



PETROGLYPHS

NEWSLETTER

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Eastern Connecticut State University
Environmental Earth Science Department, <http://www.easternct.edu/environmentalearthscience/>

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Message from the Chair

Drew Hyatt

Howdy folks and welcome to our first annual departmental newsletter!

Although a bit long, I think you will find some interesting tidbits inside. I have particularly enjoyed reading alumni responses and hope that others will respond with updates for our next newsletter (see the last page). It is striking to think how much has changed in EES even since I came to Eastern in the fall of 1999. For example, we now have more than 100 full and part-time EES majors, we have 8 full-time and approximately 13 adjunct faculty, students routinely attend and present research at regional and national geosciences meetings, we have a new EES track in sustainable energy science, and of course we have moved to great new digs in the science building. Please read on to learn more about these and other items in EES.

THE EES MISSION

The overriding educational objective of our program is to provide students with a strong foundation in environmental geoscience that draws upon classroom, on-line, laboratory and field-based experiences. Students develop an understanding of the natural world, its materials, processes and geologic records of environmental change, associated energy and sustainability issues, and the relevance of these issues to people within the context of Eastern's liberal arts mission.

Non-EES majors and undeclared students taking LAC classes in EES or pursuing related minors learn how science is conducted and what geoscientists do, develop qualitative and quantitative reasoning skills, and explore local-to-global physical processes and energy issues at the intersection between humanity and planet Earth.

EES majors prepare for careers and graduate studies in geoscience and energy studies by becoming competent in: (a) identifying and analyzing applied geoscience and energy problems; (b) using scientific approaches to formulate and test multiple working hypotheses, (c) collecting, analyzing and interpreting primary and secondary data, (d) applying quantitative and computer-based techniques, and (e) presenting findings in written and/or oral formats.

*"Educating the
Environmental
Geoscientists
of Tomorrow"*

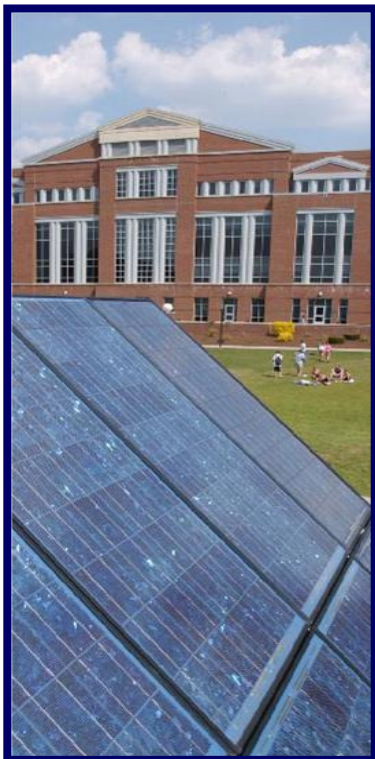




Minors & Certificates

EES students and others can pursue minors in sustainable energy, geographic information systems, hydrology, and geomorphology.

Also, a certificate program is available for Environmental Management and Policy. See the department web site.



The EES Program – An Overview

In addition to the required liberal arts core curriculum (see Eastern's home page for details on this), EES students choose courses aligned with one of three tracks, each of which prepares students for different career paths.

All students, regardless of track, are required to take 7 core EES classes, a year of physics and chemistry, math (either calculus or statistics depending upon the chosen track), and several advanced EES courses aligned with their chosen track. Students contemplating graduate school in geosciences are also encouraged to take calculus II and summer field school as electives.

Required core EES classes for all tracks include Dynamic Earth (104) or equivalent, Ancient Environments (130), Landform Analysis (224), Hydrology (322), Mineral and Rock Analysis (330), Geographic Information Systems (340), and Sedimentology & Stratigraphy (344). In addition to the courses, students must complete the following track requirements:

Environmental Earth Science Track (grad school & industry, requires calculus)

- Field Methods (350), Structural Geology (356), Three additional approved EES 300+ classes one of which must be writing intensive (WI)

General Earth Science Track (to support K-12 career paths, calculus or statistics)

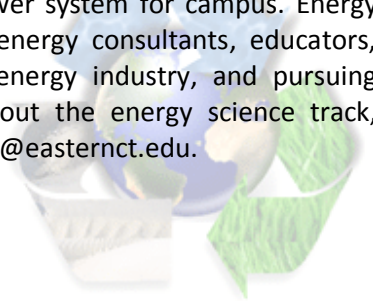
- Field Methods (350), Structural Geology (356), One writing intensive EES300+ class and 2 of Astronomy, Oceanography, or Weather/Climate/Meteorology

Sustainable Energy Science Track (grad school & industry, pre-calc or calculus)

- Global climate change (204) or Sustainable Energy (205), Sustainable Energy Lab (207), Renewable Energy (306), Two additional Advanced Energy Classes (one must be WI)

A bit more on our brand new track in sustainable energy science ...

Following a three year development effort, the department has recently launched a new track in the EES major – the energy science track. The energy track builds on the existing geoscience core by adding courses dealing with climate change, energy resources, and renewable energy. Students who select this track gain a solid background in geoscience as well as an in-depth understanding of energy science and its application to practical problems. Students in this track have done internships with a local recycling company and with the campus facilities department as well as research projects involving fabrication of fuel cell components and design of a solar power system for campus. Energy track students plan post-graduate careers as energy consultants, educators, working for state and federal agencies, the energy industry, and pursuing graduate education. For more information about the energy science track, please contact Professor Fred Loxsom at loxsomf@easternct.edu.



The New Science Building



In late August 2008 all sciences at Eastern moved into the long-awaited new science building. This has really transformed our department and added greatly to student education at Eastern. Focusing on the EES part, we now have dedicated laboratory/classroom space on 3 of the 5 presently occupied floors. Images on the next three pages provide a glimpse of the first floor entrance way (complete with new dinosaur tracks!), sustainable energy spaces (1st and 4th floor), basement field equipment areas, and lab/classroom research space and the office wing on the 2nd floor. New room functions are summarized. The general logic for most spaces is to have a room dedicated to laboratory and classroom functions with adjoining smaller project/research space.

One of the highlights in visiting the new science building is the entrance way to the 2nd floor faculty office wing where we have large hanging photographs of previous “Outstanding EES Student” award recipients going back to 2001 (see the image below). I know I enjoy walking by these images each morning, as it brings back memories of the awardees but also other classmates that worked hard while at Eastern.

Past Outstanding EES Student Awardees

- 2009 Kelly Martin
- 2008 Jennifer Goyette
- 2007 Evan Thomas & Jennifer Goyette
- 2006 John Liddon
- 2005 Julie Rumrill
- 2004 Jennifer Vinci & Shantar Zuidema
- 2003 Heath Carlson
- 2002 Amylynn Martyniak
- 2001 Tracy Gaylord



Basement Rooms: Rock Crusher Room, Hydro Field Equipment, Rock-Sediment Processing, Core Storage Cold Room

First Floor Rooms: 3 large Dinosaur Tracks in Entrance Lobby, Sustainable Energy Office Suite

Second Floor Rooms: Faculty Offices, Secretary Office, Conference Room, Facilities/Storage, Hydrogeochemistry, Intro. Geology, Rock Storage, Rock/Min/Structure, Physical Hydrology, Landforms/Maps, Geomorphology, Sedimentology/Stratigraphy, Geog. Info. Systems

Fourth Floor Rooms: Energy Lab/Class, Student Resource Room, Climate Monitoring Deck, Materials Lab.

New Equipment to Support Classes and Undergraduate Research

In addition to the coherent space in the building, we were able to purchase some wonderful equipment for use in class, lab, undergraduate and faculty research. This includes such items as: ultraviolet/visible spectrophotometers, a ground penetrating radar, terrestrial laser scanning and total station surveying equipment, rock saws and samplers, a hand-held x-ray fluorescence gun, laser diffraction particle size analyzer equipment, a vibracore rig, and Leica polarizing microscopes to name a few pieces of equipment. We are working this equipment into our classes in ways that provide EES students with some fantastic hands-on opportunities. In fact, these efforts mesh with Eastern's new mission as a liberal arts institution that incorporates pre-professional experiences for its students. We really are working toward being a university of first choice.

