

November 2, 2009

UPCOMING MEETING

Wednesday, November 4

- EAS Leadership Committee, CIVL 2173 (9 a.m.)

THESIS DEFENSE

Wednesday, November 4, at 3 p.m. in CIVL 2201:

"Impacts of Land Surface Properties on Temperature Trends over the United States (1979-2005): Assessment using the US Historical Climate Network and North American Regional Reanalysis Datasets." PhD Defense for Souleymane Fall; Advisor: Dev Niyogi

EAS SEMINAR

Thursday, November 5, at 3:30 p.m. in CIVL 1252:

"Modeling Hurricanes across Scales." Dr. Greg Holland, National Center for Atmospheric Research

Refreshments at 3 p.m. in CIVL 2201

For more information, see the EAS online [calendar](#).

RECENT PRESENTATIONS

Gabe Bowen gave an invited talk at the Department of Earth Sciences at Northwestern University on October 23rd. The title was "H and O isotope ratios of heterotroph tissues: Paleoclimatological, ecological and forensic applications."

Jennifer Haase gave an invited talk October 29th at the Fourth FORMOSAT-3/COSMIC Data Users Workshop at NCAR in Boulder, Colorado entitled, "[New Experiments with the GISMOS Airborne Radio Occultation System](#)"

Larry and Sheryl Braile presented the following workshops at the California Science Teachers Association meeting in Palm Springs California on Saturday, October 24, 2009:

- Earthquakes – A Workshop for Teachers (3 hours)
- Earthquakes in the Southern California Area (1 hour)
- Making Waves: Seismic Waves Activities and Demonstrations (1 hour)

The following presentations were given at the 2009 GSA Annual Meeting, 18-21 October in Portland, Oregon:

"[A Role for Mental Rotations in Field-based Problem Solving](#)" by Riggs, and Balliet (Invited Talk)

"[Assessing Learning Outcomes in Field Geology Instruction](#)" by Riggs (Invited Talk)

"[Systematically Fractured Clasts in the Titus Canyon Formation: Evidence for Late-stage Brittle Deformation in the Boundary Canyon Detachment System](#)" by Lindemann and Riggs

"[Geologic Problem Solving in the Field: Insights from Analysis of GPS Tracks at Variable Temporal Scales](#)" by Balliet and Riggs

"[Seeing the Field through the Eyes of Students](#)" by Maltese and Riggs

"[Deposition, Provenance, and Exhumation of Neogene Strata in the Syntaxis of the Chugach-St. Elias Range, Southeast Alaska](#)" by Witmer, Ridgway, Enkelmann, Brennan, and Valencia

"[Stratigraphy and Provenance of the Poul Creek Formation in the Chugach-St. Elias Mountains, Southeast Alaska: Insights on Eocene-Miocene Sedimentation in the Gulf of Alaska](#)" by Brennan, Ridgway, Witmer, and Valencia

"[Environmental Opportunities Related to Underground and Surface Coal Mines in Southwest Indiana](#)" by West and Fisher

"[Current Status of the Mesozoic Astronomical Time Scale](#)" by Hinnov, Ogg, Huang, Galbrun, Huret, Boulila, Husson, and Locklair

"[Earth History Visualization – The Timescale Creator System and Datapacks](#)" by Ogg, Lugowski, and Gradstein

"[The Geophysical Evolution of Mercury](#)" by Solomon, Freed, Hauck, Head, Kerber, Phillips, Robinson, Watters, and Zuber

"[Field Geophysics Education at SAGE – Learning Geophysics by Doing Geophysics](#)" by Braile, Baldrige, Jiracek, Ferguson, Biehler, Gilpin, Pellerin, McPhee, Snelson, Bedrosian, and Sussman

"[Analysis of Strain Partitioning in Analog Oblique Convergent Wedges](#)" by Haq

CONGRATULATIONS AWARD WINNERS!

Cleveland Abbe Award

The American Meteorological Society announced that our own Department Head, Ernie Agee, has won their **Cleveland Abbe Award for Distinguished Service to Atmospheric Sciences by an Individual**.

The description of the award is: *Presented on the basis of activities that have materially contributed to the progress of the atmospheric sciences or to the application of atmospheric sciences to general, social, economic, or humanitarian welfare.*

The award committee has awarded this honor to Prof. Agee *"For nearly 40 years of contributions and service to atmospheric science at the local, national, and international levels."*

The award will be presented at the 90th Annual AMS Meeting in Atlanta, Georgia on January 20, 2010.

Gilbert Harris Award

William J. Zinsmeister was honored with the 2009 Gilbert Harris Award last week at the Geological Society of America meeting in Portland, Oregon. Jim Ogg received the award for Bill Zinsmeister, and re-presented it to him at the EAS faculty meeting.



