A Note From the Department Head

Welcome to our inaugural edition of the new Inside EAPS newsletter. We are truly fortunate to have a strong support network from our alumni. Your loyalty helps the department continue to be successful in its mission of educating the next generation of earth scientists and disciplinary excellence. I hope you will enjoy reading the recent and exciting developments in the department that are featured in this edition of the newsletter.

If you have the opportunity to visit the Purdue campus anytime soon, we encourage you to come by and visit the department. We always welcome our alumni to stop by if you have any questions or ideas that you would like to discuss. As you know, EAPS is known for its quality teaching and mentoring of students and our department contributes significantly to the core areas of university's mission – discovery, learning, and engagement. I believe that our department is poised to make even greater contributions to the core mission of the College of Science and Purdue, and look forward to connecting with you, our alumni, for your suggestions on making some of our aspirations a reality.

Best regards,

Indrajeet Chaubey
Professor and Head
First Endowed Chair Coming to the Department

Stephen R. Brand (MS ’73, PhD 76’) and his wife, Karen, made a substantial gift last fall to establish the Earth, Atmospheric, and Planetary Sciences first endowed chair. The Stephen and Karen Brand Endowed Chair will be used to recruit a researcher in the area of unconventional energy resources.

“Breakthroughs in the areas the Brand chair will study are the world’s best hope for affordable, plentiful energy and economic uplift,” Purdue President Mitch Daniels said. “We must invest in research to find other ways to create the energy we need. The Stephen and Karen Brand Endowed Chair will provide the platform from which Purdue can grow into a leader in maximizing these new possibilities in concert with new industry and government partners.”

The endowed chair will capitalize on EAPS’ strengths in geology and engineering to build and expand the research knowledge in this emerging area. The forward momentum created by this position will also offer students the opportunity to learn in-demand skills that will set them apart from other graduates.

Dr. Brand began his career in 1976 with Phillips Petroleum Company, which would later become ConocoPhillips, as a geologist for exploration and production. He rose through the ranks and eventually served as president of Australasia, then vice president of worldwide exploration and business development for exploration and production, and senior vice president of technology (R&D). During his tenure as senior vice president of technology, programs were developed and initiated in nanotechnology, algae biofuels, low carbon hydrogen, organic solar cells, carbon dioxide capture technology and dieselization.

EAPS Professor and Graduate Student

Featured in the Chronicle of Higher Education

Professor Kenneth Ridgway and graduate student Darryl Reano were recently featured in the Chronicle of Higher Education. The article highlights the challenges faced by Reano on his path through graduate school, as well as how Ridgway is increasing Native American diversity in the department.

Reano, like many other Native Americans, was struggling with feelings of guilt during his graduate education at Purdue. He had a sick family member 1,400 miles away, on his reservation in Acoma Pueblo, NM, and it hurt not being around for his family. These feelings are echoed around the country by many other Native American students and are a major reason that they earn a troublingly low number of doctorates.

Stories like Reano’s prompted the Sloan Foundation to give more than $17 million to a handful of universities, including Purdue. Since 2007 the Sloan Program has been implemented at Purdue where 17 American Indians have earned degrees and 12 are enrolled now. Professor Ridgway attributes a high retention rate to the programs focus on fostering community and matching students with the right research interests and supportive professors. Read more by scanning the QR code.
Astronaut Reunion Brings EAPS Alum Back to Campus

Andrew Feustel (BS ’89, PhD ’91) visited campus last spring for a Purdue Astronaut Reunion. He was able to meet with current students in the department and give them career advice and answer many of their questions about traveling in space. He flew on two space shuttle missions in 2009 and 2011, conducting several spacewalks to service the Hubble Space Telescope and the International Space Station, respectively.

During the reunion, Dr. Feustel took part in the event, “A Conversation with Our Astronauts.” At the conclusion of the program each astronaut, including Dr. Feustel, was awarded with the Order of the Griffin Award. This award was presented by President Mitch Daniels. It is the highest honor that can be bestowed upon a Purdue alumnus.

The astronauts also surprised Daniels, by giving him a signed collage of photos from space.

Dr. Feustel is currently one of twenty-three Purdue graduates to become astronauts.

El Aguila Gold Mine Display Draws Publicity to the Department

Last spring, EAPS celebrated the dedication of the El Aguila Mine Exhibit, located on the second floor of Hampton Hall. This display was brought to life through a generous donation by William Reid (BS ’70, MS ’72).

The exhibit is a museum quality interactive display that takes visitors through the entire mining process and includes items from the El Aguila Mine in Oaxaca, Mexico. Several kinds of ore are mined there, including gold.

Reid, now retired, is the former chief executive officer of Gold Resource Corp., the company that owns El Aguila Mine. In addition to the funding, Reid brought a team from EAPS to the mine to gather information, photos, videos and items for the display.

The exhibit is one of the displays helping to make EAPS a destination on the Purdue Campus. Other projects include a new, interactive Rock Display, located between Hampton Hall and the Pharmacy Building.

Meet New EAPS Director of Development

EAPS would like to introduce our new Director of Development, James “Jimmy” Parker. He is a graduate of the Purdue Brian Lamb School of Communication and comes to University Development from his previous position as Recruiter of Teaching Education Programs in the College of Education. Jimmy’s goal is to work closely with EAPS alumni, as well as the department, to meet strategic goals and provide the best possible experience for our students by preparing them for their futures. Join us in welcoming Jimmy to the EAPS team!

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EAPS Alum Among 2014 Distinguished Science Alumni Award Winners

The Purdue College of Science Distinguished Alumni Awards honor scholars, scientists, professors and professionals in various fields. This year, among the eight recipients is Herbert Borenstein (MS ’79).

