

**GEOBULLETIN**  
**October 17, 2008**

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

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

**FALL 2008 WEEKS LECTURE SCHEDULE**

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

**Weeks Lecture**  
**FRIDAY, OCT. 17<sup>th</sup> at 3:30 PM, A140 WEEKS HALL**  
**Motion of the Hawaiian hotspot**

The Hawaiian--Emperor hotspot chain, and its distinctive bend at 47 Ma, have figured prominently in the development of ideas concerning the nature of mantle plumes, plate motion, and frames of reference. However, paleomagnetic data from Ocean Drilling Program (ODP) Leg 197 (Tarduno et al., 2003), together with results from plate circuit (e.g. Cande et al., 1995) and geodynamic modeling studies (e.g. Steinberger and O'Connell, 1998), indicate southward motion of the Hawaiian hotspot during formation of the Emperor Seamounts. These analyses confirm the idea that mantle plumes should be influenced by mantle flow and that such motion must be considered when constructing frames of reference for plate motion. An important corollary of this finding on hotspot motion is that long-term polar wander of Earth has been inaccurately assessed by viewing paleomagnetic data in a fixed hotspot reference frame. Here the ODP Leg 197 analysis is reviewed and extended to include consistency tests of plate circuit models and global paleomagnetic data. The role of Pacific apparent polar wander is also further examined through new analyses of Late Cretaceous lavas from New Zealand. These analyses provide the foundation to evaluate the potential processes that could cause the Hawaiian-Emperor bend, and bends in other hotspot tracks. The candidates, which include "top-down" plate driven, "bottom-up" deep mantle processes, and hybrid mechanisms where near surface processes link to deeper mantle flow, will be discussed. (References: Cande et al., Geophysics of the Pitman Fracture Zone and Pacific-Antarctic plate motions during the Cenozoic, Science, 270, 947-953, 1995; Steinberger and O'Connell, Advection of plumes in mantle flow: implications for hotspot motion, mantle viscosity and plume distribution, Geophys. J. Intl., 132, 412-434, 1998; Tarduno et al., The Emperor Seamounts: Southward motion of the Hawaiian hotspot plume in earth's mantle, Science, 301, 1064-1069, 2003; Tarduno, On the motion of Hawaii and other mantle plumes, Chemical Geology, 241, 234-247, 2007.)

**October 24** ----- Donald Mkhonto - UW

**October 31** ----- Rick Law – VPI

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

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

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

**November 28** ----- Thanksgiving Recess

**December 5** ----- David Deamer

**December 12** ----- Stephen Hasiotis

**December 19** -----

**2009 Internships for Student Research – Regarding this internships,more info/flyers are in the Dept.Office. If you are interested, Please feel free to stop and view those informations.**

DOSECC internships promote student involvement in projects where drilling has provided data and materials for study. Internship funding will be available in the summer of 2009. Application details are listed on the web site [www.dosecc.org](http://www.dosecc.org)

Become a Lunar Exploration Summer Intern:

The Lunar and Planetary Institute(LPI) is hosting a special summer intern program to evaluate possible landing sites for robotic and human exploration missions. The 10 week program runs from June 1, 2009 through August 8, 2009. [www.lpi.usra.edu/lunar\\_intern/](http://www.lpi.usra.edu/lunar_intern/)

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Application Deadline: January 23,2009

Instruments Grant for Grad Student Research - Deadline: January 1, 2009

The grant provides up to \$10,000 of Decagon's research instruments to a graduate student studying any aspect of environmental science, with emphasis on those studies that propose continuous wireless monitoring of the natural environment as part of their research methods. Application package available online at [www.decagon.com/gaharris](http://www.decagon.com/gaharris)