Second Floor Office Wing



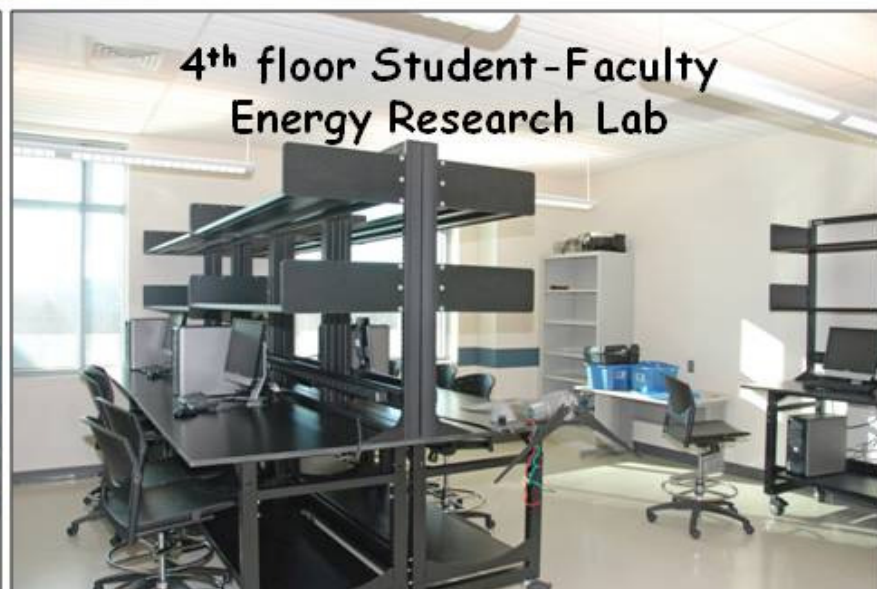
Second Floor Laboratory / Classroom / Project Space

Most geosciences courses in EES are held on the second floor of the science building. Each room serves as a laboratory and classroom for courses related to specific topics. As well, most rooms have adjoining project rooms where students and faculty conduct a variety of research activities (see p. 11).



First and Fourth Floor Space—Entranceway Tracks and Sustainable Energy Space

The impressive entrance way to the science building now sports 3 large rock slabs with *Eubrontes* tracks, thanks in large part to the work of Dr. Drzewiecki and the Facilities department. Two of the tracks were previously stored in Goddard Hall, while a new larger sample (below) came from the recently renovated veterans hospital in Rocky Hill.



Basement Laboratory / Field Equipment Rooms

We have excellent space adjacent to the basement loading dock that facilitates the loading and retrieving of field equipment and samples.



In addition to field experiences that students receive in the laboratory of most EES courses, our students have benefitted from several local weekend field trips to examine geological features that can't be observed near the ECSU campus. In the spring of 2007, Peter Drzewiecki and Tim Schroeder (now at Bennington College) took students to examine the Paleozoic meta-sedimentary rocks and structures in the Narragansett Basin in Rhode Island. Students observed the deformational features of the Purgatory Conglomerate, including stretched pebbles. They also observed sedimentary structures in the Rhode Island Formation, and faults and foliation exposed at Beaver Tail State Park. The same trip was led by Peter Drzewiecki and Elisabeth Nadin in the fall of 2009.

Recent Field Trips



Former EES students examine the Purgatory Conglomerate in Rhode Island with Peter Drzewiecki in 2007



EES majors help to collect a small sediment core from a coastal swamp while on the field trip to Bluff Point with Peter Drzewiecki, Drew Hyatt and Fred Loxsom in 2009

Former EES students were impressed with the deformational structures associated with the Taconic Orogeny exposed in a road cut in SW Vermont



A somewhat more adventurous trip was led by Peter Drzewiecki and Tim Schroeder in the spring of 2008. The trip began with a drive to SW Vermont, where participants traveled west examining the rocks and geological structures of the Taconic Orogeny. The trip then headed south along the Hudson Valley in New York State, examining various outcrops of sedimentary rocks that recorded the evolution of the eastern margin of North America from a passive margin to a foreland basin during the Acadian Orogeny. Students were able to observe fossiliferous marine limestone – something that exists only as legend in Connecticut! Finally, near Catskill, NY, participants traversed through Taconic deformation once again, and had the opportunity to observe remarkable outcrops of compressional deformation features, including thrust faults and folds. Cold, rainy weather did not dampen the spirit of the students.



Drew Hyatt, Fred Loxsom, and Peter Drzewiecki took students from Landforms and Ancient Environments classes on a Saturday trip to Bluff Point State Park in the spring of 2009. Students were treated to exposures of relatively young glacial and coastal swamp deposits, as well as billion-year-old metamorphic rocks (including unusual Alaskite) and spectacular pegmatite. The highlight of the trip for most students was when Drew Hyatt was soundly defeated by Peter Drzewiecki in a Brunton Compass duel.

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What are they doing now?

As mentioned on page 3 large photographs of previous “Outstanding EES Student” award recipients adorn the walls in the entrance way to the 2nd floor office wing. The following provides a chronological update from 3 previous winners, but please check out the “Updates from Alumni” on page 22 to learn more about what has happened to other EES grads. Also, consider sending us an update so that we can highlight what you have been doing in future newsletters (see the last page of this newsletter for details on submitting information).



🔗 Heath Carlson 2003 Outstanding EES Student

Since graduation from Eastern Connecticut State University, I received an M.Ed in Educational Leadership from Central Connecticut State University while concurrently teaching Geology and Earth Science at South Windsor High School. In addition, I am an adjunct instructor for the “Frontiers” and “Explorations” programs offered through the Greater Hartford Academy of Math and Science. Recently, I accepted a position as the Mathematics and Science G.E.D. instructor for the adult education program in Stafford. Teaching in a variety of settings has been immensely satisfying and has allowed me to hone my constructivist, hands-on approach. This past November I was featured in a segment of WFSB’s “Cool Schools” which spotlighted several of the demonstrations I utilize in my class. Outside of the classroom, I enjoy being the Technical Director of the SWHS’s fall musicals and spring comedies. I am very proud of the sets produced by my crew of nearly thirty “Techies.” Around SWHS I can be heard daily during 3rd period as the announcer of “Bobcat Radio” and I can be found chaperoning a variety of extracurricular activities. Each year I make an effort to attend at least one event/performance/game of each of my students. This winter I will be the “play-by-play” voice for our 11th ranked Boy’s Hockey Team. My future plans include obtaining my sixth year degree, coaching a high school team, and perhaps returning to E.C.S.U. as an adjunct Geology instructor. A special “thanks” to the extraordinary instructors, administrators, and staff at E.C.S.U. who have given me all the necessary tools to be successful in my career in secondary education. I truly thank you all!

After graduating from ECSU I continued my education and was offered a research assistantship at the University of Vermont in Burlington to pursue a Master's degree in Geology. Part of my thesis involved traveling to remote reaches of the Greenland ice sheet to install GPS receivers and collect data concerning rapid changes in the velocity of ice flow. I spent two field seasons camping "on the ice" and ended up assisting with many different projects which included: firn coring to investigate the relationship between sastrugi (snow surface features) and grain size; installation of seismic equipment to measure ice quakes; and snow sampling for a black carbon study. After the completion of my thesis, titled "Spatial and Temporal Variations in Strain Rates near Swiss Camp Greenland" in 2008, I traveled to Limerick, Ireland where I presented my work at an international glaciology conference. After a brief return to CT, I accepted a summer internship at the Somes-Meynell Wildlife Sanctuary near Bar Harbor, Maine. Part of my responsibilities included coordinating a group of volunteers to monitor the Common Loon population for indications of effects of heavy metals in the environment. I also began collecting data to investigate a potential correlation between nest-lake acidity and eggshell thickness. I am currently enjoying life on the "other side of the desk" as an adjunct faculty member in the Earth Science Department at SCSU. This summer I will continue my work at the wildlife sanctuary, expanding it to include a geomorphologic characterization of several lake basins.



