

UH GEOSCIENCES

Alumni Newsletter

FEBRUARY 2008



Message from the Department's Chair



Dear Alumni,

I am very happy to bring to you the revival of our Alumni Newsletter. A close relationship with our alumni is very important to us, but due to manpower and

fiscal shortages, we were forced to discontinue our distribution of Alumni Newsletter in the past. Many alumni who have been away from campus lost contact with us for a while, and this disconnection is, indeed, very unfortunate. Our Department is growing rapidly now, and with the addition of new faculty, research scientists, and students, we are working harder to keep in touch with all of you, to let you know what's happening, and perhaps, to encourage you to get involved with all the new and exciting projects and efforts underway at your alma mater. With this Newsletter, we hope to re-establish connections with all our alumni and to nourish the ones that are on-going.

In this issue, you will get a glimpse of the transformation our Department has been and is going through in the past few years. You will see the faces of our new faculty members. You will hear from some familiar older voices. You will learn more about our new research and projects and the faculty specialties that we have added. You will also find out more about our student body. And at the end of all that, I hope that you will take pride in our efforts to provide a solid educational and research environment at the University of Houston. We also hope that you would be ready to take part in this exciting time of the Department. I encourage all of you to attend the annual Sheriff Lecture, co-sponsored by the Alumni Organization and the HGS each November, and the Mucky Duck Alumni Reunion on April 25th (last Friday in April each year). These are great opportunities for the

UH GEOSCIENCES HOMECOMING

Welcome back alums!

(Look for your invitation in the Fall)

Saturday, December 6, 2008

6:30p.m. – Social Hour

7:00 p.m. – Dinner

Please contact Tram Nguyen at
tnguye36@mail.uh.edu or (713)743.3853 for
more information

MARK YOUR CALENDAR

FEBRUARY

7 – 8 NAPE Expo '08 (Houston)

APRIL

8

**American Association of Petroleum Geologist
Annual Meeting in San Antonio**

OCTOBER

5 – 9:

**GSA and GCAGS Joint Meeting - Celebrating the
International Year of Planet Earth, Houston, TX**

UH Geosciences Alums Cocktail Party

NOVEMBER

**HGS Sheriff Lecture (check our website
www.geosc.uh.edu for date and location)**

DECEMBER

UH Geosciences Alumni Reunion

Alumni to reunite and engage with students and faculty.

Our department offers many different and new research and education experiences, including exciting field work and research cruises in exotic locations across the globe. We also offer state-of-the-art, theoretical and high performance computer modeling, and cutting-edge work in a large number of experimental and analytical laboratories in, for example, rock physics, exploration geophysics, reservoir quantification, earthquake seismology, structure and tectonics, geodynamics, geochronology, organic and inorganic geochemistry, sedimentology and sequence stratigraphy, GIS, remote sensing and geoinformatics, atmospheric sciences and air quality.

I would like to wish you and your families a very Happy New Year. We look forward to hearing from all of you. Our offices are always open to welcome our alumni, so if you have a chance, do stop by. We would love to see you again and to get as many re-involved with the Department as possible during this important time in our development.

Dr. John F. Casey



**The UH Dept. of Geosciences & the
UH Geosciences Alumni Association
host**

"UH ALUMS AT THE GSA"

**Look for our announcement in the
GSA's program!**

FACULTY *profile*

Janok Bhattacharya, Professor; Ph.D. 1989 McMaster University, Ontario, Canada. Sequence stratigraphy, deep-water sedimentation.

Adry Bissada, Research Professor; Ph.D. 1967 University of Washington at St. Louis. Petroleum systems, petroleum geochemistry.

Kevin Burke, Professor; Ph.D. 1957 University of London. Global tectonics, basin analysis, rift systems.

Daewon Byun, Professor; Ph.D. 1987 North Carolina State University. Air quality modeling and atmospheric science.

Regina Capuano, Associate Professor; Ph.D. 1988 University of Arizona. Geochemistry, geohydrology, hydrochemistry.

John F. Casey, Professor; Ph.D. 1980 State University of New York at Albany. Regional structural geology, plate tectonics, igneous petrogenesis, marine geology.

John P. Castagna, Professor; Ph.D. 1983 University of Texas. Seismic analysis, reservoir geophysics, petrophysics.

Henry S. Chafetz, Professor; Ph.D. 1970 University of Texas. Carbonate petrology, depositional models, sedimentology, geobiology.

Christina Chan, Visiting Asst. Professor; 1999 University of British Columbia. Rock physics, environmental and engineering geophysics.

Peter Copeland, Associate Professor; Ph.D. 1990 State University of New York at Albany. $^{40}\text{Ar}/^{39}\text{Ar}$ -geochronology, thermochronology, continental tectonics.

John F. Dewey, Distinguished Research Professor; Ph.D. 1960 University of London. Structural geology, plate tectonics.

William R. Dupré, Associate Professor; Ph.D. 1975 Stanford University. Sedimentology, fluvial systems.

Ian Evans, Associate Professor; Ph.D. 1971 Texas A&M University. Stratigraphy, paleontology, paleomagnetic stratigraphy.

