

GEOBULLETIN
OCT 16TH, 2009

Geobulletin is distributed weekly, 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 Mondays.

WEEKS LECTURE SCHEDULE DATES

Fall 2009

Oct. 16 (F) – Mark Zoback

WEEKS LECTURE

MARK ZOBACK

Dept. of Geophysics, Stanford University

Friday, Oct. 16, Informal Seminar

10:45 AM. Weeks Room 140

A strategy for enhanced recovery and CO₂ sequestration in gas shales

Friday, Oct. 16, WEEKS Seminar:

SPECIAL TIME

1:30 PM. Weeks Room AB20

**Scientific Drilling Into the San Andreas Fault Zone:
SAFOD's First Five Years**

The principal goals of EarthScope's SAFOD project are to study the structure, composition and state of the San Andreas Fault at depth and to make near-field observations of earthquake nucleation, propagation and arrest with instrumentation emplaced directly within the fault zone. At laboratories around the world, core samples exhumed from the active fault at depth are now being used to study deformation mechanisms, constitutive properties of the core and to investigate a number of questions related to the mechanical and geochemical evolution of a major plate-bounding fault zone at depth. Through direct sampling and measurements, we have constrained the origin of fault-zone pore fluid and the magnitude of stresses and fluid pressures at which fault slip occurs. Geophysical measurements show the San Andreas Fault Zone at depth to be relatively broad (~200 m), containing several discrete zones only 2-3 m wide with extremely low P- and S-wave velocities and low resistivity. Two of these zones have progressively deformed the cemented casing at measured depths of 3194 m and 3301 m (corresponding to vertical depths of 2.6 - 2.7 km), indicating that they are actively creeping shear zones. The 3194 m casing deformation zone lies ~100 m above a cluster of repeating M2 earthquakes that form the southwestern boundary of the active fault zone. Talc and serpentine were discovered in drill cuttings associated with the deepest casing deformation zone, and these minerals may be responsible for the predominantly creeping behavior and anomalously low shear strength of the San Andreas Fault at this location. Cores crossing the two deformation zones are composed of shales, siltstones and mudstones and contain 1-2 m of a highly foliated, relatively incohesive fault gouge.

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This fault gouge has an anomalous mineralogy with respect to the adjacent country rock in that it contains veined serpentinite bodies, serpentinite porphyroclasts and an ordered chlorite/smectite phase. Pervasive shearing within the gouge is indicated by anastomosing, slickensided surfaces, with authigenic clay mineralogy and host-grain/clay microstructures suggestive of extensive fluid-rock interaction and dissolution-precipitation creep.

- Oct. 23 (F) - Chris Marone (SPONSOR: Harold)
- Oct. 30 (F) - Lorraine Lisiecki (SPONSOR: Anders)
- Nov. 6 (F) - Scott Tyler (SPONSOR: Herb)
- Nov. 13 (F) - Rob DeConto (SPONSOR: Anders)
- Nov. 20 (F) - OPEN
- Nov. 27 (F) - THANKSGIVING
- Dec. 4 (F) - OPEN
- Dec. 11 - Prof. Charles Geiger of Kiel University

JOB OPENINGS

- Tenure-Track Assistant Professor - Sedimentary Geology- Illinois State University
- The 2-year position for an enthusiastic postdoctoral researcher in the field of Organic and Isotope Geochemistry and Paleo-Climatology is located at MARUM - Center for Marine Environmental Sciences, Bremen, Germany
- Faculty Position -Energy Research: Fluids in Porous Media -Rice University -Department of Earth Science
- Ford Foundation Diversity Fellowships
- Collections Manager, Mineralogy Division, Peabody Museum of Natural History, Yale University
- The Department of Geology at Utah State University (USU) seeks applications for a tenure-track assistant professor position located at the USU Uintah Basin Regional Campus in Vernal, Utah
- The Department of Earth and Environmental Sciences at the University of Stellenbosch announces the following vacancy for a contract academic post. The initial contract will be for 3 years, with the expectation of renewal, provided that both sides are agreeable. Lecturer or Senior lecturer in Geology (3-year contract with probable renewal)
- Post Doctoral Position - Materials Science and Engineering Division -Ames Labs DOE
- The Center for Environmental Sensing and Modeling ([CENSAM](#)), a research project sponsored by the MIT-Singapore Alliance for Research and Technology ([SMART](#)), is opening a new project to create environmental histories of the marine environment using annually-banded corals
- Department of Geology & Geography -West Virginia University -New Faculty Positions -Sedimentary Geologist And Energy Geochemist
- Isotope Biogeochemistry Research Technician, University of Massachusetts Amherst
- Tenure-Track Faculty Positions in Sedimentary Geology and Low-Temperature Geochemistry - Department of Geological and Atmospheric Sciences -Iowa State University
- The Geophysics Section of the School of Cosmic Physics, Dublin Institute for Advanced Study, has a seismology Ph.D. Studentship for the study of the structure and dynamics of Western North America and the Mediterranean
- The U.S. Geological Survey, Alaska Science Center, Geology Office, Anchorage, Alaska, is seeking a research economic geologist (GS-1350-11/12) who also has geologic mapping expertise
- Stable Isotope Instrument Specialist - The Geology Department at the University of Oviedo, in Oviedo, Northwest Spain, invites applications for a position to run and maintain a new stable isotope laboratory.
- Postdoctoral Fellowship in Ambient Noise Seismology, Victoria University of Wellington
- The Georgia Southern University Department of Geology and Geography has three searches underway for tenure track assistant professor positions (1 geographer, 2 geologists).
- The Department of Earth Science at Rice University seeks an outstanding scientist at the junior level.
- University of Hawaii-Manoa, Honolulu - A postdoctoral research position is available to study the dynamics of mantle plume-plate interaction using geodynamic-based solutions to seismic observations of the Iceland hotspot

