

# EARTH AND SPACE SCIENCES

2008 DEPARTMENT NEWSLETTER



**UCLA**

## GREETINGS FROM THE CHAIR:

Hello, I'm Craig Manning, Chair of the Department, and – in my night job – a geologist and geochemist studying water-rock interaction and water chemistry in extreme environments. We're excited and proud to update you on what we're up to here in ESS. In this report you'll get a sampling of some exciting recent research and results, an introduction to new ESS faculty, and an update on Departmental events and activities, student awards, and alumni doings.

I took up chair duties on September 1, 2008. The new job has been made easier by the excellent work of past-chair Dave Jackson, who put in four years of hard labor, steering the Department through some challenging times with fortitude and equanimity. Thanks, Dave, from the entire ESS family.

In the last year, we've welcomed two new faculty members – Caroline Beghein, a seismologist, and Vassilis Angelopoulos, a space physicist. Both are already making waves, which you can read about on pages 4 and 5 following. And there will be more to come. Last year, ESS participated – along with UCLA's Department of Atmospheric and Ocean Sciences and Institute of Geophysics and Planetary Physics – in what we call the "Geosciences Initiative,"

a hiring plan that is bringing in more faculty with research and teaching interests in the surface envelopes of the Earth and planets. I look forward to introducing you to at least four new faculty in our next newsletter.

We've also said good-bye to three valued staff members. Ram Alkaly retired on October 31, after a successful career of thin-section preparation and hamburger flipping at Departmental barbecues. Following several years of semi-retirement (we've annually recalled him to work part time), he's moved his operation to his garage, where he will continue his work for ESS and others. Also, Dr. Eric Tonui, a Research Geochemist, is moving to UC Riverside, where he will take up duties as a Licensing Officer for Research and Technology Commercialization. And Dr. Marty Grove, another geochemistry researcher, accepted a position as Research Professor at Stanford University. We're sorry to see them go, but we're

happy that all are pursuing new opportunities and we wish them the best in what lies ahead.

It's a pleasure to record some of the successes of our faculty. Professor Chris Russell has attained lasting celestial glory via nomenclature: this year, asteroid 21459 was named *Chrisrussell* in his honor. Meanwhile, NASA bestowed Vassilis Angelopoulos and his science team with two Group Achievement Awards in recognition of success of his THEMIS mission. Dave Jackson was elected member of the Bureau of the International Union of Geodesy and Geophysics. Mark Moldwin was honored by the UCLA Motor Board Senior Honor Society with a "Tip of the Hat" Award. Larry Smith (joint position with Geography) was a Guggenheim Fellow in 2006-07. Craig Manning (yours truly) received a Research Award from the German Humboldt Foundation, in 2007. And finally, congratulations to Abby Kavner (mineral physics) and Jonathan Aurnou (planetary dynamics). Both were promoted to Associate Professor with tenure in 2008.

Not to be outdone, our students have also been garnering accolades. Several have won prizes for outstanding papers or posters at international meetings, including David Galvan (2007 Spring AGU), Rachel Smith, (2007 Kobe International School of Planetary Sciences), and Anat Shahar and Igor Stubailo (2007 AGU Fall). Michael McRivette, Galvan, and Shahar also won prestigious UCLA Dissertation Year Fellowships. We're proud of our students' success when it comes to winning external fellowships and grants. These include awards from the Geological Society of America (Sara Cina, William Childers), Exxon-Mobil (Cina), NASA (Simone de Leuw, Colleen Milbury), and the National Defense Science and Engineering Fellowship Program (Krista Soderlund). Lastly, I want to commend Britney Schmidt who – with Prof. Margaret Kivelson – started the UCLA Women in Science and Engineering (WISE) program.

ESS is a wonderful department. We have outstanding students, staff, faculty, and alumni, and it's a privilege to be associated with it. And we depend on you to help keep us at the cutting edge. So, let us know about your recent accomplishments and your whereabouts. And, as the University faces some significant economic uncertainties in the coming months, please consider a donation that will help us continue to provide one of the best environments for learning and practicing Earth and Space Sciences. Best wishes, and please stay connected!



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## On the cover:

*2007 Summer Field Class (with  
Prof. An Yin and T.A. Sara Cina)  
take a break for a group photo at  
Long Lake in the Sierra Nevada  
Range near Bishop, California.*

### ESS Geochemists Suggest That Plate Tectonics Started More Than 4 Billion Years Ago

Analysis of minerals from ancient magmas paints a new picture of the early Earth, including the surprising finding that plate tectonics may have started more than 4 billion years ago — much earlier than scientists had believed. The findings were published by ESS graduate student Michelle Hopkins, with co-authors Professor Mark Harrison and Professor Craig Manning, in the Nov. 27, 2008 issue of the journal *Nature*.

“We are proposing that there was plate tectonic activity in the first 500 million years of Earth’s history,” said Harrison. “Unlike the longstanding myth of a hellish, dry, desolate Hadean Earth with no continents, it looks like as soon as the Earth formed, it fell into the same dynamic regime that continues today...there appear to have been oceans; there could have been life — completely contradictory to the cartoonish story we had been telling ourselves.”



*Craig Manning, Mark Harrison, and Michelle Hopkins analyze data from the ESS ion microprobe*

“We’re revealing a new picture of what the early Earth might have looked like,” added Hopkins. “In high school, we are taught to see the Earth as a ... hellish, molten [planet]. Now we’re seeing a new picture, more like today, with continents, water, oceans, much earlier than we thought.”

The Earth is 4.6 billion years old. Some Earth scientists think plate tectonics started 3.5 billion years ago, others that it began even more recently than that. But the new work suggests that neither view is correct.

The research is based on analysis of ancient mineral grains known as zircons which, after erosion from their original host, now reside in sedimentary rocks in Western Australia. Hopkins analyzed the zircons with the ESS high-resolution ion microprobe, an instrument that enables scientists to date and learn the exact composition of samples with enormous precision. The microprobe fires a beam of ions at a sample, releasing from the sample its own ions, which are then analyzed in a mass spectrometer.

The analysis determined that some of the zircons formed in magmas between 4.2 and 4 billion years ago. In addition,

the zircons contain minute mineral inclusions that point to crystallization in granites at some 20 kilometers depth. The data imply a wet, cool exterior of the planet, and suggest formation in a region with heat flow far lower than the global average at that time.

“We discovered the temperature at which these zircons formed was constant and very low,” according to Harrison. “You look at artists’ conceptions of the early Earth, with flying objects from outer space making large craters; that should make zircons hundreds of degrees centigrade hotter than the ones we see. The only way you can make zircons at the low temperature we see is if the melt is water-saturated. There had to be abundant water. That’s a big surprise because our longstanding conception of the early Earth is that it was dry.”

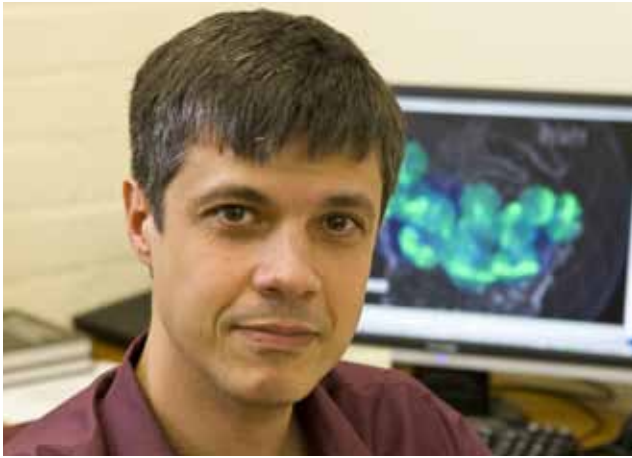
“The global average heat flow in the Earth’s first 500 million years was thought to be about 200 to 300 milliwatts per meter squared,” Hopkins said. “Our zircons are indicating a heat flow of just 75 milliwatts per meter squared -- the figure one would expect to find in subduction zones.”

“Several lines of evidence now support that once radical hypothesis,” Harrison said. “The inclusions we found tell us the zircons grew in water-saturated magmas. We now observe a surprisingly low geothermal gradient. The only mechanism that we recognize that is consistent with everything we see is that the formation of these zircons was at a plate-tectonic boundary. In addition, the chemistry of the inclusions in the zircons is characteristic of the two kinds of magmas today that we see at plate-tectonic boundaries.”

