

GEOBULLETIN

FEB 5TH, 2010

GeoBulletin is distributed weekly, by E-mail. Contributions are requested! If you have a news item, a request, an announcement etc. email it to geodept@geology.wisc.edu or leave it at the office, Room 236 by noon on Monday.

Weeks Lecture

Speaker list - Winter/Spring 2010

Date Speaker Faculty sponsor

Feb. 5	- Julie Newman	TIKOFF
Feb. 12	- Tim Dixon 12 PM and 3 PM	TOBIN CONFIRMED
Feb. 12	- Andrew Dugmore 4 PM	THURBER CONFIRMED
Feb. 19	- Roger Summons	JOHNSON CONFIRMED
Feb. 26	- J. F. Gaillard	SAHAI CONFIRMED
Mar. 5	- Carrick Eggleston	SAHAI CONFIRMED
Mar. 19	- Chris Pearson	
Apr. 9	- OPEN	
Apr. 16	- John Craddock	GOODWIN CONFIRMED
Apr. 23	- Rose Came	CARLSON
Apr. 30	- BOV/spring banquet	
May 7	- Emily Brodsky	FEIGL CONFIRMED

WEEKS LECTURE

JULIE NEWMAN

Dept. of Geology and Geophysics
Texas A&M University
College Station, TX

Friday, Feb 5th, 3:30 PM. Weeks Hall Room 140

**Fabric and texture superposition in upper mantle peridotites, Red Hills,
New Zealand**

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The Red Hills ultramafic massif, New Zealand records multiple deformation events interpreted to have occurred under mantle pressure and temperature conditions. Field relations, mineral compositions and olivine textures (lattice preferred orientations (LPO)) reveal 4 generations of superposed fabrics with evidence for strain localization on at least 2 scales.

These structural relationships suggest that the upper mantle may experience a complex deformational history, and thus acquire a heterogeneous deformational fabric. Furthermore, the LPOs of these rocks do not fully reflect the mesoscopic fabrics. When olivine LPOs are considered within the same (geographic) reference frame, it is apparent that rocks retain evidence of the preexisting LPO from earlier deformation. The possibility of multiple overprinting fabrics in the upper mantle, and the lack of complete resetting of LPO, needs to be considered when interpreting deformation at upper mantle conditions.

WEEKS LECTURE

TIMOTHY H. DIXON

University of Miami

NSF MARGINS Program Distinguished Lecturer

Friday, Feb 12th Noon, AB20 Weeks hall

Slow Earthquakes in the Costa Rica Subduction Zone

Subduction zones, where oceanic plates are pushed under the leading edge of continental plates along ocean trenches, produce Earth's largest earthquakes and most tsunamis. The pattern of strain release during earthquakes, where the leading edge of the continental plate jumps towards the ocean by several meters or more, is related to the slow build-up of strain accumulation during the interseismic period, which may last for hundreds of years. New GPS technology permits this slow pattern of strain accumulation to be measured. Studies of strain accumulation may give clues to the nature of future earthquakes, leading to improved understanding of the seismic process and improved forecast of seismic hazard. However, GPS data at a number of subduction zones indicates that not all accumulated strain is released during earthquakes; slow, aseismic slip events with durations of days – months are increasingly recognized as a major component in the strain release budget. In this talk I will describe a new GPS and seismic network that is being installed in northern Costa Rica to monitor such events, and describe preliminary results from the first three years of operation. We have already observed one slow slip event, in May 2007. Maximum surface offsets were approximately 2 cm, occurring over a duration of several weeks, corresponding to an ~ M 6.5 earthquake if all of this strain had been released rapidly. Maximum slip was centered near the down-dip edge of the conventionally defined seismogenic zone. How these data are collected, analyzed and interpreted will be discussed, as well as implications for future earthquakes and improved understanding of the earthquake process.

TIMOTHY H. DIXON

Friday, Feb 12th 3:00 PM, Room AB20, Weeks hall

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New GPS results on accelerating uplift and ice melting in Greenland

WEEKS LECTURE

ANDREW J. DUGMORE

Professor of geosciences
Geography, School of Geosciences,
University of Edinburgh

Friday, Feb 12th, 4:00 PM. Weeks Hall, Room AB20

Well adapted but still extinct: lessons in human ecodynamics from the Viking settlement of the North Atlantic

In Greenland we have the apparent paradox of more than four centuries of Norse sustainable practice and successful adaptation to climate change coupled with ultimate failure. In Iceland and the Faroe Islands the Norse settlement endured, but in the case of Iceland long-term settlement success was associated with extensive landscape degradation. We propose that the choices made in Norse Greenland to develop their farming system with a rising level of connection and intensification of marine resource utilization could have created an elegant solution to global changes that increased the short-term effectiveness of adaptation and minimized landscape impacts, but at a cost of reduced resilience in the face of unexpected variation. In effect, their concentration on marine mammals for subsistence and a highly integrated communal approach to both subsistence and economic activity (the harvesting and processing of prestige goods, particularly ivory) was effective in the short term, could be refined to cope with a degree of change but ultimately proved to lack resilience; results that contrast with developments in Iceland and the Faroe Islands.

JOB OPENINGS

- [Kingston University](#) are seeking to appoint a Lecturer in Mineralogy and Petrology
- PhD position in Quaternary Geology, with topic "Boreal ecosystem from the glacial period to the Holocene in N Europe" -at the Department of Geosciences and Geography, University of Helsinki, Finland
- Faculty position at Department of Geosciences, National Taiwan University
- The Community Foundation for Southwest Washington , in cooperation with the U.S. Geological Survey's David A. Johnston Cascades Volcano Observatory (USGS, CVO), invites applications for the 2010 Jack Kleinman Volcano Research Grants Program
- The Department of Geoscience at the University of Nevada Las Vegas is seeking candidates for a tenure-track position in terrestrial climate science
- Grand Teton National Park -Park Ranger Naturalist Intern
- The Geosciences laboratory in Montpellier opens 3 faculty permanent positions in 2010 in the domains of structural geology, tectonics and petrology
- University of Western Australia's University Postdoctoral Research Fellowship (UPRF) application round is now open.

