Graduate Student Profile

In Geoscience Newsletters throughout the year, we will profile of one of our geoscience graduate students, so that we can learn more about them!

Zhao Zhao joined us this fall from China, as a new graduate student studying under Dr. Lanbo Liu.

Zhao received his B.S. degree in Geophysics from Peking University in 1996 and an M.S. degree from the University of Tokyo in 2001.

After Zhao graduated from the University of Tokyo, he spent 6 years working as a software engineer. Having spent 10 years in Japan, he wanted to find some more challenges for his life. Zhao’s parents encouraged him to apply for admission at UConn. Fortunately, he was accepted and became a PH.D. student here this fall.

Zhao states: It is my honor that I was offered a graduate assistantship to become an RA, and to work under the guidance of Dr. Liu. During the period I am working here, I would like to focus my research in numerical simulation of seismic, electromagnetic and acoustic waves, developing new methods in waveform simulation, and analyzing underground structure using geophysical methods.

I think my personal interests lies mainly in sports. I like tennis, figure skating and golf the best. I also like history and I think I am pretty good at Chinese history.

Northeast GSA Meeting

Need an excuse to see Niagara Falls?

Then plan on attending the Northeastern Section Meeting of the Geological Society of America, which will be held in Buffalo, New York, from 27-29 March 2008!

The abstract deadline is 18 December 2007. The section meeting is a great venue to present research conducted in the New England region, and a great way to meet colleagues in your field of interest.

http://www.geosociety.org/sec_tdiv/northe/08mtg/

Travel grants are available from the GSA Northeastern Section in cooperation with the GSA Foundation. These grants are open to both undergraduate and graduate students who are GSA Members, currently enrolled in Northeastern Section schools, and are presenting oral or poster papers at this meeting. You must register for the meeting before the travel grant application deadline of 18 February 2008.

Also, Volunteers who help at the meeting attend for FREE! Find out more on their website.

Inside this issue:

| Faculty News etc. | 2 |
| Upcoming Events | 3 |
| Websites of Interest | 3 |
| Earth Science Picture of the Day | 4 |
| Dr. Byrne’s Travels | 6 |

In the News for Geosciences:

- Dentists may not see the value of sugary soft drinks or wine, but geochemists tell a different story. Researchers recently learned that soft drinks, wine and even beer can be used to detect metals in soil samples, demonstrating that these common beverages are just as good as, if not better than, the more traditional geochemical analyses used to find mineral deposits.
Announcements, Awards, Publications, etc.

CIG Publications:


Geoscience Advisory Board Member Melinda Daniels has been appointed to the Editorial Board for the Journal Geomorphology. Congrats!

Meeting Presentations:
2007 GSA Annual Meeting in Denver (October)

“Multivariate Ordination of an Opportunist-Dominated Fauna from the Frasnian of Virginia: Finding the Paleoecologic Gradients” Andrew M. Bush and Roderic I. Brane

‘Paleoecology of the Phanerozoic Increase in Alpha Diversity’ Andrew M. Bush, Richard K. Bambach, and Gwen M. Daley


‘Exopolymeric Substances in Hypersaline Microbial Mats: Their Potential Role on Calcium Carbonate Minerals Precipitation’—Braissant, O., C. Dupraz, C. Glunk, A.W. Decho, P.T. Visscher

‘Microbial Mediation of Carbonate Precipitation: Saturation Index, Exopolymeric Substances and Communication’—Visscher, P.T., C. Dupraz, A.W. Decho, O. Braissant

Grad Student Announcements:

AAPG Grants-In-Aid program! The 2008 AAPG Foundation Grants-in-Aid Program is available to geoscience graduate students who may require funding for their research project. Grants are based on merit, and in part, on the financial needs of the applicant. The program focuses on support of qualified candidates for masters or equivalent degrees. Qualified doctoral candidates are also encouraged to apply. Monetary awards up to a maximum amount of $2000. Grants are to be applied to expenses directly related to the student’s thesis work, such as fieldwork, laboratory analyses, etc. Applicants are required to submit official academic transcripts by mail before the deadline. The deadline for the 2008 program closes on January 31, 2008. Applications are available online through http://foundation.aapg.org/gia/index.cfm