After earning his Masters, Borenstein started his career as a research meteorologist, and helped steer the evolution of early-generation air pollution dispersion models. He then navigated into the field of computer-aided design and manufacturing in the early 1980s, developing platforms to facilitate the design, construction and support of on-board submarine sub-systems for the U.S. Navy. Borenstein has moved up the management ranks and assumed several senior management roles of increasing responsibility. He is currently the Vice President of Business Transformation at Fujitsu.

Last spring, Borenstein visited the department to share his knowledge and offer career-related advice to current EAPS students during a lunch and presentation. To this day, he maintains his Boilermaker Pride—Boiler Up!

2014 Annual EAPS Award Banquet

In late April, students and their families joined EAPS faculty, staff, and alumni in a celebration of their accomplishments from the past academic year.

During the banquet, over 70 awards were presented to students totaling over $98,000.

Later that week, students also participated in an Alumni Advisory Board Panel and an Alumni/Student networking event. During this time they received tips to successful resumes, cover letters and interview experiences.

Alum Wins SEG Award

Dr. Bin Wang, PhD ’93, was awarded Lifetime Membership by SEG. The award is reserved for those who have voluntarily rendered exceptionally meritorious service to the Society that, in the unanimous opinion of the Honors and Awards Committee and the Executive Committee, warrants recognition. Wang is currently serving as director and general manager of R&D at TGS-NOPEC. Congrats to Dr. Wang!

Melosh Receives Herbert Newby McCoy Award

University Distinguished Professor Jay Melosh was honored with the most prestigious research honor in the natural sciences given by Purdue. Professor Melosh received the McCoy award for his outstanding contributions to planetary research.

Dr. Melosh’s research focuses on numerical modeling of the physics and chemistry of impacts at scales ranging from the Deep Impact event on comet Tempel 1 to the Mars-size object that impacted the Earth 4.5 billion years ago and created our moon. He also studies the exchange of microorganisms between the planets and the origin of life. His recent research includes studies of the K/T impact that extinguished the dinosaurs and the ejection of rocks from their parent bodies.

“I’m certainly honored and humbled to join the fraternity of past McCoy Award winners at Purdue University who share a love of research and celebrate those days in the laboratory with our students when we realize we might be onto something that will provide a deeper understanding of our universe,” Dr. Melosh said.
Meet our New Faculty

Julie Elliott
Research Interests: Geodesy, active tectonics and glacier change.

Marty Frisbee
Research Interests: Interactions between deep groundwater and surface water, watershed response to perturbations.

Briony Horgan
Research Interests: Planetary Geology, Infrared Spectroscopy, Mars Analogs, Surface Weathering, Aeolian Geomorphology

Lisa Welp-Smith
Research Interests: Stable-isotope biogeochemistry, exchange of H₂O and CO₂ between land biosphere and atmosphere, boreal forest carbon cycle.

Yutian Wu
Research Interests: Storm track dynamics, atmosphere general circulation, climate change.

EAPS Course in the News
Professor Andy Freed was recently highlighted in the Indianapolis Star for sharing his scientific knowledge of events that occur in the movie, “Sharknado.”

The newspaper featured an article about Freed and his EAPS course, Geosciences in the Cinema. It is an introductory-level class for non-science majors that dissects films to explore natural disasters.

Freed says that the movie clips help students picture what is happening and spark discussions about what is fact and fiction.

“It’s all a backdrop so I can have a discussion about how does a tornado form? What are the conditions you need? How big can they get? How can we measure them?” he said.

Check out the full article:

Purdue is Mars-Bound thanks to EAPS Professor
Professor Briony Horgan, is the co-Investigator of an instrument that will be traveling to Mars for a NASA rover mission in 2020.

The instrument is a camera called the Mastcam-Z. It is one of seven instruments selected by NASA that the 2020 Mars rover will carry to the red planet. Mastcam-Z will be the main science camera on the rover. It is similar to the camera used in NASA’s Mars Science Laboratory, Curiosity, with updated features like stereoscopic imaging and a zoom capability. With the upgrades, this pre-existing instrument is low-risk and a good choice for this mission, said Horgan.

What sets the Mars 2020 rover mission apart from its predecessors is that it will be looking for bio signatures, or evidence of ancient Martian life. “That’s different from previous rovers which were really just looking for really basic things like water, or how habitable was the environment,” said Horgan. The 2020 rover will also collect and cache samples that will eventually be brought back to Earth.

Future Newsletters
Help save trees by signing up to receive our newsletter electronically via email (http://goo.gl/G1EPXz). There is also an option to unsubscribe should you ever choose to do so.

EAPS Alumni, We Want to Hear From You!
We would like to include more about you in the upcoming newsletters, as well as have your updated information and email address. Send items to Amy Cooper at ancooper@purdue.edu.
Mark Your Calendars

October 19 - October 22
GSA 2014: Vancouver, Canada
EAPS Reception: Monday, October 20, 7:00 - 9:00 PM at Hyatt Regency

October 26 - October 31
SEG 2014: Denver, Colorado
EAPS Reception: Monday October 27, 6:00 - 8:00 PM at Hilton Garden Inn

December 15 - December 19
AGU 2014: San Francisco, California
EAPS Reception: Wednesday, December 17, 7:00 - 9:00 PM at The Thirsty Bear

January 4 - January 8
AMS 2015: Phoenix, Arizona
EAPS Reception: Tuesday, January 6, 6:30 - 8:30 PM, location TBD

April 20
EAPS Annual Awards Banquet
Ross-Ade Pavilion

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