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- Department of Geology, University of Wisconsin -Oshkosh, seeks full-time, tenure-track assistant or associate professor starting Sept. 1, 2010
- Junior-Professor for Experimental High - Pressure Research -(approximately equivalent to the rank of an assistant professor / lecturer) at the Institute for Mineralogy.
- The Department of Geology and Geological Engineering at South Dakota School of Mines and Technology invites applications for a 12-month position as Department Head at the Associate or Professor level.
- Candidates are sought for a 'Chaire d'Excellence' post in volcanology at the Laboratoire Magmas et Volcans (LMV) in Clermont-Ferrand, France, funded jointly by Blaise Pascal University and the Institut de Recherche pour le Developpement (IRD)
- TWO POSTDOC POSITIONS WITHIN MICROSEISMIC MONITORING - NORSAR is an independent geo-scientific research foundation established in 1968, specializing in software solutions and research activities within applied and pure seismology.
- The University of Wisconsin-Stout, Wisconsin's Polytechnic University, invites applications for a tenure track position for Assistant Professor beginning August 2010
- Post Doctoral Research Associate -Illinois State Geological Survey -Institute of Natural Resource Sustainability - University of Illinois at Urbana-Champaign
- Director General - The International Centre for Environmental and Nuclear Sciences (ICENS)
- The Earth Institute and Lamont-Doherty Earth Observatory at Columbia University invite applications for the Marie Tharp Fellowship for Women
- Mineralogy/Petrology -University of Wisconsin Oshkosh - Department of Geology seeks full-time, tenure-track assistant or associate professor starting Sept. 1, 2010
- Chair position in Environmental Change in the School of Geography & Geosciences, University of St. Andrews, UK.

JOB OPENINGS

Kingston University are seeking to appoint a Lecturer in Mineralogy and Petrology. Details of the post, for which an application deadline of 11 February has been set, can be found at the following address
<http://recruitment.kingston.ac.uk/Default.asp?Section=Vacancy&VacID=10/032>

PhD position in Quaternary Geology, with topic "Boreal ecosystem from the glacial period to the Holocene in N Europe" -at the Department of Geosciences and Geography, University of Helsinki, Finland

The position is financed by the Academy of Finland

Project description: The aim of the project is to use key palaeoecological techniques for reconstructing the vegetation history near the ice-marginal region in central Russia and from there towards Fennoscandia, with special emphasis on investigating the potential occurrence of glacial and late-glacial tree populations near the ice sheet margin and their subsequent spreading patterns. The project aims to use novel approaches for estimating vegetation cover (also in terms of biomass) and to integrate the new data with existing palaeoclimatological and fossil mammal records to generate a more holistic view on the glacial, late-glacial and Holocene environment in the region. The project is strongly linked to other on-going international programs and collaboration.

Terms of employment: The duration of the contract will be about 3.5 years, depending on the date the PhD student will start. The monthly salary will be about 2000 E. The position is a full-time research position, including a 5% commitment for teaching or departmental responsibilities.

Qualifications: The candidate is expected to have MSc. or equal in earth sciences (geology, geography) or relevant biological sciences (paleontology, palaeoecology). The candidate is expected to have a good idea of the main methods, issues, and concepts of Quaternary geology, palaeoecology and palaeoclimatology and basic skills of computing, including basic GIS techniques. Candidate must be self-motivated, committed and internationally oriented. The project will include fieldwork in central Russia and northern Europe and ability to operate in the field is an important prerequisite.

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Applications must include a curriculum vitae, a brief letter explaining the motivation for applying for the position, as well as a description of future goals. Please include the name and contact information of one or two referee persons in the application.

Location: The candidate will be located at the Department of Geosciences and Geography, University of Helsinki. The department has about 60 employees and about 60 post-docs and PhD students.

Planned starting date: 1.6. – 1.7.2010 (can be negotiated)

Final date for applications: 15.3.2010

For further information, contact: **Heikki Seppä**, Professor of Quaternary Geology
Department of Geosciences and Geography, P.O. Box 64, FI-00014, University of Helsinki, Finland
Phone: +358-9-191 50820
E-mail: heikki.seppa@helsinki.fi
Homepage: <http://www.helsinki.fi/science/palaeoclim/>

Faculty position at Department of Geosciences, National Taiwan University

The Department of Geosciences at NTU is seeking active scientists to fill one faculty position starting from 1st August, 2010 or 1st February, 2011. The position is open to all fields in geosciences, but those who have strong background in the field of geochemistry and capability of setting up and leading an AMS (accelerator mass spectrometry) lab will receive more favored consideration. Applicants are requested to submit the following documents: CV, list of publications, three to five reprints of refereed publications (one of which shall be designated as representative paper and must be published after 1st August, 2007), plans for teaching and research, and names of three potential referees to Professor Wen-Shan Chen, Chairman of Department of Geosciences, National Taiwan University, No. 1, Sec. 4, Roosevelt Rd., Taipei 106, Taiwan. Also, please email the above material to Professor Tsanyao Frank Yang, the Convener of the searching committee, at tyyang@ntu.edu.tw <<mailto:styyang@ntu.edu.tw>> .