**POSITION OPENINGS:**

- Entry-level Hydrogeologist - Midwest's leading environmental, geotechnical and construction engineering firm.
- Infrasound Analyst Position - University of Hawaii
- The USGS, in collaboration with the University of Alaska, Fairbanks, is seeking a postdoctoral fellow to study slow slip events, tremor, and earthquakes in Alaska and the Aleutian arc.
- The Department of Earth Science at the University of California, Santa Barbara, has a tenure track position, assistant professor rank, in Coastal Processes.
- Technician Positions Available in GeoIsoChem. Inc, Los Angeles.
- The Swiss Seismological Service (SED; [www.seismo.ethz.ch](http://www.seismo.ethz.ch)) at ETH Zürich is expanding its interdisciplinary center on seismic hazard modeling and invites applications for three research seismologists at a junior or senior level.
- The Swiss Seismological Service (SED; [www.seismo.ethz.ch](http://www.seismo.ethz.ch)) at ETH Zürich is expanding its interdisciplinary center on seismic hazard modeling and invites applications for three software engineers within the Information Technology Group at the SED.
- Permanent stable isotope laboratory manager position at University of Basel
- The Department of Geosciences at the University of Wisconsin-Milwaukee invites applicants for a faculty position in Isotope Geochemistry at the rank of Assistant or in exceptional cases, Associate Professor with a start date of August 2009
- Seeking at least one postdoctoral individual and as well a technician with M.S.-level training for research opportunities in our laboratories in the Department of Biology at the University of Utah or at IsoForensics, a small research company in the University's Research Park.
- Associate Development Engineer position in the College of Engineering Dean's Office at the University of California, Davis campus. Vacancy Listing #10979 - SEM Electron Beam Lithography position
- The Department of Earth Sciences at the University of Lyon1 is seeking applications for an assistant professor (maitre de conferences) position in **High pressure mineral physics** starting fall 2009
- Position of Associate Professor (maître de conférence) in Mineralogy at the University Paul Sabatier, Toulouse
- The Saskatchewan Isotope Laboratory, University of Saskatchewan, Canada, seeks a full-time isotope technician/analyst.

**POSITION OPENINGS:**

**ENVIRONMENTAL HYDROGEOLOGIST**

As one of the Midwest's leading environmental, geotechnical and construction engineering firms, STS takes great pride in providing high quality, state of the practice services worldwide for over 50 years. We have a challenging opportunity available in Madison, WI location for a highly-motivated, career-oriented entry-level Hydrogeologist.

Successful candidate will provide field and office support on projects including environmental assessments, site characterization, and environmental restoration and remediation. Requirements include a B.S. in geology with a strong hydrogeology background. Groundwater modeling and environmental consulting experience a plus. Excellent communication skills (verbal/written) and ability to perform field activities are essential. OSHA 40-hour training is desirable but not essential.

We offer a competitive benefits package. Please forward resume to:

Kevin L. Brehm, P.E.  
Associate Engineer/  
Wisconsin and Vernon Hills  
Sciences Department Manager  
D 414.577.1314  
C 262.374.0337

AECOM  
11425 West Lake Park Drive  
Milwaukee, WI 53224  
T 414.359.3030 F 414.359.0822  
[www.sts.aecom.com](http://www.sts.aecom.com)

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Subject:(Job) Infrasound Analyst Position - University of Hawaii  
Analyst Position -- Infrasound Laboratory (ISLA)  
University of Hawaii-Manoa

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ISLA ANALYST - ID# 28566. Hawaii Institute of Geophysics and Planteology. Regular, Full-Time, RCUH Non-Civil Service position with the Hawaii Institute of Geophysics and Planteology (HIGP), Infrasound Laboratory (ISLA), located in Kailua-Kona, Hawaii. Continuation of employment is dependent upon program/operational needs, satisfactory work performance, and availability of funds.

Duties: Provides operations, programming and data analysis support for acoustic, seismic, and imaging stations and system administration support for Windows and Linux systems. Assists the Principal Investigator with programming, data analysis, interpretation, and maintaining PC and Linux computers used by laboratory staff. Provides field support as needed.

**Primary Qualifications:**

Education: Bachelor's Degree from an accredited four (4) year college or university in Physics, Geophysics, Geology, or Computer Science.

Experience: At least three (3) years of experience in digital signal processing and waveform analysis. Some experience in field operations.

