

GEOBULLETIN
NOVEMBER 7TH 2014

*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 225 by Noon on Wednesday.

WEEKS LECTURE – FALL 2014

Date	Speaker	Institution	Host
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WEEKS LECTURE



Jessica R. Meyer
University of Guelph

Nov 7th 2014, Friday, 3:30 PM, Room AB20 ~ Weeks Hall

**A 'Hydraulics First' Approach to Delineation of a Hydrogeologic Units in Sedimentary
Rock Flow Systems**

A key component of all groundwater investigations is characterizing the three-dimensional distribution of hydraulic conductivity contrasts in the subsurface. Portions of the flow domain with

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contrasting hydraulic conductivities are then conceptualized as hydrogeologic (or hydrostratigraphic) units. These units serve as the framework for conceptual and numerical models and guide the placement of monitoring well screens used to collect the hydraulic data necessary for parameterizing and calibrating numerical models. Adequate representation and prediction of groundwater flow processes requires that hydrogeologic units be delineated on the basis of hydraulic information. However, in practice, delineation of hydrogeologic units is often based on data that is indirect with respect to hydraulic properties or blended hydraulic data. This purpose of this presentation is to introduce a novel method of hydrogeologic unit delineation which utilizes high resolution hydraulic head profiles to identify hydraulic conductivity contrasts and show how it is being applied to improve conceptual and numerical modeling of a contaminated sedimentary rock site in Cottage Grove, Wisconsin.

WEEKS LECTURE



Francis Macdonald
Harvard University

Nov 14th 2014, Friday, 3:30 PM, Room AB20 ~ Weeks Hall

The tectonic context of Neoproterozoic glaciation and long term climate change

On geological timescales, the Earth's climate is balanced with the supply of CO₂ from volcanic and metamorphic sources and the consumption of CO₂ through silicate weathering. Climate stability requires a negative feedback between chemical weathering rates and temperature, and yet, multiple times in Earth history this silicate weathering feedback has failed, and spectacularly so during the

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Neoproterozoic Snowball Earth episodes. Here we take the null hypothesis that CO₂ outgassing has not changed on geological timescales, and that long term climate change is controlled by the strength and sensitivity of the silicate weathering feedback. This feedback should vary on geological timescales, not only with temperature, but also with tectonics through global topography, paleogeography and the lithology of what is being weathered. The geological record provides multiple natural experiments that can be explored to better understand the tectonic context of long term climate change. Particularly, here we ask: Why did the silicate weathering feedback fail during the Neoproterozoic Snowball Earth episodes, but not during the Gondwanan or Cenozoic glaciations? Geochronological constraints demonstrate that the Sturtian Snowball Earth was the first glaciation in over a billion years and that glacial onset was coeval with the emplacement of the Franklin large igneous province in the tropics. New Neoproterozoic Sr, Os, and Nd isotope compilations also indicate enhanced basalt weathering immediately before glacial onset. Basalt weathering is not only more efficient at consuming CO₂ than average continental crust, but yields higher dissolved loads of Fe and P. Increased nutrient fluxes to the oceans, organic carbon export, and anaerobic respiration may have provided an additional CO₂ sink. These results implicate basalt weathering as a critical driver in the initiation of Cryogenian glaciation and in modulating seawater chemistry and long-term climate change.

21-Nov-14	James Eldrett	Shell	Ma/Meyers(F)
5-Dec-14	Larry Band	UNC-Chapel Hill (GSA Birdsell-Dreiss Distinguished Lecturer)	Wang/Bahr
12-Dec-14	NONE (AGU)		

JOB OPENINGS:

- [The Department of Geosciences at Texas Tech University seeks applicants for two assistant professor, tenure-track positions.](#)
- [Research Position in Earthquake Seismology, USGS-Golden](#)
- [Lab Technician Position in Geochemistry - Ohio state University](#)
- [Employment/Research Opportunities at the Wisconsin Geological and Natural History Survey](#)
- [Lab Manager at Victoria University of Wellington](#)
- [Osu Boone Pickens School of Geology -Full Time Geochemistry Laboratory Coordinator](#)
- [Petrology-Economic Geology Position, California State Univ Chico](#)
- [Tenure-Track Faculty Position – Sedimentary Geology: Sedimentary Basin Analysis, Sedimentology and Stratigraphy -Department of Geosciences- Western Michigan University](#)
- [PhD-project in soil science: ‚Mechanistic understanding of soil functions by submicron scale analyses with NanoSIMS’](#)

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- Tenured or Tenure-Track Professor Position in Petrology - UT Austin
- The Department of Earth Sciences at IUPUI has an immediate opening for a full-time position as instrumentation/academic specialist.
- The Department of Earth Sciences at IUPUI invites applications for a tenure-track faculty member at the Assistant Professor
- Dolan Integration Group (DIG) has immediate openings for a Stable Isotope Laboratory Technician and Project Data Technician.

