GEOBULLETIN
OCT 9TH, 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. 9 (F) - Russ Vreeland (SPONSOR: Eric)

DR. RUSSELL H. VREELAND

Director, Ancient Biomaterials Institute
West Chester University

Specialized talk

"New visions on microbial evolution from ancient halite"
Friday Oct 9th, 12:00 Noon, Room AB20, Weeks Hall

DNA was extracted from surface sterilized salt of different geological ages (23, 121,419 million years, MYA) to investigate haloarchaeal diversity. Only *Haloarcula* and *Halorubrum* DNA was found in 23 MYA salt. Older crystals contained unclassified groups and *Halobacterium*. The older crystals yielded a unique 55 bp insert within the 16S rRNA V2 region. The secondary structure of the V2 region completely differed from that in haloarchaea of modern environments. The DNA demonstrates that unknown haloarchaea and the *Halobacterium* were key components in ancient hypersaline environments. *Halorubrum* and *Haloarcula* appear to be a dominant group in relatively modern hypersaline habitats.

"Tiny critters, huge impacts: why Earth needs microbes in its rocks"
Friday Oct 9th, 3:30 PM, Room AB20, Weeks Hall

An NSF Geology program director once told me that he was glad geologists had discovered there was life on Earth. Personally, I'm happy that microbiologists realized that there are rocks present as well. Despite being perhaps one of the oldest associations in natural science (microbiology and geology), scientists are only now beginning to realize that microbes (and whole microbial communities) have a unique and intimate relationship with Earth's rocks and minerals. This is not a one sided association as it is becoming apparent that Earth needs microbes in its rocks just as much as the microbes need the rocks. This generalized talk will trace aspects of this interaction while providing views of microbes interacting with various rock types and how they get into the rocks in the first place. The talk will conclude with a brief discussion of why this interaction may be important to our home planet and perhaps even beyond.

Oct. 16 (F) – Mark Zoback
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

PhD scholarship

A 3 year PhD scholarship is available from Jan 2010 entitled 'Novel biomarkers and their stable isotopic compositions associated with the end-Permian and end-Devonian mass extinction events'. Project support comes from an ARC QEII Discovery grant. The project is open to national and international applicants. The project will involve a combination of organic geochemical techniques including GC-MS, GC-IRMS, LC-MS and PY-GCMS and extant algal mesocosm experiments. A field trip either to Spitsbergen, South America or Canning Basin, WA will probably take place during the project.
For more information please contact
Professor Kliti Grice
ARC QEII Fellow/Director
WA Organic and Isotope Geochemistry Centre
Department of Chemistry
Curtin University of Technology
GPO Box U1987
Perth WA 6845
Australia
K.Grice@curtin.edu.au

The GeoQuEST Research Centre at the University of Wollongong (New South Wales, Australia) is looking for PhD students interested in Geochemistry/ Geochronology/ Geomorphology. Two scholarships are up for grab for international students. More are available through the University scholarship system (applications will need to be filled by October 17).

Research topics are broad: Quaternary landscape evolution and links with climate change, soil formation, catchment erosion, as well as geochronology with application to volcanic hazards (dating of explosive eruptions) and archaeology. Tools are: U-series isotopes, OSL-dating, stable isotopes (incl. clumped isotopes) and cosmogenic nuclides (along with major and trace element geochemistry and radiogenic isotopes).
An example of project would be to use U-series isotopes to re-construct past changes in erosion in the Himalayas and the Andes in order to quantify how erosion and sediment transport have responded to climate change during the past 100,000 yr.

The University of Wollongong is located 80km (50mi) south of Sydney,right on the coast. Wollongong is a town of nearly 300,000 inhabitants. Despite a funny name (Wollongong means "sound of the sea" in the local Aboriginal language), it is a great town to live in, with a young population (~20,000 students are enrolled at the University of Wollongong), beautiful beaches, great outdoor activities (some of the best surf spots in the country) and great weather (abundant sunshine all year round, mild winter and hot summer).

