

January 11, 2010

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## THE NEW HEAD'S PERSPECTIVE

### Happy New Year!

Welcome back to campus for the Spring 2010 semester, and Happy New Year to EAS students, staff, faculty and alumni! I hope that you had a happy holiday season and semester break and that the new semester and new year will be interesting, productive and enjoyable for you.

The American Meteorological Society annual meeting is coming up next week in Atlanta. Many EAS faculty, students and staff will be attending. EAS will be hosting an alumni and friends reception at the AMS meeting from 6:30 to 8:30 p.m. on Tuesday, January 19<sup>th</sup>. The reception will be held in the Sycamore Room of the Omni Hotel at CNN Center and we hope to see many of you there.

Many thanks to Professor Ernie Agee for his stellar service to EAS as Interim Department Head since last summer. Under his thoughtful and effective leadership the department enjoyed several important new achievements and events, and successfully completed creation and approval of a new strategic plan that will guide our continued development over the next 5 years.

I am looking forward to working with you all as the new EAS department head. Even with the current financial climate, I am confident that EAS will be able to move ahead aggressively with the initiatives described in our strategic plan. These include enhancing and evolving our teaching and research programs, strong engagement with alumni, corporate partners, policymakers and K-12, as well as continued efforts to improve the department as a supportive and enjoyable environment in which all of our students, staff and faculty can pursue their goals. Working together, we can continue the rapid pace of improvement that has been a hallmark of EAS over the last decade.

Jon Harbor

## A PARTING PERSPECTIVE BY THE INTERIM HEAD

Upon completion of my third appointment as your department head (ranging from 6 years to 6 months) this will no doubt be my last opportunity to provide an administrative perspective. Simply put, I view our department at an all-time high level of academic excellence, due to the professional efforts and achievements of the faculty, students and staff, both present and in the past. Even more remarkable, such a perspective can be offered in this stressed financial environment for higher education. The successes of EAS alumni, here at home in Indiana, as well as around the nation and the world, continue to elevate the stature of our academic programs.

A brief look into the future reveals extraordinary opportunity for geoscientists, as the "grand challenges" of sustaining humankind in a productive global arena involves the pursuit of fundamental needs, such as energy, food and water supplies, mitigation in a changing climate, understanding and safeguards against natural hazards, as well as new venues of multidisciplinary scientific studies that address unforeseen opportunities. EAS proudly wears the title of "the Multidisciplinary Science Department" in the College of Science, evidenced by 16 joint faculty appointments within 8 departments and 3 Colleges across the campus. We are positioned well, and EAS can achieve yet higher levels of academic excellence with our vibrant faculty and student body, surrounded by critical support staff, and continued visionary leadership from Dean Roberts and our new department head, Jon Harbor.

Finally, it is important to note that the "esprit de corps" in our department is second to none, and this is like "icing on the cake" in the formula for academic success.

Ernie

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## OUR RECENT PUBLICATIONS

Tseng, T. L., W. P. Chen, and R. L. Nowack, 2009: Northward Thinning of Tibetan Crust Revealed by Virtual Seismic Profiles, *Geophys. Res. Lett.*, **36**, 14, doi:10.1029/2009GL038252.

Nowack, R. L., T. Parsons and A. Revil, 2009: Exploring new Frontiers with *JGR-Solid Earth, J. Geophys. Res.*, **114**, B10, doi:10.1029/2009JB006977.

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### RECENT PRESENTATIONS

Dr. Wen-Yih Sun presented an invited paper, "Mass correction applied to semi-Lagrangian advection scheme" (with O. M. Sun) at the International Aerosol Modeling Algorithms (IAMA) Conference at UC-Davis, Davis, California, December 9-11, 2009.

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### SIGMA XI AWARD WINNER

Kevin Gurney has been awarded the 2010 Sigma Xi Young Investigator Award in the physical sciences. This award was established in 1996 to recognize researchers in the early stages of their careers whose outstanding contributions best exemplify the ideals of Sigma Xi. Kevin will receive the award at the Annual Meeting in Raleigh, North Carolina, where he will present the keynote lecture.