🌀 Julie Rumrill 2005 Outstanding EES Student

I am currently a second year master's student in structural geology at the University of Wyoming, Laramie, WY. Twenty-four hours after graduating from ECSU, I flew to Wyoming to help teach their summer geology field course. I had attended as a student the previous summer, and was asked to return as a teaching assistant even before I had been accepted into the UW graduate program. Field camp was an amazing experience during which I fell in love with western geology and culture. I have been a teaching assistant for the past two summers which has allowed me to trek across Wyoming, Colorado, and Utah, learning about and teaching the local geology to both under graduate and graduate students. My thesis research has sent me to the Mojave Desert, southeastern California and western Arizona, several times during the last year and a half. I spent 2 and ½ months conducting research in the fall of 2009, and recently returned from a 3 week field season on January 9, 2010. I have presented preliminary results of my research in California at a national geologic meeting for 2 consecutive years. I applied for, and received over fifteen thousand dollars in grants to fund the remainder of my project. Developing an area of expertise via my research has also opened up other opportunities for travel, work, and research. I was asked to assist with a carbon sequestration project which landed me in the Grand Tetons, northwestern Wyoming, during summer 2009. I will be completing back to back internships in industry which will place me in Alaska for the summer and Texas in the fall. My career goals are not definitive at this time. I am considering a PhD program in order to pursue a career in academia and will try my hand in industry via my upcoming internships. Post ECSU life has been eventful, exciting, and fulfilling in so many ways. The faculty at ECSU helped me to build a solid foundation upon which I have begun erecting my future. I am eternally grateful to the EES faculty for their knowledge, support, and encouragement, without which, I would not be where I am today.



🌀 Jen Goyette 2007 & 2008 Outstanding EES Student

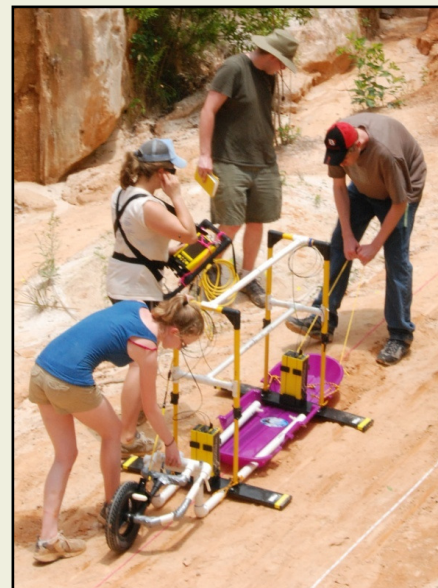
On-going Undergraduate Research Projects

The present year is an active one for student research. Six students will be presenting their findings at the upcoming NE-SE Geological Society of America meeting in Baltimore, several students are engaged in sustainable energy research (complete with NASA funding thanks to Dr. Smirnova!), and we anticipate a good showing at the spring Arts and Science Student Conference and Exhibition on April 17, 2010. The following summarizes several ongoing projects, listed alphabetically by supervisor.

Student Research at Providence Canyon State Park in southwest Georgia

(Supervised by Peter Drzewiecki and Drew Hyatt)

A total of 6 EES students (William Oster, Amberlee Nicoulin, Jessica Farrell, Brian Clark, Toni Langevin, and Eric Lindquist) joined Drs. Drzewiecki and Hyatt, landscape painter Andy Jones (from the Visual Arts Department), and Media specialists Lisa Curtiss and Craig Naumec for 10 days of field work at Providence Canyon State Park in June 2009. This multidisciplinary team examined the Art and Science of the park using vibracoring, ground penetrating radar, terrestrial laser scanning, plein air painting, and high-definition video. Several of the students are conducting follow-up independent study research for upcoming conference presentations. This includes:



William Oster, who is processing, analyzing and interpreting Ground Penetrating Radar data collected in cross-valley and lengthwise transects down slope from the eroding headlands of the park. Will is using these data to construct 2D and 3D imagery of the subsurface in order to infer a history of erosion and deposition at a site with extreme anthropogenically modified landscapes.

Amberlee Nicoulin, who is describing and analyzing 5 vibracores along a single canyon in Providence Canyon State Park. She is collecting data on bulk density, grain size, and carbon content data in order to correlate the cores with each other. These cores will be used to understand the sediment fill history in an anthropogenically modified canyon.

Jessica Farrell, who collected 25 interactive fisheye images that she has processed and is using, along with other media collected in the park, to build learning resources that enable K-12 teachers and students to learn more about the park. This ties in well with Jessica's plans to become a K-12 teacher, and also relates well to the use of the park in the Georgia educational standards.

Studies on the Geomorphology of Sites in Connecticut (Supervised by Drew Hyatt)



David Cicalone (left) has used ground penetrating radar and terrestrial laser scanning techniques to image and analyze 3 pseudokarst sinkhole sites, one in Mansfield (gneissic bedrock), one in Hebron (gneiss), and a third in Manchester (sandstone). This work required David to become proficient with a number of software packages and is directly relevant to his current efforts in applying to several graduate school programs.

Kelly Martin recently completed a final report detailing aspects of a study that examines the bedrock-controlled nature of the Diana's Pool near south Chaplin (above). Kelly's project involved summer field work mapping and measuring valley-side break down slabs to consider ways in which the river has enlarged and shaped this reach of the Natchaug river. She is presently doing some follow-up petrographic analyses of these rocks in order to understand the mineralogical influence on differential weathering at the site.



Sustainable Energy Science

(Supervised by Fred Loxsom)

Charles Stoloff—Charles has been using HOMER, a DOE computer simulation tool, to assess solar and wind resources in New England. His work shows that solar electric power systems work well in all areas of the region, but residential scale wind systems show much greater regional variability. Charles will present his work at a regional GSA meeting and at the national meeting of the American Solar Energy Association.

Peter Governale—Peter is a BGS major with a concentration in sustainable energy studies. He has been studying the efficiency of campus buildings and has made several valuable recommendations for reducing energy consumption in these buildings. This semester, he will extend his work to an assessment of the solar and geothermal energy potential for the campus.

Alicia DeMaio—Alicia is beginning the process of designing and testing small wind and solar electric power systems that will be installed at a public high school in Lucea, Jamaica. Following the installation, Alicia will monitor the data gathered by this project to assess the effectiveness of this installation.

Sustainable Energy Science — continued

(Supervised by Fred Loxsom)

Timothy Collins—Tim is a BGS major with a concentration in sustainable energy studies. Tim completed an internship with Willimantic Waste last semester. He measured the efficiency of the WilliWaste's new single-stream sorting machine. His work has led to useful recommendations for the company. Tim has been accepted to a Harvard Graduate School Extension program and will work toward a MS degree in Environmental Management.

Andrew Macomber—Andy has developed a proposal for adding an 18 kW photovoltaic power system to the south-facing roof of the new science building. President Nunez has approved the process of seeking additional funds and gaining state approval for the project. The system will supply some of the electric power used in the building and will serve as an educational resource.

Veronica Hooker—Veronica is a Sustainable Energy Studies minor and will graduate with a degree in Political Science. Veronica has been studying energy policy in Jamaica and is developing materials that will be used during our Spring Break tour and Service Learning project this March.

