

GEOBULLETIN
SEPTEMBER 5TH, 2008

The GeoBadger Alumni Reunion

From Baraboo to Mars – GeoBadgers in the Field

September 25-27, 2008
Weeks Halls, Madison, WI

http://www.geology.wisc.edu/news_events/reunion08/

GEOCLUB FALL PICNIC
FRIDAY, SEPT. 12, AT 5 PM
GARNER PARK

FOOD AND DRINK PROVIDED
COST FOR ADULTS = \$7, KIDS FREE

Professor Phil Brown, and Emeritus Professors Bob Dott and Dave Mickelson will present

Geology of Wisconsin: An overview

Friday, September 5 at 3:30 in Room A140 Weeks Hall

All are welcome, but the primary purpose is to provide an introduction to Wisconsin geology for new staff and students.

Geobulletin is distributed weekly, on Friday by E-mail. Contributions are requested! Anything and everything (well almost) that you want to see in print. If you have a news item, a request, an announcement etc. email it to geodept@geology.wisc.edu. or leave it at the reception desk, Room 236 by noon on Wednesdays.

**Welcome from the Chair
Cliff Thurber**

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John Fournelle (Electron Microprobe), Rm. 306A, johnf@geology.wisc.edu
Brian Hess (Thin Section Lab), Rm. 206, hess@geology.wisc.edu
Brian Jicha (Rare Gas Geochronology Lab) Rm. 335, bjicha@geology.wisc.edu
Jim Kern (Ion Microprobe Lab) Rm. 130-134 jkern@geology.wisc.edu
Noriko Kita (Ion Microprobe Lab) Rm. 145, noriko@geology.wisc.edu
Patrick Kuhl (Computer), Rm. 156, pkuhl@geology.wisc.edu
Neal Lord (Electronics), Rm. 146, lord@geology.wisc.edu
Lee Powell (Electronics), Rm. 146, leep@geology.wisc.edu
Lee Putman (Machine Shop), Rm. B148, put@geology.wisc.edu
Mike Spicuzza (Stable Isotope Lab), Rm. 337, spicuzza@geology.wisc.edu

Librarians:

Marie Dvorzak, Rm. 440, mdvorzak@geology.wisc.edu
Toby Lathrop, Rm. 440, alathrop@library.wisc.edu

Building Manager:

Michelle Szabo – Primary Building Manager, Rm. 225A, michelle@geology.wisc.edu
Brian Hess – Back up Building Manager, Rm. 206, hess@geology.wisc.edu

ORIENTATION FOR NEW GRAD STUDENTS is Friday, August 29, 2008 --- 1:00-3:00 PM in Room A259. An orientation program for new TA's will follow. All new graduate students are expected to attend. New TA's are required to attend this session and the TA orientation session that follows (from 3-5 PM). Continuing grad students, faculty and staff are invited to the orientation and to join the students for refreshments in the Library around 2:45 PM during the break between new student orientation and TA training and/or come to Weeks End Seminar.

REMINDER --- The department offices on the 2nd floor will be closed on Monday, September 1st in observance of Labor Day. They will reopen Tuesday at 7:30 AM.

FACULTY MEETINGS --- The first faculty meeting of the year will be held Wednesday, September 3, 2008 at 3:30 pm. The remainder of the meetings for the first semester will be at the same time, same room and are scheduled as follows: September 24 (special meeting on the undergraduate curriculum), October 15, November 12 and December 10. There may be an additional special meeting on September 17. Council meetings will normally be held on the Wednesday one or in some cases two weeks prior to the faculty meeting.

GEOCLUB OFFICERS FOR THIS YEAR ARE AS FOLLOWS:

PRESIDENT ----- Amalia Doebbert	VICE PRESIDENT ----- Alex Teel
SECRETARY(T-shirt Czar) ----- Meg Dickoff	TREASURER ----- Melodie French
ELUCIDATOR ----- Eric Williams	FIELD TRIP ----- Andy Leaf
MONITORS ----- Andy Fraass (fall), Chole Bonamici, Eva Szilvagy	
WEB CZAR ----- Joe Kington	
SODA CZAR ----- Brett Carr (fall), Andy Fraass (spring)	

AAPG:

PRESIDENT ----- Andrew Trzaskus	VICE PRESIDENT ----- Eric Williams
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SECRETARY ----- JoAnn Gage

LECTURE SCHEDULE ---- All lectures (unless otherwise noted) are held on Fridays at 3:30 PM in AB20 (Laudon Lecture Hall). Coffee & cookies are served in the lobby starting at 3:15 PM.