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- The Department of Planetary Sciences/Lunar and Planetary Laboratory at the University of Arizona expects to fill up to three tenure track faculty positions
- University Lecturership in Scientific Archaeology in association with St Cross College

JOB OPENINGS

Tenure-Track Assistant Professor-Sedimentary Geology-Illinois State University

The Department of Geography-Geology at Illinois State University seeks applications for a tenure-track position at the rank of **Assistant Professor** with expertise in **Sedimentary Geology**. The preferred starting date is August 16, 2010. A Ph.D. in Geology or closely related field is preferred, but ABD candidates who will finish the dissertation before the time of appointment will be considered.

The Department seeks candidates with a strong potential for scholarly research, publication, and teaching in Sedimentary Geology. The successful candidate will be an integrated scholar with a strong commitment to teaching at all levels including coursework in general education, intermediate courses in Sedimentary Geology, and advance courses in his/her area of expertise (e.g. exploration geophysics, basin analysis, etc.). The ability to mentor students in our MS program in Hydrogeology and to participate in the instruction of our summer field geology course is desirable. Research experience with emphasis in Paleozoic cratonic strata or Pleistocene glacial sediments is desirable. The potential for a significant startup package exists.

Illinois State University is a research-intensive university with an annual enrollment of approximately 20,000 students. The university is located in the Bloomington-Normal metropolitan area of central Illinois with a population of approximately 150,000. The Department of Geography-Geology offers B.S./B.A. degrees in Geography, a B.S. degree in Geology, and an M.S. degree in Hydrogeology. Please send applications to Chair, Sedimentary Geology Search Committee, Department of Geography-Geology, Illinois State University, Normal, Illinois, 61790-4400, USA. Applications should include a cover letter, curriculum vita, statements outlining current and future research interests and teaching philosophy, three letters of recommendation, and all college and university transcripts. All materials must be received on or before **December 1, 2009**. No e-mail applications will be accepted. Inquiries about the application process should be directed to Dr. David Malone (dhmalon@ilstu.edu, 309-438-7643). Additional information about the department and the community can be found at www.geo.ilstu.edu. Filling this position is contingent upon budgetary approval.

Illinois State University is an Affirmative Action University encouraging diversity.

**Faculty Position -Energy Research: Fluids in Porous Media -Rice University
Department of Earth Science**

The Department of Earth Science at Rice University seeks an outstanding scientist at the junior level who studies the physical, chemical, or biological aspects of fluids in porous and fractured media with applications to energy resources or greenhouse-gas management. Specialties of interest include, but are not limited to, organic or aqueous geochemistry, reactive flow, rock properties, or geophysical imaging.

We particularly encourage applications from, and nominations of, women and minorities.

Successful candidates are expected to direct an active research program, supervise graduate research, and teach courses for undergraduate and graduate students. Details about the department and its facilities can be found at <http://earthscience.rice.edu>.

Applications received by November 15th, 2009, will receive fullest consideration.

Please send a CV, research and teaching statements, and names of five or more references to:

Search Committee Chair
Department of Earth Science, MS-126
Rice University, PO Box 1892
Houston, TX 77251-1892.

Rice is an equal opportunity affirmative action employer.

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Ford Foundation Diversity Fellowships

Through its program of Diversity Fellowships, the Ford Foundation seeks to increase the diversity of the nation's college and university faculties by increasing their ethnic and racial diversity, to maximize the educational benefits of diversity, and to increase the number of professors who can and will use diversity as a resource for enriching the education of all students.

Eligibility to apply for a Ford fellowship is limited to:

- All citizens or nationals of the United States regardless of race, national origin, religion, gender, age, disability, or sexual orientation,
- Individuals with evidence of superior academic achievement (such as grade point average, class rank, honors or other designations),
- Individuals committed to a career in teaching and research at the college or university level.

The Predoctoral fellowships 2010 Application Deadline is November 2, 2009.

The Dissertation 2010 Application Deadline is November 9, 2009

The Postdoctoral 2010 Application Deadline is November 9, 2009

See Website for complete eligibility information: <http://national-academies.org/fellowships>

Contact Us

Fellowships Office, Keck 576
National Research Council
500 Fifth Street, NW
Washington, DC 20001

Tel: 202-334-2872

Fax: 202-334-3419

E-mail: infofell@nas.edu

Collections Manager, Mineralogy Division, Peabody Museum of Natural History, Yale University

The Yale Peabody Museum of Natural History is seeking to fill the position of Collections Manager in the Division of Mineralogy. An abstract of the advertisement for the position is given below. We are looking for someone with a M.S. (Ph.D. preferred) in systematic mineralogy and petrology with museum experience, the relevant management skills and who has research interests related to collections development.

Information on the Peabody Mineral collection can be found at:

<http://www.peabody.yale.edu/collections/min/index.html>.

Application:

For more information and immediate consideration, please apply online at www.Yale.edu/jobs <<http://www.Yale.edu/jobs>> - the STARS req ID for this position is 7773BR.