Abil/Know/Skills: Expertise in real-time acquisition, processing, and archiving of digital waveform and image data. Knowledge of time-series, spectral analysis, digital signal processing, array processing, and automatic signal classification algorithms. Working knowledge of MATLAB and Unix. Knowledge of GMT or similar mapping software. Ability to recognize and select waveform features. Skilled in working with Oracle databases, including writing queries, creating tables, and views. Ability to program two (2) or more of the following languages: MATLAB, Java, Perl, C, or FORTRAN. Proficiency with waveform analysis software, such as Antelope and Matseis, and image processing tools. Ability to help administer and maintain computer and network systems.

Physical/Medical Requirements: Ability to obtain a U.S. security clearance. Ability to travel and perform fieldwork in tropical island environments. Ability to lift and carry fifty (50) pounds of equipment. Ability to work long shifts to restore monitoring systems to mission-capable status in minimal time.

SECONDARY Qualifications: Skills in installation, maintenance, and administration of database systems. Experience in configuring and managing networked Windows, Linux, and Solaris operating systems.

Application Requirements: The preferred method of applying for a job is through our on-line application process. Please go to [www.rcuh.com](http://www.rcuh.com), click on "Employment" and navigate to "Job Announcements/Apply for a Job"

Inquiries: Dr. Milton Garces or David Fee, 808-327-6206, or email milton at isla.hawaii.edu or dfee at isla.hawaii.edu. See also <http://www.rcuh.com>

Closing Date: October 21st, 2008

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**The USGS, in collaboration with the University of Alaska, Fairbanks**, is seeking a postdoctoral fellow to study slow slip events, tremor, and earthquakes in Alaska and the Aleutian arc. This opportunity promises to provide key observational constraints and insights related to one of the newest and most exciting discoveries in solid Earth science. Applicants may propose a variety of creative research directions. For example, proposals which address the relationship, or lack thereof, between non-volcanic tremor and volcanic tremor are welcome.

The application deadline for this opportunity is November 12, 2008. The successful applicant will be expected to start work at the USGS in Anchorage, Alaska in late 2009 or early 2010. If you would like more information about this project, please contact one of the project supervisors (listed below), and visit the Mendenhall Postdoctoral Research Fellowship Program webpage at <http://geology.usgs.gov/postdoc/2010/opps/opp32.html>.

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**GEOSYNTEC CONSULTANTS** has Ongoing Needs for Engineers and Scientists We are seeking motivated, passionate, technical candidates to join us

**Our ideal candidate... holds an advanced degree in engineering or science,•  
enjoys superior communication and interpersonal skills,•  
demonstrates academic achievement, and•  
preferably possesses the ability to become professionally licensed.•**

Since 1983, Geosyntec has provided clients with environmental, geotechnical, and hydrological engineering consulting and design services. We are an employee-owned company with offices throughout the United States and in Canada, Malaysia, and the United Kingdom. Nationally known for our practice leadership, client service, and innovation, our professionals continue to develop new technology applications and capabilities. Our applied research partnerships with leading universities, NASA, other Federal agencies and others are producing better methods for all of our practice areas. We strive to provide a stimulating, progressive, and friendly work environment that will enable us to continue to recruit and retain great staff to provide the best possible service and value to our clients.

**Our Practice Areas**

Environmental Engineering - Geotechnical Engineering -Water & Natural Resources  
Risk Assessment & Toxicology -Site Investigation & Remediation -Waste Management  
Construction Management Brownfields/Redevelopment

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**Multiple openings available. Interested?**

[www.geosyntec.com](http://www.geosyntec.com)

*We are an Equal Opportunity/Affirmative Action/Equal Access employer. We welcome the applications of all qualified males, females, minorities, veterans, and the disabled.*

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The Department of Earth Science at the University of California, Santa Barbara seeks a geoscientist who conducts creative research in coastal processes, broadly defined, and could include sediment transport/deposition, source to sink dynamics, geochemical/biogeochemical cycling, sedimentary petrology, sedimentation, coastal energy resources and impacts of sea level change. A field orientation combined with expertise in analytical and/or computational tools is preferred. The appointee is expected to develop a vigorous, externally funded research program and teach both undergraduate and graduate courses. This tenure-track appointment will be at the rank of Assistant Professor to begin July 1, 2009 or later. Review of applications will commence December 8, 2008. The position is open  
Until filled.

