



Department of Earth and Environmental Sciences

ALUMNI NEWSLETTER

2011



UNIVERSITY *of*
ROCHESTER

Letter from the Chair

Dear Alumni and Friends,

Thank you for sending all of the updates and news about your families, your work, and your activities. It has been great for us to learn what you have been up to. I speak for all of the faculty when I say that you have made this a great place for us to teach and do research. We have enjoyed teaching and advising the bright, motivated, and inspirational students that characterize the University of Rochester. We are rewarded by the news of your successes and adventures in life. The Earth and Environmental Sciences department looks forward to sharing department news, faculty and students highlights, and alumni updates on a regular basis. We hope that this annual newsletter will better enable you interact with us and fellow alumni.

The rapid growth of human population has had a profound influence on the Earth system. Natural resource limitation (such as fossils fuels, minerals, and water), climate change, and environmental change are just a few of the pressing issues in Earth science that are receiving increasing attention as they impart a stronger influence on the global politics and global economy. Efforts to understand and deal with these global issues require an increasingly interdisciplinary perspective. For example, an understanding of the scientific evidence for the anthropogenic influence on climate change can inform energy policies that ultimately encourages advances in alternative energy technology. Similarly, understanding the effects of climate change on the hydrologic cycle helps to guide policies and technology development related to water resource management. Earth science is central to these global issues and therefore represents a core set of disciplines that link to various related programs at the University of Rochester. We view our department's growth in the areas of global change research as building on our core strengths within the EES department, while strengthening research and curricular links between other sciences and social sciences at the University of Rochester. Our current faculty (<http://www.ees.rochester.edu/faculty>) span a range of disciplines from solid Earth to Earth surface processes, with a broad range of expertise in geochemistry, geophysics, and tectonics. Some exciting developments in our department include the addition of two new faculty members in the realm of climate science, ocean science, and global change. In July, we will be joined by Dr. Vasilii Petrenko who studies atmospheric chemistry through high latitude ice records. Dr. Petrenko's work has focused on the sources and sinks of greenhouse gasses during periods of climate change recorded in ice. We are currently engaged in a search to hire a new faculty member in the field of ocean science/paleoceanography. Dr. Karen Berger has also jointed EES faculty as a full-time lecturer, teaching new classes in sustainability, hydrology, and environmental science.

We hope that you will track our efforts to expand and strengthen our program and will consider supporting the department with a gift (Department of Earth and Environmental Sciences General Gift Fund). Your philanthropic commitment helps ensure the continued excellence of education and research in EES.

Sincerely,
Carmala Garzjone
Associate Professor and Chair



Faculty Highlights



Professor Udo Fehn retired on June 30, 2010, after 30 years as a dedicated teacher and researcher in the Department of Earth and Environmental Sciences at the University of Rochester.

Over the past 30 years, Professor Fehn has generously served the broader university community through efforts on ~20 different College and University-wide committees. Recently, he served as Chair of the Department of Earth and Environmental Sciences from 2008-2010.

Over the course of his teaching career, Udo taught undergraduate and graduate courses on Energy and Mineral Resources, Ore Deposits, Isotope Geology, Geophysics, Environmental Geophysics and Environmental Decisions. He was instrumental in the initiation of Environmental Science/Studies degree programs in the College and the EES department and served as director of Environmental Programs since their inception in 1992.

His courses were very popular among both science and liberal arts majors because of his efforts to frame and aim his course materials to the specific needs of the varied student audiences. For his teaching efforts, in 1998 he received the University of Rochester Students Association Award for Undergraduate Teaching Excellence in the Natural Sciences. Udo's long-standing effort to sustain strong Environmental programs in the department and his knowledge of the subjects has been and continues to be a great asset to the EES department.

Throughout his long scientific career, Udo remained strongly focused in his research initiatives and projects, publishing nearly one hundred scientific papers in peer-reviewed journals with his students, research associates and colleagues from the U.S. and abroad. His research interests have been in three primary areas. He has contributed significantly on the transport of fluids and chemical cycles, dealing with recycling of marine sediments in volcanic arcs, volatiles in subduction zones, origin of gas hydrate deposits, sea water convection through oceanic crust, and hydrothermal ore deposits. A second and equally significant area of innovative research has been in the application of accelerator mass spectrometry for measuring cosmogenic and anthropogenic isotopes.

He pioneered the measurements of iodine isotopes by accelerator mass spectrometry and used them creatively for dating hydrocarbon deposits, volcanic fluids and gas hydrates. Another area of his research efforts has been in environmental geology where he applied anthropogenic isotopes as environmental tracers. His research led to collaborations with colleagues from New Zealand, Germany, and China, and he developed a strong relationship with colleagues in Japan, where he spent a sabbatical as visiting Professor at the University of Kyoto in 2000 and as Fellow of the Japanese Society for the Promotion of Science at Gakushuin University in Tokyo in 2005. Udo's graduate students also benefited from his strong research program and breadth of contributions. His graduate students have gone on to promising careers in academia, industry, and national research labs.

Udo plans to remain in the EES Department for the near future as an emeritus faculty member to continue to work with colleagues and former students on a range of interesting research projects. Our department is grateful for his many years of service and his continuing support. As his extensive service to the University, dedication to teaching, and his valued research contributions demonstrate, Udo is a truly exemplary member of the faculty at the University of Rochester.



Undergraduate Profile

Jennifer Alpern

"After taking a course in chemical and physical hydrology during my sophomore year, I knew I wanted it to be the focus of my academic career because of the way that the class merged different sciences and presented material in an applied setting. The next year, I took a voluntary position in SIREAL, the Stable Isotope Ratios in the Environment Analytical Laboratory, where I gained experience by using equipment I had read about in textbooks and by becoming involved in experiments I had heard about from lectures. This gave me an opportunity to work closely with Dr. Pennilyn Higgins, the laboratory technician, who taught me why certain procedures were used in specific cases and how to perform them. It was an extraordinary experience to be able to translate what was studied in a classroom to see first-hand how it applies in the world. Although I was interested in the work I was doing, I desired a more mathematical approach to problem-solving applications.