“We developed the view that plate tectonics was impossible in the early Earth,” Harrison added. “We have now made observations from the Hadean eon—these grains contain a record about the conditions under which they formed—and the zircons are telling us that they formed in a region with anomalously low heat flow. Where in the modern Earth do you have heat flow that is one-third of the global average, which is what we found in the zircons? There is only one place where you have heat flow that low in which magmas are forming: convergent plate-tectonic boundaries.”



*4-billion-year-old zircons were found in these quartzites in the Jack Hills of Western Australia*



## VASSILIS ANGELOPOULOS

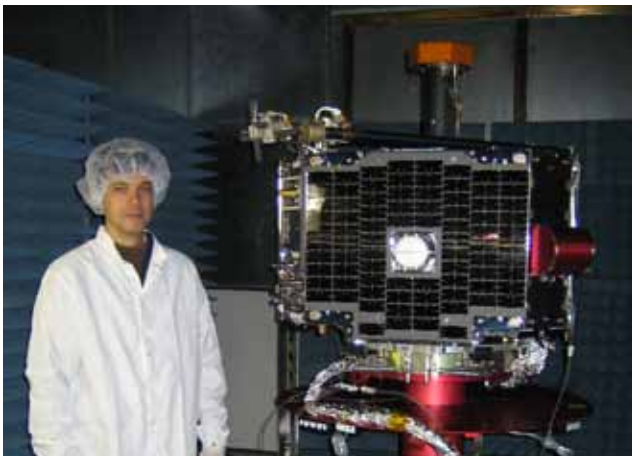
New faculty member Vassilis Angelopoulos came to the Department in 2007, after spending several years working simultaneously at UC Berkeley and at the Jet Propulsion Laboratory in Pasadena. Besides the obvious benefit of reducing his commuting time between L.A. and the Bay Area (he still maintains an appointment at JPL), accepting the position at UCLA is in fact a homecoming for Vassilis, as he received his Ph.D. in Physics at UCLA in 1993. Since then he has distinguished himself for his research in space physics with an emphasis in magnetospheric processes. His research interests include plasma sheet transport, electromagnetic instabilities in the plasma sheet and its boundary, beam-induced ionospheric low frequency waves, substorm physics, turbulence and self-organized criticality.

Currently his main research interest is a NASA-funded space mission known as THEMIS (Time History of Events and Macroscale Interactions during Substorms), a constellation of satellites and ground stations that studies energy releases from the Earth's magnetosphere. THEMIS began in 2007, but has already made a significant breakthrough, by showing for the first time what triggers the geomagnetically disturbed periods known as substorms, which wreak havoc on satellites, power grids and communications systems, and lead to the explosive release of energy that causes the spectacular



*Very fast moving arc of Aurora Borealis  
(photo courtesy of V. Angelopoulos)*

brightening of the aurora borealis, or "Northern Lights." The THEMIS mission is establishing for the first time when and where substorms begin, determining how the individual components of substorms interact, and discovering how substorms power the aurora borealis.



*Angelopoulos with one of the THEMIS Satellites*

As the satellites measure the magnetic and electric fields of the plasma above the Earth's atmosphere once every four days, the ground-based observatories are imaging the auroral lights and the electrical currents from space that generate them. "Armed with this knowledge," said Angelopoulos, "we are not only putting to rest age-old questions about the origin of the spectacular auroral eruptions, but we will also be able to provide statistics on substorm evolution and model its effects on space weather."

In Angelopoulos, ESS has a recognized talent. He's won many awards and honors from the space-physics community, most notably the American Geophysical Union's Macelwane medal (2001), which is bestowed upon a small, elite cohort of young geoscientists in the world. We are proud to welcome him to the Department.

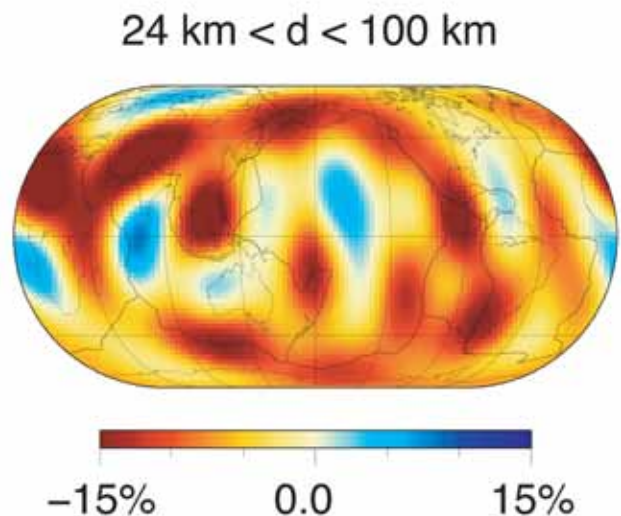
CAROLINE  
BEGHEIN



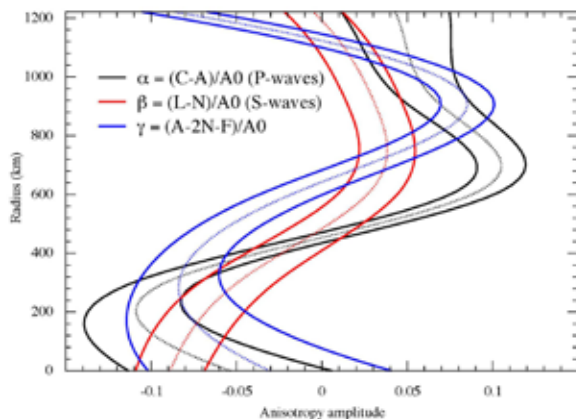
Professor Caroline Beghein arrived in ESS in January, 2008. She received her Ph.D. in 2003, from the University of Utrecht, the Netherlands. She went on to postdoctoral Fellowships at the Massachusetts Institute of Technology in 2004-2005, and Arizona State University in 2006-2007.

Beghein’s research focuses on understanding the Earth’s interior structure through the use of the seismic waves generated by earthquakes. Known as “seismic tomography”, this field takes its name from the fact that the speed, form, and anisotropy of the various types of seismic waves contain information about the medium through which they travel and, given many earthquakes and many detector instruments, can be used to construct tomographic images of deep parts of the Earth that are otherwise unobservable.

As a seismic tomographer, Caroline tackles mantle deformation at the regional scale. At the global scale, her interests include



Most likely model of shear-wave anisotropy in the top 100 km of the mantle, obtained with a model space search approach applied to global surface wave phase velocity data. In our convention, positive values correspond to fast vertically polarized shear-waves, and negative values correspond to fast horizontally polarized shear-waves.



Models of inner core anisotropy obtained from Earth’s free oscillations data and a forward modeling technique (modified from Beghein and Trampert (*Science*, 2003)). The dotted lines correspond to the mean of the obtained model distribution, and the solid lines correspond to two standard deviations. A clear change in the fast direction of wave propagation is observed in the lower third of the inner core.

lithosphere-asthenosphere interaction, deformation of the mantle, chemical and thermal composition of the deep mantle, and inner core seismic anisotropy. A common theme to all these pursuits is an effort to reliably quantify model uncertainties and assess the robustness of features seen in the models.

Caroline is a recipient (in 2005) of the prestigious Outstanding Young Science Medal of the European Geophysical Union. ESS is delighted that she has joined us, and we look forward to her continuing success.

