GEOBULLETIN
MARCH 27TH, 2009

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.

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.

Mar. 27 - Leigh Royden (MIT) (SPONSOR: DEMETS)

PROFESSOR LEIGH ROYDEN, MIT

NOON, THURSDAY, MARCH 26, 2009 SEMINAR IN A259 WEEKS HALL

TRENCH MOTION, SLAB GEOMETRY AND VISCOUS STRESSES IN SUBDUCTION SYSTEMS

A semi-analytic, three-dimensional model for subduction, which incorporates thin-sheet viscoelastic slab within a Newtonian viscous upper mantle, provides a dynamically consistent means of computing viscous stress, trench motion and slab geometry. Slabs that extend from the surface to the base of the upper mantle are over-supported by viscous stresses in the shallow (<100 km) mantle and under-supported by viscous stresses at greater depth in the upper mantle. Thus deeper parts of the subduction system act as an "engine" for subduction while shallower parts act as a "brake" on trench motion. Trench migration rates and slab geometry reflect a competition between these two parts of the subduction system. Model rates of subduction and slab dip respond almost immediately to changes in the buoyancy of subducting lithosphere entering the trench, as more buoyant slab segments correlate with slower subduction rates and steeper slab dip. Our results agree well with observations of changing subduction rates in Greece, the Apennines and the Banda Arc and with preliminary results from analog modeling.

3:30 PM FRIDAY: MARCH 27, 2009 WEEKS SEMINAR IN AB20 WEEKS HALL

UPLIFT, EVOLUTION AND GEODYNAMICS OF THE TIBETAN PLATEAU

Uplift of the Tibetan plateau is the result of continental collision and post- collisional convergence of India and Eurasia, and began about 50 million years ago. Uplift and crustal thickening of the eastern plateau probably did not begin until 10-15 Ma and in occurred without significant shortening of the upper crust except in a few localized areas. It is likely that most of the uplift and crustal thickening beneath eastern Tibet is not caused by shortening of the entire crust, as is the case in almost all other convergent mountain belts, but is rather the result of lateral flow of deep crustal material from beneath central Tibet into eastern Tibet. This regional pattern of deformation can be linked to the mechanism of the May 12, 2008, magnitude 7.9 earthquake in Sichuan, China, which occurred at the eastern edge of the plateau. The earthquake fault accommodates uplift of the eastern plateau relative to the adjacent lowlands and can be interpreted to root into the zone of ductile material in the deep crust.

Apr. 3 - Stephanie Prejean (USGS Anchorage) (SPONSOR: THURBER)

Apr. 8 - Peter Cook, CSIRO, NGWA Darcy Lecturer
"Environmental Tracers in Modern Hydrogeology: Reducing Uncertainty in Ground Water Flow Estimation"

Apr. 10 - Joe Stoner (Oregon State University) (SPONSOR: CARLSON)
"Climatic implications of abrupt geomagnetic change"

Apr. 17 - Dept. of Geology and Geophysics – Board of Visitors Spring Meeting

Apr. 24 - Susanne Janecke (Utah State University) (SPONSOR: DEMETS)
"Reorganizing plate boundaries, evolving basins, pseudotachylyte, detachment faults, and crossing strike-slip faults: Southern California"

May 1 - Laurent Charlet, (Univ. Grenoble) (SPONSOR: SAHAI)

May 8 - Peter Visscher (SPONSOR: RODEN)
"Microbial mechanisms forming modern marine stromatolites - Using the present to predict the past"

THESIS DEFENSE:

The Quaternary Geology of Eastern St. Croix County, Wisconsin
By

STEVEN J. KOSTKA

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
(Geology)
at
Friday 27th March 9:00 AM, 235 Weeks Hall

UPCOMNG SPRING BANQUET

Shockingly, April is almost upon us. Which means the Spring banquet is also rapidly approaching, and needs to be announced to you all. I've put the brief rundown below, and more details and a signup sheet will follow in a few days. Also, start thinking about those oops, stoops, and poops nominations you might want to make... Surely someone you know has done something (dis)honor worthy in the past year. Hope everyone had a good spring break!

ANNOUNCEMENTS:

Strengthening Your Geoscience Program: A Practical Workshop with Ideas and Examples -- June 2-4, 2009
College of William and Mary, Williamsburg, VA

Application DEADLINE: April 3, 2009

This workshop will provide an opportunity to focus on how to strengthen your geoscience program. We will draw on strategies and examples from past workshops to develop practical solutions to the challenges facing participants' departments. Workshop sessions will focus on topics including the following:
- student recruitment
- curriculum
- co-curricular programs
- preparing the geoscience workforce
- program assessment
- and departmental leadership and management.