The due date is October 23, 2009. Please contact Mineralogy Curator-in-Charge Jay Ague (jay.ague@yale.edu) for any further information about this position. Thanks for your interest in this position or for spreading the word.

Duties and Responsibilities

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Responsible for the day-to-day management of the Yale Mineralogy and Petrology collections, including all aspects of the preservation, improvement, development and use of the collections. Duties include oversight of relevant budgets, staff, students, and volunteers, maintenance of the collections, processing of materials, care and conservation, documentation, and databasing. The Collections Manager will represent the Mineralogy Division within the Peabody and Yale, nationally, and internationally, to promote the collection and to maximize its use. She/he will also promote knowledge of the collection through exhibitions and public education initiatives, and will pursue grant funding and carry out research that relates to collections improvement and development, including, as appropriate, collecting expeditions.

Yale// University// is an affirmative action/equal opportunity employer. Yale values diversity in its faculty, staff, and students and strongly encourages applications from women and members of underrepresented minority groups.

The Department of Geology at Utah State University (USU) seeks applications for a tenure-track assistant professor position located at the USU Uintah Basin Regional Campus in Vernal, Utah. This is a 9-month (academic year) contract with a role of quality teaching (70%), research (25%), and service (5%) within USU's dynamic Regional Campuses and Distance Education (RCDE) system.

Qualifications: A PhD in geology or a closely associated field is required. We seek a candidate who examines petroleum/hydrocarbon systems and has background in sedimentary geology from either a physical or geochemical perspective. Expertise in low-temperature geochemistry and/or paleoecology will also be considered. This appointment will be at the Assistant Professor level if a PhD is in hand; otherwise, the appointment will be at the Instructor level with completion of the PhD a requirement for reappointment. The anticipated start date is August, 2010.

Teaching: Teaching responsibilities will include undergraduate and graduate classes, with an emphasis on undergraduate education. The successful candidate will teach and advise students in introductory classes in geology and/or earth system science, and upper division or graduate courses in his or her area of expertise. Schedules may include evening interactive broadcast classes to accommodate USU's non-traditional students statewide as well as those on the USU Logan campus. Teaching may include field trips and short-course formats so that students may be exposed to region's unique geology.

Research: This faculty member should develop a research program leading to scholarly publications and also direct undergraduate and graduate research projects. Participation of undergraduates in research is especially encouraged. Collaboration with business partners in the region's energy industry will support this faculty member's research agenda. Also encouraged are interactions with science faculty at USU Uintah Basin and regional stakeholders, including Native American tribes, state and federal land management agencies, Dinosaur National Monument, and the State Museum in Vernal.

Utah State University: As a Carnegie Doctoral/Research institution with over 1,000 faculty, three regional campuses, and \$130 million in annual research funding, USU has a land-grant record of supporting quality teaching and research. The Geology Department at USU is strongly field-oriented and recently received a university award for excellence in teaching. The department currently offers BS, MS and PhD degrees. More information on department faculty and programs may be found on its website [<http://www.usu.edu/geo/>].

USU Uintah Basin: With two campus sites in northeastern Utah, the Uintah Basin Regional Campus (UBRC) is USU's largest and fastest growing regional campus, serving about 2,400 students annually. This campus boasts a tripling of student enrollment in recent years, a highly dedicated faculty and staff, and extraordinary community support. With funding from Utah's legislature and private donors, several new faculty have been hired across a spectrum of disciplines, and UBRC is dramatically expanding its physical facilities. Technology-equipped classrooms enable UBRC to send and receive high-quality instruction statewide. Please visit [<http://uintahbasin.usu.edu/>] for more information.

Applications: Send current curriculum vitae, a statement of teaching philosophy and description of teaching experience, a statement of research interests and goals, transcripts (unofficial copies acceptable) to document degrees awarded, and names and addresses of at least three references to:

Dr. James P. Evans,
Department of Geology
Utah State University
Logan, UT 84322-4505
James.Evans@usu.edu
435-797-1267

Review of applications will begin December 1, 2009, and applications will be accepted until a pool of qualified candidates is identified.

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Research Scientist / Research Fellow / Postdoctoral Associate Position: Coral environmental histories in the region of Singapore and Indonesia.

The Center for Environmental Sensing and Modeling ([CENSAM](#)), a research project sponsored by the MIT-Singapore Alliance for Research and Technology ([SMART](#)), is opening a new project to create environmental histories of the marine environment using annually-banded corals. We seek a postdoctoral fellow with experience working with coral paleoenvironmental records, including the skills to sample corals in the field and interest in developing chemical and/or isotopic paleoenvironmental records for this region. Applicants are expected to have doctoral degrees in atmospheric sciences, mathematics, physics, oceanography, geochemistry or related fields and have strong skills in conducting independent field work. The ability to work independently is extremely important.

The position will be based at the MIT SMART Centre in Singapore, with visits to [MIT](#). Applications should include a cover letter and a full CV/resume, together with names and contact information for three references. Please submit applications via email to censam@mit.edu.

1. USGS Mendenhall Postdoctoral Research Fellowship Program

Call for Applications

2. Graduate Student Fellowships - Canada's Role in the Circumpolar World

Call for Proposals

1. USGS Mendenhall Postdoctoral Research Fellowship Program
Call for Applications

The US Geological Survey (USGS) Mendenhall Postdoctoral Research Fellowship Program is currently accepting applications for fiscal year 2011.