To learn more about research at the GeoQueST Research Centre:
http://www.uow.edu.au/science/eesc/geoquest

If interested, please contact Dr Tony Dosseto at tonyd@uow.edu.au

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JOB OPENINGS

- Part-time Undergraduate Research Assistant - Planetary Science Institute and University of Wisconsin
- 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
- The Ph.D. position for a highly motivated student with interest/background in the field of Earth System Modeling and Paleo-Climatology is available at the AWI - Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany
- Sr. Scientist - Atmospheric Data Assimilation- Candidate will contribute to scientific research and applications in the Global Modeling and Assimilation Office (GMAO) at the Goddard Space Flight Center
- Support Scientist - Land Data Assimilation - Applications Programmer/Support Scientist - To support the Global Modeling and Assimilation Office (GMAO) at the Goddard Space Flight Center.
- 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.

JOB OPENINGS

Part-time Undergraduate Research Assistant -Dr. Kimberly Kuhlman and Prof. Alan Carroll
Planetary Science Institute and University of Wisconsin - kim@psi.edu or carroll@geology.wisc.edu

We are looking for a student to assist with the characterization of particle size, shape and surface textures of terrestrial analog sediments using optical microscopy in preparation for the analysis of images returned from the Mars HandLens Imager (MAHLI) on the Mars Science Laboratory (MSL). The size and shape distributions of regolith particles contain a wealth of information concerning the history of geological processes and climate of Mars, such as wind and water activity that is expressed in sediment transport and soil processes such as cementation, percolation and chemical weathering. Size, shape and textural information will also shed light on the provenance of sediments and can potentially provide clues to clast composition, particularly when data are

used in conjunction with data obtained using other techniques. The successful student will characterize particle size, shape and surface textures of terrestrial analog sediments using high-resolution optical microscopy and the image analysis software packages, ImagePro Plus and ImageJ. The particle descriptions will then be analyzed for grain size and shape distributions using a variety of well-known numerical techniques, including Fourier shape analysis.

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Tenure-Track Assistant Professor-Sedimentary Geology-Ilinois 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.

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The new project "***A new hydrogen-isotope approach to understand North African monsoon changes in the Holocene* (HYDRACENE)**" funded in the framework of the DFG Priority program '**INTERDYNAMIK**' aims at investigating the hydrological cycle of North-West Africa during abrupt climate changes in the Holocene by continental hydrologic reconstructions using **compound-specific hydrogen isotope analyses and atmospheric isotope modeling**. Within this interdisciplinary project, opportunities exist for a postdoctoral researcher and a Ph.D. student.

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**. The postdoctoral researcher will reconstruct continental hydrologic changes based on compound-specific hydrogen isotopes in plant lipids from high-resolution marine sediment cores. Linkages to oceanic climate changes will be examined by reconstructing ocean temperatures. In close collaboration with paleo-climate modelers detailed data-model comparison will be conducted.

The full job advertisement can be found at:

http://www.marum.de/en/Page6079.html#Section31262

The **Ph.D. position for a highly motivated student with interest/background in the field of Earth System Modeling and Paleo-Climatology is available at the AWI - Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany**. The PhD candidate will perform simulations of Holocene climate evolution (hydrologic cycle, water isotopes, surface temperatures) using a state-of-the-art Earth System Model. The aim is the identification of forcing mechanisms responsible for climatic changes observed in newly derived proxy records. The successful applicant will be part of the Paleoclimate Dynamics Research Group which has a lively, active and international atmosphere.