JOB OPENINGS:

Two Tenure-Track Positions at Texas Tech University

The Department of Geosciences at Texas Tech University seeks applicants for two assistant professor, tenure-track positions. A PhD in an Earth Science (or closely related) discipline at time of appointment is required.

Position 1 focuses on seismology, emphasizing the imaging of crustal features (from shallow sedimentary and structural studies to investigation of crustal scale tectonic features). A letter of application, including names of three referees, short statements of research and teaching philosophies, and vita can be uploaded online at <http://www.texastech.edu/careers/requisition#2211BR>. Questions should be sent to Dr. Harold Gurrola, Search Committee Chair: harold.gurrola@ttu.edu.

Position 2 focuses on sedimentary systems with an emphasis on one or more of clay mineralogy, diagenesis, mudstones, carbonate petrology and reservoir characterization. A letter of application, including names of three referees, short statements of research and teaching philosophies, and vita can be uploaded online at <http://www.texastech.edu/careers/requisition#2209BR>. Questions should be sent to Dr. Paul Sylvester, Search Committee Chair: paul.sylvester@ttu.edu.

Candidates with strong records of scholarship and who have the proven capacity or clear potential to bring externally sponsored research to Texas Tech University are encouraged to apply. Teaching duties include graduate and undergraduate courses in the candidate's specialty. The department (www.geosciences.ttu.edu) has active research specialties in Geology, Geophysics, Geochemistry, Geography, and Atmospheric Science. Texas Tech is located in Lubbock on the edge of the Permian Basin. The region appreciates the social and economic importance of geology and geophysics knowledge due to the importance of petroleum and groundwater to the Texas economy. Service duties include program-building, as well as commitment to extra-curricular activities. Service to the department, college, and university is expected.

As an Equal Employment Opportunity/Affirmative Action employer, Texas Tech University is dedicated to the goal of building a culturally diverse faculty committed to teaching and working in a multicultural environment. We actively encourage applications from all those who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community at Texas Tech University. The university welcomes applications from minorities, women, veterans, persons with disabilities, and dual-career couples. Evaluation of candidates will begin January 30, 2015.

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Research Position in Earthquake Seismology, USGS-Golden

The U.S. Geological Survey (USGS) Geologic Hazards Science Center (GHSC) in Golden, Colorado, has opened a research position in Earthquake Seismology. The primary focus of the position is to plan, originate, and conduct research that characterizes shaking-related hazards primarily for the benefit of USGS real-time earthquake information systems. This focus may include studies of basin and other propagation and site effects, spatial variability, complexity, and uncertainty that may relate to the real time hazard and loss assessment.

This will be a permanent position at the GS-13 level, with promotion potential to GS-15.

Applications (resume and responses to application questions) for this vacancy must be received online via USAJOBS before midnight Eastern Time on Friday, November 14, 2014. Resumes MUST adhere to the format prescribed on USAJOBS, including full narrative descriptions of "Duties, Accomplishments and Related Skills" for past work experience. Transcripts, etc. MUST be attached as required by the Vacancy Announcement. A full description of the job opening, qualifications and instructions on how to apply can be found at:
<https://www.usajobs.gov/GetJob/ViewDetails/385427700>.

The Job Announcement Number is PAC-2015-0706 (PAC-2015-0077 for current Federal Employees). The salary range is \$74,587.00 to \$115,301.00 per year. U.S. citizenship is required. Contact Melissa Barnhart with questions about the application process (Phone: 916-278-9399; pacsac3@usgs.gov).