Gennady Goloshubin, Research Professor; Ph.D. 1981 Institute of the Physics of the Earth, Moscow. Reflection seismology, attribute analysis, reservoir characterization

Stuart A. Hall, Professor; Ph.D. 1976 University of Newcastle. Potential fields, paleomagnetism, marine magnetism, tectonics.

De-hua Han, Research Associate Professor; Ph.D. 1987 Stanford University. Rock physics, hydrocarbon fluid properties, reservoir characterization.

Fred Hilterman, Distinguished Research Professor; Ph.D. 1970 Colorado School of Mines. Seismology, seismic interpretation & analysis, rock physics, AVO, physical modeling.

Shuhab Khan, Assistant Professor; Ph.D. 2001 University of Texas at Dallas. Remote sensing, GIS, tectonics.

Thomas Lapen, Assistant Professor; Ph.D. 2005 University of Wisconsin – Madison. Geochronology, petrology.

James Lawrence, Associate Research Professor; Ph.D. 1970 California Institute of Technology. geochemistry, meteorology, isotope.

Barry Lefer, Assistant Professor; Ph.D. 1997 University of New Hampshire. Atmospheric science, global climate change, air quality modeling and monitoring.

Aibing Li, Assistant Professor; Ph.D. 2001 Brown University. Seismology, synthetic waveform modeling, seismic inversion techniques.

Chris Liner, Professor; Ph.D. 1989 Colorado School of Mines. 3D and 4D petroleum seismology, advanced interpretation methods, desert seismic exploration.

Rosalie Maddocks, Professor; Ph.D. 1965 University of Kansas. Paleontology, micropaleontology, ostracodes.

Kurt Marfurt, Adjunct Professor; Ph.D. 1978 Columbia University. Reflection seismology, seismic modeling and

interpretation, physical modeling, seismic attribute analysis, seismic coherency.

Michael Murphy, Assistant Professor; Ph.D. 2000 University of California at Los Angeles. Structure and tectonics of orogenic belts, fault seal, growth faulting.

Bernhard Rappenglueck, Associate Professor; Ph.D. University of Munich. Airchemistry, meteorology.

Arch Reid, Professor; Ph.D. 1964 University of Pittsburgh. Igneous petrology, planetary geology, meteorite impacts.

Alexander Robinson, Assistant Professor; Ph.D. 2005 University of California at Los Angeles. Tectonics.

Robert E. Sheriff, Professor Emeritus; Ph.D. 1950 Ohio State University. Exploration geophysics, reflection seismology, seismic stratigraphy, reservoir geophysics.

Virginia Sisson, Research Associate Professor; Ph.D. 1985 Princeton University. Field-oriented petrotectonic, fluid inclusion, geochemistry.

Jonathan Snow, Assistant Professor; Ph.D. 1993 WHOI/MIT. Geochemistry, petrology, tectonics.

Donald Van Nieuwenhuise, Research Associate Professor; Ph.D. 1978 University of South Carolina at Columbia. Clastic depositional systems, high-resolution biostratigraphy.

Julia Wellner, Visiting Assistant Professor; Ph.D. 2001 Rice University. Sedimentology, glacial.

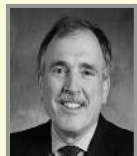
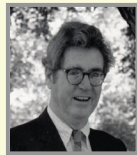
Robert Wiley, Research Associate Professor; Ph.D. 1980 Colorado School of Mines. Geophysical modeling and imaging, seismic, ground water exploration.

Hua-wei Zhou, Adjunct Professor; Ph.D. 1989 California Institute of Technology. Earthquake seismology, seismic processing, seismic tomography, reflection seismology, seismic inversion, physical and numerical seismic modeling.

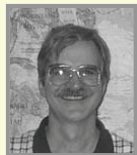
"Personally I'm always ready to learn, although I do not always like being taught."

Winston Churchill

Dr. Kevin Burke is the recipient of the prestigious Penrose Medal by the Geological Society of America in 2007. Geologists from around the world are considered for the Penrose Medal, which is given for outstanding achievements in original research. Prior to this, in 2006, Dr. Burke was the honored recipient of the Geological Society of America's Structural Geology and Tectonics Career Awards



Dr. Peter Copeland was honored with the 2007 Teaching Excellence Award, an award by UH Provost Office recognizing outstanding faculty, for teaching in the core curriculum. Peter was nominated by students and colleagues and won the award with letters of support such as that of Nohemi Garcia who wrote about Peter's class, "I thought Physical Geology was going to be tedious, but it was one of the most interesting classes I have ever taken."



Dr. Janok Bhattacharya received the Grover E. Murray Memorial Distinguished Educator Award from the American Association of Petroleum Geologists in April 2007 for outstanding contributions to geological education. Janok's research focuses on sequence stratigraphy, and he believes that, "[our] program crosses the boundaries between geophysics and engineering disciplines and provides an important environment for teamwork and integration that we believe provides a model for industry." Prior to this award, in 2006, Janok was also the recipient of the American Association of Petroleum Geologist Distinguished Lecturer's award.



Dr. Fred Hilterman was the honored recipient of the 2006 Maurice Ewing Medal from the Society of Exploration Geophysicists (SEG). The highest honor given by SEG, the Ewing Medal extends special recognition to major contributions to advancing the science and profession of exploration geophysics.