Further information can be found at:

http://www.awi.de/en/research/research_divisions/climate_science/paleoclimate_dynamics/

Requirements for postdoctoral researcher:

- Ph.D. in geosciences, chemistry, biology or related fields
- Hands-on experience in isotopic analyses of various sample materials
- Knowledge of atmospheric and biological isotope fractionation processes and experience in organic geochemical methods are a benefit
- Interest in Paleo-Climatology and Paleo-Climate modeling

Requirements for Ph.D. student:

- Academic qualification comparable to a German Diploma degree (e.g., a Master's degree including a written thesis) in a related discipline
- Proficiency in English (oral and written)
- Experience/interest in programming (preferably Fortran 90)

Starting date for both positions is January 2010 (negotiable). Duration of the postdoctoral research position is 24 months; the Ph.D. position will be funded for 36 months. An extension of the postdoctoral project by one year is intended.
Salary and benefits will be according to the German employee scale TV-L 13 (postdoctoral researcher) and TV-L 13/2 (Ph.D. student).

Applications should include a CV, copies of relevant documents, publications if applicable, a statement describing research interests and experience, and contact information for two referees (postdoctoral researcher position only). Please only provide copies, as documents cannot be returned and will be destroyed after the application process.

The University of Bremen and AWI aim at an increase of the number of women in the scientific staff and therefore encourage women to apply.

In case of equal personal aptitudes and qualification priority will be given to disabled persons.

Application review begins October 10, 2009; the positions are open until filled. Applications and enquiries for the postdoctoral position should be directed to Dr. Enno Schefuß, preferentially by email (schefuss@uni-bremen.de).
Applications and enquiries for the Ph.D. position should be directed to Dr. Martin Werner, preferentially by email (martin.werner@awi.de).

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Sr. Scientist - Atmospheric Data Assimilation

Job Description: Candidate will contribute to scientific research and applications in the Global Modeling and Assimilation Office (GMAO) at the Goddard Space Flight Center in Greenbelt, Maryland. Candidate will participate in the development and use of the GMAO's GEOS-5 atmospheric data assimilation system (ADAS) with potential involvement in many aspects of the program.

* Development and experimentation involving the GMAO's 4dVAR data assimilation capabilities
* Research, planning and development into capabilities to assimilate new types of satellite data, including atmospheric constituents, and in observing system evaluation studies.
* Participation in ongoing projects to assess and improve the impact of observations in the ADAS. Duties may include setting up and running experiments with the ADAS, applying diagnostic tools including adjoint models to measure observation impact on analyses and forecasts, and analyzing results.
* Participation in the development and testing of Observing System Simulation Experiments (OSSEs). Develop simulations of satellite instrument radiance data within the context of GMAO atmospheric model and data assimilation system applications.

Education: Requires a Ph.D. in Atmospheric Sciences, Physical Sciences or Mathematics.

Required Skills: Strong computational background and experience with large-scale computations and in code and script development in FORTRAN 90 and UNIX is required. Experience executing experimental runs in a high-performance computing environment is required. Solid background and previous hands-on experience in atmospheric modeling and/or data assimilation.

Solid background with remotely sensed satellite data.

Desired Skills: Experience/understanding of adjoint methods; experience with CVS.

Support Scientist - Land Data Assimilation
Applications Programmer/Support Scientist - To support the Global Modeling and Assimilation Office (GMAO) at the Goddard Space Flight Center in Greenbelt, Maryland. Candidate will support land data assimilation research and development within the Sub-Seasonal to Decadal (SSD) group within the GMAO. Candidate will implement and test land assimilation capabilities under a variety of configurations including the ability to assimilate new types of satellite data.

Education: M.S. in Earth science, computer science, or mathematics. PHD desired.

Required Skills: Solid background in code and script development in FORTRAN90 and UNIX along with previous hands-on experience in Earth system (e.g., land surface) modeling or data assimilation. Experience with supercomputer systems and with large-scale land-surface or atmospheric computations.
Contact **Mark Dever –*Recruiter-*** ***Aerotek CE***
2400 Research Blvd, Suite 120
Rockville, MD 20850
Tel: 301-315-1828
Fax: 301-315-1890

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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

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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
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.

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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.

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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

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

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 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 specialty / 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

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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

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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 (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.

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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
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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.

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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)

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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 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.

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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).

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