Deadline for application: 28th February, 2010. Web site: <http://www.gl.ntu.edu.tw/>

Announcing the 2010 Jack Kleinman Grants for Volcano Research--The Community Foundation for Southwest Washington, in cooperation with the U.S. Geological Survey's David A. Johnston Cascades Volcano Observatory (USGS, CVO), invites applications for the 2010 Jack Kleinman Volcano Research Grants Program. The program is intended to perpetuate and memorialize the attributes embodied by Jack Kleinman, a USGS employee who died in a kayaking accident in 1994, to promote collaborative projects on volcanoes among USGS and university researchers, and to further the educational and outreach mission of the USGS. Stipends of \$500 to \$2,000 are available to senior undergraduates and graduate students who are conducting research in volcanology, preferably in the Cascade Range, Aleutian volcanic arc, Hawaii, Yellowstone, or Long Valley caldera. The funds are intended to defray the costs of conducting field studies, including such items as travel to the field area, living expenses while in the field, supplies, or analytical services. Applicants need not be U.S. citizens.

Consideration in the selection of grant recipients will be given to the characteristics that best defined Jack Kleinman: exuberance, integrity, reliability, loyalty, and the abilities to relish challenge, inspire enthusiasm in others, and delight in the natural world. An example of the scope of work envisioned is a field project involving geologic, geochemical, or geophysical investigation in one of the volcanic areas listed above. A strong emphasis on fieldwork is highly desirable. Involvement of a faculty adviser or cooperation with a staff member at CVO, Alaska Volcano Observatory (AVO), Hawaiian Volcano Observatory (HVO), Long Valley Observatory (LVO), or Yellowstone Volcano Observatory (YVO) is strongly recommended. Contact information and summaries of current research at the observatories are available at <http://volcanoes.usgs.gov/>. To promote projects of mutual interest, collaboration with a USGS scientist at an observatory or elsewhere is given considerable weight in the selection process. Successful applicants are encouraged to present their results as part of the Kleinman Seminar Series at one of the USGS facilities and to publish their work in an appropriate research journal.

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Applicants should submit: (1) a short (3-5 pages) project description including objectives, strategy, and anticipated products, including a budget any other sources of support for the project; and (2) two letters of recommendation, including at least one from a current academic adviser or instructor. The application and letters should address explicitly how the project meets the selection criteria listed above. Send application and supporting letters in PDF or Microsoft Word format to kleinmangrants@comcast.net with "KLEINMAN 2010" in the subject line. Applications will be evaluated by a panel of USGS/CVO staff members. The Community Foundation for Southwest Washington will make final decisions on the number and dollar amounts of the grants. The deadline for receipt of applications is March 1, 2010 . Selections will be announced by April 1, 2010.

Additional information about educational outreach at USGS/CVO, including the Kleinman grants program, is available at <http://vulcan.wr.usgs.gov/Outreach/> .

Assistant Professor, Geoscience - [The Department of Geoscience at the University of Nevada Las Vegas is seeking candidates for a tenure-track position in terrestrial climate science](#). We are searching for a process-oriented scientist whose research will link climate science to changes in hydrologic processes, primarily, as well as to changes in critical zone, ecological, and surface geological processes. Possible research foci include evaluating the impact of anthropogenic climate change and natural climate variability on water resources and ecosystems in the desert southwest, and understanding past hydroclimate variability. The successful candidate is expected to build a sustained, externally-funded research program that incorporates a strong field component that is relevant to the Great Basin/Mojave Desert Region. The ability to collaborate with a broad range of other faculty members across UNLV, as well as UNR and DRI, is highly desirable. This position will benefit from new research infrastructure, including state-of-the-art laboratory facilities in stable isotope geochemistry, soils, hydrology and GIS; the Center for Urban Water Conservation; NSF EPSCoR Climate Change monitoring transects in the Great Basin; and the NSF EPSCoR Climate Change project team. Duties of this position will include the supervision of graduate students seeking MS and PhD degrees in Geoscience, instruction of introductory courses in the areas of Climatology and Earth Science, and upper-division/graduate instruction in the candidates' specialty. The position will be at the Assistant Professor level, and requires that the candidate hold a PhD degree in the Geosciences or a related field at the time of appointment (expected to be August, 2010). This hire will be initially funded by a major NSF EPSCoR grant focused on Climate Change, and the successful candidate will be expected to participate in that program.

Review of applications will begin February 16th, 2010, and continue until the position is filled. For details, see <http://jobs.unlv.edu> or call 702-895-2894. AA/EEO Employer.

Grand Teton National Park -Park Ranger Naturalist Intern - Working in the field of natural history interpretation consists of positions that deal directly with park visitors. After completing a training session, the work involves answering questions at visitor centers and providing trip planning help at an information desk, presenting short guided walks and tours, leading children's program and helping provide information to individuals you may encounter while completing special projects.

Compensation: Paid

When: Summer 2010

Where: Grand Teton Park, WY

Who: Anyone interested

Deadline: March 1, 2010

Location of Job Description: L&S Career Services BuckyNet Contact Info: Andrew Langford;
<mailto:Andrew_langford@nps.gov> Andrew_langford@nps.gov; 307-739-3401

The Geosciences laboratory in Montpellier opens 3 faculty permanent positions in 2010 in the domains of structural geology, tectonics and petrology. Montpellier is a city of 250000 inhabitants, located in the sunny south of France, by the Mediterranean. It is a major university city (50 000 students). Géosciences Montpellier is an active research department with 75

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researchers and 30 PhD students, supported by 45 technical and administrative staff, and many analytical and experimental facilities (<http://www.gm.univ-montp2.fr/>).