While taking environmental science classes, I was also taking math and physics courses to complete a minor in applied mathematics. I began to wonder how methods learned from these courses could be manipulated for hydrologic studies. Instead of pursuing a major and a minor, I felt it more beneficial to combine them through Geomechanics, a joint undergraduate program with the Department of Mechanical Engineering. This major brought together the topics that I had wanted to integrate since freshman year: math, physics, hydrology, and geology. With guidance and encouragement from my advisor, Dr. Cynthia Ebinger, I found myself on a track in accomplishing just that. Being a Geomechanics major has taught me to combine environmental science with math and physics so that I can approach problems qualitatively and solve them quantitatively. I plan to continue my education in graduate school through a PhD program where I can gain a detailed understanding of fluid mechanics. Eventually, I hope to combine my backgrounds in computer programming, hydrology, and fluid mechanics, to develop coding routines that can track activity of the asthenosphere by treating it as a highly viscous, non-Newtonian fluid, which could ultimately lead to findings in the study of plate tectonics."



Alumnus Profile

Brian T. Turner

I received a BS in geology in 1962, went on to grad school for MS and PhD degrees in geology, then did a four-year tour of active duty in the USAF. From there, I went on to Albany Law School for a J.D. and worked for a law practice in northern NYS for several years. However, geology was closest to my heart, so I continued doing geological research in the Adirondacks while practicing law. That led to an invitation to join the then new geology department at George Mason University in Virginia, where I stayed for six years. My continued research in the Adirondacks uncovered some very important aspects of the Pre-Grenvillian development of the terrain, but unfortunately, a postal strike in Canada prevented the publication of the findings at a time when I was shifting career fields again.

For purely economic reasons, I entered the field of electrical engineering in 1985 and have been so employed ever since. I currently work as a fulltime contractor to a federal agency as an expert in the design and development of antennas and in RF propagation prediction. I am also an ordained Anglican minister which keeps me very busy in my so-called "spare time."

The tug of geology remains strong - last summer I took my eight year-old grandson, Daniel, on a week-long fossil-hunting trip in the Big Horn Basin of Wyoming. We recovered lots of specimens and Daniel was thrilled to see dinosaur tracks in 167 m.y. old shales (I thought it was neat too). I have a fantasy that someday I'll find time to publish my Adirondack research - hard evidence of shallow intrusion of anorthositic rocks, a pre-Grenville garnet-grade metamorphic event, and major thrust faulting, all prior to the Grenville metamorphic event at 1100 m.y. I've always been a dreamer.



Undergraduate Profile

Maura Rapkin

I knew during my first geology course that I am drawn to studies about the natural processes of the earth. Once I declared my major, I made it a priority to spread my excitement for the topic. I have always pursued education regarding preservation of local environments and natural surroundings. As a double major in Environmental Science and Film Production, I have found myself sharing these passions with others. My most rewarding experience was as a lab workshop leader for Introduction to Geology. In lab, I felt like I could pass along my excitement for an understanding of the topic while also bonding with other EES students. Upon graduation, I want to combine my interests in media and environmental education. I am currently seeking opportunities with different film and television networks, as well as conservation-oriented organizations in order to continue sharing and educating on the topic.



Undergraduate Profile

Mary Dzaugis

My interest in geology began when I was thirteen years old. It was the first time I traveled to Australia to work in the Flinders Ranges on Ediacaran fossils with my aunt, who is a paleontologist. That first summer in 2002, I spent a month living in a classic Australian sheepshearers' shed complete with a rain barrel for water, a one-hole corrugated outhouse, and generous gaps at each door for the lizards and spiders to enter. In the field, I spent my time washing, measuring and cataloging fossils. After a few weeks of painstaking effort using scrub brushes and dental tools to clean the fossiliferous beds, I was hooked. Over the following years I became an integral part of this research team and became more interested in the field of geology.

When looking for colleges, the University of Rochester was at the top of my list. My grandmother and my two aunts are both alums of the school and I grew up hearing their stories. Soon after entering the University of Rochester, I knew that I made the right decision. From the start, I pursued geology as a major but I also was very interested in math. After receiving encouragement from a few EES professors to try a double major, I decided to major in both Geology and Math. This choice has given me a unique experience at the U of R and has prepared me well for the next steps in my career.

I have had an amazing four years in the EEC department. The field trips that accompany many of the geology classes are among my most memorable experiences. Locally, I have explored Letchworth State Park and the Paleontological Research Institution in Ithaca. I traveled all the way down to Virginia and back looking at the different provinces of the Central Appalachians. In addition, I have taken trips with the Undergraduate



Student Geologic Society (USGO), most notably Howe Caverns and fossil hunts. This year, I am the President of USGO and have had the opportunity to organize the annual picnic and our biweekly meetings. We have watched all ranges of geology-themed movies ranging from *Avatar* to *Megafault*, providing us with many opportunities to critique the geology!

I have had an excellent four years and I am going to miss the department – both the students and professors. I have decided to apply to graduate school in earth sciences. Specifically, I am hoping to combine my geology and math skills by entering into a master's program in paleoclimatology. Eventually, I would like to get a PhD and work at a university.



John Bershaw



I recently defended (November, 2010) my PhD dissertation at the University of Rochester, working with Carmala Garzione. I came to the University of Rochester excited by the prospect of travel to remote, relatively unexplored corners of the Earth. As an earth science graduate student, I was given the opportunity to travel across giant mountains and high plateaux carved by tireless rivers, collecting samples which were brought back to Rochester for analysis in our stable isotope lab. The chemistry of these samples is revealing how the Himalaya and Tibetan Plateau came to be. It has also given us a better understanding how high topography affects climate, which is particularly interesting to those who study climate change, past, present and future.

