

eGEO TIGER

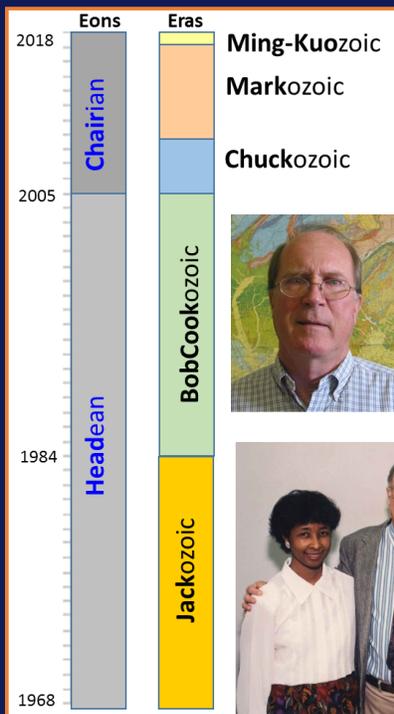
January 2019



50th Anniversary Issue 1968-2018



The Geosciences Time Scale



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eGEOTIGER

Greetings from the Chair!

I am honored to be the new Chair of the Department of Geosciences. I understand the importance of the Chair's role in supporting the growth and success of our programs and students, and in advocating on behalf of Geosciences with COSAM, Auburn University, and our many stakeholders. I especially wish to thank Dr. Mark Steltenpohl for his leadership as the Department Chair over the past 8 years and for his many contributions.



During the more than twenty years that I have been associated with the Geosciences Department, I have had the opportunity to work with many hard-working, dedicated faculty, staff, and students. Their commitment and efforts have led to the current status of the Department. In 2018 we celebrated Geosciences' 50th anniversary -- an open house was held in the Beard-Eaves Memorial Coliseum in October to share history, reconnect with alumni, provide tours of research labs and offer a drone flight demonstration. Over the years, we have seen the Department go through significant changes. Sustained growth in recent years in graduate programs, a new PhD program in Earth System Science (ESS), acquisition of several major research instruments, and new faculty hires in strategic areas provide opportunities for us to transition from a predominantly teaching-oriented culture to a new orientation balancing teaching and research. What also drives and motivates this transformation is the societal needs for well-trained geoscientists in the investigation of natural resources, natural disasters, and environmental changes. Currently, we have the largest number of graduate students ever enrolled in the history of the Department. The number of faculty members also reached an all-time high of 17 tenured and tenure-track

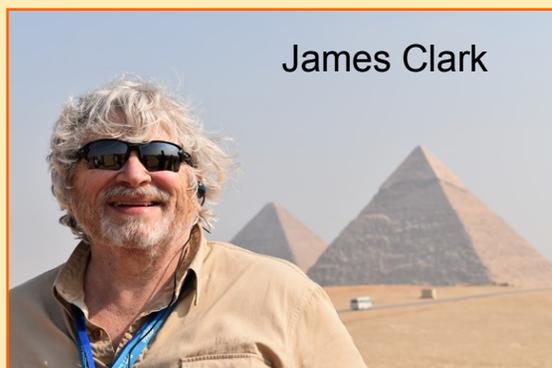
faculty, together with 6 lecturers. The Department has added major research instruments in the last few years, including several elemental and isotope mass spectrometers, X-ray diffraction/fluorescence, geochronology labs, and field-based geophysics, hydrogeology, and GIS (LIDAR) equipment. A new building to house all of Geosciences personnel and facilities has been planned but is still waiting for university approval.

I am also happy to report several recent initiatives to help move the Department forward. For recruiting and retaining top-notch graduate students, the level of GTA stipends has increased to \$22K for 12-month appointments beginning in Fall 2018. Two of our ESS PhD students, Stephanie Courtney and Elijah Johnson (supervised by Dr. Karen McNeal), were recipients of 2018 NSF Graduate Research Fellowships; only five Auburn graduate students (three in COSAM) received one of these prestigious and highly competitive awards. Starting in Fall 2018, 25% of the Indirect Cost Recovery Fund received by the Department is now returned to faculty Principal Investigators to promote their research. We have just begun our quest to develop a focus in strategic areas via new hires relevant to societal needs and global changes. The Department recently provided competitive salaries to new faculty hires, and recent startup packages were the largest ever for the Department. However, we will soon lose expertise (via retirement) in the more traditional areas of solid-earth Geosciences; thus, we must address the challenges and opportunities that the anticipated faculty retirements will have on our research and education efforts.

Everyone I have worked with deserves my personal thanks for a job done with dedication and enthusiasm. It's been a great year, and really a great many years under the leadership of Mark in a great department. I encourage every Geosciences family member to reach out and become involved in the activities of the Department. You too will find it a rewarding experience.