The Mendenhall Program provides an opportunity for postdoctoral fellows to conduct concentrated research in association with selected members of the USGS professional staff, often as a final element to their formal career preparation. The program is also intended to provide research experiences that enhance personal scientific stature and credentials. Mendenhall Fellows are appointed to the USGS for two years and receive full salary and benefits at the GS-12 level, adjusted for the cost-of-living at the geographic area of the assignment.

In order to be considered for this opportunity, applicants must meet specific qualifications which are outlined at: <http://geology.usgs.gov/postdoc/2011/basics.html#qual>.

There are over sixty different fellowship opportunities available. Many of the projects have specific relevance to the arctic community.

For the complete list of fellowship opportunities, including links to their descriptions, please go to: <http://geology.usgs.gov/postdoc/2011/research.html>.

For further information on the Mendenhall Postdoctoral Research Fellowship Program, please go to: <http://geology.usgs.gov/postdoc/index.html>.

Or contact:

Rama K. Kotra

Email: rkotra@usgs.gov

Kimberly B. Reed

Email: kbreed@usgs.gov

2. Graduate Student Fellowships - Canada's Role in the Circumpolar World
Call for Proposals

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The Northern Governance Thematic Network of the University of the Arctic, with support from the Department of Foreign Affairs and International Trade Canada, is pleased to announce ten available fellowships for Graduate Students, valued at \$5000 each.

The objectives of the fellowship are to:

- Foster innovative research and policy development on a range of issues related to Canada in the circumpolar world;
- Encourage and promote research of circumpolar studies by Canadian graduate students; and
- Encourage research in the field of the circumpolar world in the interest of higher education, scholarship, and an informed public opinion.

Research papers will focus on one of the following two areas:

1. The Arctic Council as a mechanism to advance Canada's foreign policy objectives, including:
 - To deepen the exchange of best practices and explore a more robust discussion on policy issues and coordination;
 - To increase the outreach and advocacy role of the of the Arctic Council; and
 - To identify key emerging issues regarding sustainable development and environmental protection facing the Arctic requiring further study/research.
2. Canada in the circumpolar world:
 - Future political trends and challenges facing the region;
 - How arctic states can best manage emerging issues in the region bilaterally and/or multilaterally (e.g., pollution/environment, emergency response, search and rescue);
 - Opportunities for Canada to take a leadership role (e.g., conservation and sustainable use of the arctic marine and coastal environment).

To qualify, the applicant must be a citizen or permanent resident of Canada, actively pursuing a graduate degree (Master's, PhD, or equivalent) in circumpolar and/or northern research, and in good academic standing. The application package must include a completed application form, a one-page paper proposal/abstract, and a letter of appraisal from a supervisor. Application materials can be submitted electronically to Greg Poelzer (greg.poelzer@uarctic.org) or mailed in hardcopy to:

Greg Poelzer
International Centre for Governance and Development
9 Campus Drive, Room 280.1 Arts
University of Saskatchewan
Saskatoon, SK S7N 5A5

Application Deadline: Sunday, 1 November 2009. Successful applicants will be notified by 1 December 2009.

For further information, or to obtain an application, please go to:
<http://www.uarctic.org/singleNewsArticle.aspx?m=539&amid=7679>.

Or contact:
Greg Poelzer
Email: greg.poelzer@uarctic.org
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The Department of Earth and Environmental Sciences at the University of Stellenbosch announces the following vacancy for a contract academic post. The initial contract will be for 3 years, with the expectation of renewal, provided that both sides are agreeable. Lecturer or Senior lecturer in Geology (3-year contract with probable renewal)

The Department currently has 11 academic and 3 support staff. It has a particular strength in hard-rock petrology and petrogenesis. Currently, the main specialties are in the areas of high-grade metamorphism, crustal melting, granite genesis, structural geology and tectonics, ore-deposit geology and sedimentology. We have ready access, on campus, to a wide range of mechanical and analytical techniques that are required to support research in these areas (rock storage, preparation, crushing, etc., mineral

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separation laboratory, EMP, SEM, XRF, ICP-MS [LA and solution]). The Department is highly research-orientated, with an emphasis on publication in top-quality journals and the supervision of research students.

Web page: <http://academic.sun.ac.za/geo/>

Main duties and responsibilities

Teach undergraduate and honours courses (general / in the applicant's area of specialty) supervise honors, MSc and PhD student research projects participate in the development of the departmental undergraduate and honours curriculum follow and to seek funding for a productive personal research programme

Job requirements:

PhD in a subject area that will complement or strengthen the main research directions of the Department

A track record of research in the candidate's speciality

Excellent research skills, as evidenced by publications in high-profile international, peer-reviewed journals

Ability to teach in their field of speciality / general geology

Desirable (but not mandatory) attributes:

undergraduate teaching experience

Preference may be given to candidates whose research field lies in one or more of the following areas:

tectonics / structural geology

hard-rock economic geology

igneous / mantle petrology

mineralogy

Commencement of duties: 1 January 2010

Closing date for applications: 30/10/2009

For information please contact:

Prof. J. D. Clemens

phone: +27 (0)21 808 5159

e-mail: jclemens@sun.ac.za

Post Doctoral Position - Materials Science and Engineering Division -Ames Labs DOE

Ames Labs DOE is seeking candidates for a Post-Doctoral position in micro-analytical materials characterization Candidates should have at least 4 years of hands-on experience using electron microscopic tools characterizing metals and ceramics. This experience should include, but not limited to, scanning electron microscopy and analytical energy dispersive spectroscopy. Preference will be given to candidates with experience in wavelength dispersive spectroscopy. Candidate's graduate work should demonstrate a strong background in microstructure characterization, phase analysis and thermodynamics.