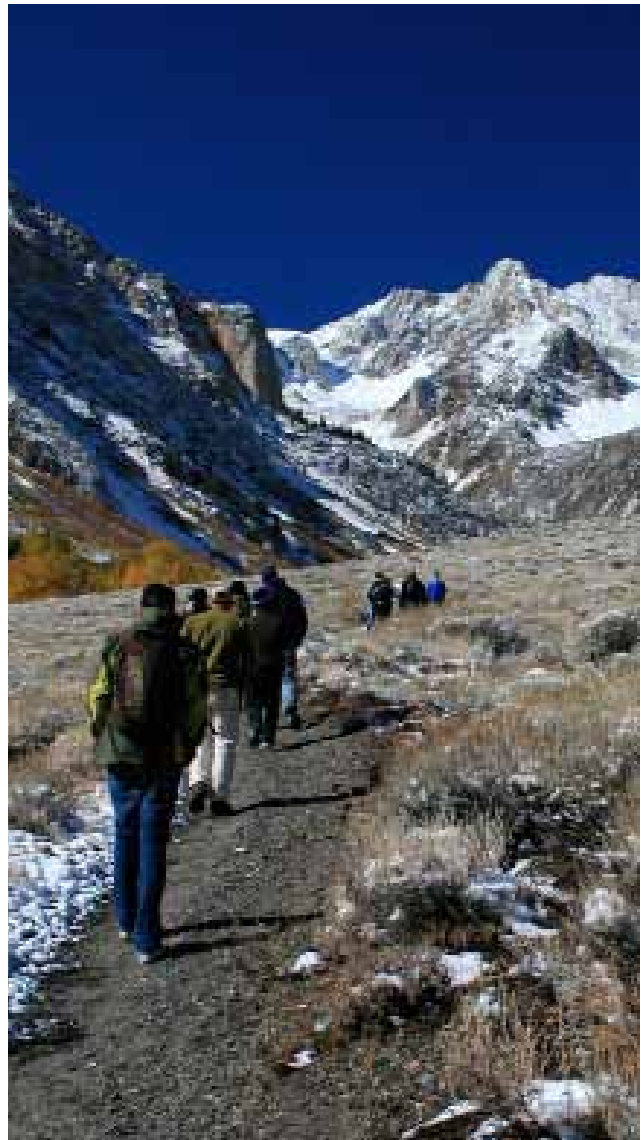
## GLACIATION OF THE SIERRA NEVADA

In Prof. Jonathan Aurnou's freshman seminar, "Signs of Glaciers Past," UCLA undergraduates come face-to-face with the Sierra Nevada's exceptional glacial geomorphology. This seminar spends two and a half days in the field, based out of UC's Sierra Nevada Aquatic Research Laboratory (SNARL), which is located 5 miles south of Mammoth Lakes. The class is predominantly student taught, with guidance from the professor and TA's. Each student presents a location-specific field report, describing glacial features and the geomorphological processes that created them.

The first full day in the field is spent on the eastern side of the Sierra, interpreting the signs of past glaciations. Remarkably well-preserved moraine systems extend from the Sierran front out onto the floor of Long Valley. The class visits the moraines at McGee Creek, Convict Lake and Bloody Canyon, as well as the tufa towers at Mono Lake. Afterwards, the class hikes up the 900 foot high Tahoe-aged moraine that sits behind SNARL. From atop this moraine, it is easy to appreciate the grand scale of the Sierran glaciations.



*Prof. Aurnou pointing out the arêtes and horns of the Cathedral Range from Gaylor Peak col (image courtesy of M.A. Calkins).*



*Students hiking the McGee Creek trail (image courtesy of M.A. Calkins).*

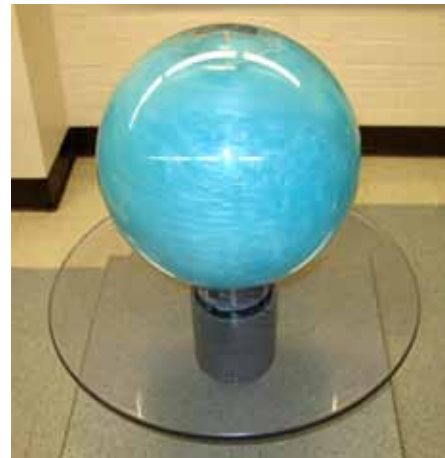
The following day is spent in the Tuolumne Meadows region of Yosemite National Park, inspecting the glacial "headwaters." Stopping at Tioga Pass, the class hikes to the top of Gaylor Peak (11,005 ft. elevation). From this vantage point, it is possible to see the presently active glacierettes in the north-facing bowls of the Kuna Crest. A perfect view is also had of kettle ponds and paternaster lakes, the Granite Lakes cirque, and the glacially sculpted Cathedral Range. The last stop of the trip is Pothole Dome, at the west end of Tuolumne Meadows. From the top of this dome, glacially scoured, polished, and plucked granite lies in every direction.

On the return trip, many of the students, including those who have never been to the mountains before and those who have grown up camping in the Sierra, come away with a radically different understanding of the Sierra Nevada and its ubiquitous glacial features.

## MODELING AND EDUCATIONAL DEMONSTRATIONS LAB (MEDL)

ESS staff-member and alumnus Gary Glesener has created a new career niche that combines the skills of a mechanically inclined inventor with a love of Earth Science. When he was young, Gary was a day dreamer; he recalls that in grade school, "the only time my mind wasn't wandering off during class was when we got to do hands-on science experiments or build something." Glesener's talent for creative construction led him to interests in the physical sciences and in woodworking. Despite an aversion to traditional learning environments, he made it to UCLA, and successfully completed a degree in Earth Sciences.

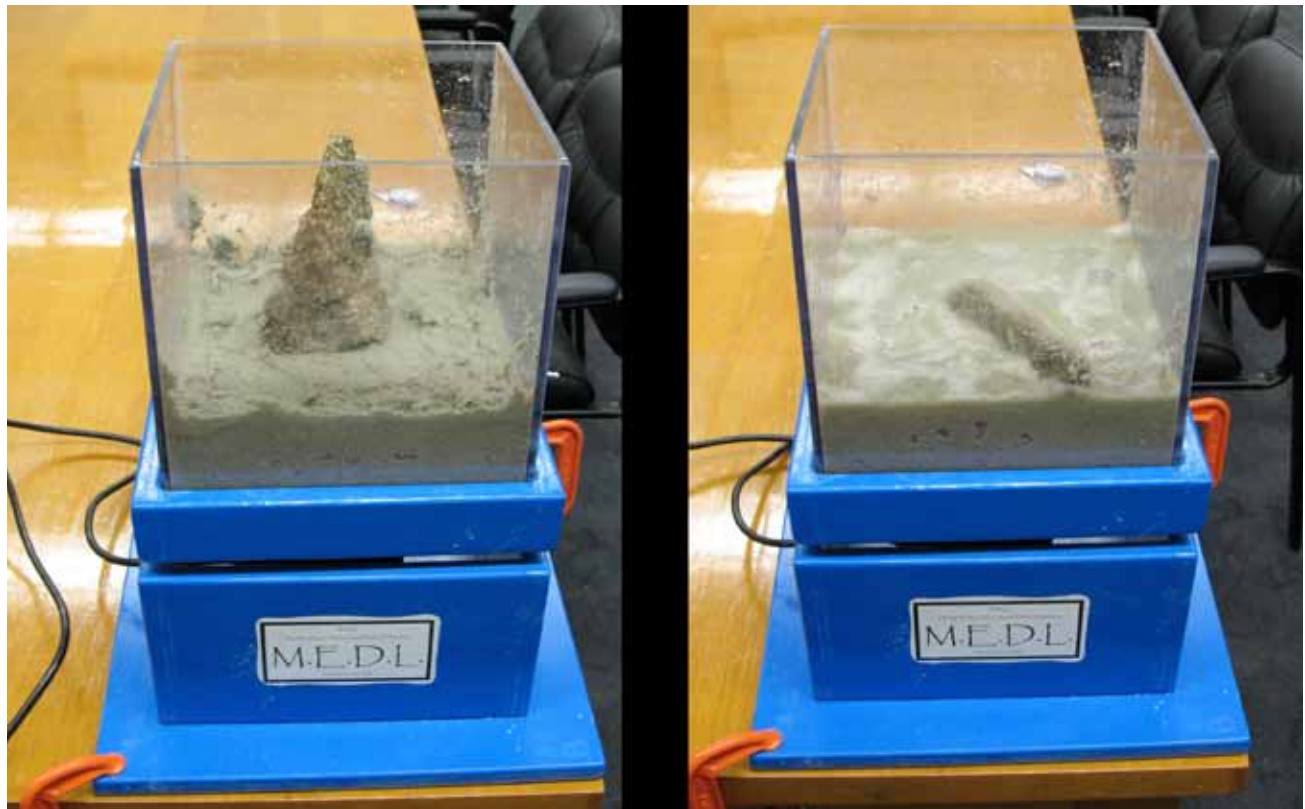
Now, ESS is lucky to have Gary applying his skills as a Principal Lab Mechanician in the Department. He has created the Modeling and Educational Demonstrations Laboratory (MEDL), in which he creates and builds hands-on in-class demonstrations. The inspiration for MEDL was born of his early experiences in school and as an employee in Professor Jonathan Aurnou's lab, but it has evolved into an educational mission for him. Since many of the models he has created in MEDL are for the Department's introductory science courses, they serve a dual purpose for the students. The majority of these students are non-science majors, for whom Gary hopes the models make foreign concepts more interesting and easier to comprehend. And some may even join ESS as majors because of them. Gary presented his models - to great fanfare - in poster sessions at the 2006 and 2007 Fall meetings of the American Geophysical Union.