The program will also include discussions of how colleges and universities in a region might work together.

Teams of participants from a department are encouraged.

The operational costs of the workshop as well as double-occupancy rooms and some meals will be covered by a grant from the NSF for up to two members of each departmental team. Participants or their home institutions must provide transportation to and from the workshop.

For more information or to apply for the workshop, visit the workshop website:
http://serc.carleton.edu/departments/program_revision/overview.html

For this workshop, we would like just ONE application from your department/team. You may fill out the form as a team, or designate one member of your team to apply for all of you.
http://serc.carleton.edu/departments/program_revision/application.html

We will ask each department team accepted for the workshop to submit an essay about the department's strengths and challenges, a description of the department's planning process, and a summary of the most recent departmental review (internal and/or external).
Finally, if you are heading into a departmental review and/or assessment of your program (or just finishing one), this would be a great workshop. Also encourage you to take a look at the workshop we just finished on Assessing Geoscience Programs: Theory and Practicehttp://serc.carleton.edu/departments/program_assessment/program.html
We have a growing collection of assessment instruments (e.g., examples of senior and alumni surveys, rubrics for assessing student work, and so forth.
http://serc.carleton.edu/departments/program_assessment/instruments.html

The Building Strong Geoscience Departments Program is sponsored by the National Association of Geoscience Teachers, the American Geological Institute, the Geological Society of America, and the American Geophysical Union.

Veterans Memorial Scholarship

The Rocky Mountain Association of Geologists Foundation will again grant a $2500 award to a graduate student in geology who is an active member of the United States Armed Forces, a reservist, or an honorably separated veteran. A pdf version of the application form can be downloaded from www.rmag.org/RMAG Foundation/Veternas' Memorial Scholarship/ Application.

Applications must be submitted electronically to laura.wray@williams .com by mail to: Laura L. Wray
RMAG Foundation Chair
3747 South Jasmine Street
Denver, CO 80237

Application deadline is April 3, 2009.

Subject: Graduate summer internships in volcano seismology

The University of Alaska Fairbanks (UAF) announces the availability of paid summer internships for U.S. graduate students from U.S. universities in seismology, crustal deformation, igneous petrology, and physical volcanology. Successful applicants will become members of a US-Russia-Japan team comparing the response of crustal magma systems to catastrophic decompression at Bezymianny and Shiveluch Volcanoes, Kamchatka, Russia, and Mount St Helens, Washington. The project is part of the National Science Foundation's program, Partnerships in International Research and Education (PIRE), which seeks to introduce US graduate students to internationally collaborative science.

The ideal student participant will be at an early or middle stage of her or his PhD program, be physically and mentally prepared for rigorous field investigations under difficult conditions, and have a strong interest in international collaboration and understanding. It is also desirable that the student's major advisor share an interest in the research and, although not a requirement, that the work can become a component of the student's PhD program. Complete announcement and application forms can be obtained at http://gps.alaska.edu/PIRE and by contacting the relevant science team leaders below. The deadline for application is March 1. Selections will be made by March 15. As required by the NSF, the competition is open only to US citizens or US permanent residents.

Seismology - Michael West (west@gi.alaska.edu)
Geodesy - Jeff Freymueller (jeff@giseis.alaska.edu)
Petrology/Volcanology - Pavel Izbekov (pavel@gi.alaska.edu)

POSITION OPENINGS:

- A great position for a 3 year lecturer in the Discipline of Geology and Geophysics at the University of Adelaide has just come up to complement our existing research strengths and teaching.
- The College of Lake County is a progressive two-year community college located in suburban Chicago in northeastern Illinois - Instructor, Earth Science
- The Department of Earth & Planetary Sciences at Washington University in St. Louis is hiring a full-time research scientist to oversee a new stable isotope biogeochemistry facility
- PhD Position: Climate reconstruction in African Great Lakes region during the last millennium
- U.S. Geological Survey (USGS) Position Available -- Chemist/Physical Scientist
- Position Outreach-Forest Minerals Program Leader - Bridger-Teton National Forest - Pinedale, Wyoming

POSITION OPENINGS:

A great position for a 3 year lecturer in the Discipline of Geology and Geophysics at the University of Adelaide has just come up to complement our existing research strengths and teaching.

Geology at the University of Adelaide is growing fast with very strong student numbers in both undergraduate, Honours (which is a year project based study after undergraduate) and PhD programs. It is largely because of this growth that the university is supporting an expansion in staff. The Discipline presently has 8 full time academic staff with a number of independently funded research staff and post-docs. We maintain a strong international research portfolio that is focussed into continental evolution, mineral exploration under cover and regolith and landforms and is largely encompassed within our new university research centre 'Tectonics and Resource Exploration (TREx)'. We have excellent on-site research facilities including TIMS lab, LA-ICPMS and solution-ICPMS instruments, a stable isotope mass spectrometer, microprobes, SEM's with CL, EBSD etc., TEMs, a Focussed Ion Bean instrument and a LA-ICPMS multicollector.

