings. Fall semester is always very exciting as we welcome new faculty and students to the department. We were fortunate to hire three world class atmospheric science faculty (Drs. Daniel Chavas, Daniel Dawson, and Robin Tanamachi). Our incoming undergraduate class this fall is 113, with 5 exchange students. In addition, we welcomed 16 new graduate students to our department. Our students and faculty continue to be recognized for their excellent work and leadership. Our newest undergraduate program in Planetary Sciences is off to a great start with the number of undergraduate majors increasing from 4 to 14 this fall. Incoming freshman class has seen an increase in most of our majors.

I am thankful for a very engaged Alumni Advisory Board. Many of the board members are working closely with us in helping meet our mission. In the EAPS Award Banquet, we recognized over 60 students and awarded scholarships/fellowships totaling more than \$116,000, thanks to a strong support from our alumni. Many of the students were very appreciative of the opportunity to interact with our alumni and receive their awards from them. I hope you will enjoy reading some of the recent exciting developments in the department that are presented in this newsletter. Please feel free to visit/call/email me if you have any questions or ideas that you would like to discuss. It is always a pleasure to hear from our alumni and have an opportunity to interact with them.

Best regards,

Indrajit Choudhury
Professor and Head



2015 EAPS Outstanding Alumni

Purdue's College of Science Distinguished Alumni Award honors scholars, scientists, professors and professionals in various fields. This year, Rick Knabb (BS 1990) was the recipient from EAPS. The award recognizes his outstanding professional achievements since graduating from Purdue.

Dr. Knabb earned his Bachelor's degree in Atmospheric Science from Purdue University (1990). He also obtained a Master's of Science and Doctorate in Meteorology from Florida State University (1993, 1999). He then completed his postdoctoral work at the University of Hawaii (2000).

During that same time, Dr. Knabb was a Research Meteorologist and Lead Forecaster at the Mauna Kea Weather Center from 1999-2001. After which he joined Risk Management Solutions, Inc. as an Assistant Product Manager for Weather Risk in 2001.

Dr. Knabb joined the National Oceanic and Atmospheric Administration's (NOAA) National Hurricane Center (NHC) as the Science and Operations Officer, and a senior Hurricane specialist in 2005-2008. He then became the Deputy Director of NOAA's Central Pacific Hurricane Center in Honolulu, Hawaii (2008-2010). In 2010, he joined The Weather Channel in Atlanta, Georgia, as its on-air Hurricane Expert and Tropical Science Program Manager. He rejoined NOAA's National Hurricane Center (NHC) in June 2012 as its Director.

Dr. Knabb has worked with the NHC toward providing new products and services, including those with a strong emphasis on individual hazards such as the potential storm surge flooding graphic and the storm surge watch/warning graphic. He continues to work closely with emergency managers, media partners, and the international community.

In June, Dr. Knabb visited the campus and gave a seminar discussing the changes in products and warnings from the NHC and how to enhance preparedness and flood response. He then met with several students to share career-related advice and the role his EAPS experiences have played in his life.

The department was pleased to host Dr. Knabb and express our heartfelt congratulations on this significant honor! Thank you for your continued Boilermaker pride and mentorship!



Pictured at awards presentation are, from L-R, Dr. Jeff Roberts, Dean of the College of Science, Rick Knabb (BS '90), and Dr. Indrajeet Chaubey, Department Head of Earth Atmospheric and Planetary Sciences. (Photo courtesy of John Underwood)



Dr. Knabb met with EAPS students following his lecture on June 18, 2015. (L-R) S. Childs, L. Downing, R. Knabb, K. Hoogewind, D. Miller, and A. Marmo. (Photo courtesy of Jill Wable)



EAPS Study Abroad

EAPS is fortunate to offer study abroad programs for both graduate and undergraduate students. Supported in part by the Student Experience Fund and through donations from alumni, this program provides an opportunity for collaborative learning and research in amazing destinations. Students from Purdue and Stockholm University recently worked together to learn about glaciation in Sweden.