Dr. John F. Dewey received the Structure and Tectonics Career Contribution Award from the Geological Society of America for his contributions to the science of structural geology and tectonics.

Dr. Kurt Marfurt was chosen by SEG to teach its 2006 Distinguished Instructor Short Course (DISC). Selection as the DISC instructor is regarded as a recognition of excellence by SEG.

Dr. William Dupré was honored with the 2007 John C. Butler Teaching Award for making a difference in the classroom and connecting with students. The award, named after our own John C. Butler (1941-2001) who always looked for a better way to teach and make students look at things differently. The award is typically awarded to one faculty member, but this year, the selection committee had two nominees with long-track records of engaging students and sharing their enthusiasm for the subject matter they teach.

Dr. John Castagna was the recipient of the 2006 Society of Exploration Geophysicist *Reginald Fessenden Award*. The award is given as special recognition to individual and organization for their contribution to geophysics and to the Society of Exploration Geophysicists.

Congratulations

Class of 2007

Bachelor of Arts or Sciences

Ayman Aboshihata, Geophysics
 Peggy Alderman, Earth Science
 Ritesh Bhakta, Geology
 Felicia Bryan, Earth Science
 Bryan Cardner, Geology
 Amy Chitwood, Earth Science
 Richard Fuller, Geology
 Khaled Ghuneim, Geophysics
 Garrett Meshyba, Geophysics
 Beryl Onakpoya, Environmental Science
 Matthew Orillion, Geology
 Celicia Ramirez, Geophysics
 Cyrus Sefidrou, Geophysics
 Steven Tessari, Geophysics
 Zachary Wolfe, Geology
 Kelly Zuniaga, Geology

Master of Art or Sciences

Olufemi Akanbi, Geophysics
 Oyetayo Akintokunbo, Geology
 Mary Canino, Geology
 Arindam Chakraborty, Geology
 Morenike Coker, Geology
 Katrina Cox, Geology
 Jana Gray, Geology
 Douglas Hinkle, Geology
 James Lawrence, Geology
 Ronald Mart, Geology
 Jose Omana, Geophysics
 Veronica Sanchez, Geology
 Timothy Chapman, Geophysics
 Mingya Chen, Geophysics
 Ching-Wen Chen, Geophysics
 Milos Cvetkovic, Geophysics
 TaeHyeong Lee, Geophysics
 Ryan Perna, Geophysics

Doctor of Philosophy

Tathagata Banga, Geology
 Neda Bundalo, Geophysics
 Craig Clements, Geophysics
 Violeta Coarfa, Geophysics
 Diana Dragoi, Geophysics
 Li Li, Geophysics
 Long Ma, Geology
 Gabriel Perez, Geophysics
 Bo Zhao, Geophysics

"Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius - and a lot of courage - to move in the opposite direction."

Albert Einstein

BUILDING blocks

The number of researches in the Department of Geosciences continued to increase, and our faculty has won a number of grants and donations from various public and private organizations to support their innovations. Follows is a summary of the grant/support awarded to our faculty in FY 2007 & 2008.

Dr. Aibing Li was awarded the Faculty Early Career Development from the National Science Foundation.

Drs. Michael Murphy, Thomas Lapen and Alex Robinson received support from the NSF for their research titled, "Investigation of the Deformation History of the India-Asia Suture Zone, Lopukangri, South Central Tibet.

Drs. James Lawrence and Rosalie Maddocks received support from the Houston Coastal Center for their research in Climate Changes in the Tropics using Stable Isotopes.

Dr. Hua-wei Zhou received grant from the National Science Foundation to support his research titled "Seismic Imaging of Southern California Crust Using Deformable-Layer Tomography & Prestack Depth.

Dr. Janok Bhattacharya received support for his research in Quantitative Sedimentology from a private organization.

Dr. Aibing Li received grant from the National Science Foundation to support her research titled "Integrating Seismic Constraint on Continental Upper Mantle."

Drs. Jonathan Snow and Thomas Lapen received a grant from NSF to support their research titled "Os, Nd and Hf Isotopes in Abyssal Periodotites from Arctic Lena Trough."

Dr. De-hua Han received supports from various private organizations to support his research in Fluid & Rock Properties and Seismic Hydrocarbon Indicators.

Dr. Barry Lefer received a grant from the US Environmental Protection Agency to support his research entitled "The Impact of Aerosols, Clouds and Ozone."

Dr. Daewon Byun received grants from the Korean Environment Institute to fund for his research in "Application of the Emissions Inventory Preparation System with the CAPSS and Estimation of Biogenic."

Drs. Barry Lefer, Daewon Byun, and Bernhard Rappenglueck received a grant from the US Environmental

Protection Agency to support their research in the Characterization of Eastern Texas Air Quality.

Dr. Daewon Byun received support from the Texas Commission on Environmental Quality for his research titled "Improved Modeling Inputs: Land Use and Sea-Surface Temperature."

"If we knew what it was we were doing, it would not be called research, would it?"

Albert Einstein

Dr. Shuhab Khan received grant from the Western Michigan University to support his research in Assessment & Development of Renewable Groundwater Resources in the Quetta Valley, Pakistan.

Drs. Daewon Byun and Bernhard Rappenglueck received support for their research "Multi-resolution Simulation and Analysis of TexAQSI Air Pollution Events" from the Houston Advanced Research Center.