*Spinning "Turbulent Orb" which demonstrates fluid dynamics*

Chair Manning says that "Gary's in-class demonstration models are works of art. They manage to convey complicated geological concepts - like turbulence in planetary atmospheres or elastic rebound on faults - with clarity and simplicity. They make me want to be a student again."

Funding for Gary's in-class demonstration models has come from the Office of Instructional Development at UCLA, ESS class funds, and from the Alumni donations to the Department. Gary hopes expand MEDL to make a larger impact on education and outreach in the physical sciences through innovations in the models and demonstrations.



*Before and after pictures of a model built for ESS 8, "Earthquakes," which shows the devastating effects of liquefaction during seismic activity*

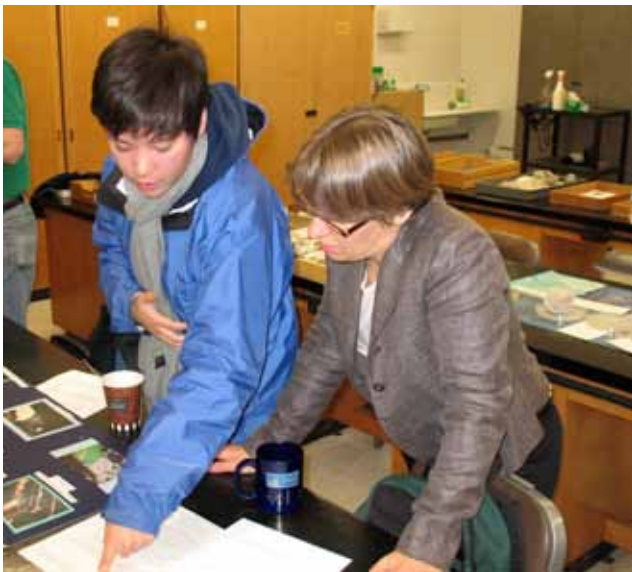
## YOUR GIFTS AT WORK



*Graduate student Sara Cina taking a break from field research in Mongolia. Sara is this year's recipient of the Horodyski Field Award, which was created by Department alumna Bonnie Bloeser in memory of Robert Horodyski, a former ESS staff-member.*



*The ESS Expedition, which was donated several years ago by Ford Motor Company. Part of the maintenance budget for the Department's 3 field vehicles comes out of the ESS Alumni Fund.*



*An undergraduate student presents her research to Professor Abby Kavner during the Fall 2008 Mineralogy class open house.*



*Faculty and Students enjoying one of the departmental classroom's new projectors.*

*Donor funds have a huge, positive impact on our students and our research. They benefit all aspects of our work in the field, including our undergraduate summer field program, our Departmental vehicles, and field research by our graduate students. Your support is also used to improve our teaching in the class rooms; for example, via upgraded classroom technology, and by underwriting of student demonstrations.*

*Every dollar counts. If you have made a gift to ESS recently, thank you very much for your support, it is greatly appreciated! Remember, the Department needs it now more than ever!*



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## DEGREES AND AWARDS—2007



*Earth and Space Sciences Class of 2007—Back row, left to right: Mark Ching, Alan Husker (step up behind), Mark Harrison, Chris Russell, An Yin, Hilary Strong, Alex Webb (step up behind), Erin Spengler, Edwin Schauble, Jesse Mosolf. Third row: Paul Davis, Amar Rao, Miguel Cruz, Helen Bottomley, Greg Cubbon, Tawny Loera, Eduardo Esparza, Margaret Parks, Bryan Murray, Kelly Havens, Gilles Peltzer. Second row: Dean Joe Rudnick, Mark Moldwin, Dave Jackson, John Rosenfeld, Melissa Giovanni, John Beran (step up), Stephanie Briggs (step up), Craig Manning, Hanying Wei (step up), David Berube (step up), Yann Gavillot, Jon Aurnou (step up), Robert Troy, Ray Ingersoll (step up), Rebecca Greenberg, Shaina Forsythe (step up). Front row, left to right: Gina Rogers, Emily Foote, Tim Tran, Jennifer Jay, Misa Cowee, Kevin McKeegan, Jean Elkhoury, Lauri Holbrook.*

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Jean E. Elkhoury  
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Jonathan Hunt  
Eric King  
Catherine Amy Macris  
Jesse Mosolf  
Bryan Murray  
Hanying Wei

### BACHELOR OF ARTS

Tawny Loera



### BACHELOR OF SCIENCE

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John Michio Beran  
Mark Ching  
Miguel Francisco Cruz  
Greg Cubbon  
Eduardo Esparza  
Irving J. Flores  
Emily Jeanne Foote  
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Kelly Lynn Havens  
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Margaret Christina Parks  
Amar P. Rao  
Gina Marie Rogers  
Erin Marie Spengler  
Hilary Elizabeth Strong  
Simon Teeter-Balin  
Tim Kham Tran

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Emily Jeanne Foote

### EUGENE B. WAGGONER SCHOLARSHIP

Shaina Forsyth

### JOHN & FRANCES HANDIN SCHOLARSHIP

Tim Kham Tran  
Jennifer A. Jay

### CLEM NELSON SUMMER FIELD AWARD

John Michio Beran  
Mark Ching  
Greg Cubbon  
Rebecca Greenberg  
Kelly Lynn Havens  
Margaret Christina Parks  
Miles Alexander McCammon



### WALTER S. HARRIS SUMMER FIELD AWARD

Gina Marie Rogers

### EXCELLENCE IN STUDENT TEACHING AWARD

Paul Burgess  
Sara Cina  
Ming-Chang Liu  
Cam Macris  
Michael McRivette  
Britney Schmidt  
Jelena Tomic

### EUGENE B. WAGGONER SCHOLARSHIP

Xianzhe Jia

### W. GARY ERNST FELLOWSHIP

Jonathan Hunt



*Earth and Space Sciences Class of 2008—Back row, from left: Maximillian Werner, Ed Young, An Yin, Jeremy Boyce, Mark Moldwin, Eli Gurian, Sunshine Abbott, Adam Dinkmeyer, Maureen Vincenty, Michael Lawson, Josh Springett (EAP). Middle row: Dean Joe Rudnick, Dave Jackson, Natanya Black, Ray Ingersoll, Chris Russell, Ricardo Hernandez, Matt Thomas, Miles McCammon, Chelsea Reed, Xuan (Richard) Feng, Rebecca Greenberg. Front row: Anat Shahar, Jon Aurnou, Caroline Beghein, Emily Chow (EAP), Jennifer Valenzuela-Watkins, Kin (Corliss) Sio, Troi Reynolds, Abby Kavner, Lauri Holbrook.*

**DOCTOR OF PHILOSOPHY**

Natanya M. Black  
Yasong Ge  
Andrew N. Hock  
Ming-Chang Liu  
Michael W. McRivette  
Anat Shahar  
Maximilian J. Werner

**MASTER OF SCIENCE**

Britney E. Schmidt  
Claire D Spafford  
Jelena Tomic  
Qi Wang



**BACHELOR OF SCIENCE**

Sunshine Selena Abbott  
Brian Alan Cook  
Adam Bennett Dinkmeyer  
Richard Xuan Feng  
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Eli Alexander Gurian  
Ricardo Giovanni Hernández  
Michael Joseph Lawson  
Sandy Le



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**MICHAEL DE WITT LIEN SCHOLARSHIP**

Tracy Marie Howe

**EUGENE B. WAGGONER SCHOLARSHIP**

Matthew Anthony Thomas

**JOHN & FRANCES HANDIN SCHOLARSHIP**

Chelsea Reed

**CLEM NELSON SUMMER FIELD AWARD**

Sunshine Selena Abbott  
Maureen Phillips Vincenty

**CLARENCE HALL SUMMER FIELD AWARD**

Troi Ann Reynolds

**EXCELLENCE IN STUDENT TEACHING AWARD**

Sara Elsa Cina  
Paul Day  
David Galvan  
Pamela Hill  
Carrie Nugent  
Dan Petrizzo  
Mark Pratt  
Jelena Tomic

**HORODYSKI FIELD AWARD**

Sara Cina

**WAGGONER SCHOLARSHIP**

Lan Jian

**SIMON LATIMER SERVICE AWARD**

Paul Hayne  
Britney Schmidt



**EDITOR'S NOTE:** Due to space constraints, we were not able to include alumni pictures in the print edition this year, but in January we will post a digital copy complete with pictures on the ESS website. Go to [www.ess.ucla.edu](http://www.ess.ucla.edu) and click on the alumni section.