A Ph.D. is required at the time of appointment. Review of applications will begin December 8, 2008, and will remain open until filled. Applicants should submit a PDF file containing a letter of application, curriculum vita, a description of teaching and research objectives and accomplishments, and contact information for three referees. The application file should be submitted via email to [CoastalProcesses@geol.ucsb.edu](mailto:CoastalProcesses@geol.ucsb.edu). Queries about this position can be directed to Edward Keller ([keller@geol.ucsb.edu](mailto:keller@geol.ucsb.edu))  
The Department is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching, and service. For more information about the department, visit our webpage ([www.geol.ucsb.edu](http://www.geol.ucsb.edu)). UCSB is an Equal Opportunity/Affirmative Action employer.

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**Technician Positions Available in GeoIsoChem. Inc, Los Angeles.**

We seek a technician with M.S.-level for research opportunities in our laboratories at GeoIsoChem, a small research company in Los Angeles. We are looking for broadly trained individuals interested in applications of stable isotopes to Energy, environment, pharmaceutical, forensics, ecology, geology and food adulteration.

The position is available immediately; the searches will remain open until filled, but we hope to have the position filled no later than December 2008. We seek quantitatively oriented individuals interested in a collaborative research environment, but able to work independently as needed.

Interested applicants should submit the following applications materials via e-mail: (a) a PDF format letter of interest describing your background, qualifications, career objectives, and the names and addresses of 2-3 individuals who will write letters in support of the applicant, (b) a complete curriculum vitae in PDF format, and (c) PDFs of no more than 3 publications by the applicant. Applicants should indicate when they could join our research program if offered a position.

We offer extensive analytical capacities for stable isotope analyses and a collaborative research environment.

All application materials or other questions should be e-mailed to [jhou@geoisochem.com](mailto:jhou@geoisochem.com) or [lei.holly@gmail.com](mailto:lei.holly@gmail.com) at your earliest convenience.

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The Swiss Seismological Service (SED; [www.seismo.ethz.ch](http://www.seismo.ethz.ch)) at ETH Zürich is expanding its interdisciplinary center on seismic hazard modeling and invites applications for three research seismologists at a junior or senior level.

The successful candidates will join an international team focused on creating a state-of-the-art seismic hazard and risk modeling and validation environment, including input data, hazard computational infrastructure, model validation, and distribution. The positions will be associated with the new Global Earthquake Model (GEM) and Seismic Hazard Harmonization in Europe (SHARE) efforts. GEM is the public-private partnership initiated by the OECD to build an independent standard for calculating and communicating earthquake risk worldwide. SHARE is an EC-funded project to harmonize hazard products and zonations for engineering applications.

Candidates must have a PhD in geophysics, earthquake engineering, or a related field and a proven record of excellence in conducting research in a team environment. Expertise in one or more of the following areas is highly desirable: regional seismic networks and catalogs, seismic rupture and/or ground motion modeling, probabilistic hazard or risk modeling, statistical model validation, computational geophysics, and insurance/reinsurance industry standards and practices. Successful senior candidates may participate in undergraduate and graduate level teaching at ETH. English and German are working languages in the research groups. The selection process starts immediately and will continue until all positions are filled. The positions will be granted for a minimum duration of two years, with the possibility of extension, and may be filled at part or full time.

The SED offers an attractive working environment in Zurich, consistently rated among the cities with the best quality of life worldwide. SED provides good opportunities for personal and professional development, a competitive salary depending on experience and performance, and an excellent benefits package.

For more detailed information, please contact Dr. Greg Anderson +41 44 633 24 80 or Prof. Domenico Giardini +41 44 633 26 10.

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Please apply online at [www.jobs.ethz.ch](http://www.jobs.ethz.ch) including a cover letter, your CV, a brief statement of research interests, and the names and contact information of two references. In cases of technical problems regarding the application process, please send your written application by paper with the keyword HAWI 762 to Mr. Hans-Peter Widmer, Human Resources, P.O. Box, 8092 Zürich.

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**The Swiss Seismological Service (SED; [www.seismo.ethz.ch](http://www.seismo.ethz.ch)) at ETH Zürich** is expanding its interdisciplinary center on seismic hazard modeling and invites applications for three software engineers within the Information Technology Group at the SED.