Inquiries should be directed to:

Alfred Kracher, akracher@iastate.edu, (515) 294 7097

or

Matthew J. Kramer, mjkramer@ameslab.gov, (515) 294 0276

Ames Laboratory

Iowa State University

Ames, IA 50011-3020

Department of Geology & Geography -West Virginia University -New Faculty Positions -Sedimentary Geologist and Energy Geochemist

The Department of Geology and Geography at West Virginia University seeks to appoint two new faculty positions addressing expanded energy research efforts associated with the WVU Advanced Energy Initiative

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(ruby.geo.wvu.edu/~tcarr/AEI_page.html). Current department research interests include energy geology, carbon sequestration, reservoir characterization, geophysics, remote sensing, GIS, structure/tectonics, petrology, hydrogeology, surficial processes, environmental geology, sedimentology, sequence stratigraphy, paleontology and paleoecology. The successful applicants will contribute to teaching at the undergraduate and graduate levels. Excellent teaching and development of a vigorous externally-funded research program are required. The Department is located in an outstanding newly renovated building. Department resources include 3D visualization systems, an extensive suite of subsurface interpretation software, and five computer teaching labs housing approximately 120 computers. The Department works collaboratively with the National Energy Technology Lab (DOE-NETL), the National Research Center for Coal and Energy (NRCCE), the Department of Petroleum and Natural Gas Engineering, and the West Virginia Geological and Economic Survey, all based in Morgantown.

Applications are invited for two tenure-track positions at the assistant professor level. A PhD is required for both positions:

1. **Sedimentary Geologist.** Specialty in sedimentary geology is open and may include, but is not limited to: physical stratigraphy; sedimentary deposits, processes and systems; and basin studies on outcrop and in subsurface, plus we value a willingness to help teach Geology Field Camp. Candidates should apply by sending electronic files addressed to: Sedimentary Geologist Search Committee, Department of Geology and Geography, West Virginia University, Morgantown, WV 26506-6300 as e-mail attachments to sedgeol@mail.wvu.edu. Questions may be directed to the above email address or to Dr. Tom Kammer at 304-293-9663.

2. **Energy Geochemist.** The geochemical specialty is open and may include, but is not limited to: geomicrobiology, isotope, organic, and trace element geochemistry. A focus on energy resources is expected. Candidates should apply by sending electronic files addressed to: Energy Geochemist Search Committee, Department of Geology and Geography, West Virginia University, Morgantown, WV 26506-6300 as e-mail attachments to geochemist@mail.wvu.edu. Questions may be directed to the above email address or to Dr. Tim Carr at 304-293-9660.

Submitted electronic files should include: 1) letter of application detailing a) research interests and how these dovetail with the departmental and AEI research activities, and b) teaching experience and interests; 2) resume/vitae; and 3) names, phone numbers, e-mail and complete mailing addresses of three references. Review of applications will begin November 1, 2009 and will continue until the position is filled. The anticipated start date is August 16, 2010. Please see www.geo.wvu.edu, www.wvu.edu, and www.morgantown.com for additional information. West Virginia University is an Equal Opportunity/Affirmative Action employer. Women and minority candidates are encouraged to apply.

Isotope Biogeochemistry Research Technician, University of Massachusetts Amherst.

The Department of Geosciences at the University of Massachusetts Amherst is seeking a full-time Research Technician in the Stable Isotope and Biogeochemistry Laboratories. The Stable Isotope Lab includes Finnigan Delta XL+ and Delta V isotope ratio mass spectrometers, and peripheral instruments including an automated carbonate prep system (Kiel III), Gas Bench, elemental analyzer, and GC/combustion interface. The Biogeochemistry Lab houses several GCs, a GC-MS, and an HPLC-MS. Responsibilities include general management of these facilities, oversight of day-to-day operation of mass spectrometers and associated instruments, instrument upkeep and maintenance, training of students, and participation in research with faculty and students through application and development of analytical techniques. The opportunity for independent research also exists. The ideal candidate will hold a Ph.D., with direct experience in compound-specific isotope analysis; exceptional M.S. candidates with at least two years experience in operation of GC-IRMS systems will also be considered. Salary will be approximately \$48k/yr with benefits. Applicants should send a letter, CV and contact information for at least three references to either: Prof. Stephen Burns or Prof. Steven Petsch, Department of Geosciences, University of Massachusetts Amherst, 611 N. Pleasant Street, Amherst, MA 01003, or by email to sburns@geo.umass.edu or spetsch@geo.umass.edu. Review of candidates will begin October 31, 2009, and will continue until the position is filled.