Lab Technician Position in Geochemistry - Ohio state University

The Stable Isotope Biogeochemistry Laboratory (Dr. Grottoli) and the Noble Gas Lab (Dr. Darrah) at the Ohio state University seek a full-time laboratory technician to work 50% time in each lab. The technician would be responsible for 1) the operation of the stable isotope ratio mass spectrometer and its peripherals as well as noble gas mass spectrometer and peripherals, 2) trains students to prepare samples and operate the instruments, 3) complete the maintenance and minor repairs of instruments and associated equipment, 4) maintain data quality, correction, and archiving, 5) ensure that the labs conform to all health and safety regulations, and 5) oversee all invoicing for sample analyses and accounts payable. The candidate must hold a minimum of a BS in the physical sciences or closely related field. Desired (but not required) qualifications include an MS in the physical sciences or related field, and experiences in the operation of stable isotope and/or noble gas mass spectrometers and peripherals. This is a one-year position with a possibility of renewal. To apply, please visit www.jobsatosu.com and enter the job opening number 403406. For additional details, contact Dr. Andrea Grottoli (grottoli.1@osu.edu) or Dr. Tom Darrah (darrah.24@osu.edu).

Employment/Research Opportunities at the Wisconsin Geological and Natural History Survey

As part of ongoing geologic mapping projects in Wisconsin, the WGNHS is recruiting undergraduate geology majors (or recent graduates) to participate in stratigraphic, sedimentological and geochemical studies of new bedrock drill cores and field samples, and compilation of subsurface datasets. See below for two different ways to get involved:

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1) Lab Assistant (*Student Employee or Limited Term Employee, \$10/hr min., 30-40 hrs/week, 6 months*):

Responsibilities of this position include processing, sampling and archiving geologic materials at the WGNHS Research Collections and Education Center in Mount Horeb. Some specific tasks involve: creating powdered samples for carbon isotope analysis, handheld XRF analysis, sample dissolution and heavy liquid separation for conodont biostratigraphy.

Please contact Pat McLaughlin (patrick.mclaughlin@wgnhs.uwex.edu 608-262-8658) for more details.

2) Directed Study Credit (*with the possibility for developing the research into a Senior Thesis Project*):

Research opportunities exist in stratigraphic, sedimentological and geochemical study of Wisconsin Paleozoic units associated with ongoing mapping efforts. Studies include Devonian paleoecology, Silurian reef trends on the margin of the Michigan Basin, sequence stratigraphy of Upper Cambrian frac sand units, depositional and tectonic history of Precambrian quartzites, and more.

Please contact Jay Zambito (jay.zambito@wgnhs.uwex.edu 608-262-3385) for more details.

These positions provide practical experience in a variety of areas important to employers in natural resource development and environmental studies, including: rock description, strategic sampling, data analysis, geologic mapping, etc. This is also a great way to learn about possible employment opportunities with the WGNHS as a field assistant or drill site geologist for next summer's field season.

Lab Manager at Victoria University of Wellington

We have an exciting opportunity for someone with both research and ICP instrument experience to join the School of Geography Environment and Earth Sciences as Laboratory Manager. The position is full-time and permanent, with the successful applicant helping to maintain and develop our world-class suite of geoanalytical instruments, while undertaking independent research in geochemistry. The applicant will have opportunities to submit research grants, attend conferences and publish papers in their discipline.

Victoria University of Wellington is New Zealand's #1 ranked university for research excellence and was also ranked first in New Zealand in Earth Sciences.

Information about the Geochemistry Laboratory can be found here:

<http://www.victoria.ac.nz/sgees/research/facilities/geochemistry-lab>

(Note - we will soon be installing a new top-of-the-line Resonetics 193 nm Excimer laser-ablation system in addition to our suite of ICP instruments).

Information about the SGEES can be found here:<http://www.victoria.ac.nz/sgees>

For more information about the position, or to submit an application, go to:

<http://www.victoria.ac.nz/about/careers/current-vacancies> (Job Posting 314, Deadline for applications November 30th, 2014)

Osborne Boone Pickens School of Geology -Full Time Geochemistry Laboratory Coordinator

The Boone Pickens School of Geology at Oklahoma State University has an opening for a full time Laboratory Coordinator.