The successful candidates will join an international team focused on creating a state-of-the-art seismic hazard and risk modeling and validation environment. They will focus on the core information technology infrastructure, including relational databases for input and output data, project Web portals, and a Web service-oriented architecture integrating all these systems. They will also work with other team members and contractors worldwide on centralized tools for computing seismic hazard and risk.

- Position one, with emphasis on relational database systems and interfaces, requires significant expertise and recent work experience with relational database design, database systems and interfaces to them, including use of tools such as PostgreSQL, MySQL, JDBC, and Hibernate.
- Position two, with emphasis on Web portals and interfaces, requires significant expertise and recent work experience with open-source Web development tools such as Struts, JavaScript, PHP, and AJAX and good working knowledge of Web authoring standards including HTML, CSS, and XML. Experience with Portal environments such as GridSphere or JetSpeed highly desired.
- Position three, with emphasis on service-oriented architecture design and implementation, requires significant expertise and recent work experience in Java/J2EE and related technologies such as JSP, Struts, JSF, Servlets, and Spring. Experience with Web service standards such as SOAP or REST and Portal environments such as GridSphere or JetSpeed highly desired.

In addition to the specific requirements for each position described above, each candidate should have the following education and skills:

- Bachelors or higher degree in computer or physical sciences, with emphasis in software engineering, or equivalent education and experience required. Experience in the insurance or reinsurance industry beneficial.
- Experience with UNIX/Linux and Mac OS X or Windows operating systems and with Java, Perl, Python, or UNIX shell script programming required. Good working knowledge of FORTRAN and C beneficial.
- Experience in modern best practices for distributed and test-driven development environments, including use of source control, automated build testing, and issue tracking systems required.
- Demonstrated inter-personal skills in working with customers, peers, and supervisors and in planning team-oriented projects and good written and oral communication skills in English required.
- Understanding of seismology and/or earthquake engineering beneficial.
- Ability to travel occasionally.

The SED offers an attractive working environment in Zurich, consistently rated among the cities with the best quality of life worldwide. The Information Technology Group supports an international and interdisciplinary team of nearly 100 scientists, engineers, and technologists working on a wide range of earthquake-related problems. The working languages at the SED are German and English. SED provides good opportunities for personal and professional development, a competitive salary depending on experience and performance, and an excellent benefits package.

The positions are open immediately, for two to three years with the possibility of extension. We expect to fill the positions at part or full time. Please contact Dr. Greg Anderson (Head, SED IT Group; +41 44 633 24 80) for further information.

Please apply online at [www.jobs.ethz.ch](http://www.jobs.ethz.ch) including a cover letter, your CV, a brief statement of research interests, and the names and contact information of two references. In cases of technical problems regarding the application process, please send your written application by paper with the keyword HAWI 759 to Mr. Hans-Peter Widmer, Human Resources, P.O. Box, 8092 Zürich.

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**Permanent stable isotope laboratory manager position at University of Basel**

The Institute for Environmental Geoscience (IEG) at the University of Basel is seeking a full-time, permanent laboratory manager for its stable isotope facility. The IEG studies the biogeochemical cycles of biologically important elements and their isotopes in aquatic and soil systems. The laboratory includes two gas-source IRMS with peripherals (EA, Gasbench, GC), a GC-MS, and a TDN/NOx analyzer. The successful candidate will be responsible for the day-to-day operation of the laboratory, maintenance and repair of all major equipment, as well as the supervision of users. The stable isotope laboratory routinely measures H, C N, and O isotope ratios in water, soil, and sediment samples. It is expected that the candidate will be involved in the development and improvement of new methods. Active participation in research is optional.

Qualifications should include an MSc in Chemistry, Environmental Science, Geoscience or a related discipline, as well experience with stable isotope mass spectrometry and analytical techniques. A background in biogeochemistry, an expertise in compound-specific analyses and/or the

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analysis of dissolved inorganic nitrogen compounds are an asset but not a requirement. The position is permanent and will be available as of **February 1, 2009**. It offers a competitive salary and full social benefits. Interested applicants should send their application including a CV and names and contact addresses for two references to Prof. Dr. M. Lehmann, Institute for Environmental Geoscience, University of Basel, Bernoullistrasse 30. Application deadline is **15 November 2008**, but applications will be reviewed until the position is filled. For further information please contact [moritz.lehmann\(at\)unibas.ch](mailto:moritz.lehmann(at)unibas.ch).