The Tibetan Plateau is the highest, most extensive physiographic feature in the world. Though relatively flat, it occupies $2.5 \times 106 \text{ km}^2$ at an average elevation

higher than 4500 m. To put this into perspective, imagine an area four times the size of Texas sitting atop Mt. Whitney (the highest point in the contiguous United States at 14,505 ft). The Himalaya and Tibetan Plateau affect both local and global climate, playing a significant role in seasonal monsoon rains that have supported agriculture in the most populous region on the planet for millennia.

An ongoing collision between tectonic plates (the Indian and the Eurasian) is primarily responsible for the impressive topography associated with the region. However, the history of deformation near the surface (upper crust) and at depth (lower crust and upper mantle) responsible for their evolution is not fully understood. There are numerous models that may explain the surface uplift of the Tibetan Plateau, all of which make predictions that can be tested

using evidence from the geologic record. We have collected samples of carbonate minerals because they record the chemistry of ancient rainfall, which is affected by the elevation at which it fell along with other environmental factors. By analyzing these mineral carbonates from sedimentary basins throughout Asia, we are slowly piecing together an elevation and climate history of the region.

To determine how climate has changed throughout geologic history, we also need a solid understanding of what factors affect modern climate. Climate in Asia is complicated by its distinction of containing the most land-locked region in the world, up to 2500 km (1,500 miles) from the nearest coastline. This means that water vapor may travel a very long, and often complex, path before arrival. By analyzing modern water throughout the region, we have shown how environmental factors like high topography and climate affect the chemistry of this water vapor during transport and precipitation as rainfall. These insights have been used to interpret ancient rainfall records preserved throughout the region.

A paucity of data exists across the Himalaya and Tibetan Plateau as research is hampered by their relative inaccessibility and typically harsh climates. Though I am now beginning work as an exploration geologist at Chevron, working out of a comfortable office with all the amenities, I look forward to returning to the Tibetan plateau someday, austerity and all.

Manahloh Belachew

I am from Ethiopia and am currently pursuing graduate study in the Department of Earth and Environmental Sciences. I did both of my undergraduate degrees (Geology and Geophysics) and my master's degree (Solid-earth Geophysics) at Addis Ababa University in Ethiopia.

I started my PhD in January 2008, working mainly under the supervision of Prof. Cynthia Ebinger in one of her collaborative projects in Afar, Ethiopia. The project was initiated after the onset of a rifting episode in September 2005 due to the intrusion of an ~2.5 km³ volume dike intrusion along a 60 km-long segment of the East African rift system in Ethiopia. This intrusion resulted in an ~8 m opening in a few days, prompting various universities in Ethiopia, the UK, and the US to come up with a collaborative project to understand various aspects of the rifting processes which is still going on through the intrusion of a sequence of dikes and fissural eruptions. One aim of the collaborative project is to study the dike-induced seismicity and associated processes. A 44-station network with broadband seismometers were deployed in a wide area encompassing the active rift segment.

My thesis project focuses on understanding the timing and dynamics of dike intrusion processes using dike-



induced seismicity and determination of the crustal velocity structure of the region using travel time tomography. The integration of these methods will provide constraints on the distribution of melt zones within the crust which feed magma to the dikes. Such studies so far indicate the dikes were fed mainly from a mid- to sub-crustal magma chamber located at the center of the active rift segment. Studies of dike intrusions in this region, which is in transition from continental rifting to an incipient seafloor spreading center, serves as a model in understanding the along-axis rift segmentation and maintenance observed along the mid-oceanic ridges. Moreover, the results of these studies serve as an input for seismic hazard studies and mitigations.



EES Department News

2010 EES Alumni Achievement Award

Dr. Ho-Kwang (Dave) Mao (PhD, 1968) is a geologist and Staff Scientist at the Geophysical Laboratory of the Carnegie Institution for Science. Dr. Mao is well-known for his research using the diamond anvil cell for the study of minerals at high pressures. His varied research interests broadly include the chemistry of Earth's mantle and core, deep Earth geophysics, and the physics and chemistry of giant planet interiors. Dr. Mao will be visiting the EES department to receive this award on September 9th, 2011

The EES **Fairchild Colloquium Series** featured a seminar by **George Denton** from the University of Maine entitled “**Antarctica and the Ice Age Puzzle**” during Meliora Weekend 2010. Our speaker for Meliora 2011 will be **Jeff Severinghaus** from Scripps Institution of Oceanography who will be giving a talk entitled “A View of Past and Future Climate from Air Bubbles in Polar Ice”. Alumni **Paul Baker** (Duke University) and **Mark Fahnestock** (University of New Hampshire) have also give seminars in the Fairchild Colloquium Series.

According to the **2010 NRC rankings** of graduate programs, the EES department ranks 29th in research (midpoint S ranking) out of 140 Earth science programs.

Carmala Garzzone received the 2010 **Goergen Award for Excellence in Teaching** given by the University of Rochester.

Graduate Student News

PhD degrees

Rajesh Goteti

Kinematic and mechanical evolution of relay zones in normal faulted terranes: Integrating field studies in the Rio Grande Rift of north-central New Mexico and three dimensional finite element modeling

Kathakali Bhattacharyya

Geometry and kinematics of the fold-thrust belt and structural evolution of the major Himalayan fault zones in the Darjeeling-Sikkim Himalaya, India

Arundhuti Ghatak

Isotopic and geochemical studies of four volcano-tectonic provinces in continental margins: The Franciscan subduction complex, California, The Palisade Sill, New York-New Jersey, The Afar triple junction, Ethiopia, and the Rajmahal-Sylhet Traps, Northeast India

John Bershaw

The tectonic and climatic evolution of high plateaux

Brian Hough

The evolution of the northeastern margin of the Tibetan Plateau: Stratigraphy, paleoclimate and tectonics

M.S. degrees

Julia Voronov

Magnetic carriers in 3-4 billion-year-old cherts from the Barberton Greenstone Belt of southern Africa: Assessing sources, history and potential presence of magnetofossils

Awards and Fellowships

Manahloh Belachew received an African Geosciences Society Fellowship for travel to an African Geosciences meeting in South Africa.