Drs. Bernhard Rappenglueck, Daewon Byun and Barry Lefer received grant from the Texas Commission on Environmental Quality to support their collaborative research titled "Data Analysis of Air Pollution Measurements from Summer 2006 and Preparation of Model Input."

Dr. Julia Wellner received support from Rice University to fund her collaborative research titled "Controls on Sediment Yields from Tidewater Glaciers from Patagonia to Antarctica."

Dr. Hua-wei Zhou received support from the China National Petroleum Corporation for his research in Development of Expertise in Land and Marine Exploration Geophysics.

Drs. Barry Lefer and Bernhard Rappenglueck received a grant from the Houston Advanced Research Center to fund for their study in TRAMP Data Analysis and Radical Chemistry Study.

Dr. Daewon Byun received support from

Harvard University for his study titled "Global Change and Air Pollution: Phase 2 Implications."

Dr. John Castagna received a grant from G&W, Inc. which funds his research in Improved Spectral Inversion of Seismic Data Using Matching Pursuit Decomposition Algorithm.

Dr. Barry Lefer received a grant from the National Science Foundation for his collaborative research titled "Radical Chemistry Over Sunlit Snow at Summit, Greenland."

Dr. Daewon Byun received grant from the Texas Commission on Environmental Quality to support the Galveston Bay Estuary Program.

Dr. Bernhard Rappenglueck received support from Baylor University at Waco in support of his program "VOC Canister Sampling."

...want to keep up with the fast pace of today's scientific world?

WEEKLY SEMINARS

The Department of Geosciences hosts weekly seminars presenting the most innovative scientists with their breakthrough researches. Admission is free. Social hour to follow the presentation. For more information, visit our website:

www.geosc.uh.edu

the investigators

Scientific research is main-frame for any higher learning institute. Our department is a premier research institute for earth, energy and environmentally related sciences. In each issue of the Alumni Newsletter, we hope to bring you the newest developments that our faculty and students had discovered in their scientific pursuits.

INSTITUTE OF MULTI-DIMENSIONAL AIR QUALITY SYSTEM (IMAQS)

Dr. Barry Lefer, an IMAQS faculty member, and his group has been focusing on a few different projects. The first is analysis photochemical ozone production during the Texas air Quality Study (TexAQS-II) using data collected on roof of the UH-Moody Towers (Aug – Oct 2006). Master's student James Flynn presented results from this project at the 2007 AGU (Impact of clouds and aerosols on ozone photochemistry during the TexAQS-II Radical Measurement Project). And Master's student Monica Patel will present a paper at the 2008 American Meteorological Society meeting on her investigation of "The Effect of Local Circulations on Ozone Transport in the Houston-Galveston Area during TexAQS-II". Ph.D. student, Christine Haman, is working on UV and VIS solar radiation measurements from above and within the Greenland snowpack in the summer of 2007. Christine and Barry Lefer will spend a total of 7 weeks at the Summit Greenland Ice Camp collecting more snowpack solar radiation data to investigate the rates of photochemical radical formation and the importance of snow halogen chemistry at this remote high altitude site. For more information regarding the Lefer's group research, visit the following websites:

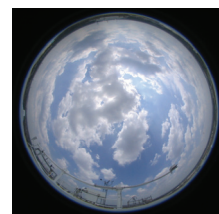
<http://passporttoknowledge.com/polar-palooza/wmv/geos03a.php>

<http://passporttoknowledge.com/polar-palooza/wmv/geos04a.php>

<http://gshox.blogspot.com>



Satellite camp about a kilometer south of the Summit Ice Camp where the science team stays warm while investigating snow photochemistry.



Cloud camp photo during TexAQS-II campaign. Digital photos of the sky were taken each minute to estimate percent cloud cover. Data will be used to evaluate atmospheric models of cloud formation, a key variable in forecasting Houston air quality.

"When science finally locates the center of the universe, some people will be surprised to learn they're not it."

Bernard Bailey



IN THE NAME OF SCIENCE: Dr. Mike Murphy, suffering from intense butt-sore, tried to carry on with his research in Zada Basin in Western Tibet.

INVESTIGATION OF THE DEFORMATION HISTORY OF THE INDIA-ASIA COLLISION ZONE, SOUTHERN TIBET

Drs. Michael Murphy, Tom Lapen, and Alex Robinson – co-investigators

Project funded by the NSF

The Tibet-Himalayan orogen is a paradigm for active intercontinental collision; hence studies of its evolution have played a major role in shaping our conceptual understanding of mountain-building processes and continental growth by accretion. Numerous geodynamic models of orogenesis have emerged from geologic and geophysical studies of the Tibet-Himalayan orogen, however, their ability to predict the behavior of middle and lower crust remain largely untested. This is because access to deep rocks in the orogen is, in general, limited to the frontal regions in the High Himalaya. Hypotheses advanced to explain the history of these rocks call upon processes which link them to the suture zone between India and Asia. During a reconnaissance investigation in the summer of 2006, University of Houston faculty identified a region that provides a window into the deep structure of the India-Asia suture zone. This project employs novel techniques in isotope geochemistry, geochronology, and mapping of the Earth's surface to address poorly understood processes hypothesized to operate during intercontinental collision, such as, the deep structure of suture zones, and the rates at which suture zone rocks are translated from great depths to the surface. Integration and analysis of these new observations with existing geologic and geophysical data from other parts of the Himalaya and Tibet will significantly impact our conceptual understanding of the evolution of mountains belts and continents.

in their own words...