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**Isotope Geochemist**

The Department of Geosciences at the University of Wisconsin-Milwaukee invites applicants for a faculty position in Isotope Geochemistry at the rank of Assistant or in exceptional cases, Associate Professor with a start date of August 2009. Applicants must hold a Ph.D. in geology or related field at the time of appointment, and have demonstrated research experience in isotope geochemistry. Post-doctoral experience is desirable. The successful candidate is expected to conduct an active, internationally recognized, externally funded research program. The successful candidate will teach an undergraduate/graduate course in isotope geology (stable and radiogenic), introductory courses and upper level undergraduate and graduate level courses in their field of expertise, and advise graduate student thesis projects. A normal teaching load is 3 courses per academic year. Information is available on-line regarding the Department of Geosciences at <http://www.uwm.edu/Dept/Geosciences/> / and the College of Letters and Sciences at <http://www.uwm.edu/lets/colsci/>

The application deadline is January 16, 2009. To apply, please go to [www.jobs.uwm.edu/applicants/Central?quickFind=50610](http://www.jobs.uwm.edu/applicants/Central?quickFind=50610)

Candidates will upload a cover letter, curriculum vitae, statement of teaching philosophy and research interests, and names and contact information of at least three current references. Examples of published work should be directed to Dr. Barry Cameron, Search Committee Chair, Department of Geosciences, UWM, P.O. Box 413, Milwaukee, WI 53201 or [bcameron@uwm.edu](mailto:bcameron@uwm.edu)

The University of Wisconsin-Milwaukee is a large research oriented institution located on the north side of Milwaukee. The Department of Geosciences offers B.S./B.A., M.S., and Ph.D. degree programs and is staffed by 12 full-time faculty. The University of Wisconsin-Milwaukee is an Equal Opportunity/Affirmative Action Employer.

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**Postdoctoral and Technician Positions Available in Utah**

We seek at least one postdoctoral individual and as well a technician with M.S.-level training for research opportunities in our laboratories in the Department of Biology at the University of Utah or at IsoForensics, a small research company in the University's Research Park.

Jim Ehleringer <[ehleringer@biology.utah.edu](mailto:ehleringer@biology.utah.edu)> and Thure Cerling <[thure.cerling@utah.edu](mailto:thure.cerling@utah.edu)>

We are looking for broadly trained individuals interested in applications of stable isotopes to Quaternary geology, including GIS analysis and soil science, to conduct research, data analyses, and modeling related to environmental isotope signals of soils. Our interests are in both mechanisms and applications of materials of possible forensic interest.

At least one of the positions is available immediately; the searches will remain open until filled, but we hope to have the positions filled no later than January 2009. We seek quantitatively oriented individuals interested in a collaborative research environment, but able to work independently as needed.

Interested applicants should submit the following applications materials to us via e-mail: (a) a PDF format letter of interest describing your background, qualifications, career objectives, and the names and addresses of 2-3 individuals who will write letters in support of the applicant, (b) a complete curriculum vitae in PDF format, and (c) PDFs of no more than 3 publications by the applicant. Applicants should indicate when they could join our research program if offered a position.

We offer extensive analytical capacities for stable isotope analyses (e.g., the Stable Isotope Ratio Facility for Environmental Research) and a collaborative research environment.

All application materials should be e-mailed to <[ehleringer@biology.utah.edu](mailto:ehleringer@biology.utah.edu)> or <[thure.cerling@utah.edu](mailto:thure.cerling@utah.edu)> at your earliest convenience. For additional information, please feel free to contact either Jim Ehleringer or Thure Cerling at the University of Utah.