John Bershaw received a Chevron Graduate Research grant.

Talor Walsh received an ExxonMobil Graduate Research grant. He was also awarded the Nuria Pequera Prize for Geology Field Work in Structural Geology.

Julia Voronov received: 1) a NASA Astrobiology Institute Summer Scholarship for travel to Santander Spain in June 2010 and 2) travel & lodging funding from the NASA Astrobiology Institute, the Agouron Institute, and the Canadian Institute for Advanced Research for attending the “Anaerobic Phototrophic Ecosystems, Ancient and Modern” meeting.



Undergraduate Student Awards

Lattimore Prize in EES

Elizabeth Baker through South Dakota Field Mines - field work in Tsaskesti, Turkey

Lisa Imamura through Albion College - field work in Absaroka Mountains, WY

Jacqueline Cinella, Julia Gorman, Dayna Jacob - all through Judson-Mead Geological Field Station - field work in southern Montana and Glacier National Park

Faculty Award in EES

in Environmental Sciences

Jialeath Carroll

Carolina Clemente

Ann Dunlea

in Geological Sciences

Lisa Imamura

Julia Nelson

KEY Program at the University of Rochester

Annalise Kjolhede and Caitlin Smigelski

TAKE-5 at the University of Rochester

Austen Erickson

Phi Beta Kappa

Lisa Imamura

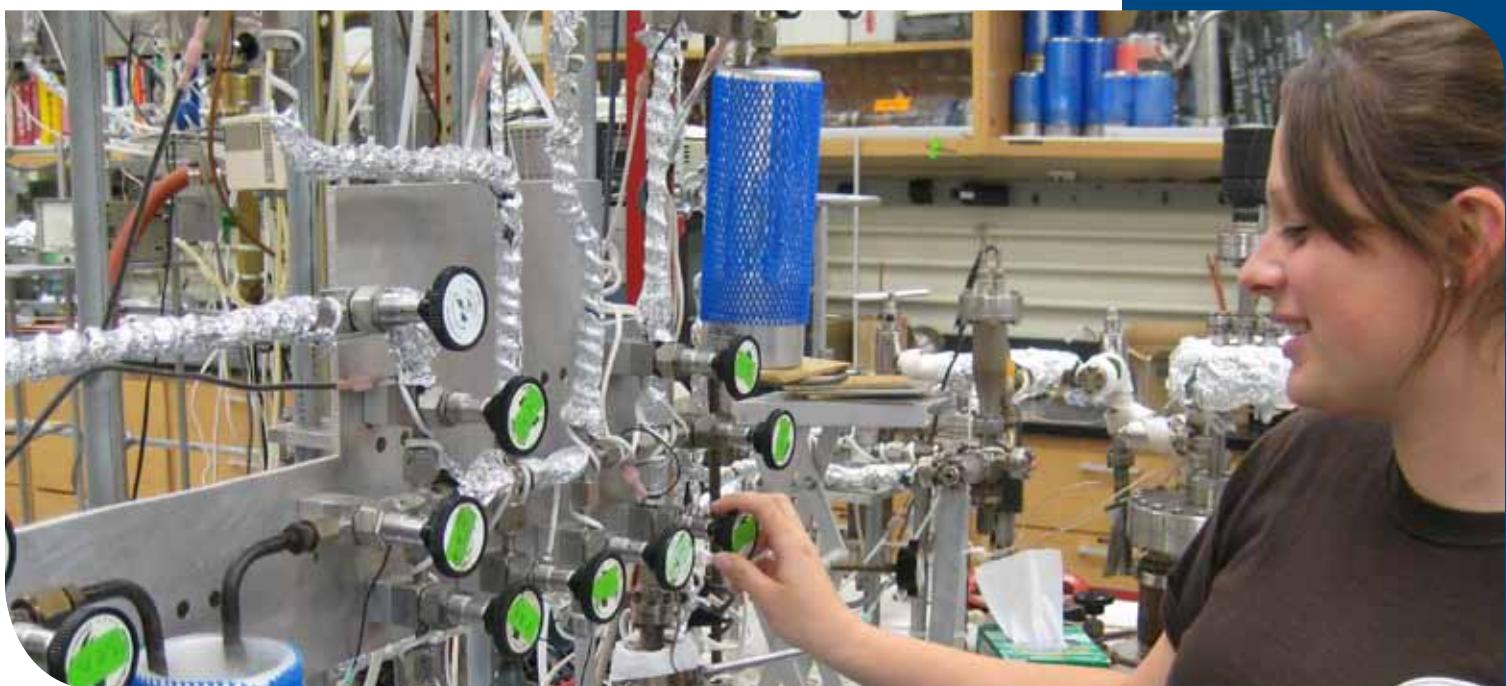
Jialeath Carroll

UK Fulbright Fellowship

Nate Lindsey for research in geothermal energy at the University of Edinburg

Lunar and Planetary Institute Summer Intern Fellowship

Julia Gorman will be doing research on spinels in lunar basalts.



Alumni Updates

1952 – GEO -DAVID PEFLEY

After graduate school, he went to work for Standard Oil (Carter Oil) in Rawlins, Wyoming where he did field mapping for nearly four years. Then for 20 years, he resided in Denver, Colorado working for Carter, Colorado Oil and Gas, Vicorp Energy and his own companies, U.S. Gold Corp and NYS Natural Gas Co. He writes that he has been fortunate to have worked in almost all phases of oil and gas exploration and production in various locations in the United States. He and his wife retired to the Finger Lakes country of Western New York and the east coast of Florida where they fished the Atlantic, travelled worldwide and generally lived the good life-until they were directly targeted by three major hurricanes in a period of two years. At that point, they moved to Henderson, Nevada. In 2008, his precious wife of 56 years, Diana, died of metastatic breast cancer. Now at nearly 81 years of age, he still relishes living in an unsurpassed geologist's paradise. His picture shows the Great Unconformity at the base of Frenchmans Mountain on the east side of Las Vegas where he is pointing to a gap in the geologic record of one billion years.