For further information and selection criteria, please go to http://www.adelaide.edu.au/jobs/current/11187/#furtherinfo

Please also contact me (Alan.collins@adelaide.edu.au), or the head of Geology and Geophysics (Graham.heinson@adelaide.edu.au) if you have any queries, or want to know more about the position.

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POSITION:	**Instructor, Earth Science**
STARTING DATE:	August 2009
DESCRIPTION OF POSITION:	Responsibilities for this position include teaching a variety of courses in geology, such as, Physical Geology, Environmental Geology, Field Geology and Oceanography. Courses are taught both day and evening primarily at the Grayslake campus. Other required faculty duties include participation of Science Outreach Program, academic advisement to students, curriculum development, and service on college committees
QUALIFICATIONS REQUIRED:	Master's degree in Geology, demonstrated success and academic experiences with diverse populations and diverse teaching methods.
QUALIFICATIONS DESIRED:	Knowledge of geology and oceanography; teaching experience in Physical Geology, Environmental Geology, Oceanography, Field Geology, and Historical Geology; experience with GIS and alternative delivery methods to include online and/or hybrid course delivery.
CONDITIONS OF EMPLOYMENT:	This is a full-time, tenure-track faculty position. Salary placement is commensurate with education and experience. The minimum 2009-2010 nine-month base salary ranges from $44,005 with a master's degree to $57,240 with a doctorate in the subject field. Because health insurance participation is mandatory for new faculty and health insurance premiums are deducted from the base salary, each new faculty member receives a flexible compensation allowance of $5,700 per academic year in addition to the base salary. This amount is intended to defray the cost of single medical insurance coverage. Optional contract for the summer session offers potential for significantly greater earnings. Faculty may be assigned to campuses other than Grayslake.
THE COLLEGE:	The College of Lake County is a progressive two-year community college located in suburban Chicago in northeastern Illinois, with a student enrollment of more than 16,000. Dedicated to excellence in teaching and learning, the College provides access to higher education, supports outreach to the community, and ensures accountability and continuous improvement. The College is committed to responding to the needs of its diverse community. The College offers courses in both day and evening at the Grayslake Campus, the Lakeshore Campus, the Southlake Campus, and other locations within the county as well as offering courses in various formats including offering courses online. Faculty are critical to the active governance structure at the College and opportunities to engage in activities outside the classroom are important to the professional development of individuals and the institution.
APPLICATION PROCEDURES AND DEADLINES:	For full consideration, applicants are expected to submit a completed application form, current resume, cover letter, three (3) letters of recommendation, and official transcripts of all degrees by **April 10th, 2009.** For an application form, please visit our website www.clcillinois.edu. The College of Lake County is an equal opportunity employer and has a strong commitment to the principle of diversity. In that spirit, it seeks a broad spectrum of candidates including minorities, women, and people with disabilities. *Applicants who will earn a Master's degree by June 2009 will be considered.

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Isotope Biogeochemistry Research Scientist

The Department of Earth & Planetary Sciences at Washington University in St. Louis is hiring a full-time research scientist to oversee a new stable isotope biogeochemistry facility under the direction of Assistant Professor David Fike. Laboratory research focuses on analysis of carbon and sulfur isotopes in modern and ancient systems (additional information at: http://biogeochem.wustl.edu). The laboratory will include two gas source mass spectrometers (Delta V and MAT 253), specifically configured for high-precision sulfur (SO_2) and carbon (CO_2) isotope analysis, and associated peripherals.

The successful candidate will be an integral part of the research group. Expected activities include: improving extraction/purification and/or developing novel applications for carbon/sulfur isotope mass spectrometry; operation and maintenance of mass spectrometers and associated peripherals/vacuum lines; training and day-to-day oversight of undergraduate students; and lab safety. Active participation in original research is encouraged. Salary will be commensurate with experience.

Applicants should have obtained a Ph.D. in isotope geochemistry (or related field) with prior experience using/maintaining gas source mass spectrometers. This is a non-faculty academic position not on the tenure track.

Washington University is an EO/AA Employer. To apply, please send cover letter, CV and names of 3 references to dfike@levee.wustl.edu. Application review will begin April 15, 2009 and will continue until the position is filled.