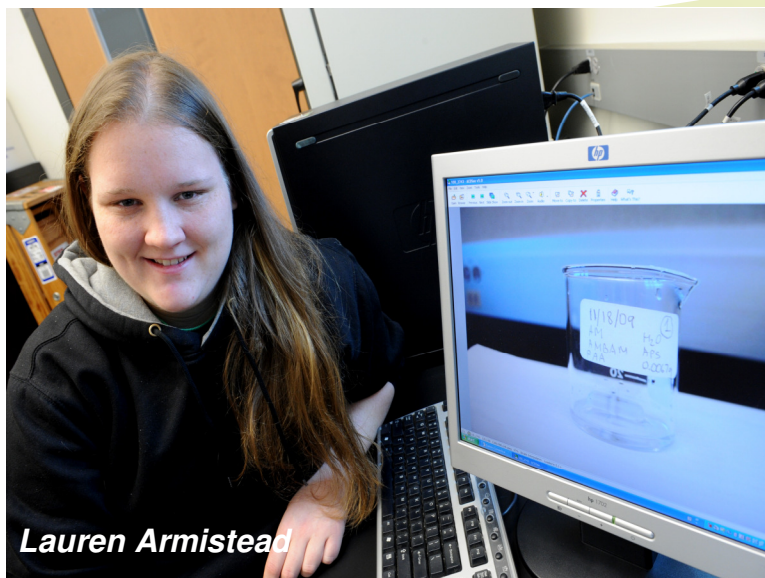
Sustainable Energy Materials Research

(Supervised by Alla Smirnova)

With funding from a recent NASA grant, Alla Smirnova has involved several students (EES majors and others) in undergraduate research examining the generation of materials used for sustainable energy applications. **Connor Morrison, Lauren Armistead, Joe Ventura, and Samantha Fowler** are presently working on projects to synthesize materials for Electrochemical capacitors with modified carbon aerogels as well as fabricating miniature solid oxide fuel cells using a gelcasting technique.

The aerogel materials are nano-structures synthesized for super-capacitors as a polymer electrolyte fuel cell catalyst support. These materials have the advantage of high surface area and narrow pore-size distributions that can be changed depending upon the ratios of the components used to make them.

The solid oxide fuel cell project is novel in its sol-gel casting/molding method of manufacturing micro-tubular oxides that in comparison to planar cells have higher durability and a higher volume power density. In the future these cells will be applied to the extraction of methane from methane hydrates found in permafrost or in seabed accumulations of methane.



Lauren Armistead



Connor Morrison



Professional Conference Presentations by Students

Part of the strength of the EES program is reflected in our students' successes in presenting undergraduate research at professional meetings and the annual Arts and Science Research Conference and Exhibition at Eastern. The following provides citations for published abstracts presented by EES students since 2005 at various Geological Society of America meetings.

2005—Geological Society of America Abstracts with Programs—40th Annual Meeting NE Section, Saratoga Springs, NY
RELATIONSHIP BETWEEN FAULT GEOMETRY AND COARSE SEDIMENTARY FACIES ALONG THE JURASSIC EASTERN BORDER FAULT, CONNECTICUT AND MASSACHUSETTS: **MCGRATH, Jared E.**, DRZEWIECKI, Peter A., SCHROEDER, Timothy J., and **CHAMPION, Kelly M.**

IDENTIFYING SPATIAL TRENDS IN THE PHYSICAL PROPERTIES OF SEDIMENTS, LAKE LOUISE, GEORGIA: **LEANDRO, Amie M.**, WALL, Angela, HYATT, James A., and BREVIK, Eric C.

VIBRACORE RECORDS OF ALLUVIAL AGGRADATION FOLLOWING MASSIVE HUMAN-INDUCED EROSION, PROVIDENCE CANYON, GEORGIA: **OSTROWSKI, Todd**, HYATT, James A., IVESTER, Andrew H., and CHOWNS, Tim

DETERMINATION OF COMPACTION DURING WELDING OF ANDESITIC IGNIMBRITE, GORELY VOLCANO, KAMCHATKA PENINSULA, FAR EAST RUSSIA: **RUMRILL, Julie A.**, SCHROEDER, Timothy J., DICKSON, Loretta D., and PHILPOTTS, Anthony R.

2006 Geological Society of America Abstracts with Programs—41st Annual Meeting NE Section, Harrisburg, PA

A FIELD AND GIS-BASED ANALYSIS OF LAND-USE INDUCED SEDIMENTATION IN EASTERN CONNECTICUT: **LIDDON, John J.**, and HYATT, James A.

DEFORMATION TEXTURES AND ALTERATION MINERALOGY OF DEFORMED META-PERIDOTITE FROM OCEAN DRILLING PROGRAM, SITE 1271: **BERGER-DEBRODT, Dawn Marie** and SCHROEDER, Timothy

2007 Geological Society of America Abstracts with Programs—42st Annual Meeting NE Section, Durham, NH

RELATIONSHIP BETWEEN STROMATACTIS MORPHOLOGY AND FACIES IN THE SILURIAN WABASH REEF, INDIANA: **HOSKINS, Meredith**, DRZEWIECKI, Peter A., and **BIELER, Kevin**

SEDIMENTOLOGY AND STRATIGRAPHY OF CONTINENTAL FACIES ASSOCIATED WITH THE TRANSITION FROM LACUSTRINE TO FLUVIAL DEPOSITIONAL SYSTEMS, HARTFORD RIFT BASIN, CONNECTICUT: **DUGGAN, Katie**, DRZEWIECKI, Peter A., GIERLOWSKI-KORDESCH, Elizabeth, and **DWYER, Allen R. III**

2008 Geological Society of America Abstracts with Programs—43rd Annual Meeting NE Section, Buffalo, NY

DOWN-VALLEY STRATIGRAPHIC RECORDS OF HUMAN-INDUCED CANYONS IN SOUTHWEST GEORGIA: **BIELER, Kevin M.**, and HYATT, James A.

DEVELOPING INTERACTIVE K-12 EDUCATIONAL RESOURCES THAT EXAMINE THE GEOMORPHOLOGY OF PROVIDENCE CANYON STATE PARK, GA: **SCHROEDER, Kristin E.**, and HYATT, James A.

LACUSTRINE AND PLAYA FACIES IN THE EARLY JURASSIC EAST BERLIN FORMATION EXPOSED IN THE DINOSAUR STATE PARK CORE, HARTFORD BASIN, CONNECTICUT: **MILARDO, Justin**, and DRZEWIECKI, Peter

NEW GEOLOGIC MAPPING IN THE STRUCTURALLY COMPLEX HARTFORD SOUTH QUADRANGLE, CONNECTICUT: **DEPAN, Matthew**, DWYER, Allen R. III, BIELER, Kevin, MILARDO, Justin, SCHROEDER, Timothy, DRZEWIECKI, Peter, THOMAS, Margaret A., and STEINEN, Randolph P.

SEDIMENTOLOGICAL AND STRATIGRAPHIC INTERPRETATION OF CROSS-BEDDED SANDSTONE IN THE JURASSIC EAST BERLIN FORMATION, HARTFORD BASIN, CONNECTICUT: **MILARDO, Justin**, and DRZEWIECKI, Peter

2010 Geological Society of America Abstracts with Programs—45th Annual Meeting Joint NE-SE Sections, Baltimore, MD

BUILDING K-12 SUPPORTING RESOURCES FOR DIGITAL MEDIA THAT EXAMINE STANDARDS-BASED CONTENT ON WEATHERING, EROSION, TRANSPORTATION, AND DEPOSITION AT PROVIDENCE CANYON STATE PARK, SOUTHWEST GA: **FARRELL, Jessica M.** and HYATT, James A.

GROUND PENETRATING RADAR ANALYSIS OF THE ALLUVIAL SEDIMENT FILL IN PROVIDENCE CANYON STATE PARK, SOUTHWEST GEORGIA: **OSTER, William C. III**, DRZEWIECKI, Peter, and HYATT, James A.

COMPARISON OF VIBRACORE RECORDS OF MASSIVE HUMAN-INDUCED EROSION AT PROVIDENCE CANYON STATE PARK IN SOUTHWEST GEORGIA: **NICOULIN, Amberlee**, DRZEWIECKI, Peter, and HYATT, James A.

SUBSURFACE INVESTIGATION OF PSEUDOKARST FEATURES IN EASTERN CONNECTICUT USING GROUND PENETRATING RADAR: **CICCALONE, David** and HYATT, James A.