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### NEW FRONTIERS MISSION NEWS

Jay Melosh is on the science team of one of the three finalists for NASA's next New Frontiers mission, which was announced in a NASA press release last week. The overall mission is expected to cost about \$630 million. Melosh's project is called MoonRise and they plan to return a sample from the South Pole Aitkin basin on the Moon's farside. Their hope is to radiometrically date the basin, which is at the base of the lunar stratigraphic column and thus assess the reality of the Late Heavy Bombardment cratering spike. They also expect to sample melt rocks that incorporate a much larger fraction of the lunar mantle than previous lunar samples and thus to learn more about the chemistry of the Moon's interior. Melosh's role is in understanding the nature of the basin-forming processes and relating the samples returned to their geologic context. This also involves studies of the best place to land on the

farside. They will receive \$3.3 million this year to refine the landing, sample retrieval and sample return systems. Melosh is planning to collaborate with experts in Purdue's Aerospace Engineering department over some problematic issues centering on the sample retrieval system.

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### CITATION

Jay Melosh is cited in an article that came out in the January 2010 issue of *Scientific American* on the formation of the Earth's first continents. The citation is for a discussion of how very large impacts affected mantle plumes on the Archean age Earth. The illustrations of continent formation in the article were also re-drawn from originals that Melosh supplied to the *Scientific American* editor, Sarah Simpson.

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### EAS TECHNOLOGY SUPPORT NEWS

#### Changes in ITaP Instructional Labs

Information on changes to ITaP Instructional Labs and Software Remote over Winter Break may be found at:

<http://www.itap.purdue.edu/tt/announcements/DEC2009.cfm>

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### A NOTE FROM OUR ACADEMIC COUNSELOR Schedule Calendar

Now-January 17: You can add classes though myPurdue with no signatures (unless specified for a certain course). Adding classes after January 18 requires advisor and instructor signatures and paperwork to Hovde Hall.

Now-January 25: You can drop a class though myPurdue without it appearing on your record.

Monday, January 18, Martin Luther King Jr. Day – No classes.

Nancy

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### ABOUT THIS NEWSLETTER:

This weekly newsletter is the place to look to keep up with departmental happenings, announcements (seminars, student group events, scholarship and award deadlines, departmental committees), job and grant opportunities, and anything else you need to know about the department. It should cut down on the glut of email and other forms of separate announcements – **if it is in the newsletter, we assume you know about it** and no other reminders are needed. Past issues will be available on our departmental web site ([www.purdue.edu/eas/](http://www.purdue.edu/eas/)). Material for inclusion in the newsletter should be submitted to Gina Richey ([grichey@purdue.edu](mailto:grichey@purdue.edu)) by **Friday noon** of each week for inclusion in the Monday newsletter.

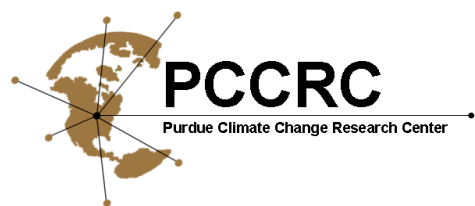
For answers to common technology questions and the latest updates from the EAS Technology Support staff, please visit <http://www.purdue.edu/eas/resources/it>.

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>.





**Please Join Us**



**Alumni, Friends, and Student Reception  
at the AMS Meeting  
Tuesday, January 19th 6:30-8:30p  
Omni Hotel @ CNN Center, Sycamore Room  
100 CNN Center, Atlanta GA**

**For more information contact:  
Dee Gillespie  
On-site cell 765-491-0259**

**No RSVP Required  
(you do not have to be registered  
for the AMS Meeting to attend)**





# NASA Postdoctoral Program



- One-year appointments
- Renewable up to three years
- Annual stipend
- Supplements for travel, relocation, and insurance

## Space Science



## Astrobiology



## Earth Science



## Space Operations



## Exploration Systems



## Aeronautics Research



### NASA Centers\*

- Ames Research Center
- Dryden Flight Research Center
- Glenn Research Center
- Goddard Space Flight Center
- Jet Propulsion Laboratory
- Johnson Space Center
- Kennedy Space Center
- Langley Research Center
- Marshall Space Flight Center
- NASA Headquarters
- Stennis Space Center
- \*Astrobiology Institute-Various Locations