Stephen Burns
Professor
Department of Geosciences
611 N. Pleasant Street
University of Massachusetts
Amherst, MA 01003
Phone: 413-545-0142
sburns@geo.umass.edu

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Tenure-Track Faculty Positions in Sedimentary Geology and Low-Temperature Geochemistry - Department of Geological and Atmospheric Sciences -Iowa State University

The Department of Geological and Atmospheric Sciences at Iowa State University invites applications for two tenure-track faculty positions at the assistant professor level to begin August 2010. One position will be in the broad area of sedimentary geology, encompassing ancient to modern sedimentary deposits and processes. The second will be in the area of low-temperature geochemistry, including, but not limited to, the fields of environmental geochemistry, contaminant hydrogeology, and biogeochemistry. Evaluation of applicants will focus on their potential to establish a successful, externally funded research program that complements existing strengths in the department including hydrogeology, isotope geochemistry, paleoclimatology, glaciology, geophysics, climate modeling, geoscience education, economic geology, and tectonics. Particularly for the position in low-temperature geochemistry, we encourage interactions with individuals in other units on campus such as Agronomy (including Soil Science), Environmental

Science; Chemistry; Civil, Construction and Environmental Engineering; Ecology and Evolutionary Biology (including Limnology); Landscape Architecture; Natural Resources Ecology and Management; Agricultural and Biosystems Engineering; the USDA-ARS National Soil Tilth Laboratory; the Bioeconomy Institute; the Center for Agricultural and Rural Development (CARD); the USGS-supported Iowa Water Center; and the Leopold Center for Sustainable Agriculture. Commitment to excellence in teaching at the undergraduate and graduate levels is essential. Information about the Department appears at: <http://www.ge-at.iastate.edu/>.

Candidates must hold a Ph.D. by the time of appointment. All applications must be submitted electronically at www.iastatejobs.com (search vacancy ID#'s 090437 and 090438). Please be prepared to enter or attach a letter of application, statement of teaching and research interests, curriculum vitae, and the names, street and e-mail addresses, and phone and fax numbers of at least three references. Additional application materials may be mailed to: Carl E. Jacobson, Chair, Department of Geological and Atmospheric Sciences, 253 Science I, Iowa State University, Ames, IA 50011-3212. The positions will remain open until filled. Full consideration will be given to those applications received by November 13, 2009. We encourage applications from minorities, women, veterans, and persons with disabilities. Iowa State University is an equal opportunity/affirmative action employer.

The Geophysics Section of the School of Cosmic Physics, Dublin Institute for Advanced Study, has a seismology Ph.D. Studentship for the study of the structure and dynamics of Western North America and the Mediterranean. Advanced techniques of seismic imaging (array imaging, multi-mode waveform tomography) will be applied to large new datasets in order to map anisotropic seismic structure of the lithosphere and asthenosphere and gain new insight into the dynamics of active continental deformation.

Students at DIAS receive broad training in geophysics through the provision of short courses and workshops, and through attendance at training schools and international conferences. Studentship applicants should have good/excellent grades, preferably an advanced degree (M.Sc., German Diploma, or similar), and strong physics and computing skills. The student will receive a non-taxable stipend of €17,100 per annum (with increases each year), plus university fees (students register at an Irish or approved international University), for four years.

The position is available now, with the start date in October-November, 2009, or as soon as possible after that. All applicants are requested to send an e-mail containing a complete CV, a statement of research interests, English proficiency certification (if applicable), and the names of 3 academic referees to Prof. Sergei Lebedev (sergei@cp.dias.ie).

Please quote "seismology Ph.D. position" in the subject line.

Consideration of applications will begin now and continue until the position is filled.

For additional information on the project or on the study at DIAS please contact Sergei Lebedev (sergei@cp.dias.ie)

The U.S. Geological Survey, Alaska Science Center, Geology Office, Anchorage, Alaska, is seeking a research economic geologist (GS-1350-11/12) who also has geologic mapping expertise.

The person in this position will conduct geologic and topical investigations of metallic and non-metallic mineral deposits of Alaska at deposit and district scales, and collaborate with other scientists to plan and complete assessments of undiscovered

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mineral resources. Experience in metallic mineral exploration, deposit evaluation, and/or mineral resource assessment is highly desirable. Experience in arctic, logistically remote, or poorly understood geologic terranes is desirable.

This is a permanent, full-time position; applicants must be U.S. citizens. Salary range is GS-11: \$49,544-64,403; GS-12: \$59,383-77,194 depending on experience; plus benefits, and a 23% cost of living allowance (COLA), subject to annual review by OPM. The USGS is an Equal Opportunity Employer. This job will be posted on the USAJOBS website (<http://www.usajobs.gov/>) October 5 to November 9, 2009, under announcement numbers WR-2009-0454 (for current and former federal employees) and WR-2009-0455 for public, non-status applicants.

Applications (resume and responses to questions) for this vacancy must be received online via USAJOBS before midnight EASTERN time on the closing date of this announcement. Please see the vacancy announcement on USAJOBS for full information regarding the position duties, eligibility, qualification requirements, and documentation that you may need to submit.

For additional information about this position, contact Audrey Tsujita, USGS Office of Human Resources, at 916-278-9399 or wrjobs@usgs.gov.

Stable Isotope Instrument Specialist - The Geology Department at the University of Oviedo, in Oviedo, Northwest Spain, invites applications for a position to run and maintain a new stable isotope laboratory. The position is an initial 2 year appointment, renewable for an additional 2-3 years. The primary project will be assessing precedents of algal adaptation to atmospheric CO2 levels in the geological record and will involve EA- and GC-IRMS determinations on organic phases and measurement of carbonates. The instrument specialist will participate actively with the research team in the scientific evolution of the project. The successful candidate will have a Masters or PhD in geology, oceanography, or related biological sciences, and several years experience running EA- and GC-IRMS applications. The candidate is expected to oversee modifications to the instrument required for adaptation for small sample sizes, conduct sample analyses, and maintain and troubleshoot the instrument. The position, available 1 December 2009, offers competitive salary, 1 month vacation, and free health care for the candidate and his/her family in the public health care system. The position is open to candidates of all nationalities; hire of a candidate from non-EU country may entail a 1-2 month delay in start date pending approval of work permit. The research team operates in English. The Department is an Equal Opportunity Employer.