Official qualification for University positions is needed in France and the deadline is gone (October 26) but starting from this year, foreigners can apply if they occupy similar positions in their countries.

For any further details, address your questions to [Serge Lallemand](#) (head of Geosciences Montpellier).

1 lecturer position in HT-HP Petrology

Geosciences Montpellier is seeking to appoint a Lecturer in "High-temperature, high-pressure Petrology" (tenured position, Maître de Conférences) starting from September 2010.

Applicants should be primarily concerned with the petrological characterisation of melt-rock interactions in the mantle. Ideally, research activities of applicants should combine petrological characterisation of mantle rocks both at the field and microscopic scales, microanalyses, and thermodynamical modelling applied to open HT-HP systems.

Teaching duties include the responsibility for the Igneous and Mantle Petrology classes and fieldwork from the 2nd to the 5th year (Master). The successful candidate will join the Mantle & Interfaces group, a large multidisciplinary research group (23 researchers, 9 technical staff, and 12 postdocs and PhD) focused on the study of the dynamics of the mantle (lithospheric and convective) and its interactions with the crust, oceans and core (<http://www.gm.univ-montp2.fr/spip/spip.php?rubrique44>).

Contact : [Jean-Louis Bodinier](#)

1 Professor of Geosciences (Structure, ductile tectonics)

Geosciences Montpellier invites applications for a tenure-track position as Professor in the department of Geosciences at the University of Montpellier, southern France, beginning September 2010. Candidates should have a strong field and theoretical background in structural geology and solid foundations in ductile tectonics. They must have a demonstrated ability to analyse deformational structures in ductile regime and competences in metamorphic petrology. It is expected that the research activities of the successful candidate will complement some aspect of our research interests focusing on the evolution of mountain belts. Competences in tectonic, thermo-mechanical modelling and geophysics will be appreciated to improve our knowledge of lithospheric deformation in convergent zones.

The successful candidate will be expected to teach introductory geology and structural geology at the Licence and Master level, and to participate in service functions of the teaching Department. Duties will also include organisation and participation to field excursions and supervision of senior theses.

The successful candidate will join the Dynamique de la Lithosphère group, a research group (12 researchers, 4 technical staff, and 5 postdocs and PhD) working on processes controlling the lithosphere-asthenosphere interactions in subduction zones and the dynamics of mountain ranges with specialization in structural geology, petrology, geochronology, marine geophysics and modelling. **Contact :** [Patrick Monié](#)

1 lecturer position in Metamorphic Petrology and P-T-d-t paths

[Geosciences Montpellier invites applications for a tenure-track position \(Maître de conférences\) with specialization in metamorphic mineralogy/petrology starting from September 2010. We seek a geologist with good expertise in metamorphic petrology and significant field experience. In particular, the candidate is expected to provide constraints on P-T-d-t paths in mountain belts at different space and time scales. The applicant is also expected to contribute to the different research projects of the Department \(Taiwan, Tibet, Patagonia, Mediterranean alpine ranges...\) and to develop research programs that include some focus on the geodynamic behaviour and evolution of the lithosphere.](#)

Teaching duties will include mainly courses in mineralogy and petrology from the 2nd (Licence) to the 5th year (Master) and organisation and participation to field trips.

The successful candidate will join the Dynamique de la Lithosphère group, a research group (12 researchers, 4 technical staff, and 5 postdocs and PhD) working on processes controlling the lithosphere-asthenosphere interactions in subduction zones and the dynamics of mountain ranges with specialization in structural geology, petrology, geochronology, marine geophysics and modelling. **Contact :** [Patrick Monié](#)

University of Western Australia's University Postdoctoral Research Fellowship (UPRF) application round is now open.

If you have anybody in your lab that would be interested in applying for a UPRF focussed around the NanoSIMS and/or IMS 1280 facilities, please bring this to their attention. The Fellowships are quite prestigious and therefore the application process is quite competitive. For more information, please follow the link below:

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<http://www.research.uwa.edu.au/future-researchers/fellowship>

Dr Matt Kilburn

Assistant Professor/NanoSIMS manager

Centre for Microscopy, Characterisation and Analysis (M010)

University of Western Australia

35 Stirling Highway

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Mineralogy/Petrology-University of Wisconsin Oshkosh , Department of Geology seeks full-time, tenure-track assistant or associate professor starting Sept. 1, 2010. Specialty areas should complement existing faculty expertise and might include (but not limited to) mineralogy, volcanology, metamorphic petrology, and economic geology. Ph.D. required; prior college teaching experience preferred. Successful candidate will be a hard rock geologist who investigates field relationships as a fundamental component of his/her research and who is committed to undergraduate education, including advising students and developing a research program involving students. Teaching responsibilities include introductory courses, field trips, and mineralogy or petrology. Ability to teach economic geology and geochemistry desirable.

Submit letter of application, concise statement of teaching and research interests and experience, curriculum vitae, and undergraduate and graduate transcripts (original or copy) by February 15, 2010 to Dr. William Mode, Chair, Department of Geology, University of Wisconsin Oshkosh, Oshkosh, WI 54901. Have three current letters of reference sent directly to Department by that date. Employment requires criminal background check. The UW Oshkosh is an EO/AAE and encourages women and minorities to apply.

The Department of Geology is a University of Wisconsin System Center of Excellence. It has eight full-time faculty members and about 70 undergraduate majors. The Department has a strong commitment to undergraduate instruction, which is supported by excellent facilities and equipment. For additional information see www.uwosh.edu/departments/geology/.

Junior-Professor for Experimental High - Pressure Research (approximately equivalent to the rank of an assistant professor / lecturer) at the Institute for Mineralogy.