EVALUATING GEOMORPHIC CHARACTERISTICS OF DIANA'S POOL, A BEDROCK-CONTROLLED RIVER IN CHAPLIN, CT: **MARTIN, Kelly R.**, and HYATT, James A.

ANALYSIS OF WIND AND SOLAR RESOURCES FOR NEW ENGLAND: **STOLOFF, Charles** and LOXSOM, Fred



A Special Day for EES

April 17, 2010

As you may recall from a previous letter, a special day for EES is coming up this spring (Saturday, April 17). Three important events will occur on that day: **(1)** the annual Arts and Science Undergraduate Research Conference (8:00 a.m. through 2:00 p.m.), **(2)** tours of EES labs and classrooms by myself (Drew Hyatt) and others, and **(3)** an evening reception and dinner honoring the careers of EES founding department members **Sherman Clebnik, Henry Snider** and the late **Raymond Smith**.

The Arts and Science conference includes oral, poster and visual presentations from students who have conducted research or creative activity in any of the 11 departments within the School of Arts and Science. Details will be posted at the conference web site throughout the semester at: <http://nutmeg.easternct.edu/learningtools/URE-ver1/ASUGRCONF/index.html>), and we anticipate several EES poster presentations.



EES senior Kelly Martin explains her research to an interested spectator (her mother!) at the 2009 Arts and Science Undergraduate Research Conference and Exhibition.

Tours of EES space in the Science Building

Building tours and viewing of equipment will focus on EES items, like the rooms shown in pages 3-7 and equipment like our GPR unit. Depending upon questions, I anticipate each tour taking about 20 to 30 minutes. The first will begin in the main lobby of the science building (where our dinosaur tracks are located) at 4:30 p.m., with a second tour beginning outside Science Room 301 at 5:00 p.m.

Fund Commemorating EES Founding Faculty

For those readers interested in attending the events celebrating the careers of Drs. Clebnik, Snider and Smith, it will be important to contact Mr. Pete Dane for details (860-465-4513 or danep@easternct.edu). This event includes a reception in Room 301 of the science building beginning at 5:50 p.m., with a dinner and brief speeches to follow in the student center at 6:45 p.m. (room to be determined). All aspects of this event, including reservations for the dinner, will be handled by Peter Dane in the office of Institutional Advancement. Please send me an e-mail (hyattj@easternct.edu) if you know you are coming to any of the three events.

Eastern to Celebrate Careers of Past EES Professors



Environmental Earth Science Professor Sherman Clebnik (right) instructs students about the geological landforms of Mansfield Hollow State Park.

From Eastern, Fall 2009 issue: To honor the careers of Professors Sherman Clebnik, Henry Snider, and the late Raymond Smith and celebrate their efforts in establishing the Environmental Earth Science Department in the 1970s, Eastern will host a reception and dinner on April 17, 2010. Alumni who majored in EES, family and friends of the three “founders” and others who were inspired by the three longtime professors are invited to attend.

The evening will include a cocktail reception in the Science Building starting at 5:30 p.m., tours as described on the previous page, and a dinner with short addresses by distinguished guests in the Student Center.

Sherman Clebnik retired this year but is still teaching on a part-time basis. Henry Snider retired as a full-time faculty member in 2000 but continued to teach in the department until 2007. He now lives in Richmond, VA. Ray Smith, who died in 1999, was the first of three at Eastern, teaching in what was then the Physical Sciences Department. Perceiving a special interest in geological and environmental topics within the department, Smith and Snider, and a short time later Clebnik, created the EES curriculum, the new major and eventually a separate EES department in the early to mid-1970’s.

In conjunction with the celebration of the men’s careers, the ECSU Foundation, Inc. will establish a fund to support research and expenses associated with it by EES students. Information about the fundraising effort will go out to EES majors this fall.

Alumni or others who have questions or suggestions about the event or the fund should contact Pete Dane, associate director of institutional advancement, at (860) 465-4513 or danep@easternct.edu. Alumni who did not major in EES but wish to attend the event are especially encouraged to call to ensure they receive invitations.



Meet the Faculty

As mentioned at the outset, we presently have 8 full-time faculty member, three of whom are on 1-year appointments. Everyone teaches a variety of introductory classes (e.g. Dynamic Earth, Introduction to Geology, Geology of National Parks, Global Climate Change, Oceanography, etc.). As well, individual professors teach classes aligned with their expertise. The following alphabetical biographical sketches give a sense of the interests and background that led these people to Eastern.



Catherine Carlson (1994-present)

I first became interested in geology when I took an Earth Science course my sophomore year in high school. I took my first college courses in geology at a community college and benefited from two 3-week long, summer field courses to the southwest and northeast United States, respectively. What an eye opener for a kid who lived in the Midwest. I was hooked and went on to university in geology. My senior year I took my first hydrology course and fell in love. Consequently, I went on to earn graduate degrees in hydrology. I came to Eastern in August of 1994 with the dream of developing a regionally recognized hydrology program. To that end, I expanded our course offerings in hydrology. Our hydrology courses now include Hydrology, Groundwater Hydrology, Hydrogeochemistry, and Contaminant Hydrogeology. Students in these courses get hands-on field experience, for example, measuring stream discharge, conducting aquifer tests, conducting geophysical surveys, and

collecting and analyzing water samples. We also take advantage of the department computer lab for accessing and analyzing information and for modeling. Students interested in pursuing a career in hydrology have the option of pursuing a Minor in Hydrogeology.

Although I love the science of hydrology, I also am an environmentalist at heart. So I have been developing and teaching courses that help students relate science to society; among these courses are Water and Society, Environmental Geology, Environmental Management, Watershed Management, and Drinking Water Management. The department now offers a Certificate in Environmental Management and Policy that is an option for both degree and non-degree students. The certificate was designed so that it can be used as a stepping stone to a BGS major concentration in Environmental Management and Policy. Along those same lines, I am excited to be working with colleagues across campus to develop an interdisciplinary BA/BS major in Sustainability Studies.

My research at Eastern primarily has focused on wetland hydrology, with students investigating groundwater-surface water interactions from both physical and chemical perspectives. My student researchers, whether for class projects, directed research projects, or independent studies, have used resistivity and seismic geophysical equipment to investigate the subsurface of wetlands as well as to explore groundwater in fractured crystalline bedrock. With the new Science Building, we now have two ICs, a new UV spectrophotometer, and a digital titrator to run our own water samples. Most recently, my interests have turned to pedagogy. My efforts to improve scientific writing among students in Hydrology have been successful, and my approach has been well received by colleagues at other institutions. Now I am focusing on improving quantitative literacy. I recently initiated a quantitative literacy assessment project with hydrology faculty from across the country. We are observing quantitative literacy issues among today's students that hinder their ability to do hydrology. We hope to strategize ways to help students to develop the skills they need to learn hydrology and to prepare for future careers as scientists.

Peter Drzewiecki (2002—present)

Hi! I joined the faculty at Eastern in January, 2002 to teach Sedimentology and Stratigraphy after the retirement of Henry Snider.

In addition, I teach Ancient Environments and a variety of introductory and general education geology courses.

I came to Connecticut via the Midwest, having earned a B.S. degree in geology from the University of Notre Dame, and an M.S. and Ph.D. in Geology from the University of Wisconsin-Madison. I spent my summers during my Ph.D. years collecting data and sampling the cuisine in the Spanish Pyrenees, where I was investigating the controls on deposition of Cretaceous carbonate platforms that were deposited during a global oceanic anoxia event. Prior to growing roots in Connecticut, I spent five years working for what is now Exxon-Mobil Upstream Research Company in the much larger state of Texas. While there, I was exposed to Jurassic fluvial rocks in Utah, submarine fan strata in West Texas, California, the Gulf of Mexico, Brazil, and West Africa, and carbonates from the Middle East, Amsterdam, West Texas, and Brazil. While I enjoyed my time in Houston, what I discovered is that I really loved to teach. Hence, the job at Eastern...