Oviedo is a small city of 200,000 with historic pedestrian only city center and classic cultural offerings (opera, orchestra). The location is ideal for those interested in active outdoor lifestyle, only 30 km from the coast (beaches, surfing) and 45 km from the Cantabrian mountains (hiking/backpacking, cycling, rockclimbing).

To apply, please send a current CV and brief description of your experience and research interests to Heather Stoll (hstoll@geol.uniovi.es).

Postdoctoral Fellowship in Ambient Noise Seismology, Victoria University of Wellington

Applications are invited for the position of Postdoctoral Fellow, Institute of Geophysics, Victoria University of Wellington. This is a fixed-term position of up to 18 months commencing on 15 January 2010 and funded by a grant from the Marsden Fund.

The objectives of this study are to determine seismic wave speeds throughout New Zealand using cross-correlated seismic noise; quantify spatiotemporal variations in the seismic noise field in conjunction with oceanic wave state data; and obtain anisotropic shear wave speed models of the New Zealand plate boundary. The postdoctoral fellow will be responsible primarily for work on the second of these objectives, and work closely with colleagues at VUW and GNS Science.

The appointee will have experience in one or more of the following: signal processing; acoustics; seismic beamforming; ambient noise analysis; earthquake seismology. Applicants must have completed a PhD or expect to do so by 1 January 2010. Selection of the successful applicant will commence on 30 November 2009.

For more information contact Dr John Townend, School of Geography, Environment, and Earth Sciences, Victoria University of Wellington, PO Box 600, Wellington, New Zealand, john.townend@vuw.ac.nz or visit <http://vacancies.vuw.ac.nz/> (reference number A273-09).

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The Georgia Southern University Department of Geology and Geography has three searches underway for tenure track assistant professor positions (1 geographer, 2 geologists). Detailed announcements for these positions may be found at the Department's web site (<http://cost.georgiasouthern.edu/geo/>). Please pass this on to anyone who might be interested.

The Department of Earth Science at Rice University seeks an outstanding scientist at the junior level who studies the physical, chemical, or biological aspects of fluids in porous or fractured media with applications to energy resources or greenhouse-gas management. Specialties of interest include, but are not limited to, organic or aqueous geochemistry, reactive flow, rock properties, or geophysical imaging.

We particularly encourage applications from, and nominations of, women and minorities.

Successful candidates are expected to direct an active research program, supervise graduate research, and teach courses for undergraduate and graduate students. Details about the department and its facilities can be found at <http://earthscience.rice.edu>.

Applications received by November 15th, 2009, will receive fullest consideration.

Please send a CV, research and teaching statements, and names of five or more references to:

Search Committee Chair
Department of Earth Science, MS-126
Rice University, PO Box 1892
Houston, TX 77251-1892
Rice is an equal opportunity affirmative action employer.

University of Hawaii-Manoa, Honolulu - A postdoctoral research position is available to study the dynamics of mantle plume-plate interaction using geodynamic-based solutions to seismic observations of the Iceland hotspot. The project will involve integrating numerical models of mantle convection with an extensive data set of body and surface wave arrivals. We seek a researcher with expertise in computational geophysics either related to mantle convection and/or seismic wave propagation, and who has written manuscripts in these or related topics. The successful applicant will be an ambitious, creative and independent researcher who is eager to collaborate with our multidisciplinary team of geodynamicists (Garrett Ito) and seismologists (Robert Dunn and Aibing Li).

The position last for one or more years contingent on annual evaluations, and comes with a stipend of about \$49 K per year. Applicants must have completed their Ph. D. by the time they are appointed. Apply electronically by sending a cover letter briefly stating your research interests and CV, which includes a publication list and contact information for at least 3 references.

Send formal or informal inquiries to:
Prof. Garrett Ito
University of Hawaii
gito@hawaii.edu
www.soest.hawaii.edu/GG/FACULTY/ITO

SENIOR EDUCATION SPECIALIST

UNAVCO, a Boulder based company, is seeking a Senior Education Specialist whose portfolio covers assisting in the development and implementation of 1) RESESS, a summer internship program and 2) leading the UNAVCO community in development of undergraduate curricular materials. RESESS (Research Experiences in Solid Earth Sciences) has been funded for the next five years to build upon the past 5-year pilot project to broaden participation in geology and geophysics. The new Senior Education Specialist will be the RESESS Associate Director and will be responsible for implementation of the project as well as serving on the RESESS management team. The UNAVCO Strategic Plan 2009-2013 calls for development of a coherent geodesy curriculum. Responsibilities also include developing an involved professoriate to interact with Education and Outreach staff and

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other geosciences education organizations (e.g. NAGT Cutting Edge) to write, test, and implement undergraduate materials highlighting 21st Century Geodesy science and applications to human interactions with our planet.