Hi all,

Some of you will probably be surprised to see that I'm still here, in fact, in the exact same office since 1970. As they say, some things never change. Teaching has changed somewhat, although I still teach microscope courses (carbonates and sandstones) and carbonate sedimentology, all at graduate level. I'm also teaching a junior-level course in sedimentary petrogenesis. The department felt we needed more on soft-rock at the undergrad level. Of course, presentation of lecture material in all classes is dominantly by PowerPoint these days.

As usual, graduate students working with me are involved in a diverse array of soft-rock studies. Penny Taylor (presently on staff at Mt. Holyoke in Massachusetts) is very close to finishing her Ph.D. study on carbonate precipitation in caves in central Texas, anticipate that she will wrap that up



Maggie and Megan near top of tufa mound, Searles Lake, California

well as differences within modern caliches from the same soil horizons. Sushanta Bose has worked on different subtle sedimentary structures that form as a result of the interaction of microbial mats and siliciclastics sediments, such as on the bayward side of Galveston Island. He presented some of his findings at an HGS meeting and received Best Poster award, and has given a talk on this subject at an international Precambrian conference in India. Sushanta anticipates finishing his Ph.D. this Spring or Summer. Those four Ph.D. candidates should all graduate within the year, all with jobs. Xuan (Maggie) Guo has completed her first field trip to an incredible collection of Quaternary age lacustrine tufa mounds (up to 40m high) in Searles Lake, California (near Death Valley). She presented a very well-received talk at the last GSA in Denver (2007) about these mounds. Although logistically the mounds are easy to get to, roads right into the midst of the area, they present some interesting problems. We were out there collecting samples this summer when it hit 128°F in Baker, a nearby town. It was so hot on the outcrop that the glue holding the soles of both of my field boots literally melted and the soles came off. Heck, they were old boots anyway. Of course, the lesson: always carry duct tape in the field. The geology is worth it, and Maggie has already made some brand new discovery, e.g., some of the tufa is aragonite. And lastly, but of course not leastly, Magen Brock Casillas has just begun sampling for her M.S. thesis along Padre Island. She will be studying the break down of the shells comprising Big Shell and Little Shell beaches as well as studying their Pleistocene analog along Laguna Madre, where beds of similar shell hash occur as beds of well-lithified fossiliferous limestone, i.e., biosparite beach deposits.

As for my own work, as of late, I have been sampling some Mn-rich hot spring deposits in Yellowstone. Naturally, they are bacterially induced precipitates. Big story with these deposits is that the bacterially induced Mn-precipitates all have very high oxidation states, that is, the Mn is close to +4, whereas abiotic Mn-precipitates have considerably lower oxidation states. In samples in which the bacterial bodies have decayed, this knowledge about oxidation state may allow us to distinguish bacterially induced from abiotic precipitates, such as in samples from Mars. That is the Mn oxidation state may be a biotic signature. Yellowstone has been such a neat and fruitful place to work.

On a personal note, Janet (my wife of 37 years) passed away during the summer of 2006 from cancer. On a happier note, our son Josh got his B.A. from Yale (2001), was a Rhodes Scholar and received his M.Phil and D. Phil from Oxford (2004), then a law degree from Yale (2007), and is presently a clerk for the Federal Appellate Court of Second Circuit (New York City). Obviously, the best piece of scholarship Janet and I produced.

In closing, I would definitely encourage you to visit us either in the department and/or in late Spring at our annual alumni get-together at the Mucky Duck.



Jim Strasen and Long Ma approaching oolite bar, Bighorn

by mid-Spring. She published part of it in JSR in 2004. Have a look, some neat stuff! Jim Strasen, also Ph.D. candidate, is also essentially done. He has been studying the deposition of the Jurassic Sundance Fm in the Bighorn Basin of Wyoming, fantastic field area, and beautiful exposures in wide open country.

When Jim was not around the office, you knew he made another trip to look at rocks. I think about 9 trips in all. In addition to his extensive field work, he has done some really incredible things with remote sensing, being able to distinguish different carbonate outcrops 10m x 10m in size using an array of different bands of satellite data. Jie Zhou (Ph.D.) is in the initial stages of writing, studying differences in caliche across the state of Texas, from humid east Texas to arid west Texas. He has found some very interesting stable isotopic trends across the state as

Hank Chafetz



Most of my time over the past few years appears to be devoted to teaching. I suppose it has been time well-spent, as I was awarded the John C. Butler Teaching Excellence award for the college last year. John was a wonderful mentor, and I couldn't be more proud! Recent courses

include the perennial Physical Geology, both face-to-face and online, Environmental Geology (on loan from Hank Chafetz), Geology of National Parks (my personal favorite), and Terrigenous Depositional Systems (both for our regular graduate students and for our accelerated master's program). I'm no longer teaching field camp, however, a brief visit with the group to Utah last summer has rekindled my interest in field camp. Who knows what's in store for me next summer! I also had a chance to give a semester-long workshop for HISD teachers on "Living with Geologic Hazards," and give invited lectures at the Museum of Fine Arts on "The Influence of geology on artists of the American West" and at a recent GIS conference entitled, "Where was GIS when I needed it?" Variety is the spice of life...