The successful candidate should have a PhD degree in a relevant field of science that was obtained not longer than six years ago. The position is not tenure track a priori, but possibility of getting tenure, subject to evaluation of performance, is not excluded. The Junior-Professor will have a teaching obligation of four hours per week per semester at the B.Sc and M.Sc levels within the Geosciences curriculum of the department.

The ideal candidate should have a research record in experimental high-pressure research, especially with the piston-cylinder and/or multi anvil apparatus, applied to geochemical or petrological problems of the Earth's interior. It is expected that the successful candidate will be able to acquire external research funding. At the time of appointment, proficiency in German is a plus but not a requirement. The University of Münster is well equipped with high pressure laboratories (cold-seal, piston-cylinder and 800 t Multi-anvil apparatus), gas mixing furnaces, preparation labs, and a variety of analytical facilities such as EMP, SEM, Excimer LA-ICPMS, TEM). Further information can be found at: www.uni-uenster.de/Mineralogie/en/index.html

The Westfälische Wilhelms-University Münster is an equal opportunity employer and is committed to raising the proportion of women scientists in academic positions. Consequently, we actively encourage applications from suitably-qualified women. Women with the qualifications and disciplinary expertise required will be preferentially considered. We also welcome applications from candidates with severe disabilities who, with suitable qualifications, will be preferentially considered. Applications with a C.V., including teaching experience and publication list, copies of degree certificates, and a statement of past and future research interests, should be made by Feb 15th, 2010 to the Dean of the Faculty of Geosciences: Dekanat des Fachbereichs 14 -Geowissenschaften

Westfaelische Wilhelms-Universitaet Muenster

Robert-Koch-Str. 26-28

48149 Muenster ,Germany preferably by e-mail as a single pdf file to: dekangeo@uni-muenster.de

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The Department of Geology and Geological Engineering at South Dakota School of Mines and Technology invites applications for a 12-month position as Department Head at the Associate or Professor level. The successful applicant should have a background in geology and/or geological engineering, a record of academic or industrial leadership, and a history of successful research in a field that complements existing department strengths. The Department Head is expected to lead departmental growth in the areas of enrollment, research, industry relations, and fundraising, in addition to managing faculty, staff, and the academic programs. Some teaching is expected. The department offers two undergraduate and three graduate degrees in geology, geological engineering, and paleontology, with eleven faculty, 90 undergraduate students and 45 graduate students. A Ph.D. in Geology, Geological Engineering, or a closely related field is preferred. Twelve-month salary range will be commensurate with background and experience.

The university is in the center of a diverse geological terrain. The Black Hills uplift lies within the northern Rocky Mountains, contains an historical gold mining region, and is flanked by the paleontology-rich Badlands and the petroleum-rich Williston and Powder River basins. Our Black Hills Natural Sciences Field Station offers a variety of geology, engineering, paleontology, and ecology field camps in the Black Hills, Turkey, and India. A number of facilities augment the natural laboratory, including a rock mechanics laboratory, GIS/remote sensing laboratory, a biogeochemistry facility, and an Engineering and Mining Experiment Station with a variety of analytical capabilities. The department and the Museum of Geology are completing a new building for a Paleontology Research Center to house its collection of 300,000+ specimens. The developing Sanford Underground Science and Engineering Laboratory at the former Homestake Gold Mine is close by and provides numerous opportunities for underground research and engineering design.

The School of Mines is a public state university offering baccalaureate, masters, and doctoral degrees in science and engineering with a student population of approximately 2,200 traditional and non-traditional learners representing 40 states and 34 countries. The university is located at the foot of the beautiful Black Hills in Rapid City, South Dakota's second largest city. Twenty-five miles from Mount Rushmore, Rapid City has a relatively mild climate and the Black Hills offer numerous opportunities for summer and winter outdoor experiences. For more information regarding Rapid City and the university, visit: <http://visitrapidcity.com/> and www.sdsmt.edu.

The School of Mines is committed to recruiting and retaining a diverse workforce. To apply for this position, applicants must apply on-line at <http://sdmines.sdsmt.edu/sdsmt/employment>. If you need an accommodation to the on-line application process, please contact Human Resources (605) 394-1203. Review of applications will begin March 1, 2010, and will continue until the position is filled.

South Dakota School of Mines and Technology does not discriminate on the basis of race, color, national origin, military status, gender, religion, age, sexual orientation, political preference or disability in employment or the provision of service.

Candidates are sought for a 'Chaire d'Excellence' post in volcanology at the Laboratoire Magmas et Volcans (LMV) in Clermont-Ferrand, France, funded jointly by Blaise Pascal University and the Institut de Recherche pour le Développement (IRD). The LMV is the largest volcanological research laboratory in France (70 permanent and 30 postdoctoral/postgraduate personnel), specializing in physical volcanology, experimental petrology and high-T geochemistry.

Techniques include ground-based and satellite-based remote sensing (thermal IR, DOAS, Doppler radar, InSAR), broadband seismology, electromagnetism, numerical modelling, high-T, ultra-high P (multi-anvil press) and analogue experimentation, textural and melt inclusion characterization, and isotopic analysis (Sr, Nd, Pb, Os, U-series). Analytical facilities include EMPA, SEM, FTIR, LA-ICP-MS and TIMS.

The IRD is the French overseas research organization, the volcanology group of which is integrated into the LMV. IRD volcanologists carry out research on volcanic systems and hazards in developing countries (notably South America) in partnership with local scientists and observatories. The successful candidate will integrate into the LMV IRD volcanology group, set up collaborative projects with IRD partner countries, supervise graduate students, and carry out research at the international level. He/she will also be required to depart on regular long-term missions of at least several months to partner countries in order to establish collaborations and do research. The post comes with an annual teaching load of 64 hours at undergraduate or postgraduate levels, either in France or abroad. The person would be required to master French within a year of arrival.