1955- GEO - GEORGE STONE

Hobbies are traveling (loves the San Juan Mts. of Colorado); nature and landscape photography; and most of all paleontology and collecting trilobites from all over the world. He writes that his house is a museum of minerals and fossils, with a huge display of Isotelus iowensis



1956-GEO - ROBERT ADAMS

1956-1959 - U.S. Navy (Naval ROTC at University of Rochester): Oceanographic Survey Ship working on installation of Atlantic Ballistic Missile Range tracking devices (sonar impact detection) and antisubmarine tracking devices throughout the Atlantic as Ship's navigator
1959-1963 - PhD Johns Hopkins working under Dr. Pettijohn
1964-1967 - Exploration Geologist at Shell Oil Company, New Mexico and Texas
1967-1994 – Associate Professor of Geology, State University College at Brockport, concentrated in Sedimentology, Rocks and Minerals, Oceanography. Participated in three week short course in Marine Geology and Oceanography on San Salvador Island in the Bahamas from 1974-1993 and wrote a general geology guide to San Salvador Island.
1994 to date – Retired from SUNY Brockport and still lives in Brockport. He spends time between Brockport (summer)

and Knoxville, Tennessee (winter, with family). He also enjoys checking out the geology of the Smokey Mountains and participated as Judge in Science Fairs in Knoxville.

1962-GEO – BRIAN B. TURNER MS/PHD

Four year tour of active duty in the USAF. Received a J.D at the Albany School of Law and had a law practice in northern New York State for several years. However, geology was closest to his heart, so he continued doing geological research in the Adirondack Mountains while practicing law. That led to an invitation to join the then new geology department at George Mason University in Virginia, where he stayed for 6 years. He writes that for purely economic reasons he entered the field of electrical engineering in 1985 and has been employed in this field ever since. He currently works as a full time contractor to a federal agency as an expert in the design and development of antennas and in RF propagation prediction. He is also an ordained Anglican minister which keeps him busy in his so-called spare time. The tug of geology remains strong- last summer he took his 8-year old grandson, Daniel, on a week-long fossil hunting trip in the Big Horn Basin of Wyoming. They recovered lots of specimens and Daniel was thrilled to see dinosaur tracks in 167 million year old shale (He thought it was neat too!) He has a fantasy that someday he'll find time to publish his Adirondack research-hard evidence of shallow intrusion of anorthositic rocks, a pre-Grenville garnet-grade metamorphic event, and major thrust faulting, all prior to the Grenville metamorphic event at 1100 million years. He says he has always been a dreamer.

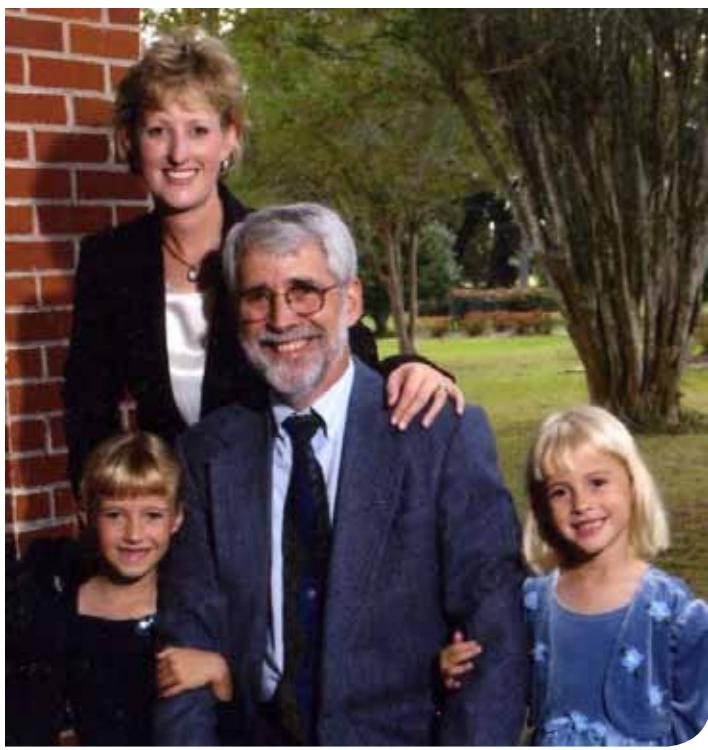
1962 GEO-TIM LONG

Has a webpage with Earth and Atmospheric Sciences at Georgia Tech, even if it is hidden under geophysics. http://www.eas.gatech.edu/people/L_Timothy_Long. He spent most of this year in travel or building a small sail boat and a dog park. However, he still keeps a seismograph operating and it can usually be seen at <http://geophysics.eas.gatech.edu/GTEQ> by clicking on Georgia seismic network and looking at JSPGA. Professionally, he is working on a couple of papers and has about half completed a book on gravity data acquisition and analysis.

1969 PhD - P. MICHAEL TERLECKY

Since leaving the University of Rochester in 1969 with a PhD, he served in the USAF as an officer, and upon leaving was head of the Env. and Energy Sciences Section at Cornell Aeronautical Lab (now Calspan Corp.). Simultaneously, he started teaching environmental and geology courses at the University of Buffalo. He is still there part-time after 38 continuous years (He thinks it is some sort of record!) He says it is all environmental courses now. He is president of an environmental engineering and consulting firm, Frontier Technical Associates, Inc. in the Buffalo area. He is also an intercollegiate sports official.