Free Water Career Seminar: CT Department of Public Health Drinking Water Section presents “Careers in Drinking Water” A 1/2 day forum. April 23rd, 2008. 9:00am-1:15pm at the Farmington Club, Farmington CT. Panel discussions and hands on demos! Questions can be directed to Vicky Carrier of the Connecticut Department of Public Health, Drinking Water Section at vicky.carrier@ct.gov

Garden Club of America Scholarships: Not just gardening! Scholarships for ecosystem studies, wetland studies, environmental fields and more! Check out their list of scholarships (undergrad and grad) here: http://www.gcamerica.org/scholarships.php

2008 North American Environmental Field Conference—University of South Florida, Tampa, January 14-16. A high energy conference featuring some of the world’s foremost authorities in environmental site characterization, monitoring, sampling and remediation. Find our more on their website: http://www.envirofieldconference.com/

Dr. Raymond Joesten Named Fellow

Our own Dr. Raymond Joesten has been named a fellow of the Mineralogical Society of America.

Members who have contributed significantly to the advancement of mineralogy, crystallography, geochemistry, petrology, or allied sciences and whose scientific contribution utilized mineralogical studies or data, may be designated as Fellows upon proper accreditation by the Committee on Nomination for Fellows and election by the Council.

Criteria for selection to fellowship (adopted by the MSA Council in 1984) are: (1) significant scientific contributions in any of the fields of crystallography, mineralogy, geochemistry, petrology, or allied sciences; (2) a minimum of a bachelor’s degree in geology or a related field; (3) at least five years of professional experience beyond the last academic degree; and (4) achievements in other areas such as excellence in earth science education, or outstanding service to their profession.

Congrats Ray!
Upcoming Events

- **Tuesday November 27th—Geoscience Seminar Series**
  Presents David Hoover, Geoscience Grad Student. “Altered Precipitation Patterns due to Climate Change: Modeling the Ecological Effects on Grasslands” 3:30pm Beach Hall 233.

- **Thursday November 29th—EEB Seminar**
  William H. Schlesinger “The Global Carbon Cycle and the Duke Forest Free-Air CO2 Enrichment (FACE) experiment”. 4:00PM in BSP 130

- **Monday December 3rd—Geoscience Seminar Series**
  Presents Yongping Chen, “ Vadose Zone Moisture Content Prediction using Electromagnetic Waves”, 3:30pm Beach Hall 233.

- **Wednesday December 5th—Geoscience Seminar Series**
  Presents Daniel Ferreira. Title TBA. 3:00pm Beach Hall 233.

- **Tuesday December 11th—Geosciences Holiday Party!**
  All day study break, Beach Hall 233 (library) and lunch at 12:30pm. Please RSVP if you are coming to lunch by 12/7! Join us for games and prizes and food! Hope to see you there...

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  Presents Geethika Wijewar-Dena. Title TBA. 3:30pm Beach Hall 233.

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- **EXPLORE THE MARIANA TRENCH**—On this site, you will find information on the main characteristics of the Mariana Trench, its exploration, and its ecosystem.  

- **HUBBLE'S TOP TEN DISCOVERIES**—National Geographic. A collection of Hubble Space Telescope images shows distant supernovas, the death explosions of massive stars, and other fantastic images.

- **GOOD QUOTE:** “The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' (I found it!) but 'That's funny....’”  
  —Isaac Asimov (1920-1992)

More to come in the next edition!

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For each newsletter that comes out, we will try to feature a few great sites related to geosciences that may be of interest to students and faculty associated with the Center. Please feel free to send any sites you find along to Abi, to be included in this section in future editions!