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**SEM Electron Beam Lithography position**

**Associate Development Engineer position in the College of Engineering Dean's Office at the University of California, Davis campus.** Vacancy Listing #10979

Primary responsibilities are to operate and maintain a scanning electron microscope system equipped with writing capability in nano range in support of micro and nano fabrication research. Includes routine maintenance, train lab members in Electron Beam Lithography (EBL); work

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closely with students, faculty and industrial users. Also includes process development, equipment trouble shooting and maintenance of other micro and nano equipment such as e-beam evaporators, Nano-Imprint-Lithography and associated imaging equipment.

Salary Range \$4,422 - \$7,517 monthly

Please see the following links for a more detailed job description and vacancy announcement

<http://jobs.hr.ucdavis.edu/jm/ViewVacancy?id=10979>

<http://jobs.hr.ucdavis.edu/jm/PositionDescriptionView?id=10979>

To apply for this position online and/or to download the application forms, please visit the UC Davis HR web site at:

[http://www.hr.ucdavis.edu/Emp/Application\\_Process/Application\\_Process](http://www.hr.ucdavis.edu/Emp/Application_Process/Application_Process)

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The Department of Earth Sciences at the University of Lyon1 is seeking applications for an assistant professor (maitre de conferences) position in **High pressure mineral physics** starting fall 2009

Teaching aspects:

The assistant professor will teach classes in mineralogy and thermodynamics for students in Earth and environmental sciences, at the Dpt of Earth Sciences. He/she will take care of the lectures, and labs in mineralogy, crystallography and thermodynamics of mineralogical reactions. This includes the teaching of X-ray and visible spectroscopies, of X-ray diffraction, of electron microscopy, etc on any type of natural material including minerals. In particular, the assistant professor will be involved in the training of students to experiments at high pressure, in the Earth sciences and Physics departments, at the local. He/she is expected to be active in the organisation and management of the taught classes.

Research aspects:

The position is dedicated to experimental research relevant to the structure, to the dynamics, or to the origin of the Earth and terrestrial or giant planets. The experimental approach should focus on the extreme conditions of pressure and temperature, either in diamond anvil cell or in large volume press. The assistant professor will receive support from the *in situ* expertise of the Lab. de Sciences de la Terre (LST, Dpt of Earth Sciences) and of the Lab. de Physique de la Matière Condensée et Nanostructures (LMPCN, Dpt of Physics). He/she will be active in the operation and development of the local facility for experiments in extreme conditions (Plateforme Lyonnaise d'Expérimentation sous Conditions Extrêmes, <http://lpmcn.univ-lyon1.fr/plece/>).

The procedure to apply for a Position in France is as follows:

Selection of candidates is a two-step process:

1) To be eligible, applicants must be qualified according to the regulation by the French Ministry of Education and Research. The application website for the 'qualification' is available at [http://www.education.gouv.fr/personnel/enseignant\\_superieur/enseignant\\_chercheur/antares.htm](http://www.education.gouv.fr/personnel/enseignant_superieur/enseignant_chercheur/antares.htm)

\*\*The deadline for application for this qualification step is Oct. 14, 2008.\*\*

2) During spring 2009, 'qualified' applicants should send a curriculum vitae, including a publication list, a statement of research and teaching interests to the human resources office at University of Lyon1

This is a permanent research and teaching position.

For a general description of recruitment see <http://www.education.gouv.fr/cid1056/maitre-de-conference.html>.

Health care and pension program are included in the salary.

For further information, we encourage potential candidates to contact Dr. Isabelle Daniel.

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Isabelle Daniel

Université Claude Bernard Lyon1

Laboratoire de Sciences de la Terre - UMR 5570

Bat Géode - R6

43 bd du 11 novembre 1918

69622 Villeurbanne cedex

tél: +33 4 72 43 27 35 (UCB) +33 4 72 72 86 97 (ENS)

fax: +33 4 72 44 85 93 (UCB) +33 4 72 72 86 77 (ENS)

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Position of Associate Professor (maître de conférence) in Mineralogy at the University Paul Sabatier, Toulouse (LMTG, Observatoire Midi-Pyrénées, 14 Avenue Edouard Belin, 31400, Toulouse; see [www.lmtg.obs-mip.fr](http://www.lmtg.obs-mip.fr))

Teaching profile:

- Mineralogy at undergraduate level,

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- Methods of analysis of minerals (spectroscopic methods, interaction of electrons with materials...) at master level,
- Courses on geo-materials and industrial waste at master level.