In addition to teaching students at all levels at Eastern, I have had a great time interacting with EES majors in many other ways. I have helped lead field trips to upstate New York, Vermont, New Hampshire, Rhode Island, and of course, all over Connecticut. Along with other faculty, I have taken students to GSA meetings in places such as Washington D. C. and Halifax, Canada. The most rewarding (and often the most frustrating!) experiences have been mentoring students while they conduct independent research projects with me. This offers the greatest opportunity to push students to their fullest potential, and see them blossom into budding geologists. Together we have investigated the Jurassic fluvial and lacustrine rocks of central Connecticut, Silurian carbonate mud mounds of central Indiana, and modern fluvial sediments of southwestern Georgia. To all those students I have taught in the past, I send my best and ask that you drop an e-mail occasionally. To all those who have not had to “suffer” through my classes, feel free to let us know how Eastern helped you. Better yet, come see us in our new digs!



Drew Hyatt (1999—present)

I received my Ph.D. (a long time ago...1993) at Queen's University in Canada with my dissertation focusing on permafrost, ground ice, and ground thermal regimes around several Arctic reservoirs. Since that time, my interests have broadened, but in general focus on earth surface landforms and processes (an area called geomorphology) and human impacts on surface geomorphology and related sedimentary records of environmental change. After graduating, I worked at Valdosta State University in south Georgia for 6 years before coming to Eastern in 1999. Since arriving here, I've worked with a number of talented EES students on projects in Connecticut, Greenland, and back in south Georgia (most recently as part of an 11 person team in the summer of 2009). I try to integrate teaching and research, in part by building and collaborating on the development of multimedia that helps to bring the outside inside. I've enjoyed teaching a variety of classes at Eastern (e.g. introductory geology, physical geography, field methods, hazards, landform analysis, process geomorphology, first year program classes) especially those involving undergraduate research (i.e. practicum and independent study classes). I've also really enjoyed working with faculty in visual arts and video specialists from media surfaces on interdisciplinary teaching/research/creative activities under the moniker of "Art Rocks." While I am pretty wet behind the ears as a department chair, we have a great group of people in the department, and I look forward to working with EES colleagues for several years to come.



Fred Loxsom (2004—present)

Fred Loxsom, the Endowed Chair in Sustainable Energy Studies, joined the department in 2004. Dr. Loxsom has developed a series of courses in energy science to support the new energy science track in the EES major. The energy science track is designed for students who plan to pursue energy science careers or to attend graduate school in energy science or energy policy after graduation from Eastern. The program includes study of global climate change, energy resources, energy conservation, renewable energy, sustainable buildings, advanced energy conversion and energy storage devices, carbon sequestration, geothermal energy, nuclear energy, and nuclear waste storage. Fred is working with a team supported by NSF and the National Association of Geoscience Teachers to offer energy workshops for geoscience teachers. Students who do independent study projects or internships with Professor Loxsom work on renewable energy, energy conservation, or recycling projects. This semester one student is designing a photovoltaic system for the new science building and has begun seeking state and foundation support to fund the project. Another student is an intern at Willimantic Waste where he is studying the efficiency of the new single-stream recycling sorting equipment. Last November, Loxsom began a service learning project in Jamaica and this March will travel to Jamaica with a group of students to set-up a small wind-turbine for a local high school. Several students have helped Loxsom and other faculty and staff develop a climate action plan for Eastern.



Elisabeth Nadin (2009—present)

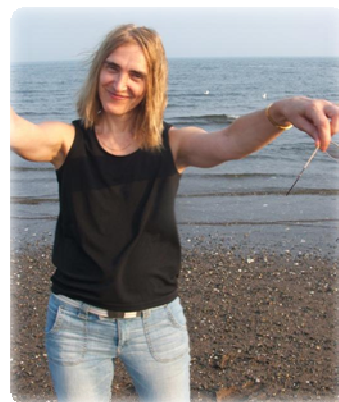


Elisabeth Nadin joined the Environmental Earth Science program at ECSU in 2009. Her geological interests were born after a summer in the Sierra Nevada, CA, working for the U.S. Forest Service. Dr. Nadin's primary research interests lie in the fields of tectonics, structural geology, and geochronology. She currently focuses on how minerals deform in the deep roots of fault zones, in an attempt to figure out the stresses necessary to squeeze deep rocks enough that they recrystallize. These field studies take her back to the Sierra Nevada, but she also works with rocks from the Nepal Himalaya, and hopes to soon start investigating some of the processes that helped to shape New England geology. In addition to scientific research, Dr. Nadin is deeply committed to communicating science through various means. Teaching science—mineralogy and petrology, structural geology, and introductory geology and oceanography in the EES division—is one way to pass on knowledge! She also has a

degree in science writing and spent 2 years as a professional science writer. Her scientific endeavors have led to all sorts of adventures, including chasing a bear out of her tent, holding an octopus, cross country skiing in Antarctica, snacking on duck feet in western China, and flying over the Sierra Nevada in a helicopter. These adventures keep the science alive!

Alevtina Smirnova (2009—present)

Dr. Smirnova joined ECSU in 2009. Before that, as a faculty at UConn and earlier at St. Petersburg State University (RF) she managed a number of multi-disciplinary programs that were partnered with universities and industry in the USA, Germany, England, Russia, Finland, Spain, Ukraine, and Azerbaijan. Smirnova obtained both her master's and doctoral degrees from the St. Petersburg State University, Russia where in 1997 she received the International Soros Academic Award. In 1999 from the Senate of the St. Petersburg University, she received the highest award recognizing her achievements in the area of novel chemical sensors. Dr. Smirnova holds 4 patents and is the author of over 180 publications in peer-reviewed journals and proceedings. She is a member of the Materials Research Society (MRS), the Electrochemical Society, NSF and DOE panel reviewer, and a reviewer of the ASME and Elsevier journals. Dr. Smirnova's area of expertise is related to the energy generating and storage devices, such as fuel cells, batteries, supercapacitors, and electrolyzers. Furthermore, Dr. Smirnova is developing new types of supports and catalysts for energy generation and biomass/gas reforming using special supercritical conditions that allow synthesis of nanomaterials with controlled porosity and extremely high surface area. The main hobbies are hiking, music, and history.





Dr. Wilson received his PhD from Oregon State University. He began the geographic information system (GIS) program in the department and is the present coordinator of the GIS Minor for EES majors and the GIS Interdisciplinary Minor for other majors. He teaches the basic, advanced, and GIS application courses. He has published research papers on GIS applications in water management and other applied environmental problems.

Roy Wilson (1990 - present)



Alessandro Zanazzi (2009—present)

My research interests primarily include the application of stable isotope techniques to reconstruct continental paleoclimatic conditions. More specifically, over the past five years, my research has focused on the reconstruction of the climate change that occurred across the Eocene-Oligocene transition in the North American mid-continent. The Eocene-Oligocene transition (~34 Ma) was the most pronounced episode of climate change of the last 66 million years. Whereas the magnitude and timing of this event are relatively well known for the oceans, several uncertainties still exist regarding the response of continental interiors to this type of major perturbation in the climate system. To solve these uncertainties, I have been analyzing the stable isotope composition of fossil teeth and bones from Nebraska, South Dakota, and Wyoming. Carbon isotope ratios in fossil bones are used to investigate possible changes in aridity. Oxygen isotope ratios in tooth enamel and fossil bones are instead used in combination to investigate changes in rainwater composition and temperature. Using these innovative proxies, I found a large drop in mean annual temperature ($7.1 \pm 3.1^\circ\text{C}$), a possible small change in temperature seasonality, and no change in aridity across the transition. My research seems to indicate that abrupt episodes of climate change occur synchronously in the continents vs. the oceans but that temperature variations in the continents are largely amplified relative to those observed in the marine record. With respect to teaching, I have been enjoying teaching intro courses in physical geology, environmental geology, and oceanography. I believe in the power of collaborative active learning and therefore I often incorporate, in my lectures, techniques like jigsaws, think-pair-share, and role plays. In the near future, I plan to develop courses in historical geology, isotope geochemistry, global climate change, and statistical analysis of geologic data. In addition to these courses, I am also interested in offering seminar-format courses for undergraduate students on geological perspectives of current issues such as global warming and climate change. These would include topics on the effect and impacts of El Niño, on the nature of icehouse versus greenhouse climates, and on anthropogenic impacts to terrestrial ecosystems. Not only are these topics interesting from a scientific standpoint, but are also of great and increasing public concern.