- **WIDGITS FOR EARTH SCIENCE**—Widgets are small applications popping up on screens for streaming music, displaying the latest weather radar, alerting us to incoming email or recent earthquakes. A number of widgets are available for earth scientists:  

GOOD QUOTE: “The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' (I found it!) but 'That's funny....’”  
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Earth Science Picture of the Day

*EPOD from 11/1/2007*— Seen in the background here, the volcano Gunung Agung ("Great Mountain") in central Indonesia has a classic conical shape and at approximately 3,014 m (9,888 ft) is the highest point on the island of Bali. It forms a beautiful backdrop for sunrise photos from Sanur Beach in Bali. This active stratovolcano exploded violently in 1963, resulting in colorful sunrises and sunsets not only in Indonesia but all over the globe as well. Photo taken in April of 2007

*Photo by Dennis Walton*
The U.S. Environmental Protection Agency (EPA), as part of its Greater Research Opportunities (GRO) program, is offering Greater Research Opportunities (GRO) undergraduate fellowships for bachelor level students in environmental fields of study.

The deadline for receipt of pre-applications is December 19, 2007 at 4:00 PM EST. Subject to availability of funding, the Agency plans to award approximately 20 new fellowships by July 31, 2008. Eligible students will receive support for their junior and senior years of undergraduate study and for an internship at an EPA facility during the summer between their junior and senior years. The fellowship provides up to $17,000 per year of academic support and up to $7,500 of internship support for a three-month summer period.


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**GeoTrivia!**

Fun with Geoscience Trivia

1. The Udden scale is a logarithmic scale for the size of what? (Hint: see photo!)
2. What term is used for the systematic interpretation of geology from aerial photographs?
3. What term is used for the difference between true north and magnetic north?

Check your answers: http://www.geosociety.org/GSA_Connection/0710/trivia.htm

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**Did You Know?**

A feature for our Geoscience Newsletter that reminds us of past Earth events and milestones that occurred around the time our newsletter comes out!

- **November 7th**—Happy Birthday! Marie Curie, Polish Chemist and Physics whose work led to the modern science of geochronology was born this day in 1967.
- **November 14th**—Happy Birthday! Charles Lyell, Scottish Geologist and author of ‘Principles of Geology’ born this day in 1797.
- **November 14th**—National GIS Day
- **December 2nd**—Did you know? Aniakchak National Monument was established this day in 1980. One of the world’s finest examples of a dry caldera.
- **December 16th**—Did you know? The first of three earthquakes strikes New Madrid Missouri in 1811. An estimated magnitude of 8.0, this quake changed the course of the Mississippi river!

Artists rendering of the damage from the 1811/1812 New Madrid Earthquakes.

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Hints: The Udden Scale measures the size of these.
The Center for Integrative Geosciences mission is to offer transdisciplinary programs of instruction and research that advance understanding of the interaction of biological, chemical, geological, and physical processes, including feedback mechanisms, at all spatial and temporal scales that have shaped Earth through geologic time, continue to shape the environment today, and which provide the basis for understanding the present and future impact of human activity on this planet.

We will be issuing these newsletters monthly throughout the academic year to keep associated students, staff, alumni, and faculty up-to-date on the Center's activities!

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Dr. Tim Byrne’s Research Travels

You may have noticed that a geologist was recently highlighted in the UConn advance this month! That geologist is our own Dr. Tim Byrne, who has joined a JOI scientific expedition off the southwest coast of Japan to learn more about what causes earthquakes.

Often referred to as ‘floating universities’, the ship Tim is on is stationed over the Nankai Trough Seismic Zone. The Nankai Trough is one of the most active earthquake zones on the planet. There are 20-30 scientists aboard the ship (named Chikyu, or ‘Earth’ in English). The long term expedition will take seismic images, examine the composition of sediments, collect core samples to study, position sensors on the ocean floor, and search for faulting zones. Tim is on the ship for six weeks. In early 2009 he will be a co-chief scientist on another three-month stage of the research.

After all the shipboard work is done, scientists will be able to monitor the Trough from land, collection the data by cable from instruments planted on the sea floor during the research cruises.

Ultimately the goal of this research is to be able to identify precursors to earthquakes, which could lead to earlier warnings and damage prevention.

Tim was chosen for this expedition due to his expertise in the geology of Japan, where he had a fellowship in 1990, and his expertise in making field observations in areas where geology is actively evolving.


Hear Tim’s podcast about this trip here: [http://www.clas.uconn.edu/podcasts/uploads/Tim_Byrne2.mp3](http://www.clas.uconn.edu/podcasts/uploads/Tim_Byrne2.mp3)