The laboratory has a historical relationship with the Museum of Natural History of Toulouse; any experience in popularizing Mineralogy will be welcome.

Research profile:

High-temperature Mineralogy. The area of research will be focused on the study of high-temperature processes in minerals. We are looking for a person able to strongly interact with other members of the research group and with a background that will complement the areas of research already developed in mineralogy at the LMTG: atomic diffusion, isotopic fractionation at the scale of the mineral, irradiation defects in minerals, mineral synthesis, high temperature deformation

The procedure to apply for an associate Professor Position in France is as follows:

Selection of candidates is a two-step process:

1) To be considered for this position, the candidate must be qualified by the French Ministry of Education and Research. This qualification process is an administrative formality and the procedure is straightforward but it must be done in order to be eligible. The application information is available at: <http://tinyurl.com/3418f3>

go to "démarrer" click on Antares (qualification), then follow the steps to fill the form.

\*\*The deadline for application for this qualification step is Oct. 14, 2008.\*\*

2) A University committee will be set up in April/May 2009 to evaluate and select the candidate, based on curriculum vitae, a statement of research and teaching interests, and interview.

This is a permanent research and teaching position, starting in September 2009. For a general description of recruitment see <http://www.education.gouv.fr/cid1056/maitre-de-conference.html>. Health care and pension program are included in the salary.

For further information, we encourage potential candidates to contact Dr. Jannick Ingrin ([ingrin@lmtg.obs-mip.fr](mailto:ingrin@lmtg.obs-mip.fr)) **as soon as possible**.

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**The Saskatchewan Isotope Laboratory, University of Saskatchewan, Canada, seeks a full-time isotope technician/analyst**, with primary duties on stable isotope instruments, and secondary duties providing technical and operational support on thermal ionisation and plasma multicollector instruments. Experience in gas source mass spectrometry is desirable. Cross-training on the solid source and plasma source instruments will be provided on-the-job, if necessary. The laboratory has 4 gas source mass spectrometers with peripherals including EA, TC/EA and Kiel IV, in addition to two thermal ionization instruments (one a Triton), a multi-collector plasma Neptune, and a trace metal clean lab. Activities of the Laboratory are inherently multidisciplinary.

Duties include the preparation of a wide variety of samples for stable isotope analysis of H, C, N, O and S; performing analyses of samples on mass spectrometers; operation of robotic microsampling devices; troubleshooting and maintenance of equipment; QA/QC; purchase ordering; communication with clients and invoicing; and training. The incumbent will work together with researchers, staff and students to develop new protocols as necessary and to implement quality control of all data produced by the isotope activities of the facility, in particular, the stable isotopes.

The successful candidate will have a technical diploma or degree in chemistry or the earth sciences, will work under the supervision of a laboratory manager and will assist in the training of students and visitors. Good communication and people skills are essential so as to guide the analytical activities of diverse users.

Previous experience in an established research laboratory with demonstrated knowledge of lab safety regulations and procedures, general lab safety, WHMIS training, weighing and gas ratio mass spectrometry is desirable. Careful, neat work behaviour, ability to work well under pressure, to face multiple deadlines and interruptions and to manage time and resources effectively are essential. Computer competency in MS Office (Word, Excel) is required. The position is full-time and, although initially a 12-month contract, it is renewable annually. Salary will be commensurate with experience.

Please send cover letter and CV to: Dr William Patterson (email [bill.patterson@usask.ca](mailto:bill.patterson@usask.ca)) Saskatchewan Isotope Laboratory

Applicants with questions regarding this position may call or email:

Dr. Chris Holmden (email [chris.holmden@usask.ca](mailto:chris.holmden@usask.ca)) or

Dr. Bruce Eglington (email : [bruce.eglington@usask.ca](mailto:bruce.eglington@usask.ca))

Further information on the activities of the Saskatchewan Isotope Laboratory may be obtained from any of the above individuals and from the Laboratory's web site (<http://sil.usask.ca>).

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GEOBULLETIN  
October 17, 2008

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