The following is an extract from the formal presentation:

[The Gilbert Harris Award is presented annually by the Paleontological Research Institution in recognition of career excellence in systematic paleontology and who has made a significant contribution to the science. Bill Zinsmeister is a passionate explorer, and for two decades, beginning in 1975, he participated in or led numerous field parties to the southern end of the world, including

ten trips to Antarctica and six to Patagonia and Tierra del Fuego.

Eight of these trips were to Seymour Island, on the tip on the Antarctic Peninsula. Although he has also worked and published extensively on fossils from the Pacific coast of North America and the Canadian Arctic, it is with the fossils of Seymour Island that Bill's name will always be associated. Bill's research – which has produced more than 100 peer-reviewed papers – has been a combination of the discovery of scores of taxa new to science and an appreciation of "Big picture science".

Bill is described by former students as "a big man with a great sense of humor" who demanded a great deal of them but was also very supportive. He has a habit of giving his graduate students a small graduation gift – a silver pencil, because Charles Darwin during the voyage of the "Beagle" made his notes with a silver pencil. Darwin has always been a hero of Bill's, and it is especially appropriate for us to celebrate Bill's career of accomplishment in the bicentennial year of Darwin's birth.]

EAS TECHNOLOGY SUPPORT NEWS

Purdue's Usenet Service to be Discontinued

Purdue's Usenet Service will be discontinued after December 31, 2009. Additional information may be found at:

<http://www.itap.purdue.edu/newsroom/detail.cfm?NewsId=2020>

EXXONMOBIL CONTRIBUTIONS



ExxonMobil recruiter, Lisa Roehl, presents a check to Ernie Agee in support of educational programs in the geological sciences. Lisa interviewed several EAS students for potential employment in ExxonMobil, and also presented a guest lecture in Jim Ogg's class on "Oil" (EAS 15100).

DOPPLER ON WHEELS RESEARCH RADAR AT PURDUE

Professor Jeff Trapp of EAS has been funded by the National Science Foundation to use of one of the Mobile Weather Research Radars “Doppler on Wheels” (DOW) for his Radar Meteorology course for one month in October/November. The upper-level undergraduate and graduate students in his course have the opportunity to take the radar out in teams to collect data on research projects of their choosing as part of the course.

While the DOW is here, Professor Trapp has also been giving tours to students enrolled in other atmospheric science courses in the department, as shown here.



The DOWs have been featured on the Discovery Channel’s “Storm Chasers” series, and have most recently been used in the field campaign “Vortex 2” this past summer, to study tornadoes. Prof. Trapp and several graduate and undergraduate students from EAS also participated in the Vortex 2 field campaign.

GEOTALES IV

The Alabama Project

Some years ago I was working on a project in Alabama where a rest stop was being planned adjacent to an existing Interstate Highway. During site investigation for the rest stop a room and pillar coal mine network was discovered based on drilling and geophysical studies. On-site evaluation of the mine workings was required before design of the facilities could be completed. Two of us engineering geologists accompanied by an Alabama mine inspector entered the shallow workings through an adit entrance. The mine was dry, with rotting timber supports and some roof fall down areas. No

dangerous gases were indicated by the mine inspector’s equipment.

The next day the two of us geologists returned for a final evaluation of the surface area. It had rained overnight and we forded a local creek in our pickup truck. I wore a suit and tie that day planning to fly home right after the site visit. On our return across the creek the truck bogged down in the soft sediment at its base. I had no choice but to remove my shirt, pants and shoes and push the truck out of the mud in my underclothes. After drying off and redressing, I was dropped off at the airport to return home from the field experience. – Terry R. West

ARTICLE IN THE ONLINE NEW YORK TIMES RESEARCH BY AN EAS ALUMNA

Research at the Source of a Pennsylvania Flood



Associated Press

Survivors amid the wreckage of the 1889 deluge in Johnstown, Pa. New findings indicate that peak water flow occurred at a collapsed bridge.

Like many people who come to Johnstown, Pa., Carrie Davis Todd, a hydrologist who was hired to teach at a local university a little over a year ago, was curious about the great [Johnstown Flood of 1889](#), in which 2,209 people were killed when a dam failed 14 miles away. “One of the first things I did was go out and look at the dam site,” Dr. Davis Todd said.

The lake behind the dam held a huge volume of water that roared down the winding course of the Little Conemaugh River before slamming into Johnstown in one of the worst disasters in American history. While there were many witness accounts of the dam failure and the torrent of water that ensued, Dr. Davis Todd, an assistant professor of geology at the University of Pittsburgh at Johnstown, was surprised to find that the beginnings of the flood had never been rigorously assessed.

To read more, go to http://www.nytimes.com/2009/10/27/science/27obflood.html?_r=2&ref=science.

Photos from the 2009 GSA Annual Meeting, 18-21 October in Portland, Oregon, Courtesy of Terry West