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We are seeking a young volcano scientist with a strong international reputation. The post will be attributed at the Maitre de Conference level (equivalent to lecturer or assistant Professor) for 5 years, renewable once to a maximum of 10 years. It will be accompanied by a salary bonus of at least 4000 euros and assured annual research funds of 10,000-20,000 euros for the duration of the 'chair'. Once the 'chair' expires, the post will revert to a normal permanent university lectureship, and the person will be expected to pass to professorial level.

Candidates are in the first instance requested to send a short CV, a letter of interest and the names of three referees to Tim Druitt (T.Druitt@opgc.univ-bpclermont.fr) and Jean-Luc Le Pennec (lepenne@ird.fr), before the end of January. Formal application of short-listed candidates will follow this spring. Candidates familiar with the French application system should note that 'qualification' at the national level is no longer required for overseas candidates already occupying lectureship positions in other countries.

TWO POSTDOC POSITIONS WITHIN MICROSEISMIC MONITORING -- NORSAR is an independent geo-scientific research foundation established in 1968, specializing in software solutions and research activities within applied and pure seismology. NORSAR operates some of the world's largest seismological observatories, and has more than 40 years of experience in seismological data processing and analysis. NORSAR now offers two PostDoc positions within the field of microseismic monitoring. One is related to microearthquakes in geothermal reservoirs, the other is related to CO2 injection and storage. Both projects will address earthquake location methods. Read more about NORSAR on <http://www.norsar.no/>.

PROJECTS, ROLES, AND TASKS

Within the EU-project GEISER (Geothermal Engineering Integrated Mitigation of Induced Seismicity in Geothermal Reservoirs) NORSAR offers a 2-year PostDoc position on the analysis of microseismic events. In this project the candidate will work with microseismic data sets from geothermal reservoirs. The development of a seismic velocity inversion method with application to microseismic data is the main objective. The tasks will also include an improvement of automatic microseismic event analysis such as source parameter determination and location methods.

Within the SafeCO2 project (Safety Monitoring of CO2 Storages Using Microseismicity and 4D Seismic Modelling) NORSAR offers a 3-year Post Doc position. In this project a new location technique that combines phase picking with migration-based methods will be further developed and applied to microearthquake data. The results will be linked with interpretation of 4D seismic modeling and boundary element stress field computations, where the candidate will also be involved in and is expected to get familiarized with.

QUALIFICATION AND TERMS

Both candidates need to have programming skills and sound education in general seismological concepts. A PhD in geosciences, physics or mathematics is required for both positions. The candidates will work in an international team with English as working language.

Both positions will remain open for applications until filled. Candidates may be requested to pass professional selection procedures. Applications should be received as soon as possible. For additional information please contact:

Dr. Volker Oye, NORSAR, P.O. Box 53, NO-2027 Kjeller, Norway

Tel: +47-63805900; E-mail: volker.oye@norsar.no

Applications with documentation of competence and experience (full CV) should be sent electronically to Ms. Winnie Lindvik <winnie@norsar.no>.

The University of Wisconsin-Stout, Wisconsin's Polytechnic University, invites applications for a tenure track position for Assistant Professor beginning August 2010. A Ph.D. in Geology, Geoscience Education, Geotechnical Engineering, Physics, or a closely related field is required when contract starts. Applicants should have a strong potential and commitment to undergraduate teaching. Duties will include teaching introductory geology, soil mechanics, and soil conservation courses. An interest and ability to teach introductory courses or laboratories in physics is expected. Seeking external funding for scholarly activities is also desirable. UW-Stout is a laptop campus and willingness to use instructional technology in the classroom is required. Construction of a new science building is expected to be complete by September 2010. Additional information can be found at <http://www3.uwstout.edu/physics/>. Applicants should send, via an attachment to an email (in Word or PDF format), a letter of application (with contact information for three references), vita, one page teaching statement, one page research plan,

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and all undergraduate and graduate transcripts (unofficial acceptable for initial application) to Dr. Alan Scott, Search Chair, at scotta@uwstout.edu. Complete applications must be received by February 15th, 2010, at 5pm CST. The University of Wisconsin-Stout values diversity and strives to attract qualified women and minority candidates. EO/AA.

Post Doctoral Research Associate -Illinois State Geological Survey -Institute of Natural Resource Sustainability University of Illinois at Urbana-Champaign

We are seeking an individual to conduct laboratory geochemical investigations with geologic materials and carbon dioxide as related to scenarios involving the geologic sequestration of CO₂. In particular, conduct interaction studies using high-pressure, high-temperature reaction vessels to identify the reaction mechanisms, kinetics, and solid-phase products that are likely to occur in saline sandstone and carbonate reservoirs, and with siltstone caprocks at potential sequestration sites in the Illinois Basin.

Responsibilities: The successful individual will conduct laboratory interaction studies with geologic core samples and brine solutions using high-temperature, high pressure reaction vessels; prepare core samples and post-reaction products for chemical and mineralogical characterization; develop, test, and refine laboratory methods and procedures in support of the evolving interaction studies; contribute to data interpretation and creates figures, text, and tables for progress reports, symposium presentations, journal manuscripts, and proposals for future funding; conduct analytical determinations of project samples using laboratory instruments such as an ion chromatograph; represent the ISGS at professional meetings, and present papers and posters at the meetings; assist in organizing and maintaining laboratories within the Geochemistry Section that will be used during project; and train and supervise students.