1972-1974 GEO/1972-MS/1974-PHD-GARY KINSLAND

(Picture of present family is from 2005. His wife Kellie and daughters Victoria, 10 and Mikaila, 11.) Others may remember Leslie and Cynthia as my first family. They are both now at Cornell still with the last names as Kinsland. He is a professor of Geology (Geophysicist) at the University of Louisiana in Lafayette, Louisiana and has been there for 34 years. He taught one year at Arizona State University before coming to the University of Louisiana. His research efforts have been many and varied. He is presently working on stereo immersive reality 3D imaging and interpretation of the topography, gravity and magnetic of the Chicxulub Impact on the Yucatan Peninsula (the one most think wiped out the dinosaurs). He similarly images and interprets LIDAR geomorphology data from around Lafayette...Pleistocene fluvial/distributaries etc. Another effort is in determining/mapping the distribution of subsurface coal deposits in northern Louisiana. His group has mapped all of the Louisiana lower Wilcox coal-bearing deposits from the "instep" of Louisiana north to Arkansas. He writes that these coals are being exploited for coal bed natural gas and soon will be insitu gasification of coals.

1972 MS EUGENE GARTLAND

He is still in Rochester and married to Wendy with a family of three children and two grandchildren. He is enjoying retirement after 28 years of service at SUNY Brockport, Rochester Educational Opportunity Center as an instructor in the GED program. He is still working part-time at SUNY Brockport teaching Geography and Meteorology. For 20 years, he was the part owner of Nature Discoveries, a natural history tour company where he lead over 70 trips around the world. This included numerous trips to

Alaska, the Canadian Rockies, Yellowstone National Park, Death Valley and Big Bend National Parks with other trips including the Galapagos, Iceland and New Zealand.

1973 GEO-BS-HOWARD WODARD

He has been a Professor in the Plant Science Department at South Dakota State University since 1990. His main responsibilities include research and teaching in the area of Soil Management and Crop Production, but he also teaches Principles of Geology to keep his sanity. Living on the prairie is challenging during the winters, but it is a great place to raise kids.

1975 PATRICK LEACH

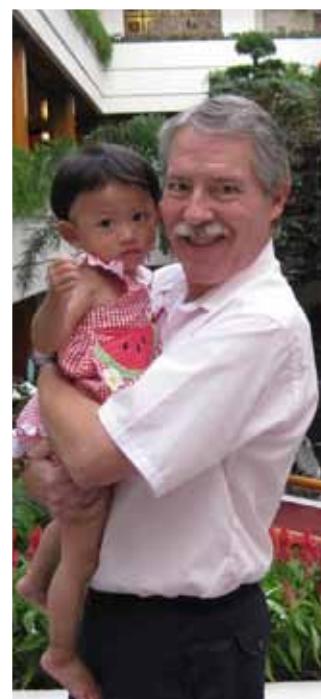
He is a Principal with Decision Strategies Inc., a management consulting firm with clients primarily in the energy industry. He has a wife and three lovely daughters who are now grown and on their own. He also had a book published in 2006: "Why can't you just Give Me the Number?" An executive's guide to using probabilistic thinking to manage risk and make better decisions.

1975 GEO-JAMES LOFTUS

Currently lives and works in Houston. He is an Integrity Data Analyst for NDT Systems and Services (America), Inc. He analyzes inertial navigation data from in-line inspection tools (aka "Smart Pigs") in order to find accurate locations of underground oil, gas and chemical pipelines. He is also involved with using that same data to determine if geotechnical forces (e.g. earthquakes and landslides) are acting upon the pipeline by analyzing strain and doing strain comparisons over time to see if the pipeline is moving. NDT has assigned him tasks over the years in the United States, Canada, South America, Europe, the Middle East and Taiwan. He has also tried his hand at being a science fiction writer and has had one novel published, Crisis in the Sky.

1976 GEO-BS STEPHEN S. HOWE

He continues to investigate the bulk and compound-specific stable isotope geochemistry of modern and ancient biogenic materials, soils, sediments, and rocks from lacustrine, marine and terrestrial settings to evaluate global climate and environmental change, in the Department of Atmospheric and Environmental Sciences at the University of Albany where he has been for 14 years. On occasion, he also investigates the mineralogy, fluid inclusions, and stable isotope geochemistry of hydrothermal mineral deposits to construct genetic deposit models. Personally, the biggest highlight during the past year was the adoption of Lilly Howe from



Jianxi Province, China, an event he and his wife have been looking forward to for nearly five years. The picture shows him holding her in Guangzhou, China, one week after the adoption and another picture of her three months later at their home in Vermont. They are thrilled to have such a precious little girl in their lives.



1978 GEO-BS MARK T. HARRIS

He has been at the University of Wisconsin-Milwaukee for over 20 years and is currently serving as acting dean for UWM's new School of Freshwater Sciences. This requires him to wear a tie, much to the amusement of his family.

1978 GEO-THOMAS BOURNE

Is the CEO of a startup company called Terreneew, LLC that bases its technology platform on IP from Cornell University. They process agricultural waste fibers into products that remediate oil spills, remove heavy metals from contaminated water, and scrub hydrogen sulfide from biogas and other sour gas streams. This company is based in Geneva, NY.

1980 GEO TIMOTHY CHOCK

Has been putting a little bit of GEO 119 Geology and Public Policy learning to work as a planning commissioner for the town of Dover, Vermont. He has been participating in a groundwater mapping program offered by the Vermont Agency of Natural Resources (also part of the USGS STATEMAP program) and has survived some scary budget cuts. This summer he build a Jim Michalak sailing dinghy and is looking forward to sailing it around Lakes Whitingham and Somerset next spring. His picture shows his son, Ren at the helm, taking his wife, Barbara, for a spin.



1981 1981 GEO-1983-MASTERS PUBLIC POLICY-CHRISTOPHER ZEHREN

He is a Senior Vice President at ICF International (www.icf.com; NASDAQ: ICFI) where he coordinates a federal business development team and serves as EPA account manager. He is married to Chris Zehren (masters in public policy-1983- now Deputy Director for Program Analysis at USDA/OBPA). They live in Washington, D.C. and have 2 kids. Their oldest, Simone, is a freshman at the University of Rochester!