Updates of Former EES Alums

- 1975 Peter Walch** President and owner of Walch & Company, North River Road, Tolland, CT
- 1976 Richard Grady Jr.** (HSE) Special Projects Manager. 16 Years @ Ensign Bickford Ind. Simsbury, CT working in the aerospace division as a manufacturing manager for this defense contractor. 15 Years @ Associated Spring Barnes Group Inc, in the Health, Safety and Environmental field. Starting as a site manager moving to regional manager then promoted to world -wide group leader. I am currently working as group (HSE) special projects manager.
- 1976 Richard Grenon** Maintenance Data Engineering Technical Service Bulletin Writer, Pratt & Whitney Aircraft, East Hartford, CT
- 1976 Harvey Regan** (Retired Teacher) I began my teaching career at Parish Hill H.S. in nearby Chaplin, CT. I moved to VA and taught for the Chesapeake public schools for 30 years. I taught earth and life science at Great Bridge Jr. High for 3 years then moved to the new air-conditioned Great Bridge High School and taught biology for 13 years. When 9th grade moved to the high school I switched to teaching Earth Science for the remainder of my career.
- 1977 Cindy Lee Konney** Own and operate New England Gemological Laboratory and Appraisal services, LLC with offices in Old Lyme, CT and Newton Center, MA (www.negemlab.com)
- 1979 John William McArthur** Retired Sr. Construction Manager
- 1979 Boyd Wood** I am currently a software developer at Farm Credit Financial Partners in Agawam, MA, and the Organist and Choir Director at the Federated Church of Willington.
- 1980 Peter Caton** I am a retired US Department of State, Foreign Service Officer. I served in the Bureau of Diplomatic Security and traveled to over 50 countries. I am currently working part time as a contractor while my wife is serving here in Belgium (Margaret S. Caton, Eastern Class of 86) as an Economics Officer, US Dept. of State. I came to Eastern as a non traditional student at age 27 from the US Navy with an Associates Degree from Mohegan Community College. Easterns' Earth Science program provided the best fit for my previous career experience and interests in math and general science. I enjoyed the ability to talk to my professors in all the departments and have maintained a relationship with Dr. Steve Kenton and had maintained one with Dr. Raymond Smith. Upon graduation I obtained a research assistant position at the UCONN Marine Research lab in Noank and worked there for two years. I then took teaching positions with Control Data Corp. and Data General Corp. before my final career move to the Dept. of State in 1986. In all cases my degree at Eastern played a key role in my obtaining these jobs. My Earth Science studies gave me the knowledge to enjoy geologic studies of the different landforms in the countries I have visited around the world. I have collected geologic maps and mineral specimens from many of the countries I have visited. Plan on retiring to New England in a few years.
- 1980 Frank Sluga** Test a feature of MSFT Host Integration Server called Application Integration. The feature allows developers to write either .Net or COM calls to programs running IBM operating systems. The feature is based on (RPC) Remote Procedure Call Technology.
- 1981 Bruce F. Eber** Upon graduating ECSU, attended University of New Haven, completed Masters degree/ environmental sciences. Worked a number of years at waste disposal/recycling facility in North Haven. Spent last 16 years as Water Quality Inspector/Water Treatment Plant Operator for the town of Wallingford, CT. Married 25 years, one daughter, junior at Roanoke College, VA, one dog.

1981 Craig D. Mackay I am a Quality Control Manager-Engineering Manager for adhesives and other polymer products for the electronics industry. I started working in November 1981 after graduating in May. I started as a formulating chemist and then got into manufacturing at a Boston area chemical company after I found out there was a 20 year waiting list to be a forest ranger. In school I took all the chemistry courses available as I had a strong interest in this area of EES. I have worked for the same manufacturing company since graduating; my BS in EES has helped. I have been with this company, Emerson & Cuming for 28 years. I started in R & D with chemical formulating of adhesives and other polymer products. I became interested in the testing of these chemical products and ended up running the QC lab and managing the chemical engineering group. Goals toward reducing variation and improving products. I handle all the customer complaints and have been working on product improvements for over 12 years. Our materials are used in products such as Par lighting lamps, washing machine motors, automotive coil potting, thermally conductive insulators for rechargeable electric automobile battery assemblies, printer cartridges, electronic conductive polymer circuit assemble products, cell phones, iPhones and other handheld devices. We are currently focusing on the new clean energy type industries for new product applications. I am still interested in the EES and clean energy, I will be getting into this area when my company closes our plant and sends our technology to China in 2011.

1981 James Motyka I am a High School teacher at Lyman Memorial High School teaching: geology, oceanography, physical science, meteorology and video production. Since graduation I have been teaching at Lyman for 28 years. Coaching high school sports for the same amount of time. I am an adjunct faculty teacher at ECSU, teaching meteorology for the past 9 years. I have 3 sons (20, 19 and 9). I have been playing music since graduation, touring in Europe and recording CD's. I also have my own small photography business.

1981 Russell Tim White Assistant Director for Collections, Yale Peabody Museum of Natural History. For the past 26 years, I have worked at the Peabody Museum of Natural History in New Haven. I was hired as the first Collections Manager for Invertebrate Paleontology, the largest collection at the Peabody and one of the top three collections of invertebrate fossils in the world. The course of my career has taken me all over North America and Europe collecting Cambrian, Devonian and Cretaceous fossils. My position has allowed me to work with many of the top scientists in the world who use invertebrate fossils to study the history of life and the evolution of the planet. Recently, I have moved into the role of administration at the Peabody where I am the Assistant Director for Collections and Operations and have oversight for 13 curatorial divisions, representing about 12.5 million specimens. In 2004 I was elected President of the Society for the Preservation of Natural History Collections (SPNHC) and worked to promote standards and best practices for the access and use, digitization and informatics, and conservation and preservation of natural history collections. In addition, I have served on the councils of the Natural Science Collections Alliance, Paleontological Society and have served on advisory boards and of the Smithsonian Institution, The Natural History Museum (London) and the Paleontology Portal. Last November (2008), I was the keynote speaker at the 100th anniversary of the National Taiwan Museum "Sustainability and the Care of Museum Collections" and this past summer I spoke in Leiden, the Netherlands at the annual meeting of SPNHC about "The Future of Museums: Interdisciplinary Programs".

1982 Jeff Burks Management Consultant

1984 David Adam Senior Project Geologist for HRP Associates, Inc.

1984 Joel Coombs After graduation I moved back to Las Vegas to get out of the cold. I took a few jobs doing soil surveys and material testing but there was a lot more money to be made in construction, so I went down that path. I now work in the supply end of the construction industry. I am the manager of Engineered Wood Products at Sunstate components. I was the Earth Science Club President '82 thru '84 and have very fond memories of my time at Eastern.

1985 Holly J. Amon-Cox I am a Special Education Teacher for the State of Connecticut. After graduation, I along with fellow classmates continued on our regular 2⁺ weekends monthly traveling to various locations on the east coast and into Toronto to hunt some awesome rock, crystal and geode specimens. Once a rock hound always a rock hound.

1986 Theodore Coogan Since graduating: 1) Battelle Ocean Sciences, 1986-1989, Researcher marine geochemistry studies related to ocean incineration of PCBs, oil spill research, TBT contamination in marine sediments; 2) Arthur D. Little, Inc., 1989-2002, Senior Consultant marine geochemistry, oil spill research (Exxon Valdez, Gulf War I, others); environmental impact assessments (mainly DoD, oil/gas production, and nuclear waste disposal, worldwide); technology transfer of GIS/remote sensing/image processing for a Dept. of Defense contract in former Soviet Union; 3) ICF International 2002- present, Project Manager IT consulting web-based GIS design and implementation, information systems architecture.