The 4-week program began this past May with students working online in groups prior to their departure. Once in country, they were first introduced to its culture and geologic history before heading out into the field to climb in the mountains. The students presented final projects at the conclusion of their trip. Study Abroad experiences give students an opportunity to learn how to work successfully with their peers, embrace their differences, and provides a holistic experience that will benefit them in their future careers.



Credit: All photos courtesy of Jon Harbor.

“Little Foot” Oldest Dated Skeleton

EAPS professor, Dr. Darryl Granger, and Dr. Marc Caffee (Physics), were recently part of a research team that dated the rare Little Foot skeleton at 3.67 million years old. Using advanced dating methods from the Purdue Rare Isotope Measurement Laboratory (PRIME), the hominid skeleton is ranked amongst the oldest on record. The lab is one of only two in the nation with the equipment capable of performing this kind of dating.

Dr. Granger led the team who performed the dating, using a radioisotopic dating technique he pioneered coupled with a powerful accelerator mass spectrometer and a gas-filled magnet detector from the PRIME Lab to measure the radioisotopes. The result was a relatively small margin of error of 160,000 years for Little Foot and 210,000 years for the stone tools.

“We succeeded in our measurement, but we were surprised the dates were so old,” Granger said. “We double-and triple-checked our results, running the measurement again and again.”



Credit: the University of the Witwatersrand



Credit: John Underwood



Credit: John Underwood

Professor in the News

Professor David Minton, a planetary scientist, was featured in the spring issue of *Insights* magazine, where he discussed his research on the origins of the solar system. His work centers on studying collisions in space to understand abiogenesis on earth. Do you ever wonder what craters, meteorites and the history of our solar system tell us? Dr. Minton will tell you, “It’s the story of our home.”

Read the entire story.



Boiler Up!

Meet Our New Faculty

Daniel Dawson

Professor Dawson received his BS (2002) with the highest distinction from Purdue University and his MS (2004) and Ph.D. (2009) in Meteorology from the University of Oklahoma. His postdoctoral work is comprised of a research scientist (2009) for the Center for Analysis and Predictions of Storms (CAPS), research associate (2009-2011) at the National Severe Storms Laboratory (NSSL), research scientist (2011-2012) at the Cooperative Institute for Mesoscale Meteorological Studies (CIMMS), and a NSF Research Fellow (2012) at NSSL. He then returned to CAPS as an NSF Research Fellow and scientist (2013-2015). He returns to the Purdue campus as an assistant professor of atmospheric science.



Robin Tamanamachi

Professor Tanamachi received her BS (2001) in Atmospheric and Oceanic Sciences from the University of Wisconsin-Madison and her MS (2004) and Ph.D. (2011) in Meteorology from the University of Oklahoma. She was a postdoctoral research scientist at the Center for Analysis and Prediction of Storms (2011-2012), and then a National Research Council postdoctoral fellow at the National Severe Storms Laboratory (2012-2014). She then served as a research scientist and National Oceanic and Atmospheric Administration affiliate at the Cooperative Institute for Mesoscale Meteorological Studies. Dr. Tanamachi now joins the faculty as an assistant professor of atmospheric science.



Fulbright Scholar Syed E. Hasan

Dr. Syed E. Hasan (Ph.D., 1978) alumnus and MKC geosciences professor emeritus, received a Fulbright award to Qatar by the J. William Fulbright Foreign Scholarship Board (FFSB). He received his Ph.D. under the direction of Professor Terry West. Dr. Hasan will teach courses in waste management and environmental geology at Qatar University, and offer seminars at other Middle Eastern universities during the 2016 spring semester.

"Qatar, with its unique marine and desert ecosystems, needs to implement a waste management strategy that is compatible with its natural environment," Dr. Hasan said. "I am looking forward to sharing my expertise in the field of waste management with students and faculty at Qatar University to help them develop a sound waste management plan for their country."

New CEO of Devon Energy Group

Congratulations to EAPS alumnus Mr. Dave Hager (BS 1979) who was recently named President and CEO of Devon Energy Corporation.