I am also pleased to report some success in supervising graduate students. Recent master's graduates include Sonya Punch (Eocene sedimentary rocks in Trinidad and Barbados),

Chris Angel (Pleistocene sediments in Texas), Yomi Oyudele (Pleistocene sediments offshore Texas), and Doug Hinkle (fluvial processes along the Trinity River). Ugo Oduma (Oligocene sedimentary rocks near Huntsville) is busily trying to join that group of recently graduated students. Her poster won first prize at a recent HGS meeting, so she is clearly well on her way as well.

When I'm not teaching or supervising graduate students, my time seems mostly to be spent advising undergraduates, as I am now (once again) the undergraduate advisor for geology, geophysics, and earth science students. Our enrollment has doubled in the last couple of years. However, we have a way to go before we see the crazy days and huge enrollments of the late 1970's and early 80's.

I continued to be somewhat active in the Houston Geological Society, However, I've recently finished my third two-year stint on the Board of Directors, and will probably try to avoid elective office for a few years.

On a personal note, my wife Elaine and I are traveling more now that our two boys are on their own (though both are presently in law school). A pending trip to the Galapagos this summer may be the highlight of next year's letter!

Bill Dupré

I continue to teach Stratigraphy and Physical Geology at undergraduate level and Tectonics & Sedimentation for graduate students. Since Janok Bhattacharya joined the faculty we have initiated a switch off in teaching stratigraphy. Because of this, Dr. Maddocks and I are now able to alternate teaching paleontology. Since early in the 21st century, I have gone over to the dark side, becoming the Associate Dean for Undergraduate Affairs (at the behest of the late, and much missed, John Butler). This is a job that absorbs unbelievable amounts of time at different times in the academic year.



Ian Evans



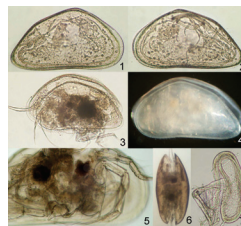
I teach paleobiology, oceanography and historical geology and conduct research on Ostracoda. Since 2002 I have been Secretary-General of the International Palaeontological Association (www.ipa.geo.ku.edu). I am now Editor for

Ostracoda for "Zootaxa; a rapid international journal for animal taxonomist"

(www.mapress.com/zootaxa). Some recent papers are listed below, and the species list in the Gulf of Mexico volume is predicted to appear soon. The figure here shows *Thomontocypris brightae* Maddocks, 2006, which was collected from washings of giant tube

worms at Riftia Field on the East Pacific Rise, Latitude 9°50.705'N, Longitude 104°17.493'W, depth 2,500m.

2005. Maddocks, Rosalie F. Ostracoda Podocopida, p. 106-128. In, P.A. McLaughlin and D.K. Camp, eds., Common and Scientific Names of Aquatic Invertebrates from the United States



and Canada: Crustaceans. American Fisheries Society Special Publication 31:1-545

2005. Maddocks, Rosalie F. New thalassocypridine Ostracoda from anchialine caves of the Loyalty Islands, New Caledonia (Podocopida, Paracypridinae). Micropaleontology, 51(2): 169-216.

2006. Maddocks, Rosalie F. Three new species of podocopid Ostracoda from hydrothermal vent fields at 9°50'N on the East Pacific Rise. Micropaleontology, 51(5): 345-372.

2006. Maddocks, Rosalie F. Podocopid Ostracoda, p. 313-315. In, D. Desbruyeres, M. Segonzac and M. Bright, eds. Handbook of Deep-Sea Hydrothermal Vent Fauna, Second Edition. Denisia 18: 1-544.

2007. Cohen, Anne C., Dawn E. Peterson, and Rosalie F. Maddocks. Ostracoda. In, James T. Carlton, ed, The Light & Smith Manual: Intertidal Invertebrates from Central California to Oregon. Fourth Edition. University of California Press, Berkeley and Los Angeles.

Rosalie Maddocks



Currently, I am busy with teaching the Introduction to Geophysics, a new course to me, and mentoring undergrad and graduate students on several projects. One NSF funded project is to study seismic velocity and anisotropy structure beneath the Tien Shan in the central Asia. A Ph.D. student, Arianna Lisi, is working on surface wave tomography in the area and presented

her results at the 2007 Spring AGU meeting. Bongani Mashele, an undergraduate student, is working with me on imaging crustal thickness in the Pakistan Himalayas as his senior honor thesis and is expected to finish it in this December. Two new Ph.D. students, Chingwen Chen and Shuqin Ma, join my research group in the fall of 2007. They start their projects on studying continental cratons in northeastern America and southern Africa, which are also funded by the NSF as my CAREER award. I am also setting up a seismometer on the UH campus as a teaching component of her CAREER project. Live seismograms from the seismometer can be viewed on a computer monitor in the lobby of the Science and Building 1 when the setting up is completed by the early Spring of 2008.