Duties: Day to day operation and maintenance of instrumentation for isotopic and geochemical analyses of geological and environmental samples. The major equipment includes a Thermo Delta V Plus IRMS interfaced with an EA and a TC/EA, 2 multipurpose vacuum lines, a PerkinElmer Optima™ 2000 DV Inductively Coupled Plasma/Optical

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Emission Spectrometer, a Dionex Ion Chromatography System (ICS-3000), a Shimadzu 20A HPLC, a Perkin Elmer Clarus 500 Gas Chromatograph, a Perkin Elmer Autosystem XL Gas Chromatograph, a UIC Inc. CM 5014 coulometer, a LECO SC632 TOC and S Analyzer and an ICP-MS to be purchased in the fall. The individual will oversee installation and receive training for new equipment, assist in developing analysis methods, and train students and researchers to run samples. The individual should have knowledge of sample analysis, processing, and reporting of data. We are interested in an individual who can analyze gases, liquids and solids of geological and environmental relevance.

Qualifications: We desire an individual with a Bachelor's degree (PhD preferred) in geological sciences (or a closely related scientific or engineering field). This individual should have experience in operating instruments, managing a lab, working with students, and should be well versed in software operation and minor programing. The individual should be highly committed, of high personal integrity, have excellent written and oral communication skills, and be able to contribute to scientific papers and proposals.

More information about the Boone Pickens School of Geology can be found on the web at <http://geology.okstate.edu/>; more information about the geochemistry facilities can be found under the 'Geochemistry Laboratory' heading at <http://geology.okstate.edu/researchfacilities/> research-facilities.

Please submit application, a cover letter, CV/resume, detailed description of previous laboratory experience, and names and contact information for three scientists. Qualified applicants please apply online at <https://jobs.okstate.edu>; if assistance is needed, contact OSU Human Resources at 405-744-7401. Position subject to availability of funds. Early start date is October 29, 2014.

Oklahoma State University is an Affirmative Action/Equal Opportunity/E-verify employer committed to diversity and all qualified applicants will receive consideration for employment and will not be discriminated against based on race, color, religion, sex, sexual orientation, gender identity, national origin, disability or protected veteran status. OSU is a VEVRAA Federal Contractor and desires priority referrals of protected veterans for its openings. OSU Stillwater is a tobacco-free campus

Petrology-Economic Geology Position, California State Univ Chico

Petrology or Economic Geology: The Department of Geological and Environmental Sciences at California State University, Chico is searching for a tenure track Assistant or Associate Professor to start August, 2015. We seek an enthusiastic Petrologist or Economic Geologist to contribute to the hard-rock foundation of our B.S. Geology and M.S. Geoscience programs. The new faculty member will join nine full-time faculty, additional collaborative faculty in other departments, and a growing team of part-time faculty with diverse talents. Chico's location provides diverse teaching and research opportunities for hard rock petrology with nearby access to a variety of metamorphic and igneous terrains as well as active and historic mining districts. The position requires a Ph.D. in Geology or equivalent field. The full position announcement and application information are available at http://www.csuchico.edu/geos/documents/Petrology_Position.pdf.

Review of applications will begin on November 14, 2014 and continue until the position is filled. [EOE/M/F/VET/DIS](#)

Tenure-Track Faculty Position – Sedimentary Geology: Sedimentary Basin Analysis, Sedimentology and Stratigraphy -Department of Geosciences- Western Michigan University

The Department of Geosciences at Western Michigan University is a growing center for geologic and environmental research, and invites applications for a tenure-track faculty position in Sedimentary Geology; with emphasis in sedimentary basin analysis, sedimentology, and/or stratigraphy/sequence stratigraphy beginning August 2015. The

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position will be filled at the Junior Faculty level (Assistant/Associate Professor). Candidates should have a strong record of research and teaching, and must have received their Ph.D. in Geology, or a related field, at the time of appointment. The successful candidate will assist in enhancing the diversity on campus through demonstrated commitment to diversity and inclusion. The successful candidate expected to establish a vigorous externally-funded research program in the field of Sedimentary Geology is central to the successful applicant's professional responsibilities. Professional responsibilities also comprise teaching undergraduate and graduate classes including, but not limited to: Historical Geology, undergraduate and graduate courses in sedimentology and stratigraphy. Industry experience related to subsurface geology is advantageous since this experience has been important in attracting and supervising graduate students. The Department has a strong tradition of both applied and basic Geosciences research highlighted by work in the areas of Environmental Geology/Hydrogeology, Geochemistry/Isotope Geochemistry, Tectonics, Remote Sensing, and Sedimentary Geology/ Sedimentary Basin Analysis. Research with a focus on applied geosciences through the years in Michigan has resulted in the development of the Michigan Geological Repository for Research and Education (MGRRE), the premier subsurface geological research and data repository for studies related to the Michigan basin, and the recent transfer (through legislative initiative) of the Michigan Geological Survey to Western Michigan University.