1981 GEO- DAN EUDENE

Is Executive Director of Riverdale Neighborhood House, a non-profit organization in the northwest Bronx serving children, youth, families and seniors, but is still fascinated by most things geological and science related. He has been married for 24 years and has four children: One in graduate school for Civil Engineering at the University of Buffalo, another in her final year at SUNY Geneseo majoring in Education; one ready for college (undoubtedly someplace cold) next year; and the youngest is a high school freshman.

1983 GEO- ANDREW KANDEL

Since 2008, he has been employed by the Heidelberg Academy of Sciences and Humanities as an archaeologist in a long-term research project named "The Role of Culture in Early Expansions of Humans" (www.roceeh.net). His research focuses primarily on the interaction of early humans and the



changing environments in which they lived. He writes that the aim of his research is to examine the role that culture played in these adaptations and assess how culture affected early human expansions over a broad time span and a diverse geographic range. In southern Africa, he is studying adaptations of humans in a coastal environment where marine resources provided new opportunities. In the Levant, he is examining the human response to climatic fluctuations during the Pleistocene that resulted in the changing landuse strategies. In the Caucuses, Andrew initiated a project aimed at understanding early human adaptations in an intermontane region where early humans adapted to a landscape fragmented by periodic volcanic eruptions. His general research interests also include: the study of geoarchaeology at open-air archaeological sites; evaluating diachronic changes in landscape use, subsistence strategies and settlement patterns; and the analysis of marine shell and ostrich eggshell ornaments



1985 GEO-B.A. GREG SZYMANSKI

Lives in Woodinville, Washington (a suburb of Seattle). His current joy is Director of Human Resources for Geonerco Management LLC, a privately held real estate development firm that develops commercial and residential property in Washington, Oregon, Utah, Colorado and California.

1987 GEO – GENE PETERS

After leaving Rochester, he spent 5 years on active duty in the Marine Corps, followed by 14 years as a consulting geologist, when not raising a family or pursuing graduate degrees part-time (Hopkins and Geo. Washington). From there, he spent about 5 years at the U.S. Nuclear Regulatory Commission, where he was Chief of the Repository Site Branch. He was responsible for making all post-closure safety evaluations for the proposed spent nuclear fuel repository at Yucca Mountain, which involved climate change, geomorphology, volcanism, seismic hazard analysis, saturated and unsaturated zone hydrology and geochemistry, as well as a variety of engineering analyses. While there, he worked extensively with Brett Leslie, a fellow Rochester geo alumnus. Early in 2010, he left the NRC to assume leadership of the FBI's Counterterrorism and Forensic Science Research Unit at the Laboratory in Quantico, Virginia (<http://www.fbi.gov/about-us/lab/counterterrorism-forensic-science-research>). They conduct research to develop new methods, techniques, and equipment for forensic science, law enforcement, and intelligence applications. Research projects range from stable isotopes in geologic media to novel DNA and RNA analyses methods. He writes that they are always looking for good post-docs and faculty on sabbatical! See Visiting Science Program: <http://www.fbijobs.gov/242.asp>

1987 GEOMECHANICAL ENGINEERING-BS – JOHN GARGES

recently completed his 13th year with Conestoga-Rovers & Associates (CRA), a full-service environmental consulting firm based in Waterloo, Canada. John is a Vice President with CRA and is in charge of CRA's Philadelphia PA and Edison NJ offices. His primary focus is hazardous waste site investigations and remediations. Most recently, he has been involved in numerous tritium-related groundwater investigations at nuclear power plants. John lives with his wife and three children in Pottstown, PA.

1991 MS- VIKAS TANDON

After graduating from the University of Rochester in 1991, he completed his PhD in Hydrogeology at the University of Nebraska. He has worked as a Hydrogeologist/Manager in the Environmental business over the last 14 years, 13 of them with Shaw Environmental, Inc., most of them in Pittsburgh, PA, with the last two in Rochester. Relocating to Boston in January 2011, with the same company. He is looking forward to connecting with any EES alumni in the area. Picture is of him and his family at Disney in 2010.

1993 GEO--DEB (JOHNSON) KURE-UR

geology field trips sparked a career-long interpretive interest in her! She has been teaching natural science, always with an emphasis on geology!, through outdoor science centers, schools, camps, and trip programs throughout the U.S. Over five years were spent as an Outreach Instructor with the Education Division of the Natural History Museum of Los Angeles County, where a highlight was leading public field trips along the San Andreas Fault. Deb currently works as a technical editor, and teaches with Camp Fire USA in Austin, Texas, during the school year, and at Camp Pemigewasset, in New Hampshire, in the summers. Leading students through the pegmatite mines, glacial valleys, and granite domes of the White Mountains is much enjoyed!

rocksandtrails@hotmail.com

1993-MS/1995-PHD- FRIEDRICH TEICHMANN

Lives in Tulln, Austria with his wife Margaret and three daughters. He writes that the girls have been busy at school. Elizabeth (17) will graduate this coming year from Gymnasium and plans to go to the University of Vienna next year. He says she loves to dance and do sports and is teaching them to pre-schoolers part time. Caroline (15) has new teachers this year who have brought new ideas and approaches into the classroom. Frances (13) is also doing very well at school. They write that they are very proud of their girls and often reflect upon the fact that they can do it all in two languages! They remain close with their families and getting together is important so last summer they visited the U.S. On the way, they toured Dublin and Ireland which they found very interesting.

1994 SHARON INGRAM CHIN

Writes we are well in Waterloo, IA. She and Martin Chin (PhD '94 Chem) have been married 16 years. She received her J.D. from Santa Clara University School of Law in 1999 and was in private practice for a few years. She is now national Compliance Manager for U.S. Bank in the Private Client Group (Trust Department). Martin is tenured faculty at University of Northern Iowa - Go Panthers! Their daughter, Katie (10), is a competitive gymnast and plays piano and french horn. Michelle (8) is a competitive swimmer and plays piano as well. They managed a quick trip through Rochester this summer! She said it was great to see the growth and all the old buildings they fondly remember. Meliora!