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PhD Position: Climate reconstruction in African Great Lakes region during the last millenium

A 3-year PhD position funded by the French Agency for Atomic Energy (CEA) is available at the Laboratoire des Sciences du Climat et de l'Environnement, Gif-sur-Yvette (South of Paris, France). The position is to be filled by automn 2009. Supervisors will be Christine Hatté (LSCE) and David Williamson (CEREGE, Aix-Marseille, France).
The research project focuses on both organic and isotopic geochemistry and modelling to reconstruct last millenium environmental changes around Massoko Lake (Tanzania). Additional information is available on:
http://www-instn.cea.fr/Publication_Sujet.php3?idSujet=939&langue=uk&lang=EN&id_rubrique=140
Precondition for the application is a master 2 or equivalent certificate in climatology, geochemistry, geology or .... We are looking for a person with a strong commitment to independent research. Experience in stable isotope geochemistry, organic geochemistry, statistics and/or inverse modeling are beneficial. Good language skills in English are required for Non-French applicants.
Applications including the common documents (CV, letter of intent, certificates, letters of reference) should be sent until **April 1st, 2009** electronically to: **Christine Hatté** christine.hatte@lsce.ipsl.fr **David Williamson** davwill@cerege.fr

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U.S. Geological Survey (USGS) Position Available -- Chemist/Physical Scientist

The USGS, Central Energy Resources Team, is soliciting interest from qualified individuals for one Chemist/Physical Scientist position in Lakewood, Colorado. Successful applicants will have qualifying education and expertise in the concepts, principles, and practices of physical and analytical chemistry, mass spectroscopy, gas chromatography, elemental analysis, and high vacuum technology. Knowledge of petroleum/coal geology/geochemistry is highly desirable. He/she will be responsible for the operation and maintenance of three continuous flow (CF) stable isotope ratio mass spectrometers (IRMS) and related peripherals necessary to acquire stable isotopic data. The incumbent must additionally develop new techniques and procedures with an emphasis on compound-specific gas-chromatography (GC)-IRMS for stable carbon and hydrogen isotopes. Candidates must be able to work as part of an analytical laboratory team, and exchange technical information related to sample analysis, data interpretation, and QA/QC with analysts and other research scientists.

Applications (resume and application questions) for this vacancy must be received on-line via USAJOBS BEFORE midnight Eastern Time (Washington, D.C. time) on the closing date of this announcement. If you fail to submit a complete on-line resume, you will not be considered for this position. Requests for extensions will not be granted. If applying on-line poses a hardship for you, please speak to someone in the Servicing Personnel Office listed on the announcement PRIOR TO THE CLOSING DATE. For assistance and questions contact the Office of Human Resources at 303-236-9586 or hdorsey@usgs.gov.

Effective February 27, 2009, USAJOBS can be accessed at http://www.usajobs.opm.gov. Announcement numbers are CR-2009-0237, CR- 2009-0238, CR-2009-0239, and CR-2009-0240. This is a full time permanent position (Chemist/Physical Scientist, GS-1320/1301-09/11/12) with a salary range of $49,970-$94,200 depending upon qualifications. The closing date is March 20, 2009.
U.S. Citizenship is required. USGS is an Equal Opportunity Employer.Technical questions related to this position may be directed to gsellis@usgs.gov.

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POSITION OUTREACH-FOREST MINERALS PROGRAM LEADER
GS-401/801-11
BRIDGER-TETON NATIONAL FOREST - Pinedale, Wyoming

The Bridger-Teton National Forest will soon be re-advertising for a forest minerals program leader responsible for the operation of the Forest's minerals activities.This notification is being circulated to inform prospective applicants of the upcoming opportunity and to determine interest in the position.The location for this position is Pinedale, Wyoming.The successful applicant will work 50 percent for the forest and 50 percent for the Pinedale Bureau of Land Management. They will occupy offices at both Pinedale locations.

TOUR OF DUTY: Permanent, Full-time. HOUSING STATUS: No housing is available. OUTREACH RESPONSE: Interested applicants or those requiring further information should contact Steve Haydon at 307-739-5535 (shaydon@fs.fed.us). **Please send Steve an email if interested.**

ABOUT THE POSITION:
The position is responsible for the coordination of all forest minerals activities on the Bridger – Teton National Forest and specific minerals assignments from the BLM. Forest assignments include both our oil and gas program, gravel operations, required NEPA, and work on the forest plan revision team. BLM work includes NEPA, environmental review of activities, and other specific assignments. The position is a unique opportunity to work together with both organizations and help them both to implement their minerals programs. During field season, the incumbant will be required to spend some time in the field completing and coordinating projects. The position is located within the Engineering/ Minerals staff group of the forest.

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~ ~ ~ ~ ~ ~ ~ ~ ~ HAVE A GREAT WEEK! ~ ~ ~ ~ ~ ~ ~ ~ ~