The Department of Geosciences at Western Michigan University (one of the top-100 public universities in the United States) is fully committed to the priorities of a "discovery driven, learner centered, and globally engaged" university. The department is one of the most research active units at WMU, has a substantial student population, confers BS, Masters and PhD degrees, and supports the general education mission of the College of Arts and Sciences and the University.

The Carnegie Foundation for the Advancement of Teaching has placed WMU among the 76 public institutions in the nation designated as research universities with high research activities. Please visit www.wmujobs.org. The appointment process at Western Michigan University requires that each applicant submit a comprehensive vita or set of placement credentials and arrange for the transmittal of at least three recent letters of recommendation. Expected start date is Fall 2015. Open until filled. WMU is an Affirmative Action/Equal Opportunity Employer consistent with applicable Federal and State Law. All qualified applicants are encouraged to apply.

PhD-project in soil science: Mechanistic understanding of soil functions by submicron scale analyses with NanoSIMS'

We offer a 3-year PhD-position at the Chair of Soil Science of the Technische Universität München (www.tum.de / www.soil-science.com) within a DFG-funded project. The group of Prof. Ingrid Kögel-Knabner is located at Freising-Weihenstephan, nearby Munich in southern Bavaria. The announced position includes a salary according to TV-L E13 (65%), corresponding to the German TV-L system (Tarifvertrag für den Öffentlichen Dienst der Länder). The anticipated starting date is January or February 2015.

Description:

Soils are highly heterogeneous structures in which organic and inorganic as well as living and non-living building blocks are interacting to form biogeochemical interfaces. While processes at these interfaces are occurring at the micro- or submicron-scale, they are reasoned to influence the behaviour of soils at the global scale. Consequently, analytical methodologies with a high resolution are required in order to investigate these processes with the final goal

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to mechanistically understand BGI formation. Among spectroscopic methodologies nano scale secondary ion mass spectroscopy (NanoSIMS) is a relatively young technique and has only been used in soil science during the last decade.

While NanoSIMS measurements in soils are currently providing excellent qualitative data on various soil processes, a leap towards producing quantitative data remains to be made. For approaching this topic we aim to combine NanoSIMS analyses with atomic force microscopy (AFM) in order to enable scaling to bulk scale measurements, such as C/N analyses or nuclear magnetic resonance (NMR) data. Samples for these experiments will range from simple laboratory microcosm systems in the beginning to soils from field experiments in a later stage of the project.

This position gives an opportunity to use cutting edge technologies, such as NanoSIMS and AFM, in an internationally renowned group focusing on the fate and stabilisation of soil organic matter.

Requirements:

Applicants should have a M. Sc. degree in physics, chemistry, geosciences, geocology, biology, environmental sciences or a related discipline. Candidates with experience in microscopic techniques like secondary ion spectroscopy, epi-fluorescence, scanning and/or transmission electron microscopy (SEM, TEM) are highly welcome. Experience with sample preparation and (geo-) statistical modelling approaches will be highly beneficial. The candidate should be highly motivated, team-oriented and willing to work with advanced analytical techniques.

Applications:

A single pdf-file including letter of motivation, a CV, the contact data of 2 referees, and a statement of research interests should be sent by email to Dr. Christian Schurig (christian.schurig@wzw.tum.de) until November 24th 2014. Evaluation of the application will start soon after the deadline. For questions concerning your application feel free to contact christian.schurig@wzw.tum.de.

Tenured or Tenure-Track Professor Position in Petrology - UT Austin

The Department of Geological Sciences in the Jackson School of Geosciences at The University of Texas at Austin seeks to hire a faculty member in the field of igneous and/or metamorphic petrology. We seek an outstanding scientist who will establish an innovative, world class, externally funded research program in the petrological evolution of the Earth's crust and/or mantle. The field of interest is open, but preference will be given to candidates who would complement and interact with our existing strengths in structural and metamorphic evolution of the lithosphere, magmatic processes, and/or mantle dynamics.