1996 B.S./2000-MASTERS-ALFRED A. SMITH

He is working for the hydrogeologic/geologic consulting firm Leggette, Brashears and Graham, Inc. They have offices throughout the East and Midwest. Al is located out of the New Jersey office and lives with his family in Suffern, NY (about 30 miles north of NYC). He says he does a nice mixture of environmental work and water supply hydrogeology with a smattering of other geological/geotechnical tasks mixed in. He is married to Maria (whom you may remember from my time at U of R) and have two children; Gus who will be turning 6 in a few weeks and Lillian who is 3.



1996 EVS/2000 UNIVERSITY OF ROCHESTER-SCHOOL OF MEDICINE- KAY ANN (THOMPSON) HOSKEY

She was a U.S. Navy Lieutenant Commander, OB/GYN Medical officer until 2007. After completing a fellowship in Female Pelvic Medicine and Reconstructive surgery, she is now working in Annapolis, Maryland. She and her husband live in Columbia, Maryland.

1997 GEO-SEAN CORNELL

Teaches at Shippensburg University and has been there for 5 years. He writes that he is going through the tenure and promotion process now so hopefully will be there permanently a year from now.



He teaches Intro Geology, Historical Geology and a number of upper division courses in the Earth Sciences. It doesn't seem possible, he says, but he has taught a total of 10 different classes in 5 years, and has supervised some 15 students on various research projects! He is field focused as always, and is an adjunct at the Marine Science Consortium at Wallops Island, Virginia where he teaches a field course every summer. The class is Coastal Environmental Oceanography and is a great option for students who want a hands-on field opportunity in the area of marine coastal geology and environmental science. He has students from at least 4 or 5 different universities and thinks it would be fun to have UR students take that class! His class is actually a traveling course that starts and ends at Wallops Island, but also travels to the Keys Marine Lab in Florida. He says his family is doing very well. His wife Angel is an English Teacher at Carlisle High

School. They have three children: Hannah 9, and the twins Jenna and Ethan who are 7. He writes that they keep them very busy, but loves life and couldn't be more proud.

2005 EVS-FRANK J. CIAMPA

Frank writes that 2010 was a very good year, highlighted by receiving his master's (ALM) from Harvard University in Environmental Management and Sustainability, as well as his contribution to an article published in Newsweek magazine. This summer he worked on an environmental research project for MSCI ESG Research (formerly RiskMetrics Group). The project was completed and the results were published on Monday in Newsweek Magazine in a segment called "Newsweek's 2010 Green Rankings."

2005 EVS-SARAH (COULTER) GEISLER

Has completed a Masters degree at SUNY Buffalo in urban planning, and is currently looking for work in the field of environmental planning and disaster resilience/preparedness planning. She is happily married to another University of Rochester alumnus, Richard Geisler and has settled in Rochester.



2005 GEO-SARAH GREENE

Is currently in the final year of her PhD at the University of Southern California. Next fall she is off to the University of Bristol for a post-doctoral position. Her picture is of her at one of her field sites in the Canadian wilderness (Williston Lake, British Columbia).

2006 GEOMECHANICS-THOMAS P. SHAY

Since graduating from the geomechanics program in 2006, Thomas has been working with Woodard & Curran (an engineering consulting firm) in White Plains, NY as a civil/environmental engineer. He writes that he had the opportunity to work on some exciting projects and have gained significant experience in planning, permitting, design, and construction oversight of both private and municipal projects. He is also in the process of obtaining an MBA in Strategic Management from Pace University on a part-time basis and looks forward to graduating in May 2011. He married his wife Krista in August 2008 and recently moved to Norwalk, CT.

2007 GEO- NICK DYGERT

Is studying igneous petrology and geochemistry in a PhD program at Brown. His master's thesis project is a field study of trace element compositions in a traverse across a dunite channel at the Trinity Ophiolite. He writes that they're trying to constrain melt migration rates, at this particular outcrop melt is migrating from the channel into the host peridotite which is really unusual. He is also planning the department field trip this year to the Manicouagan Impact Crater in Quebec and Thetford Mines Ophiolite.

2008 GEO –

KENDRA WILLIAMS

Is in the last year of a Masters in Geology program at Portland State University working with Scott Burns on a thesis entitled "Debris Flow Characterization, Analysis and Hazard Assessment for Mt. Adams, Washington. She is also working part time for the Oregon Department of Geology and Mineral Industries in Portland, Oregon.

2008 GEO-BS-SHEPHANIE MASON

Is finishing her MS degree at the University of New Mexico. She is engaged in a field-based paleomagnetic study of the kinematic evolution of the San Luis basin, northern Rio Grande rift.

2008 EVS-RACHEL SKELLIE

Is currently working at an environmental consulting firm called Aztech Technologies, Inc. in Ballston Spa, NY. This company mostly deals with petroleum contamination remediation. She is a geologist working whose work ranges from writing reports to environmental oversight on petroleum tank upgrades to collecting ground water samples from impacted soil to analyze. She writes that a small company requires diverse personnel, so she gets to be involved in all stages of clean-up.

2008 GEO-ALLISON SAIL

Graduated from Columbia University with a MA in Climate and Society (climate change and environmental policy) in August of 2009. During the summer of 2009, she interned at the Environmental Defense Fund, where she focused on developing strategic solutions and policies to combat climate change. For the past year she has been working at GE Energy in Schenectady, NY with the Renewable Energy Business as a policy analyst. She provides analytical support to our global team by reviewing and reporting on various renewable energy policies and competing energy sources, which could impact our wind and solar business. She also spends time quantifying the emissions, life-cycle and other environmental impacts of GE's wind turbines.

2010 ESP-CAROLINA CLEMENTE

Joined an AmeriCorps State and National Program and is now working as a crew member for the Nevada Conservation Corps. Her crew goes on 4- and 8-day tours throughout the Southwest doing habitat restoration, invasive species removal, wildfire fuel reduction and trail construction/maintenance. She says she absolutely loves it!



Thank you to all who have generously donated to the EES department over the past year!

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