UNDERGRAD LOOKING FOR WORK IN LAB

Contact:

Dylan Loss -- 414-940-1929 -- loss@wisc.edu

FALL 2008 WEEKS LECTURE SCHEDULE

September 05 -----

September 12 ----- Patrick McLaughlin – WI State Survey

September 19 ----- Henry Pollack --- University of Michigan

On Sept. 18 at 7 PM (supported by the UW Lectures Committee) his talk will be titled

"Scientific Uncertainty and Climate Policy: Moving on Without All the Answers"

On Sept. 19 at 3:30 PM (as part of the Weeks Lecture Series) his talk will be titled

"Earth's Changing Climate: View from Underground".

September 26 ----- Reserve for Alumni event and BOV

October 3 -----

October 10 ----- Glenn Spinelli --- New Mexico Tech

October 17 ----- John Tarduno --- University of Rochester

October 24 ----- Donald Mkhonto - UW

October 31 ----- Rick Law – VPI

November 7 ----- Peter Mozely – New Mexico Tech

November 14 ----- Steve Wojtal – Oberlin College

November 21 ----- Joseph Licciardi --- University of New Hampshire

November 28 ----- Thanksgiving Recess

December 5 ----- David Deamer

December 12 ----- Stephen Hasiotis

December 19 -----

POSITION OPENINGS:

- The State of Wisconsin Department of Agriculture, Trade & Consumer Protection is currently recruiting for a Hydrogeologist - Advanced.
- Two openings in the Tsunami Warning Center, GS-11-12-13 full time permanent jobs. Phys Scientist, Geophysicist, Oceanographer

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- **Geophysical Institute, Seismology - JOB TITLE: Research Technician-Data Specialist.** This job is crucial to the functioning of the Alaska Earthquake Information Center.
- **Geophysical institute - University of Alaska Fairbanks, Geophysical Institute, Seismology, JOB TITLE: Research Professional 3.** Looking to hire a seismologist who will complement our existing strengths in seismology, with expertise in one or more of the following fields: seismotectonics, earthquake source mechanics, or wave propagation and earth structure, with components of observational seismology in his/her area of interest.
- **The Department of Geological Sciences at the University of Minnesota Duluth** invites applications for a one-year, 2008-2009, sabbatical replacement in the area of *Structural Geology and Tectonics*.
- **The Commissariat for the Energy of the Atom (French Nuclear Agency)** is seeking a motivated candidate for a one-year funded, one-year renewable postdoctoral research position.

POSITION OPENINGS:

The State of Wisconsin Department of Agriculture, Trade & Consumer Protection is currently recruiting for a Hydrogeologist - Advanced. Additional details on the position and how to apply can be found at the link below. Please forward this information on as you feel appropriate.

http://wisc.jobs/public/job_view.asp?annoid=33567&jobid=33082

Leah Herzberg, Human Resources Specialist
Department of Agriculture, Trade & Consumer Protection

P: 608-224-4762
F: 608-224-4757

There are two openings in the Tsunami Warning Center, GS-11-12-13 full time permanent jobs. Phys Scientist, Geophysicist, Oceanographer, GS-11/12/13;de

SALARY RANGE: 48,148.00 - 89,217.00 USD per year OPEN PERIOD: Wednesday, August 20, 2008 to Wednesday, September 10, 2008

SERIES & GRADE: GS-1301,1313,1360-11/13 POSITION INFORMATION: Competitive Service - Career or Career-Conditional Full-time Permanent

PROMOTION POTENTIAL: 13 DUTY LOCATIONS: 2 vacancies - Palmer, AK
WHO MAY BE CONSIDERED:

All qualified U.S. citizens.

JOB SUMMARY:

The NWS, the world's preeminent weather and atmospheric sciences organization, offers you an opportunity to help protect American lives and property. Since 1870, NWS has served the public by providing forecasts and hazardous weather warnings while studying the most dynamic forces of nature. Contribute your talents to this tradition. NWS...Working together to save lives.

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earthquake location program and evaluate accuracy and stability of calculated solution.