Aibing Li

The two years since arriving at the University of Houston has been very busy in terms of research. As of this last Fall, a new metal-free clean laboratory has been constructed for ultra-trace element and isotope analyses of terrestrial and extraterrestrial samples. Graduate student Barry Shaulis and I have developed methods for U-Th-Pb age analysis of single detrital zircons using the new laser ablation inductively-coupled plasma mass spectrometry laboratory that was recently installed in the department of Geosciences. Shaulis is applying this analytical technique to understand provenance transitions that have occurred along the Laurentian margin in the vicinity of present-day Oklahoma and Texas during the Paleozoic. New graduate student Kellen Springer has started a project to understand subduction zone dynamics by studying a fossil subduction zone in the Alps of Italy along with colleagues in Switzerland. I have been collaborating with Alan Brandon at NASA Johnson Space center to try and understand the age of Martian crust by performing Lu-Hf and Sm-Nd isotope analyses of a recently discovered Martian meteorite RBT-06242. Alan and I have also been collaborating on several other projects including the age and origin of relict peridotite bodies in the Western Gneiss Region of Norway. It has been an eventful couple of years at home for Erica and me with the birth of our son William in 2006.



Tom Lapen



Dr. Julia Wellner joined the department in the fall of 2006 as the co-director of the Geosciences Learning Center and as Research Assistant Professor. She is working in the learning center with Dr. Jennifer Lytwyn and a current total of 30 TAs. Since coming to UH she has continued her research in Antarctic marine geology and completed her seventh cruise in the region in the

spring of 2007. During the summer she had two undergraduate students, Ibraheem Pedro and Maiwenn Nguyen, join her to help process samples of Holocene fjord sediment collected over the last two years in the Antarctic Peninsula. The goals of the work are to build an understanding of the climatic change that has occurred in the area during the deglaciation and to determine the controls on sediment flux to fjords across climatic gradients. She has just been funded for geophysical work to characterize the subglacial morphology of the Larsen B ice shelf region during a series of four cruises from 2009– 2013 and is looking forward to returning to the Weddell Sea.



This past September, I took a group of UH graduate and undergraduate students on a research cruise off

Japan. Target of the two 2-week legs was a seafloor structure known as “Godzilla Mullion.” This structure is the oceanic equivalent of a metamorphic core complex, a normal detachment fault surface the size of the Houston metropolitan area, which exposes mantle and lower crustal rocks in its footwall. It is located in the back arc (western) side of the Mariana Islands, and is related to the seafloor spreading that took place there up until about 10 million years ago.

We conducted dredging operations together with our Japanese hosts, in water depths up to 6000 meters! We curated and describe seafloor basalt, gabbro and peridotite samples as they were brought up. The mantle rocks will help to understand the processes that occur during backarc spreading. Four UH Undergraduates took part: Jamie Yowell, Kelly Zuniaga, Carla Cleveland, and Mareah Flynn. The graduate students were Heather Berglund and Sergio Sarmiento. During the two weeks each group spent at sea, they learned a lot about the composition of the ocean floor and ate a lot of Japanese food. Godzilla himself was nowhere to be seen.

Jonathan Snow



CONTINUING EDUCATION

GIS CERTIFICATION PROGRAM

Geographic Information Systems, known as GIS, is technology that you likely access everyday, possibly without realizing it. When you go online to view a map or check the appraised value of a property or use a GPS locator in your car, you are benefiting from GIS.

The post-baccalaureate certification program in GIS at UH provides students with knowledge and experience to complete and work in the field of GIS, both in public and private sector. The courses focus on the acquisition, storing, visualization, modeling, and analysis of information on spatial phenomena with some emphasis on geospatial applications.

Students seeking a GIS certificate must have an undergraduate degree and have graduate or post-baccalaureate status at the University of Houston. With permission of the Department, selected well-qualified undergraduates will be allowed to participate in the certification program.

New students can apply for post-baccalaureate admission at the Office of Admissions or Office of International Admission. They require an official transcript showing the degree earned from your former institution(s). If you cannot obtain this transcript, a certifying letter from the Registrar's Office indicating graduation date may be used. The letter must show the school seal and signature of the Registrar.

Application deadline:
Spring Semester – December 1
Fall Semester – July 1

Application form can be downloaded by visiting:
<http://www.geosc.uh.edu/graduate/degree/USApplications.pdf>

THE PROFESSIONAL MASTERS PROGRAM at UH Department of Geosciences

The Department of Geosciences at the University of Houston offers Professional Masters Programs which will lead to Master of Science or Master of Art with specialization in Petroleum Geology, Petroleum Geophysics or Integrated Petroleum Science. The program is ideal for working professional, as its curriculum consists of focused courses that are delivered in an accelerated sequence to accommodate the needs and schedules of today's petroleum geoscientists. Admissibility into the programs is dependent upon review of the combination of Graduate Record Exam (GRE) score, undergraduate grade point average (GPA), and three letters of recommendation.

Master of Science degree candidates must complete at least 13 courses (totaling 39 hours) selected from the specialization curricula. Master of Art degree candidates must complete at least 10 courses (totaling 30 credit hours) selected from the specialization curricula. A final 3-hour Capstone Project, is also required for the Master of Science degree. The programs will normally be completed within 15 months of initial enrollment.