Qualifications: Ph.D. in geochemistry, soil chemistry, physical chemistry, or related discipline. Employment as a post doctoral research associate requires the completion of a Ph.D. no more than five years prior to the beginning of the employment start date. Laboratory experience in conducting research with water samples, and geologic materials such as rock, soil, or clay samples. Experience in analyzing research samples using laboratory instruments. Skills in word processing, spreadsheet, database management, and graphics software. Demonstrated ability to work independently, prioritize, organize, and handle heavy workloads with multiple deadlines. Excellent written communication skills with demonstrated ability to produce comprehensive technical reports. Good communication skills to establish friendly, open, and clear communication with others. Ability and willingness to effectively contribute as part of a team. Ability to train and supervise the work of students.

The work of this position takes place in an office, chemical laboratory, and in the field. Must be able to sit for extended periods of time working at a computer, using a keyboard and mouse, and using repetitive hand motions. May be exposed to chemical odors and fumes. Must comply with requirements for personal protective equipment and safety regulations. Must be willing and able to perform field work, some of which may be under less than ideal conditions (inclement weather, remoteness and moderate physical exertion). Must be able to carry field equipment and sample containers as needed during field work.

This is a temporary full-time 12-month position. It is likely that position will be extended beyond one year depending on funding and programmatic need. The starting date is negotiable after the closing date. Salary is commensurate with experience. To ensure full consideration, applications must be received by **March 1, 2010**. Qualified candidates must submit a letter of application which details qualifications noted above, résumé, list of publications, working e-mail address, and the names, addresses, phone numbers, and e-mail addresses of three professional references to:

Lori Walston, Human Resources, Illinois State Geological Survey -- 615 East Peabody Drive, Champaign, IL 61820
217-244-2401 walston@isgs.illinois.edu
www.isgs.illinois.edu

The University of Illinois is an Affirmative Action, Equal Opportunity Employer.

Director General - The International Centre for Environmental and Nuclear Sciences (ICENS)

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Expressions of interest and nominations are being sought for the chief scientific and administrative officer of ICENS. The mission of ICENS (<http://www.icens.org>) is the interdisciplinary application of science and technology to Jamaica's development.

The scientific agenda emphasises integrated research programmes based on environmental geochemistry and because of the extraordinary levels of several elements in certain Jamaican soils, the present focus is on elemental transfers and potential consequences thereof in the system:

SOILS ► FOOD ► PEOPLE.

This programme offers research opportunities in, for example, soil and environmental geochemistry, plant animal and human nutrition and public health.

The Centre is located on the Mona Campus of the University of the West Indies. The research equipment includes a SLOWPOKE 2 nuclear research reactor, a KeveX EDX-771 energy-dispersive X-ray fluorescence spectrometer, a very high sensitivity total reflection x-ray fluorescence spectrometer; and a Perkin Elmer OES OPTIMA 7000 DV. Excellent computer facilities are available.

ICENS is a member of COMSATS and is also a satellite centre of the Trace Element Institute of UNESCO.

The person being sought will have an excellent record of achievement in a related field and be willing to consider a 3-5 year initial contract. Emoluments are negotiable to some extent and a number of allowances including housing are paid. Return economy airfares are provided for appointee, spouse, and up to 3 dependent children. Assistance with payment for baggage is available. Further details can be obtained by email at: icens@uwimona.edu.jm, by telephone at (876) 935 8288 or by mail addressed to: Search Committee c/o Ms. Verna Lumsden, ICENS, 2 Anguilla Close, University of the West Indies Mona, Kingston 7, Jamaica.

Marie Tharp Fellowship for Women Scientists - Overview and Application Information: 2010-2011

For Residency in 2010-2011; Application Deadline: March 15, 2010 ---Overview: The Earth Institute and Lamont-Doherty Earth Observatory at Columbia University invite applications for the Marie Tharp Fellowship for Women. This fellowship provides up to \$30,000 to qualified women scientists to spend three months at Lamont-Doherty Earth Observatory (or related units) to conduct research. Fellows will have an opportunity to work with faculty, research staff, post docs, and graduate students during their fellowship. Marie Tharp Fellows will be appointed Adjunct Research Scientists at Columbia. Each fellow is expected to participate in EI/LDEO activities and make a scientific presentation during her residence. This award was started during the five-year, \$4.2 million National Science Foundation ADVANCE award, given to the Earth Institute at Columbia University over the period 2004-2009. The goal of this program is to promote the recruitment, retention, and advancement of women and minorities in the sciences, and to cultivate an environment that attracts, fosters, and promotes women leaders in science.

Background: The fellowship is named after Marie Tharp, who was the first to map details of the ocean floor on a global scale. She published the pivotal interpretation of mid-ocean ridges that was crucial to the eventual acceptance of the theories of plate tectonics and continental drift. Tharp based her work on data from sonar readings obtained by Maurice Ewing and his team. Piecing together data from the late 1940s and early 1950s, she and colleague Bruce Heezen discovered a 40,000-mile underwater ridge girdling the globe and established the foundation for the conclusion that the sea floor spreads from central ridges and that the continents are in motion with respect to one another—a revolutionary geological theory at the time. Years later, satellite images proved Tharp's maps to be accurate. Tharp came to Columbia in 1948. She then moved to the Lamont Geological Observatory (now the Lamont-Doherty Earth Observatory), where she began work on mapping the ocean floor. Her map of the ocean floor is still a foundation for research and education in the ocean sciences.

Who Is Eligible to Apply for a Marie Tharp Fellowship? The competition is open to junior and mid-career women scientists in the earth sciences. Since the purpose of the Marie Tharp Fellowship is to bring promising women scientists to Columbia, faculty (full-time and adjunct) and researchers at Columbia are not eligible to apply. Applicants must hold a Ph.D. There are no restrictions on nationality; however, applicants must be authorized to work in the U.S.