- * Participate in fieldwork at seismic stations.
- * Obtain data from non-routine sources in order to enhance data quality and completeness, and integrate it into the archives.
- * Document Data errors, circuit, channel telemetry problems as they appear in the data - notify supervisor or engineers.
- * Manage file space in order to maintain functioning of automatic acquisition software - more data when necessary or alert supervisor when archiving is necessary.
- * Be able to respond to earthquake or volcano alarms and take the appropriate action if necessary.
- * Prepare weekly seismicity report, present at weekly data meeting.
- * Help provide tours of the seismology lab to visiting groups.
- * Field telephone calls to the seismology lab and to the appropriate individual, answer questions regarding earthquakes and tsunamis.
- * In a volcano crisis, be able to assist in keeping analysis of volcanic data up-to-date so better decisions regarding eruption likelihood can be made.

Minimum Qualifications

- * Bachelor's degree in earth or physical science needed, as the basic understanding of physics, mechanics and mathematical results of location algorithm requires this minimum education/or equivalent experience.
- * Understand mechanics of wave propagation, earth structure, and multiple arrivals.
- * Understand normal patterns of seismicity, earthquake, and tsunami behavior in Alaska.
- * Mathematical skills adequate to interpret errors and results in analysis calculations.
- * Familiarity with UNIX operating system, SUN workstations, tape drives, disk drives, Internet connections.
- * Strong communication skills both verbal and written.
- **The successful candidate of this position will be placed at a level appropriate for their education and experience. This position is part of a career development plan and that will provide an avenue for increasing the position's scope, complexity, and degree of independence as the incumbent's experience and skills increase.

For a complete job description and applicant instructions, please apply online at www.uakjobs.com. If you have any questions, please contact Lisa Yancey, HR Consultant, Geophysical Institute, University of Alaska Fairbanks, (907) 474-7791 or e-mail: lisa.yancey@gi.alaska.edu. The University of Alaska Fairbanks is an Equal Opportunity/Affirmative Action Employer.

GEOPHYSICAL INSTITUTE - UNIVERSITY OF ALASKA FAIRBANKS

LOCATION: Geophysical Institute, Seismology
JOB TITLE: Research Professional 3
POSTING NO:
0054343
QUICKLINK: www.uakjobs.com/applicants/Central?quickFind=61054
GRADE: 80 - 82 DOE

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EMPLOYMENT STATUS: Full-time, Exempt

CLOSING DATE:

Open Until Filled

Applications are invited for a Staff Research position in seismology at the University of Alaska Fairbanks. We are looking to hire a seismologist who will complement our existing strengths in seismology, with expertise in one or more of the following fields: seismotectonics, earthquake source mechanics, or wave propagation and earth structure, with components of observational seismology in his/her area of interest. The successful candidate must be capable of participating in the near-real-time operation of the AEIC activities, and collaborative research efforts focussing on Alaska's tectonics, seismicity, structure, and related topics.

Typical Duties

- Organize and maintain data-flow, files and algorithms for ShakeMap operations within AEIC real-time data processing system.
- Contribute to maintenance of the real-time data processing system, including trouble shooting data flow problems.
- Code development on Sun/Solaris computer systems for real-time and off-line earthquake data processing.
- Coordinate with other staff seismologists daily lab operations pertaining to processing, analysis, and archiving of earthquake data.
- Contributions required for the development, organization, and regular publication of Alaska earthquake reports and catalogs. This includes quality control, finalizing and archiving of current data.
- Strong understanding of digital seismograph systems as necessary for proposing and integrating new seismic stations into the existing systems.
- Conduct research on selected seismological topics, both descriptive and analytical. Publish papers and articles on this research in scientific periodicals and refereed journals. It will include both independent and cooperative studies focusing on Alaska's tectonics, seismicity, structure, and related topics.
- Responsible for immediate action in the event of a seismic crisis, coordinating 24 hour seismic monitoring with fast, accurate analysis of data so that hazard assessment and decisions regarding public safety may be made by emergency agencies.
- Interact with the public, news media, and/or public safety agencies as a spokesperson for the Geophysical Institute seismology lab as requested by the State Seismologist. This will include writing and distributing information releases as needed, radio and TV interviews regarding ongoing, recent, or past seismic and volcanic behavior.

Minimum Qualifications

- Requires at least a Masters Degree in Geophysics/Seismology with extensive experience (Ph.D. preferred) or equivalent.
- Must possess a strong seismological background as well as strong seismology training, both theoretical and observational.
- Relational database management experience preferably with Datascope.
- Experience operating and developing near-real-time seismic data processing systems using the Antelope Environmental Monitoring system.
- Experience with moment tensor inversion techniques, and seismic array processing techniques is highly desirable.