### 1943

**ROBERT M. NORRIS**, BA (MA '49) took a job at UCSB in 1952 as one of two geologists on the faculty in the Department of Physical Science. During his 40-year career there he had the pleasure of seeing the department grow from almost nothing to a department with a national and even international reputation for real quality. Since his retirement he has written a layman's guide to the local geology—The Geology and Landscape of Santa Barbara County and its Offshore Islands, Santa Barbara Museum of Natural History, Monograph 3, 2003. He hopes everyone will buy a copy!

### 1945

**WARREN HAMILTON**, BA, (PhD 1951) still has great fun figuring out how the earth works: My research consists mostly of strongly contrarian geodynamics and planetary evolution. Other contrarians have given me much help in climbing learning curves in, geophysical and mineral-physic disciplines. My office is in the Department of Geophysics, Colorado School of Mines, where I am a Distinguished Senior Scientist (a.k.a. volunteer). I give a series of guest lectures in a global geophysics course, and occasional tectonics lectures in the geology department and am an adjunct prof at the University of Wyoming. I received this year's Career Contribution Award from the Structural Geology and Tectonics Division of the Geological Society of America (and long ago received the GSA Penrose medal).

### 1950

**ARTHUR MIRSKY**, BA: After starting the Department of Geology (now called Earth Sciences) at Indiana University - Purdue University Indianapolis (IUPUI) and serving as its Chairman for the first 26 years, I retired. I considered a number of options as to "what am I going to do now?" I finally decided that I had always enjoyed teaching. So I told the Chairman who replaced me that I would be willing to teach one course each semester

as a volunteer (meaning I would not be paid), provided I could pick the courses. Of course he agreed. For 13 years now, in the Fall Semester, I teach a sophomore-level required course that teaches written and oral reporting skills to Geology majors. In the Spring Semester, I teach an introductory course on the geology of national parks for non-majors. Even after 13 years, I still enjoy teaching these two courses.

### 1953

**BILL HUBBARD**, BA: I retired from international oil exploration about 20 years ago and have been living in Beaufort, CN with my wife Jackie ever since. After we built our house here, we spent a little time sailing for about a dozen years (until I aged out) but our main focus now is twelve grandchildren. Over the years I've had the pleasure of serving on the boards of several local non-profits and the town board. But my most gratifying task was initiating a junior sailing program with the Maritime Museum in 1993. Each summer we put about 200 kids through the program, nearly 2500 kids to date. We still travel a bit, but mostly to see family, including a kid and family we help support in Guatemala. As for UCLA, my main connection these days is watching the ups and downs of our basketball team. They are always in my prayers, particularly when they play SC.

### 1957

**RICHARD A. BARCA**, BA (MA 1960 at USC), is currently semi-retired but remains active with occasional contracted consulting for the environmental division of a Great Lakes geotechnical engineering firm, as well as performing Phase I Environmental Site Assessments on commercial properties as a Sr. Independent Consulting Geologist. His latest activity is as an Adjunct Faculty member at Jackson Community College where he is currently teaching Introduction to Geology, and Physical Geography, as evening courses. After 45 years working professionally as a geologist in oil exploration and environmental consulting, he is excited about getting back in the classroom and having the opportunity to work with both young (and older), energetic and open minds!

### 1958

**EUGENE FRITSCHÉ**, BA (PhD

1969), and his wife, Sue, are still active in their retirement. Recently he was busy serving as the Field Trips Logistics Chair for the national AAPG Convention in Long Beach, California, and co-lead one of the field trips for the meeting. During the meeting he was awarded the Grover E. Murray Distinguished Educator Award by the AAPG, an award which only two professors from west coast universities have received. He also continues to serve as the barbecue chef for the monthly meetings of the Coast Geological Society in Ventura. He extends greetings to all his UCLA friends and classmates!

**RICHARD PROCTOR**, MS, and **ALLEN HATHEWAY** (AB '61) convened a string of sessions on "Pioneer Engineering Geologists in Southern California" at the 50th Annual Meeting of the Association of Engineering Geologists. Many UCLA Geology alumni were involved in managing and speaking at the meeting. Richard and Allen served as Presidents of AEG in 1979 and 1985, respectively. In addition, the late Eugene Waggoner (1913-1991; AB, 1937; MS, 1939; Member, National Academy of Engineering) was strongly honored as a major pioneer in the profession and, with Proctor and Hatheway, all three have been elected to Honorary Member status in the Association, an honor limited to 19 living members.

### 1961

**ALLEN HATHEWAY** (AB '61) received the Meritorious Service Award of GSA's Engineering Geology Division at Denver in October (2007) and was the Burwell Citationist as well. Allen served as Division Chairman in 1980.

### 1963

**ALEX TARY**, BS 1963, and wife Sandra are both retired (he from the U.S. Forest Service (Shasta-Trinity National Forests) and running a private wine cellar in Redding, California).

### 1965

**M. CHARLES GILBERT**, PhD: graduated with PhD in 1965 as Gary Ernst's first graduate student. I was able to synthesize and study the stability relations of an iron-rich endmember of the calcic amphiboles (hornblendes). After spending 3 years at the Geophysical Laboratory as a Fellow, taught at Virginia Tech for 15 years. Then was at Texas

A & M for 7 years, 3 years of which were on assignment at the US Department of Energy in the Geosciences Program as a Program Officer in the Office of Basic Energy Sciences. Finally moved to the University of Oklahoma in 1990 and retired after 17 years in May, 2007. Pleased to see that geosciences at UCLA is continuing to do well. I am able to maintain an office at the OU School of Geology & Geophysics and am continuing to work on all aspects of the Cambrian Southern Oklahoma Aulacogen.

### 1968

**RICHARD WISEHART** (BS, MS 1971) was dealing with chemotherapy at Fresno, well into his second career as a facility engineer at Hetch Hetchy Reservoir (City of San Francisco), after retiring from a U.S. Forest Service (Stanislaus National Forest), as an Engineering Geologist and Geotechnical Engineer.

**BOB HILL**, BS (MS '72): upon nearly finishing the text of my thesis, I reported for active duty at Fort Belvoir, VA, in the spring of 1970. I became a First Lieutenant in the Army Corps of Engineers where I served at Fort Bragg, NC, and Long Binh, South Vietnam. I returned to UCLA briefly in early 1972, and completed my MS Thesis. For most of my career, I have worked as an exploration geologist with Texaco, Exploration Research Associates, and Koch Exploration, and as an independent consultant. In December, 2003, I retired from the California Geological Survey, where I met my wife, Janis. We have four children (three boys, one girl) and five grandchildren (ages 2 to 11 years). I spend a little of my time consulting on minerals-related projects, and most of my time fly-fishing, hunting, riding my Harley (Heritage Softail Classic), vacationing with family at Convict Lake in the high Sierra (Mono County, CA) and making futile attempts at shortening Janis' never-ending "Honey-do" list. One of my most rewarding accomplishments in retirement thus far was helping to organize the Quadra Island Reunion, which was written up in the 2006 ESS Newsletter. To my surprise and great delight, my good friend of ESS student days, Roy Budnik, contacted me after reading about it!

## 1969

**ROBERT "RED" A. ROBINSON, BS:** I am a Sr. Vice President with the geotechnical and environmental firm of Shannon & Wilson, Inc. in Seattle, Washington. During my nearly 35 years with this company I have traveled around the US, Canada, Mexico and South America working on major civil projects involving tunneling, slope stabilization, highway and railroad construction, mining, dams, and large buildings. I am happily married, have 2 daughters and a son, and 2 young grandchildren.