What Does the Fellowship Entail? The duration of the Marie Tharp Fellowship is for a period of three months. Fellows are encouraged to visit for three consecutive months, but they may choose to take their fellowship in separate monthly visits. The fellowship must be taken in residence at one of the earth science units of the Earth Institute (see end for complete list of eligible units). The fellowship will provide up to \$30,000 for support of the fellow during the three-month period.

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Budget: Fellows can use this award to pay salary, research expenses and travel, up to a total of \$30,000 over a three-month period. The following maximum limits are proposed: Salary \$20,000; Research Expenses \$25,000; Travel: \$5,000. In case of compelling reasons, the fellow may submit a written request to the LDEO Directorate to waive one or more of these limits. Requests will be reviewed on a case-by-case basis.

Application Procedure. Each applicant must submit a three-page proposal describing how she would use her time and with whom at Lamont-Doherty Earth Observatory / Earth Institute she would like to work. It is strongly recommended that applicants contact their collaborators prior to submission. The proposal must be accompanied by a *curriculum vitae*, a proposed budget, and two letters of reference. To prepare the budget please use the guidelines given above. All application materials must be submitted by March 15, 2010 via email to Dr. Kuheli Dutt at Kuheli.Dutt@columbia.edu. **All materials must be submitted as a single combined PDF document. Incomplete applications will not be considered.** References may be either included in the combined document or directly emailed to Kuheli.Dutt@columbia.edu

Selection Criteria. All proposals will be reviewed by a committee of scientists and administrators at EI and LDEO. The criteria for selection will be based on scientific excellence and potential contribution to LDEO / EI research activities. The following specific points will be considered: Quality of scholarly record as evidenced by publications and reference letters;

- Feasibility and quality of the proposed research as evidenced by the research proposal and reference letters;
- Relevance of the proposed research to the LDEO/EI Research activities as evidenced by the research proposal.

Marie Tharp Fellows will be notified of their appointment by April 15, 2010.

For further information, please see http://www.earth.columbia.edu/advance/mt_fellowship.html

http://www.ldeo.columbia.edu/ldeo/dir/academic-affairs-diversity/Funding_Opportunities.html

Contact: Dr. Kuheli Dutt, Assistant Director for Academic Affairs & Diversity

Lamont-Doherty Earth Observatory, Columbia University

61 Route 9W, Palisades, NY 10964-8000

Email: Kuheli.Dutt@columbia.edu Website: <http://www.ldeo.columbia.edu/academicaffairs>

Mineralogy/Petrology -University of Wisconsin Oshkosh - Department of Geology seeks full-time, tenure-track assistant or associate professor starting Sept. 1, 2010. Specialty areas should complement existing faculty expertise and might include (but not limited to) mineralogy, volcanology, metamorphic petrology, and economic geology. Ph.D. required; prior college teaching experience preferred. Successful candidate will be a hard rock geologist who investigates field relationships as a fundamental component of his/her research and who is committed to undergraduate education, including advising students and developing a research program involving students. Teaching responsibilities include introductory courses, field trips, and mineralogy or petrology. Ability to teach economic geology and geochemistry desirable.

Submit letter of application, concise statement of teaching and research interests and experience, curriculum vitae, and undergraduate and graduate transcripts (original or copy) by February 15, 2010 to Dr. William Mode, Chair, Department of Geology, University of Wisconsin Oshkosh, Oshkosh, WI 54901. Have three current letters of reference sent directly to Department by that date. Employment requires criminal background check. The UW Oshkosh is an EO/AAE and encourages women and minorities to apply.

The Department of Geology is a University of Wisconsin System Center of Excellence. It has eight full-time faculty members and about 70 undergraduate majors. The Department has a strong commitment to undergraduate instruction, which is supported by excellent facilities and equipment. For additional information see www.uwosh.edu/departments/geology/.

**Chair position in Environmental Change in the School of Geography & Geosciences, University of St. Andrews, UK.
Chair in Environmental Change**

As part of a continuing programme of expansion, we invite applications for a Chair in Environmental Change.

You will have a strong international reputation, an outstanding record of innovative and internationally-recognised research and publication, and a track record of substantial funding success. You will play a major role in the leadership and development of the School's well-established Environmental Change Research Group, and development and enlargement of our Graduate School. No restriction is placed on area of expertise, but we seek to enhance and diversify our research in Earth surface process and biogeochemistry, and encourage applicants with interests in ecosystem processes, hydrology, glaciology, biosphere-atmosphere exchange, process-based environmental modelling or stable isotope biogeochemistry. Candidates with an outstanding record in Quaternary palaeoenvironmental reconstruction and/or palaeoceanography will also be considered.

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Preference will be given to candidates with research interests cognate to those of existing staff, and those whose research has policy relevance and/or has links with our expanding programme in Sustainable Development.

It is anticipated that a linked lectureship appointment will be made following the Chair appointment.

Informal enquiries to [Professor Paul Boyle](#) (Head of School) or [Professor Colin Ballantyne](#).

Please quote ref: SK099/09 --Closing date: 12 February 2009

Application forms and further particulars are available from Human Resources, University of St Andrews, The Old Burgh School, Abbey Walk, St Andrews, Fife KY16 9LB, (tel: 01334 462571, by fax 01334 462570 or by e-mail Jobline@st-andrews.ac.uk). The advertisement, further particulars and a downloadable application form can be found at <http://www.st-andrews.ac.uk/employment/>.

The University is committed to equality of opportunity.

The University of St Andrews is a charity registered in Scotland (No SC013532)

******* HAVE A GREAT WEEKEND *******