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- Experience in regional earthquake seismology preferably in Alaska.
- Must be familiar with SOLARIS/UNIX operating systems on Sun computers and multi-threaded programming and languages including C, Fortran, Perl, Tel/Tk, and Java.
- Strong written and oral communication skills.
- Ability to think calmly and clearly in a crisis situation.
- Physically capable of performing fieldwork studies at remote locations, to include; walking, lifting, and outdoor survival in possibly unfavorable conditions.

**The successful candidate of this position will be placed at a level appropriate for their education and experience. This position is part of a career development plan and that will provide an avenue for increasing the position's scope, complexity, and degree of independence as the incumbent's experience and skills increase.

For a complete job description and applicant instructions, please apply online at www.uakjobs.com. If you have any questions, please contact Lisa Yancey, HR Consultant, Geophysical Institute, University of Alaska Fairbanks, (907) 474-7791 or e-mail: lisa.yancey@gi.alaska.edu. The University of Alaska Fairbanks is an Equal Opportunity/Affirmative Action Employer.

The Department of Geological Sciences at the University of Minnesota Duluth invites applications for a one-year, 2008-2009, sabbatical replacement in the area of *Structural Geology and Tectonics*. This short notice is a consequence of a move to administration by one of our faculty. Start date is Sept. 2, 2008 (or earlier). Master's degree or advanced standing in a Ph.D. program in geology, geological sciences, geophysics, or closely related field is required. Ph.D. is preferred. We seek applicants with an excellent understanding of fundamental physical principles and processes and a demonstrated ability to apply that understanding in a quantitative manner to important problems in Earth Sciences. Salary will be competitive and the position includes benefits.

Duties/Responsibilities: the successful applicant will be required to teach an introductory course in Earth's Resources (GEOL 2350) during fall semester and Structural Geology (GEOL 4450, senior level) and an upper division/grad level course in Tectonics (GEOL 4480). The successful candidate will also have the opportunity to supervise undergraduate research or to help with advising graduate research if desired. UMD is a medium-size comprehensive public university in a splendid natural setting on the north shore of Lake Superior. The program in Geological Sciences offers undergraduate and graduate degrees in a wide range of earth science disciplines.

Interested candidates should attach a cover letter, curriculum vitae, three references (including name, address, phone, and email address), transcripts, along with a brief written statement of teaching and research interests. Please send the information to Howard Mooers, Head, Geological Sciences, 230 Heller Hall, 1114 Kirby Dr. Duluth, MN 55812. email: hmooers@d.umn.edu.

The selection committee will begin its review of complete applications as they come in. The position will remain open until filled.

The University of Minnesota is an equal opportunity educator and employer.

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The Commissariat for the Energy of the Atom (French Nuclear Agency) is seeking a motivated candidate for a one-year funded, one-year renewable postdoctoral research position. The goal of the post-doctoral study is to provide a thorough knowledge of the fundamental structure and molecular-scale reactivity of uraninite (UO₂) surfaces contacted with aqueous solutions. This knowledge is desirable to build robust models of long-term behavior for spent nuclear fuel in nuclear waste repositories.

The first aim of the post-doctoral assistant will be to investigate the atomic-scale structure, surface relaxation and reconstruction of selected uraninite surfaces (e.g., <001>) in contact with water, by using high-resolution X-ray reflectivity. Next, the kinetics and mechanism of surface dissolution and transformation will be probed by in situ coupled flow-through dissolution and reflectivity studies. These results will be combined to place constraints on the dissolution mechanism, and thus derive a molecularly sound model of uraninite dissolution. The position will be located in the research center of Saclay (about 20 km or 13 mi southwest of downtown Paris). X-ray reflectivity experiments will be carried out at the ESRF, Grenoble.

The applicant should hold a PhD degree for less than two years. An experience in surface characterization techniques using X-ray is desirable. The position is open to both French and foreign candidates.

Please send your application, including a resume, list of publications and communications, and list of references to Dr Michel Schlegel michel.schlegel@cea.fr.

~ ~ ~ ~ ~ ~ ~ ~ **HAVE A GREAT WEEKEND!** ~ ~ ~ ~ ~ ~ ~ ~