**JOE STRAUS MS (PhD '72):** I would just like to thank the UCLA ESS Dept for a solid educational grounding. I have been employed by The Aerospace Corporation in El Segundo since receiving my PhD in 1972. I spent 17 years in Aerospace's research labs and then had a series of positions in the company, culminating in serving as its Executive Vice President since October of 2001. I will be retiring at the end of June (editor's note: June 2008), and am looking forward to more travel, exercise, and a little consulting.

## 1970

**JOHN OLSON, PhD:** I am currently a professor of physics at the University of Alaska Fairbanks, in Fairbanks, Alaska. I have been a faculty member here for about 27 years. I studied plasma waves in magnetospheric and ionospheric plasmas for about 20 years and then changed to acoustics. Today we have a robust program studying low-frequency sound (infrasound) and its applications. I am interested in any news about my one-time office mate Randy Burton. He graduated a year or so after I did and I have lost track of him.

**MICHAEL P. STARK, BS, (MS '73 Iowa State Univ.):** I have been residing in Bakersfield, California for a number of years after an international career at Occidental Petroleum where we lived in London and the Middle East and I worked many areas of the world. I am currently working for a small independent, Ivanhoe Energy, here in Bakersfield where I am VP of Exploration and Land. My primary areas of activity are the San Joaquin and Sacramento Basins where we explore and produce, and I am doing some

international exploration in Latin America and the Middle East as well. It is still fun! My wife Kathryn and I have two daughters and now have two grandsons (one three and one 6 months.) While I still enjoy working, we try and get away as much as possible to spend time in the Sierras where I ski, do a couple of backpacking trips each summer, and try to get in as much fishing as possible. I have recently been doing some exploration work with two other UCLA alums from the class of '70, Mark Nahabedian and Sam Briglio.

## 1974

**MARTY GOLDHABER, PhD,** is now a senior scientist with the U.S. Geological Survey. His current research is on the geochemistry of soil in the Great Valley of California. As of January 1, 2008, he assumed the role of president of the Geochemical Society. He and his wife recently moved to an old (1912) house in a historic district in central Denver.

**MICHAEL RABINOWITZ, PhD:** My wife Diane indulged me on my 60th birthday with a trip. Hence, these pictures of the road sign at eUCLA, in the SE corner of Western Australia. It's known mostly for its vast shifting sandfields, and some zircons. Over the years we have visited dozens of active and defunct lead mines, mills, smelters, and refineries to get samples for mass spectrometry. Once we visited two smelters in one day. Learning about lead isotopes at UCLA has certainly enriched my travels. We are grateful to have our first grandchild.

## 1975

**RICHARD W. HURST, PhD,** recently "retired" from California State University, Los Angeles after 30 years as a Professor of Geology and Geochemistry. I continue to teach at CSLA and at California Lutheran University in Thousand Oaks where I live. In addition to teaching, I have served as a consultant in forensic isotope geochemistry, primarily tracing and age dating contaminants through soil and groundwater, since the early 1980s. My research has focused on the development of the ALAS Model, a method employing lead isotopes that is used to estimate the year leaded gasoline was released into the environment that continues to be used throughout the United States.

## 1976

**MIKE GARCIA, PhD:** in the last year, I lead a four week international marine expedition on the U. Hawaii ship with the WHOI robotic sub JASON2. We surveyed and sampled many hundreds of submarine volcanoes that were previously unknown around the northern Hawaiian islands of Kauai-Niihau and Kaula. These volcanoes are part of the rejuvenated stage of volcanism. The goal of the cruise was to determine the where, when, what and why of rejuvenated volcanism. At the moment, I am in Antarctica participating in a study of dike swarms in the Dry Valleys. We just completed 3 weeks of field work. The Dry Valleys are one of the most glorious geologic wonders on the planet. Great opportunity to visit them.

## 1978

Congratulations to **ELIZABETH (HORTON) ERICKSON, BS,** who broadened her horizons and took the State of California Professional Geologist exam. We welcome her to the ranks of Professional Geologists! She is currently employed with the California State Regional Water Quality Control Board. Respectfully submitted by her UCLA summerfield Class of 1977 field mapping partner, **KATHLEEN (EHLIG) RIEDEL (BS, 1977).** Way to go Liz!!!

**KEN PETERS (PhD Geochemistry 1978)** was a "Kaplanite", but more recently became a trail runner, kayaker, and mad scientist. He is currently Senior Research Geologist at the U.S. Geological Survey in Menlo Park, specializing in 3D numerical basin modeling and geochemical-chemometric evaluation of petroleum systems. He previously spent 15 years with Chevron and 8 years with Mobil and ExxonMobil. Ken taught worldwide courses in petroleum geochemistry and thermal modeling for Chevron, Mobil, ExxonMobil, Oil and Gas Consultants International, and at various universities, including U.C. Berkeley and Stanford. He is now also a Consulting Professor at Stanford University, where he teaches GES 249 (petroleum geochemistry) and GES 255 (basin modeling). He served as Chairman of the Gordon Research Conference on Organic Geochemistry (1998), the Organic Geochemistry Division of the Geochemical Society (2001-2004), and the

AAPG Committee on Research (2007-2010). His most recent book is the second edition of "The Biomarker Guide" (2005, Cambridge University Press). He wants to retire, but has a wife, son, and cat who take all of his money.

**JOHN BACHELLER, MS:** Since getting my MS in 1979 I have been with Mobil Oil (now ExxonMobil) on various assignments in Houston and Dallas working domestic and international E&P. Married in 1987. Moved to The Hague for 3 years, Stavanger for 4 years and Jakarta for 3 years while we had one boy and two girls and engaged in petroleum exploration. I came back to Dallas/Houston in 1999 working in the Gulf of Mexico, and have just moved back to Jakarta doing more exploration. I'm eligible for retirement in a couple of years but having too much fun!

## 1979

**TED BALL, BS Geology,** is a project manager in the environmental restoration project at the Los Alamos National Laboratory in Los Alamos, New Mexico. Ted, wife Jeanne and kids Emily, Jeffrey and Haley are enjoying skiing, golfing and hiking in northern New Mexico.

## 1981

**MARK CLOOS, PhD:** I continue to teach structural geology and tectonics at the University of Texas at Austin. Field projects continue in New Guinea and I have a focus on the origin of porphyry copper deposits. Last summer, I led a dozen 5 to 12th grade teachers from Texas who are seeking a MS in Geoscience Education on a 10 day whirlwind field trip to see the geologic wonders of California. UCLA Hall of Famer Steve Lipshie led us on a fantastic two day tour to see the wonders about Owens Valley.

**BRUCE J. BILODEAU, MS:** My family and I moved back to the US in August 2007 after living in Sumatra for four years. We all enjoyed the assignment very much. I especially enjoyed the mountain biking, although I had to take a year off to heal from a shattered vertebra suffered in a bike accident. We lived in Duri, a residential camp, about a four hour bus ride from the nearest large city, Pekanbaru. Our two girls went to an American school in camp and both my wife and I were employed by Caltex/Chevron. We have now moved back into our house in Danville,

CA. I still work for Chevron and my wife is taking a 1yr+ leave of absence.

**ALLEN GLAZNER**, PhD: I am married to Mary Olney, who went to med school at UCLA and was known to my classmates at the time, and we have a daughter, Jenny (20), and a son, Chris, (22). I'm still on the faculty at the University of North Carolina at Chapel Hill, where I've been since getting my PhD in 1981. And I'm still working in California. My research is currently focused on the origin of granites in Yosemite National Park and elsewhere in the Sierra Nevada, so I get to spend a good bit of time out there. Every once in awhile I run into Steve Lipshie wandering around the Long Valley caldera. He can't seem to leave the place either. I'm collaborating on another project, this one focusing on late Cenozoic volcanism in the Sierra Nevada, with fellow UCLAian Lang Farmer. In December I had the good fortune to reunite with my old office mate Bruce Bilodeau, who is back with his family from a 4-year posting in Indonesia for Chevron. We shared the office on the third floor that shared a door with the Chair's office (not that we ever put a glass on the door to listen in, at least not TOO often).