As the previous Executive Vice President of Exploration and Production, Mr. Hager is well equipped for his new role. He has also served as the Chief Operating Officer (2013-2015), Chief Executive Officer and President of DLP GP, L.L.C, a General Partner of Devon Midstream Partners, L.P., and as an Executive Vice President of Exploration and Production (2009-2013). Mr. Hager worked for Kerr-McGee Corp. in a number of roles (2000-2009). He began his 35-year career in the energy industry as a geophysicist with Exxon Mobil Corp (1979). Mr. Hager earned a BS in geophysics from EAPS, and a MBA from Southern Methodist University. He also completed Executive MBA programs at Duke University and Harvard University.

EAPS Professors Featured in the News

Professor Jay Melosh and Professor David Minton were interviewed multiple times providing their expertise about the photos received from NASA's New Horizon spacecraft.

The excitement began on July 14th as the world began to see Pluto in detail for the first time. Dr. Melosh and his team hope to use the images to determine Pluto's age. Scientists will also get a better idea about how the planets were created. "All your life, you hear about this strange, little world, Pluto, on the outer reaches of the solar system and wonder what it looks like. And finally we get to see it up close," said Minton.



Credit: NASA/APL/SwRI

Alumni Profile: Sam Childs



Credit: Tim Brouk

EAPS alumnus, Mr. Sam Childs graduated this past spring (2015) with a bachelor's degree in Atmospheric Science with a climatology focus. As a West Lafayette native, Purdue provided a home close to his home, family, and church.

Mr. Childs' interest in weather began with a fear of thunderstorms as a child and evolved into a passion for forecasting severe weather. He was involved in undergraduate research with Dr. Ernie Agee. During his time at Purdue, he has published two journal articles and interned at NOAA.

When asked what he will remember most, Mr. Childs replied, "Getting to know my fellow students. There are only 12 of us so we became really close."

Mr. Childs has received many honors and awards while at Purdue.

Most recently, he received a National Science Foundation Graduate Research Fellowship and an American Meteorological Society Graduate Fellowship.

Mr. Childs was accepted into the Master's/Ph.D. program at Colorado State University. "I have been here my entire life. It has been my backyard. I owe a lot to the university that is for sure," said Mr. Childs. We wish him the best of luck and continued success. Boiler up!

Alumni Profile: Paul Krishna

Mr. Krishna (MS 1988) began his career with ExxonMobil. Since then, he has held many management positions and is currently the Environmental, Health and Safety Issues Manager in Fort Worth, Texas. Mr. Krishna is in direct contact with our communities addressing concerns and safeguarding the environment.

Mr. Krishna has received honors from the department on two separate occasions. In April of 2006, he received the College of Science Outstanding Alumni Award, and the Distinguished Alumni Award in 2011 in recognition for the contributions he has made in our communities and lives. He continues to give back to the department serving as a member of the Alumni Advisory Board.

Mr. Krishna recently shared, "I see a number of people I graduated with within the oil and gas industry and stay in touch with them." He said that it is not uncommon to find someone who has graduated from Purdue and EAPS. "I feel a good fraternity with those people, and it makes me proud to be a Boilermaker!"



Boiler Up!

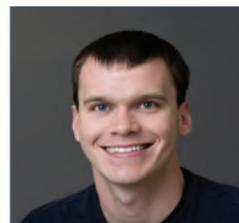
Alumni Updates

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.



NASA Fellowship Recipients

Three EAPS students were selected for the NASA Earth Space Science Fellowships. Congratulations go out to (L-R) Saiprasanth Bhalachandran, Kevin Graves, and Ya-Huei Huang on their accomplishment. Their major professors are Dr. Dev Niyogi (Bhalachandran) and Dr. David Minton (Graves and Ya-Huei).



Upcoming Events - Mark Your Calendars!

AGU 2015: San Francisco, California

December 14- December 18, 2015

Reception: December 17 from 7:00 p.m.- 9:00 p.m. at the Thirsty Bear

AMS 2016: New Orleans, Louisiana

January 10 - January 14, 2016

LPSC 2016: The Woodlands, Texas

March 21-25, 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.



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