We seek a candidate who will take advantage of the existing geochemical analytical capabilities of the Jackson School, and in particular the electron microprobe, scanning electron microscopes, laser ablation single and multi collector ICP-MS, TIMS, stable isotope laboratories, and High Resolution Computed X-Ray Tomography facility, as well as interact with and possibly utilize the existing experimental petrology and high-pressure mineral physics laboratories. The search is open rank, with a preference for those at the Assistant Professor level. A Ph.D. is required by the **expected start date (August 22, 2015)**.

The Department of Geological Sciences is part of The Jackson School of Geosciences (JSG), which also includes two research units, the Institute for Geophysics and the Bureau of Economic Geology. The JSG is home to more than 190 research scientists and faculty members, and one of the largest combined graduate and undergraduate enrollments of

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any major Earth science program in the country. At JSG, petrology is a part of the Solid Earth and Tectonic Processes research theme and the Petrology and Mineral Physics discipline.

Review of applications will begin December 31, 2014, and continue until the position is filled. **All interested applicants should submit a cover letter, CV, research statement, teaching statement, and complete contact information for three letters of reference via e-mail to dgs@jsg.utexas.edu.** Questions regarding the search may be addressed to the head of the search committee, **Dr. James Gardner, at gardner@jsg.utexas.edu.**

The Department of Earth Sciences at IUPUI has an immediate opening for a full-time position as instrumentation/academic specialist. The Instrumentation and Academic Specialist will manage research instrumentation, provide departmental laboratory safety compliance, and support teaching. The primary purpose of this position is to provide assistance to the Department and faculty through oversight of the Earth Science research infrastructure, with particular focus on managing and maintaining the efficient operation of the Department's instruments (e.g. GCs, HR-ICP-MS, GC-MS, gas-source irMS, ICP-ES, CHN analyzer, and computer interfaces). The instrumentation support provided by the specialist will include handling all of the maintenance, training and scheduling for both a new and existing XRD shared among multiple departments. The Academic Specialist will also help to provide general laboratory research support, such as user training and overseeing sample preparation and analyses as well as troubleshooting and maintenance of other instruments. Laboratory support also includes ensuring departmental and building safety by serving as laboratory safety coordinator. In addition, this position will provide teaching support including maintaining the rock and mineral collections for course instruction as well as helping students to coordinate laboratory and field activities. Finally, the Academic specialist may be responsible for providing general departmental support by performing administrative and other miscellaneous tasks such as coordinating maintenance of vehicles, equipment and property. This is a full-time position, renewable on a 12-month basis. Analytical and instrumentation experience is required. Applicants must have an M.S. degree or higher in earth science, environmental science, chemistry, biology or a related field. Electronics, mechanical, and gas line plumbing expertise is desirable.

Applicants should include a cover letter, resume and the names and contact information of at least three people. Applicants should submit these materials, in a single PDF file, to the Academic/instrumentation specialist Search Committee at cjchouin@iupui.edu. Applications for this position may also be addressed to this committee and mailed to the Department of Earth Sciences, IUPUI, 723 West Michigan Street, Indianapolis, IN, 46202-5132. Review of applications will begin October 27th and continue until position is filled.

We are a growing department that offers undergraduate degrees in geology and environmental science, the M.S. in geology, and an interdisciplinary Ph.D. degree in Applied Earth Sciences (<http://earthsciences.iupui.edu/>). The department has 12 faculty with active research programs in aqueous, stable isotope and microbial geochemistry, biogeosciences, paleoclimatology and global change, medical geology, terrestrial surface and hard rock geology, planetary geology, glacial geology and geomorphology, hydrology, and remote sensing. State-of-the-art geochemistry labs are equipped with stable isotope ratio mass spectrometers, a cavity ring down spectrometer, GC-MS, ICP-MS, ICP-OES, electrochemical equipment, chromatographs (IC, GC, and HPLC), and a multisensor core scanner. IUPUI is home to the Integrated Nanosystems Development Institute (<http://indi.iupui.edu/>) that houses modern SEM and XRD facilities shared by Earth Sciences faculty.