**CHRISTINE (BATHKER) WHITE**, BS, and her husband, Bud, are now living near Ojai, California. Christine is an environmental compliance advisor for a small independent oil company based in Ventura. In their spare time they still love to camp, hike, and travel to exotic places. Christine is planning a reunion of the 1981 Summer Field Class in the Fall of 2008. If you are interested in attending please contact her at ojaichristine@sbcglobal.net.

**WAYNE SAWKA**, MS: After finishing my PhD at the Australian National University in '85, I was a post doc with Mark Harrison at SUNY Albany (small world). From there, I went on to LLNL and then to Aerojet Corporation. After that, I took a break for a few years doing non-profit work, mentoring new business start-ups and founding the UC Davis CONNECT Entrepreneurship program. But by then my own business venture was calling, and I founded my small rocket motor company in Reno. Our rocket propellants are an entirely new form of energetic material, controlled by electrical power; making them much safer to use. Our applications are

mostly for the Navy, however, I'm already being contacted by the oil service companies for safer explosives, all roads lead back to geology! I also got married in 2002 to Lynne Preslo (a hydrogeologist) and we honey mooned down in Patagonia. We also went climbing in Nepal and got up a 20,000', but wouldn't you know it, Mark Harrison had already dated the mountain. Lynne runs her own company and is also on the Board of Directors at the Aquarium of the Pacific in Long Beach, so we're quite involved there. We split our time between our homes in Huntington Beach and Reno, with me always being the "dog taxi" for our Zephyr, our English Setter.

### 1982

**STEVE RICHARDSON**, BS, is alive and well in Ventura, CA: I am a consulting geologist and last year developed an oil and gas exploration prospect along the Ventura Anticline. I gathered partners, leased land, raised money and unfortunately drilled a dry hole! However, we have plans for a redrill in the Spring. I am married with two beautiful girls, 18 and 13. I still run into Christine White (Bathker BS '81 or 82?) at the Coast Geological Society meetings. I invite everyone in the Southern CA area for a beer, tri-tip meal and a speaker the 3rd Tuesday of each month in Ventura. For info go to [www.coastgeologicalsociety.org](http://www.coastgeologicalsociety.org) Barry Temple and Paul Elliott, where are you? Good luck to all, Steve

### 1983

**JEFF KNOTT**, BS, and wife **DIANE CLEMENS** (BS '84) celebrated their 20th wedding anniversary in 07. It shows that field camp can produce something besides geologic knowledge. Both are on sabbatical for 07-08 from their professorships at Cal State Fullerton Geological Sciences. In December, they went skiing at Badger Pass with their children (Alex, 15; Sam, 9) and met up with fellow UCLA alum **KIRK HELLEND** ('83).

**SCOTT WARNER**, BS: I am still the managing principal for the Oakland office (about 125 staff) of Geomatrix Consultants and enjoy that very much. We have a good slew of former Bruins (from several departments) on staff so our rivalries with Stanford and Cal alum always heat up during Football and Basketball season (interestingly, I have no Trojans on staff!).

Although our state school funding situation is in crisis-mode again, I am thrilled that my sixth grade daughter is completing a whole year of earth science as part of her middle school education - and even in the public school system! (I can't remember any earth science between taught in any primary or secondary education!). Our family - my wife Susan (also a UCLA alum) love traveling and getting to cool geologic spots is always fun (see attached from Haleakala in 2007). I look forward to the next ESS get together - I'd be happy to host one in the SF Bay area."

### 1984

**DIANE CLEMENS KNOTT**, BS: see **JEFF KNOTT**, '83.

**VERONIQUE ROBIGO**, MS, and husband **BRUCE K. NELSON**, PhD, 1985: We have been at the University of Washington since September 1986 (Yes! It has been a while!). We call Seattle home and continue to discover and enjoy the beautiful Pacific Northwest. Bruce is Professor in the department of Earth and Space Sciences, in Isotope Chemistry and Igneous Petrology <http://depts.washington.edu/isochem/> The last few years, Bruce's field work and research has taken him to the Canary Islands. Veronique is Research Scientist in Marine Geology and Geophysics and Marine Education Specialist at the School of Oceanography The last couple of years, she has transitioned from exploring the seafloor of the Pacific Ocean to promoting and improving ocean sciences literacy.

### 1985

**BRUCE K. NELSON**, PhD, see **VERONIQUE ROBIGO**, '84

**CLAUDIA J. ALEXANDER**, MS, is a project manager and project scientist for NASA's Jet Propulsion Laboratory in Pasadena, CA, where she heads up NASA's contribution to the international Rosetta mission, a European Space Agency-led unmanned space mission launched in 2004 to study the comet 67P/Churyumov-Gerasimenko.

### 1986

**KAREN MCBRIDE**, BS, has had an exciting year. I am still at NASA Headquarters in Washington DC and working in the Science Mission Directorate where I work the Mars Scout Program and work with Mars Missions

such as Phoenix and Mars Odyssey. We recently launched Phoenix on August 4th (2007) at 5:29am. I have included photos. I have also included a photo of DAWN and it's launch vehicle in it's housing on PAD 17B..... Chris Russell's (IGPP) Discovery mission to 2 asteroids. The view is taken from the 8th floor of PAD 17A which was housing Phoenix's Launch vehicle. If anyone is in DC, feel free to visit. [kmcbride@hq.nasa.gov](mailto:kmcbride@hq.nasa.gov)

### 1987

**SHARI (HRITZ) LONDON**, BS.: I just celebrated my 5th year at ConocoPhillips in the Risk Management and Remediation department. After leaving UCLA I was a mudlogger for a geothermal company for a short time before venturing into the environmental consulting field, where I worked for 14 years before being hired by ConocoPhillips. My consulting background includes work on assessment and remediation of oilfield operations, bulk storage plants, pipelines and service station properties, and environmental litigation support. Since joining ConocoPhillips I've also spent increasing time working on claims and litigation involving redevelopment of hydrocarbon-affected properties. I live in Fountain Valley, California and have been happily married for over 16 years to my husband, Dennis; we have 2 furry (canine) children.

**ANDREA KRETCHMER**, MS: I am still living in New York City with my husband Dr. Paul Lutvak and my three children. After 10 years using my geology degree as an environmental consultant, I spent 10 years as a full-time parent with a sideline in community service. Now I am two years into my new business venture which is in real estate development. My company specializes in affordable housing for low-income families. The best part of it is that I get to also use my geology experience because in and around New York the land crunch is so tight that many cities and municipalities are realizing that remediating and redeveloping contaminated properties is a necessary solution. I am fortunate to be combining my vocation and my avocation and meeting the needs of underserved neighborhoods by cleaning up their blighted properties and providing housing for their residents. I am also attaching a picture of my family on a trip last

summer to Alaska: My husband Paul, daughter Penelope age 7, son Spencer age 14 and son Charles age 11.

**STUART AND TRACY (MCINERNEY) BERGE**, both BS, are celebrating their 20th wedding anniversary this year. Stuart is currently working for the Port of Long Beach as an Environmental Manager, responsible for the remediation projects for Port property prior to sale or acquisition. Tracy has worked for the Southern California Regional Rail Authority/METROLINK for the past 10 years. She is the Manager of Public Safety and Environment, where she oversees the public safety outreach program, chairs the Southern California Rail Safety Team and is responsible for the environmental compliance of Metrolink's maintenance facilities. They are the proud parents of Ethan (15) and Nolan (13).

### 1988

**AARON VELASCO**, BS, (PhD '93 University of California, Santa Cruz) an Associate Professor and Professional Geophysicist at the University of Texas at El Paso, and is currently President of SACNAS.

**KENNETH KELSCH**, BS: Though few members, I'm looking for our fellow geophysicists and geologists who graduated from the 1988 UCLA ESS class? For myself, it has been twenty years since graduating from UCLA ESS department, and I continue to work within the sub-surface area working for Chevron (La Habra, Nigeria, Indonesia, Thailand and Angola). Personally, I appreciated the field classes (geology and geophysics) that UCLA provided; however, Dr. Bird's class "computing for earth science" was a key class that benefited myself and continues on the theme for UCLA to be competitive. I wish the best to the 2008 graduating class. For myself, it was only yesterday when I left this great establishment and pleased I was able to attend and make a difference in the earth science realm in terms of oil gas exploration and production and mentoring young earth science staff.