1994 Herbert Bush Environmental Analyst/Scientist

1995 Dale R. Chenette Since graduating, I have worked for several environmental firms in the area of environmental remediation until 2002, when at the urging of my wife, I decided to go into education. I began my educational career working as an educational technician in a special education classroom at Winthrop High School, in Winthrop, ME. During this time I completed the coursework necessary for initial teacher certification at the University of New England. My family and I moved to Memphis, TN in 2005, and my wife and I began teaching for Shelby County Schools that same year. While here, I have earned my Masters of Education through Union University and am currently working on a Master in Educational Leadership through Arkansas State University. My family and I are planning to move back to Connecticut at the end of this school year to be closer to family.

1996 Robert Ashton After leaving ECSU, went on to graduate school, where I received my M.S. in science and mathematics education. I have an Environmental Earth Science certification with the State of CT and have been teaching 7-12 grades now for 10 years. I teach 8th grade science in Norwich, CT. Love every minute of it!

2000 Robert Gnida I work at Sikorsky Aircraft in Stratford, CT. I worked there 27 years. I now have 3 beautiful grandchildren (2 girls, 1 boy). One of them is my daughter Jessica and George Boras' daughter. Molly is 1½. George is also a graduate of Eastern. He and I met in Organic Chem. and I introduced him to Jessica. My other 2 grandkids are Ben, 6½ and Candace, 5. They live with me. I have been an Inland Wetlands Commissioner for 3⁺ years. I am taking a brief hiatus from the IWC in Hamden and will return.

2000 Jessica Hudson (Bashen), After graduation I worked in environmental consulting for 3 years. Was hired in 2004 at Acute Care Hospital in CT for current position. 2006 began M.S. program at UCONN for Occupational Safety & Health Management. Will be complete in spring 2011.

2001 Phaedra Durost Teach earth science at Windsor High School.

2001 Gary Goeschel After graduation, I went to work with the Town of Wilton, CT as an Environmental Analyst. At that time my family had been scattered across the US, from Colorado to Virginia. During my time in Wilton I married my wife and my family began moving back to eastern CT. As such, I thought it would be nice to move back east of the river to be closer to family and I was able to begin work for the Town of Colchester, CT as the Assistant Town Planner/Zoning Enforcement Officer. After several years with the Town of Colchester, I was offered an opportunity to work as an environmental planner with a private environmental consulting firm, Freudenthal & Elkowitz (F&E), in Islandia, NY (Long Island). After making the 4-hr round trip, commuting to Long Island for a year, I found the opportunity to end my arduous commute and work again in the public sector, as the Director of Planning for the Town of East Lyme, CT, where I currently reside with my wife and our three beautiful children. I have been working for East Lyme for almost a year-and-a-half now having reduced my commute, along with my carbon footprint, to about 10-minutes.

2003 Heath Carlson Teach environmental earth science at South Windsor High School. In addition, I am an adjunct instructor for the "Frontiers" and "Explorations" programs offered through the Greater Hartford Academy of Math and Science. Recently, accepted a position as the Mathematics and Science G.E.D. instructor for the adult education program in Stafford.

2003 Steve Dumas Private Consultant

- 2003 Troy Schinkel** After graduation I went on to get a masters in Education at the University of New Haven. Now, I am in my fifth year of teaching ninth grade Earth Science at Southington High School. I am also currently going back to school for a masters in Earth Science at CCSU. Furthermore, I am getting married this summer to a wonderful girl named Holly who is also a school teacher. We recently bought a home in Wolcott and have discovered all of the joys of owning a house; water in the basement, lack of hot water, building walls, replacing sheetrock, painting, spackling electrical issues, mice and bugs.
- 2004 Melissa Bezanson (Spence)** I am an Assistant Geoscientist at Weston Solutions, a private environmental engineering firm. I have been here for almost five years and have found my career enjoyable and rewarding. I do everything from soil and water sampling, to acting as a site manager on environmental remediation projects. Some days I end up on top of roofs in Boston and New York installing/maintaining green roofs. I am starting to get into the world of green redevelopment. I do get to travel a lot-as my office covers all of New England, and on occasion I get sent out to the region to help other offices in emergency response type projects like Hurricane Katrina and Hurricane Ike.
- 2004 Megan Parr** I worked for two years as a hydrogeologist at Fuss & O'Neil in Manchester. Then went back to school to get my certification and masters in teaching. Currently I'm teaching 6th grade science.
- 2005 Casey Naylor Fortin** 6th grade science teacher. I went on to get my MS in secondary education at the University of Bridgeport. I graduated from there in May 2006 and have been teaching at Har-Bur Middle School in Burlington, CT ever since. I also got married in August 2009 and we bought our first house in Torrington, CT
- 2005 Jared McGrath** I am currently a Project Engineer with Turner Construction; we do construction management (commercial). Upon graduation I interviewed with Turner in Phoenix, AZ while on a short post-graduation vacation. I accepted their offer for a position and currently live in Scottsdale, AZ with my wife .
- 2005 Julie Rumrill** Adjunct faculty at Southern Connecticut State University.
- 2006 Benjamin Rach** (Environmental consultant) Hired by GZA Geo-Environmental June 2006. Currently work there as a consultant. Traveled to various states for work as a hydro-geologist. Work mostly in remediation, but also do storm water pollution prevention plans and starting to work on commercial scale Geothermal design. Recently promoted to Engineer I.
- 2007 Katie Duggan** Since graduating , I moved to CT and am currently working in the environmental field as a Project Scientist with HRP Associates, Inc (HRP). HRP is an environmental consulting company specializing in civil/environmental engineering and hydrogeology. HRP is located in Farmington, CT and has satellite offices in Fairfield County, CT, New York, South Carolina, Indiana, and Florida. I have had the opportunity to work on a variety of environmental compliance projects for industrial facilities, hospitals, colleges and universities. The environmental compliance projects have ranged from field work (soil, water and air samples) to the review and critique of procedures, plans, and permits related to Federal and State regulations (i.e. the Clean Water Act, Clean Air Act, Resource Conservation and Recovery Act, etc.). HRP currently is involved in the College Audit Program which I have had the opportunity to be a part of. Utilizing the EPA Compliance Incentive Initiative, HRP Associates, Inc., with legal partner Halloran & Sage LLP, negotiates an Audit Agreement with private colleges and universities, as well as public universities via the Associations and Federations of the Independent College and Universities within a respective state. The Audit Agreement is an effective mechanism for resolving a broad range and number of institution-wide violations discovered during environmental audits pursued under EPA's Audit Policy. The college audit program has given me the opportunity to travel and conduct audits on numerous college campuses in Florida, Michigan, Georgia, Kansas and Texas.
- 2007 Meredith Hoskins** I'm currently an environmental scientist at Maguire Group Inc. in Foxboro, MA and I'm in the environmental engineering masters program at Worcester Polytechnic Institute.
- 2007 Derek Roy** I work as a Scientist I @ Arcadis, Inc. soil/groundwater investigations for Chevron & BP sites in the NE
- 2008 Lucretia DeCoursey** In-School Suspension Coordinator and science substitute teacher at Fitch Middle School, Groton, CT.



Send us your Updates for Future Newsletters

We would very much like to include more updates from former EES students in our next newsletter (the 2010-11 academic year). Also, we are always interested in knowing what people are up to now.

If you would like to contribute, please e-mail responses the following questions to either Zosia (carlquitz@easternct.edu) or myself (hyattj@easternct.edu).

All the best for a great year! Drew Hyatt, Chair, Department of Environmental Earth Science.

To help us build the next newsletter, please send the following:

1. Name, graduation year, current e-mail address.
 2. Tell us what you do now (and if you are ok with our including this information in the newsletter).
 3. A brief paragraph updating us on what has happened to you since graduating (or over the last year, if you submitted a response for the current newsletter).
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