The Department of Earth Sciences at IUPUI invites applications for a tenure-track faculty member at the Assistant Professor level with experience in mineralogy and/or nanoparticle sciences as applied to solid earth systems

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or environmental geosciences and human health. A Ph.D. in earth sciences or closely related field received prior to August 2015 is required and postdoctoral experience is desirable. Candidates should have a strong research record, an interest in multidisciplinary research, the ability to initiate and sustain an externally funded research program, and a commitment to both undergraduate and graduate mineralogy education. Field-based research and teaching programs are important and preference will be given to individuals who can interface with interdisciplinary research teams in earth sciences as well as chemistry, biology and public health. Applicants for the tenure track position should submit a letter of application, curriculum vitae, statement of research interests, statement of teaching interests, and the names and contact information of at least four references. Interested individuals are encouraged to submit their application as a single PDF file to ibsz100@iupui.edu.

We are a growing department that offers undergraduate degrees in geology and environmental science, the M.S. in geology, and an interdisciplinary Ph.D. degree in Applied Earth Sciences (<http://earthsciences.iupui.edu/>). The department has 12 faculty with active research programs in aqueous, stable isotope and microbial geochemistry, biogeosciences, paleoclimatology and global change, medical geology, terrestrial surface and hard rock geology, planetary geology, glacial geology and geomorphology, hydrology, and remote sensing. State-of-the-art geochemistry labs are equipped with stable isotope ratio mass spectrometers, a cavity ring down spectrometer, GC-MS, ICP-MS, ICP-OES, electrochemical equipment, chromatographs (IC, GC, and HPLC), and a multisensor core scanner. IUPUI is home to the Integrated Nanosystems Development Institute (<http://indi.iupui.edu/>) that houses modern SEM and XRD facilities shared by Earth Sciences faculty.

Applications for this position may also be mailed to the committee at Department of Earth Sciences, IUPUI, 723 West Michigan Street, Indianapolis, IN, 46202-5132. Review of applications for the mineralogist position will begin December 1, 2014 and continue until the position is filled.

Postdoctoral Scholar in stable isotope geochemistry, California Institute of Technology

We seek applicants for a postdoctoral fellowship in stable isotope geochemistry in the Division of Geological and Planetary Sciences at the California Institute of Technology. The successful applicant will conduct experiments examining the kinetics of isotope exchange in organic compounds and analyze 'clumped' and position-specific isotopic compositions of experimental products and related natural materials using prototype high-resolution gas source isotope ratio mass spectrometers. Preference will be given to applicants with significant hands-on experience working with high performance mass spectrometers of any kind, and/or experience designing and performing experiments at high temperature and pressure. Experience with light-element stable isotopes and/or organic chemistry is desirable but of secondary importance.

The successful applicant must have received a Ph.D. degree before beginning the appointment. Applicants able to start by January 5th, 2015, or as soon as possible thereafter, are preferred. The initial appointment will be for 1 year, with expectation of renewal for a second year following a progress review.

Interested applicants should send a CV, publication list, and the names and contact information for 3 references to:

John Eiler
Division of Geological and Planetary Sciences
California Institute of Technology
Pasadena, CA
91125
eiler@gps.caltech.edu

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Dolan Integration Group (DIG) has immediate openings for a Stable Isotope Laboratory Technician and Project Data Technician.

Located in Boulder, Colorado, DIG is a geochemical consulting and laboratory services company providing innovative solutions to companies and individuals actively exploring, developing or producing unconventional oil & gas resources. Our Oil and Gas clients range from smaller independent operators to major integrated companies. DIG also serves environmental firms and government agencies. DIG runs a state-of-the-art GC-IRMS laboratory for the analysis of hydrocarbon gases.

The positions in brief:

Stable Isotope Laboratory Technician – The position entails daily operation of the GC-IRMS laboratory. Duties include, but are not limited to, sample analysis, instrument maintenance and troubleshooting, data management, QA/QC, and data reporting.

Project Data Technician - responsible for day-to-day project data entry, data movement and data deliverables. Projects and tasks may include but are not limited to data collection and integration, map production, GIS spatial analysis and database manipulation.

Position details, desired qualifications, and application instructions can be found on our careers page:

<http://www.digforenergy.com/about-dig/careers/>

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