Administered by Oak Ridge Associated Universities



## NASA Postdoctoral Program

<http://nasa.orau.org/postdoc>



### Eligibility

- Ph.D. completed
- U.S. Citizen
- Lawful Permanent Resident (LPR)
- J-1 Research Scholar
- Employment Authorization Document (pending LPR)

### Applications

- Completed online
- Due March 1, July 1, or November 1
- Reviewed by NASA
- Scored by peer reviewers

### Awards

- Residency at NASA site required
- Approximately 50 awards annually
- Annual stipend starts at \$50,000
- Supplement for areas with higher cost of living
- Limited relocation allowance
- Travel allowance ~ \$8,000 per year
- Health insurance available through ORAU

### NASA Centers



administered by Oak Ridge Associated Universities





# NSERC

National Suborbital Education and Research Center

UND THE UNIVERSITY OF NORTH DAKOTA



## NASA Opportunity for Student Airborne Research

NASA seeks highly motivated advanced undergraduate and early graduate students for participation in a summer 2010 research program in Earth system science using its DC-8 flying laboratory. The Student Airborne Research Program (SARP), is managed by the National Suborbital Education and Research Center ([www.nserc.und.edu](http://www.nserc.und.edu)).

Students will acquire hands-on research experience in all aspects of a scientific campaign, using a major NASA resource for studying Earth system processes, calibration and validation of space-borne observations, and prototyping instruments for possible satellite missions. Students will operate instruments onboard the DC-8 aircraft to sample atmospheric gases and to image land and water surfaces in multiple spectral bands.

Applicants should have a strong academic background in disciplines relevant to the Earth system, including the physical, chemical, or biological sciences, or engineering.



Eligibility requirements include full-time student status at an accredited U.S. college or university. Women and minorities are strongly encouraged to apply. Successful applicants will be awarded a stipend for participation in the 6 week program in Southern California for classroom, laboratory, and aircraft experience. NSERC will provide travel to and from California and living expenses while in California.

### Application materials should include:

- 2 page personal statement describing the student's interests in pursuing research in the Earth sciences and other special qualifications.
- Letter of recommendation from a professor or advisor familiar with the student's abilities.
- Official undergraduate and/or graduate transcripts.

### Selection criteria will include:

- Excellent academic performance
- Promise for contributing to nation's future workforce as judged by career plans
- Evidence of interest in Earth system science and hands-on research
- Geographic, gender and ethnic diversity
- Ability to perform in teams

## DEADLINE FOR APPLICATIONS IS FEBRUARY 22, 2010

Submit by mail to:

Rick Shetter, NSERC Director

Center for People and the Environment, University of North Dakota

4149 University Avenue, Stop 9011

Grand Forks, ND 58202-9011

More information can be found at <http://www.nserc.und.edu/learning/SARP>, or by telephoning Mr. Shetter at (701) 330-2126.

Or submit electronically to:

[r.shetter@nserc.und.edu](mailto:r.shetter@nserc.und.edu)



# DOSECC Internship Program

DOSECC internships are open to college students (graduate or undergraduate) and primary and secondary school teachers, worldwide. The internship must involve a project where drilling has provided data and/or materials for study.

Interns can undertake research related to ongoing or past drilling efforts, and you can work anywhere you like - crunch data at your home institution, travel to a drill site to collect data, or go to a core repository to examine samples. You pick your own project and do your own research with input from your advisors. Interns do not come to DOSECC to work with us, nor do we provide the rock or sediment core - DOSECC personnel are not directly involved in your project, except for granting you the money to do your research.

Internship funding will be available in spring 2010 and budgets of \$2000 to \$5000 are appropriate. In the past, a high percentage of applicants have been successful. More details are available at [dosecc.org/html/internship.html](http://dosecc.org/html/internship.html)

**Application Deadline:**  
**1 March 2010**  
**Awards Announced:**  
**1 April 2010**