### 1990

**ELIZABETH HEISE**, PhD: I graduated in 1990 from UCLA. I then went on to get my PhD in Marine Geology from Texas A&M University in 2001. Now I am an Assistant Professor in Environmental Sciences

at the University of Texas at Brownsville. I have been here since 2003. I am working on the Bahia Grande Wetlands Restoration Project. It is one of the largest wetland restoration projects in the US. We are restoring 11,000 acres of coastal wetlands near Brownsville, TX.

### 1992

**DAVE HIRSCH**, BS I recently advanced to Associate Professor of Geology at Western Washington University, and I love it here - Bellingham is great and I have a fantastic job teaching Mineralogy and Petrology (in the footsteps of Rosenfeld, Manning, Barton and Davidson, my own teachers) and doing exciting research in metamorphic petrology and Cascades geology, with great graduate and undergrad students. I have a wonderful family: I'm married to a hydrogeologist, Heather, and we have two wonderful children, Laurel (21 mo) & Sawyer (4 mo). My website is: <http://davehirsch.com> - lots more photos!

**ASHWIN VASAVADA**, BS, has been a Senior Scientist at the Jet Propulsion Laboratory in Pasadena since 2004. He currently serves as the Deputy Project Scientist on the Mars Science Laboratory, a \$1.7 billion NASA mission that will place a rover on Mars in July 2010 to study the geology and geochemistry of a local region and to understand Mars' capacity to support life in the past or present.

**DENNIS VAN SWOL**, MS: My family and I live on a farm in northeast Kansas where we grow mostly corn and soybeans. I fly for a charter airline which carries urgent cargo internationally. Additionally, we fly college sports teams to various games throughout the U.S. Last year, I was promoted to DC-9 Captain. My son, Nicholas, is now a high school freshman, and my wife, Marilyn does computer consulting from home.

### 1994

**JULIE BARLEY**, PhD, is still at the University of West Georgia, where she became a full professor this year. She continues working on Proterozoic geobiology and geochemistry, particularly in Mesoproterozoic carbonate successions. Most recently, field research took her to Mauritania in 2003. In November 2005, she was named the Carnegie Professor of the Year for Georgia. Lately, she has been working

as the First-Year Program Coordinator for the University of West Georgia, and is responsible for coordinating programming for UWG's incoming freshmen, about 1800 students each year.

### 1999

**NICOLE LAUTZE**, BS: After graduating from ESS I taught high school chemistry at Notre Dame Academy in LA (1999-2000), went to Italy on a Fulbright Fellowship (2000-2001), and then studied for a PhD at Univ. Hawaii Manoa (2001-2006). My focus was understanding explosion dynamics at Stromboli volcano, Italy through analysis of ejecta microtextures. At the end of 2006 I worked/taught in Peru on another Fulbright fellowship (taught Physical Volcanology and helped with mapping the then active Ubinas volcano), and am now a Mendenhall Postdoc at the USGS in Menlo Park, where I conduct high T/P piston-cylinder degassing experiments.

**GENEVIEVE LIANG**, BS, graduated in July 2008 with an accelerated 1-yr MBA specializing in international business from the USC Marshall School of Business and is now working in business development of large-scale solar projects for Sharp Corporation's Solar Energy Solutions Group in southern California.

### 2000

**WILLIS QUAN**, BS, is currently working for the Southern California Gas Company as a GIS technician.

**PATRICK LAM**, BS (MS '02) and Kelly Shiozaki (BS 2002) married in 2005. They had a baby girl, Meghan, in October 2007. (Courtesy of Sheila Morrissey)

### 2001

**JESSICA BLOCK**, BS: After graduation in 2001, I spent a 2-year internship at the USGS in Menlo Park and then went on to Arizona State University (ASU) to get my MS in geology. For the past 2 years I have been working as a research scientist at ASU in an immersive visualization facility called the Decision Theater ([www.decisiontheater.org](http://www.decisiontheater.org)) where I work on science policy issues for Arizona, specializing in water resources. I use the immersive space, similar to a CAVE, to visualize water resource issues with scientists and stakeholders.

### 2002

**MATTHEW AFFOLTER**, BS, The biggest news with me is I am now

working for the Utah Geological Survey. The web address for my project is: [http://geology.utah.gov/esp/snake\\_valley\\_project/index.htm](http://geology.utah.gov/esp/snake_valley_project/index.htm)

**MASON CHUANG**, BA, graduated from Vermont Law School with an environmental law and policy degree and licensed in Massachusetts and Washington D.C. Worked for various government agencies (CPUC & SCDA) and private companies (WSGR) but is currently looking for a new position in the environmental field. "Hopefully something that will get me back out on the road just like those awesome ESS courses. Geology Rocks!"

**SHEILA MORRISSEY**, BS, is working on a geology PhD at UC Santa Barbara.

### 2003

**BRYAN MURRAY**, BS, is working on a geology PhD at UC Santa Barbara. (Courtesy of Sheila Morrissey)

### 2004

**JENNIFER GARRISON**, PhD, recently started a tenure track job at CalState LA as assistant professor of Igneous Petrology/Volcanology. Congrats Jennifer!

**LEIGH ANNE SMITH RIEDMAN**, MS, is working on a geology PhD at UC Santa Barbara. (Courtesy of Sheila Morrissey)

**ELIZABETH JENSEN**, MS (PhD '06): I'm currently working on MESSENGER data from the January 14, 2008 flyby of Mercury through my business, ACS Consulting. Finally, I recently published "Faraday rotation observations of CMEs" in Geophysical Research Letter with Chris Russell.

### 2005

**JENNIFER DAHLBERG**, BS, completed her Masters Of Science in Forensic Science with a specialization in criminalistics at the University Of Central Oklahoma in December 2007, and started working with the Washington State Patrol crime lab in Vancouver, Washington as a DNA analyst in February.

**MAJOR AARON J. HEICK**, MS, recently took command of the 452d Aircraft Maintenance Squadron located at March Air Reserve Base near Riverside, California. As commander he is responsible for over 200 military personnel ensuring that Air Force Reserve Command's eight C-17 aircraft are mission ready at a moment's notice.

## IN MEMORIAM

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**GEORGE FEISTER**, B.A., '41 passed away in May, 2007. John Van Amring, M.A. '57, says of George: "I am proud to have known George; he was a good person and fine geologist. He and John Kilkenny greeted me when I first joined Union Oil in 1957. I was privileged to try to fill his shoes when he retired in 1979."

**WILLIAM B. ELLIS**, B.A. '50, passed away on January 26, 2006. Recalls friend and fellow classmate Herb Mann, "Bill was my field partner in UCLA's first Nevada Summer Field Camp. Thank the almighty for the guidance and comfort of being

led by three great professors: Jim Gilluly, Clem Nelson, and John Crowell, for as it turned out we were mapping in part of the Roberts thrust and in several areas were stacking stratigraphic sections in reverse (e.g., Ordovician over Mesozoic). The lasting lesson from that summer's course was to always question, or at least examine critically, any geologic interpretation."

**DAVID L. WEIDE**, B.A. '58, Ph.D. '74, passed away on June 25, 2008. David was a Professor Emeritus in the Geoscience Department at University of Nevada, Las Vegas.

**DON ROSE**, B.S. '59, passed away July 25, 2008, at the age of 75. Rose was an activist in the tunnel and dam industry and in the civil engineering and engineering geology professions. His latest endeavor was teaching the Tunnel Engineering and Cost Estimating course as part of UCLA's professional construction management certificate program. He is survived by his ex-wife and best friend, Elizabeth Rose; a daughter, Victoria, a son, Donald Jr., and three grandchildren. (Courtesy of Allen W. Hatheway, B.A. '61, M.S. '66)

**JULIE GUENTHER**, former Scientific Illustrator for the UCLA Geology Department, passed away on December 11, 2006. From 1965-1990 Julie performed amazing feats with pen, ink, and mylar! Julie Guenther did the final drafting on many of Clem Nelson's maps as well as complex, detailed, geologic maps for Clarence Hall, Gary Ernst, Donald Carlisle, and countless UCLA Geology graduate students. She will be missed dearly by all who knew her and worked with her. (Courtesy of David L. Weide, B.A. '58, Ph.D. '74, shortly before he himself passed away)