The successful candidate must have experience in college-level teaching, PhD level knowledge of solid earth geosciences, and experience and success in working toward broadening diversity in the geosciences or elsewhere. As a member of UNAVCO's Education and Outreach program, the individual must be able to successfully interact with many types of people and have high level organizational and project management skills. This person will report to the Director of UNAVCO Education and Outreach.

This position may be filled as a full time position or two half-time positions, depending on the pool of candidates. Faculty interested in leading the college level curriculum development for a sabbatical period may apply. We will start reviewing applications November 1. For more information, please contact Susan Eriksson eriksson@unavco.org.

UNAVCO (www.unavco.org) is a non-profit membership-governed consortium funded through the National Science Foundation (NSF) and National Aeronautics and Space Administration (NASA). UNAVCO's mission is to support and promote high-precision measurement techniques for the advancement of Earth Sciences. Member organizations are primarily research universities who study deformation of the Earth's crust, addressing mechanisms for large and small scale tectonic features and processes, such as earthquakes, volcanoes, plate motion, faulting and folding, and mountain building.

UNAVCO offers a very competitive set of benefits including medical, dental/vision insurance, STD, LTD, Life insurance, and TIAA-CREF. Salary will be commensurate with responsibilities and experience. UNAVCO is an equal opportunity employer and is committed to fostering diversity in the workplace.

** LUNAR AND PLANETARY LAB FACULTY POSITIONS **

ASSISTANT, ASSOCIATE, OR FULL PROFESSOR --

The Department of Planetary Sciences/Lunar and Planetary Laboratory at the University of Arizona expects to fill up to three tenure track faculty positions. Candidates in all areas of planetary science are encouraged to apply. Current faculty and research staff are involved in the scientific exploration of the Solar System including the Sun and heliosphere, comparative planetary studies, exoplanetary systems, origins of planetary systems, and inquiry into the presence of life elsewhere in the cosmos. They employ tools such as theoretical studies and data analysis, laboratory and field investigations, telescopic observations, remote sensing, spacecraft instrumentation, and spacecraft mission development and operations. The faculty, research staff, and graduate student body are drawn from the diverse backgrounds of planetary science, astronomy, chemistry, geology, physics, and engineering. Additional information concerning the Department/Laboratory is available at <http://www.lpl.arizona.edu>.

Duties and Responsibilities:

Successful candidates will teach at all levels, from freshman through advanced graduate classes. They will establish and maintain a distinguished research program and will supervise graduate students.

Minimum Qualifications:

Ph.D. in a related field. To be considered for an appointment above the rank of Assistant Professor, candidates must have an internationally recognized record of distinguished scientific achievement, leadership, and teaching ability in the planetary sciences. To be considered for appointment at the rank of Assistant Professor, candidates must demonstrate clear promise of such achievement. Review of materials will begin immediately (October 2009) and will continue until positions are filled. Full position details and online application are available at www.hr.arizona.edu; reference job #43641. Applicants MUST apply through the above URL, but should also send an original set of application materials (including a curriculum vitae, letter of interest, and statement of research and teaching interests) to: Professor Michael J. Drake, Head and Director, Department of Planetary Sciences/Lunar and Planetary Laboratory, 1629 E. University Blvd., The University of Arizona, Tucson, AZ 85721-0092.

See full page flyer at <http://www.lpi.usra.edu/features/positions/lpl/flyer.pdf>

The University of Arizona is an AA/EEO/ADA employer - M/W/D/V.

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University Lecturership in Scientific Archaeology in association with St Cross College

Grade 10s: Salary £42,351- £56,917 p.a.

The School of Archaeology proposes to appoint a University Lecturer in Scientific Archaeology. The lecturership is tenable from 1 January 2010 or as soon as possible thereafter and will be associated with a non-stipendiary fellowship at St Cross College.

Applications are sought from persons with a strong scientific background and a proven record of research and teaching in the general area of biomolecular archaeology, but probably with an emphasis on isotopic research. Applicants must have a demonstrable commitment to the development of new scientific methods in archaeology, and the application of such methods to questions of genuine archaeological significance. The successful candidate will be expected both to develop a vigorous programme of research that will contribute to the School's international research reputation, and to participate in the School's undergraduate and postgraduate teaching programme. He/she should have, or be close to completing, a doctoral degree with a specialism in the field of the post.

This post is to replace Professor Robert Hedges, and will be primarily based in the Research Laboratory for Archaeology and the History of Art, which has excellent facilities for isotopic analysis, including compound-specific measurements. The School of Archaeology at Oxford has three main elements: scientific archaeology, prehistoric archaeology and classical archaeology. The successful candidate may have their own archaeological specialization, or would be expected to develop collaborative research programmes with other members of the School or elsewhere.

Further particulars are available from the Administrator, School of Archaeology, 36 Beaumont Street, Oxford OX1 3PG [administrator@arch.ox.ac.uk].

Applications (*eight* copies except from candidates overseas who need send only one), including a *curriculum vitae*, a list of principal publications, and the names of two referees, should be sent to the Administrator, School of Archaeology, 36 Beaumont Street, Oxford, OX1 2PG, for receipt not later than 9 November 2009. Candidates should ask their referees to send their references to the above address by the closing date.

Dr. Peter Ditchfield

Stable Isotope Laboratory Manager

Research Laboratory for Archaeology and the History of Art

University of Oxford

Dyson Perrins Building, South Parks Road

Oxford, UK

OX1 3QY

tel:01865-285210

fax:01865-285220

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