In general, the program will consist of four courses during both fall and spring semesters and two to three courses during the summer semester. The typical class schedule will be four hours on Friday for four weeks, and eight hours on Saturday for three weeks. On the Wednesday following the last class of the course, final examination of that course will be given. The following week will begin a new course.

The Department also offers Short-Course Program for those who do not wish to pursue a Master's degree and/or just want to fine-tune their knowledge in Geosciences with advanced concepts. Short-course students are not required to formally apply to the program. Upon receipt of payment to a particular course, the student will be allowed to attend, and upon completion of that course, he or she will receive a certificate of attendance.

Tuition for Short-course program is \$2,000 per course. Tuition for Professional Master Program is \$3000 per course, totaling \$39,000 for Master of Science degree and \$30,000 for Master of Art degree.

If you wish to receive a brochure of any of the program, please call us at (713) 743-3853 or visit our website at www.geosc.uh.edu.

ANNOUNCEMENT

**2008 Professional Masters Program with specialization in
Petroleum Geophysics**
Start Date: September 2008*

Summer 2008 Short Course Program
Start Date: May 5th, 2008
For course schedule, please visit our website at www.geosc.uh.edu

*pending enrollment of 20 students or more

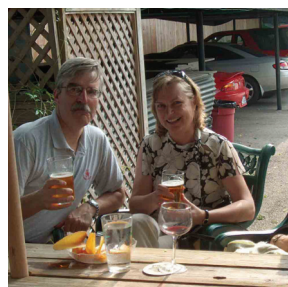
"An important scientific innovation rarely makes its way by gradually winning over and converting its opponents: What does happen is that the opponents gradually die out."

Max Planck

department *activities*



UH Geosociety students (with Mike Murphy) on a field trip to Eastern California. Location in picture: base of Mount Whitney



Thanks to the organizers (top picture), and other participants, the Department, enjoyed another successful International Food Festival.



Janok Bhattacharya and Tom Lapen at field camp in Utah.

SHARE YOUR STORIES!

WANT TO STAY CONNECTED? We will be delighted to hear from you. So... join in, tell us your stories, send us your pictures, and we will put them in the next issue.

Please send your correspondences to:

Tram Nguyen
University of Houston
Department of Geosciences
312 S&R Bldg. 1
Houston, TX 77204-5007
(713) 743-3853

ANNUAL MUCKY DUCK GET-TOGETHER



And that's how the Red Sea was parted!

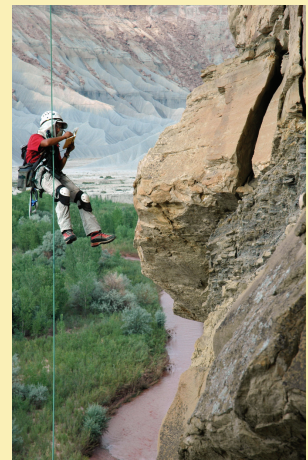
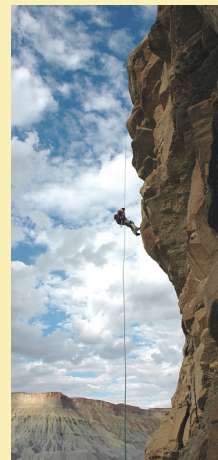
Dr. Janok Bhattacharya joined the Department in the fall of 2005. He is presently running the Quantitative Sedimentology Research Consortium, funded by Anadarko, BP, and Chevron, with a research focus on superbly exposed outcrops of the Cretaceous Ferron Notom Delta in the deserts of central Utah, near Capitol Reef National Park and the Henry Mountains. Houston-based students study the 3D seismic geomorphology of incised valleys, shelf edge deltas and sediment remobilization features in the Gulf of Mexico and Gulf of Thailand.



Janok at Mistaken Point, New Foundland, looking at 565 million year-old metazoan fossils

For more information about Janok's project, visit www.qsc.uh.edu

Pictures below: Ph.D. candidate Yijie Zhu measuring section using technical climbing gear. At bottom: cooling off on top of Boulder Mountain and looking northeast towards the Henry Mountains.



Your donations are greatly needed, and will go to support our students, both at graduate and undergraduate levels, in forms of scholarships. At your choosing, your donations may also be used to acquire new equipments for our department's on-going researches. Let us know how you would like to support the Department. **THANK YOU FOR YOUR GENEROSITY.**



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- ☐ The UH Department of Geosciences General Fund
- ☐ The John C. Butler Presidential Endowed Scholarship in Geosciences

Please make check payable to:
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And send to:
University of Houston, Geosciences Department
Science and Research 1, Room 312
Houston, Texas 77204-5007
Attention: Tram Nguyen

department *activities*



The Sheriffs (Bob, Margaret and their daughter, Barbara) enjoyed the company of others at a dinner honoring Bob



From left: Chris Beaumont (Sheriff Lecture's guest speaker), John Casey and John Dewey at Robert Sheriff's dinner.



From the field into the classroom: Dr. Shuhab Khan led his GIS students on field trip and back to his state-of-the-art laboratory. For more information on Dr. Khan's GIS program, visit



IN MEMORIAM



Dr. John C. Butler

Oct. 31, 1941 – Oct. 24, 2001

Keeping John's teaching spirit alive, his family and colleagues had created the

John C. Butler Presidential Endowed Scholarship in Geosciences

Please forward all donations to:
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