Featured Geosciences Advisory Board Member

I grew up in Montgomery, Alabama, and left for my new Auburn home in the fall of 1968 to study science. After two years of studying calculus, physics and chemistry, I discovered geology as my major. The new Haley Center second floor southwest corner became my stomping ground for geology classes, labs, research, and of course the cozy geology students' coffee/study room. A mere five students formed the first graduating Geology class in 1972. The Department had only four Geology professors. I remember complaining that each geology major course was taught as if it was the only course that you were taking.



To this day, the only time I have ever dreamed in color was during Dr. DeRatmiroff's optical mineralogy course when I had studied in the lab until 2:00 a.m. Tough days and nights at Auburn prepared me for the challenges ahead in my future career. We also had plenty of fun times like geology field trips, seeing the Rolling Stones on their visit to the Auburn campus, and studying with my geologist wife-to-be Therese Shannon (1973). Terri had a wonderful award-winning teaching life and profession before passing away in 2010 due to cancer.



James at the Haley Center Eagle's Nest with Samford Hall in the background, 1970.

Being in the first Geology class to graduate gave us special family status at Auburn. Dr. Ron Taylor and his wife even invited me over for Thanksgiving dinner my junior year. I was fortunate to do undergraduate field research with Dr. Jack Carrington in the area of Shelby Cove, Alabama. Dr. Carrington spent almost every Saturday for a year in the field teaching me geology and mapping skills. My graduation took place in the summer of 1972, and even after that I still communicated with Dr. Carrington on field projects in Georgia that related to our Alabama research area. The Auburn research project gave me the independent thinking necessary for my first job and later when I became the Chief Geologist for the Georgia Department of Transportation from 1972 to 1976. After four years with the state of Georgia, I started my Master of Science program at Georgia Tech and obtained a degree in Geophysical Sciences in 1977. The Auburn Geology 431 Special Research Problem course gave me the skills to start my research right away upon entering graduate school. I was able to finish my graduate research in one year.

My graduate research involved remote sensing of the major streams and rivers in Georgia Coastal Plains using Landsat1 photos, geophysical field gravity surveys, and a review of deep test wells with geology and age dates. This study revealed radial drainage surface patterns and volcanic rocks under the Georgia Coastal Plain. The volcanic remains are basement rock when the continents were first splitting apart by plate tectonics. Professor G. F. Sowers was my Georgia Institute of Technology mentor.

Today I am President and Principal Consultant of my firm, GeoHydroLogicPro, which I started in 2016. I have over 47 years of experience in geotechnical, geological, environmental and hydrological issues. In the late 1970s I worked for Law Engineering Consultants of Marietta, Georgia (4 years) on high-level nuclear isolation studies in salt domes, the building of MARTA city transport in Atlanta, and other geohydrology and geotechnical projects. The latter part of my career was spent with DuPont Engineering (35 years) in Beaumont, Texas, on deep well injection and deep freshwater groundwater production along with advocating for environmental protection and risks assessment. I worked on the Land Disposal Flexibility Act that was passed by Congress in 1996 and signed into law by President Clinton. In 2001 I was on a five-person expert panel reporting from the US EPA to Congress on the risks associated with Class I injection wells. I was President of the Underground Injection Technology Council from 2006 to 2016 and served in the 1980s on the Research Board for the Ground Water Protection Council. In the 1990s and 2000s time frame, I was part of the educational program for the Russian and Chinese meetings through Lawrence Berkeley Labs. I am a licensed professional geologist/geoscientist in Georgia (1979), Texas (2003), and Louisiana (2014).

I am married to Kathleen Clark, and we visit the "Loveliest Village on the Plains", Auburn, yearly. We had a great visit on September 27, 2014, at Auburn's homecoming weekend with alumni tailgate partying in front of Petrie Hall. Dr. Mark Steltenpohl gave us a special tour of the "old geology stomping ground" on the second floor of the Haley Center. The tour brought back many fond memories. This trip provided us the incentive for the Kathleen and James E. Clark, Jr. Endowed Fund for Excellence in the Department of Geosciences. The support will give Auburn the ability to serve more students, build on the quality education that Auburn provides, and improve its overall mission of instruction, research, and outreach.

It's great to be an Auburn Geotiger!



James and Kathy at Channel Islands National Park, California.

GeoClub by John Hawkins

Last year started out as a typical year for the Geoclub. In March we took our backpacking trip up to the western Blue Ridge of north-east Georgia. The weather was a little better than it was last year; we enjoyed mild temperatures and just a small amount of rain. After telling local legends and a few creepy stories about the region on the first night, we hiked over the next 16 miles, and the trip ran smoothly. I enjoy taking the Geoclub to this region because we can stumble upon excellent outcrops that provide wonderful teaching tools.

We were unable to keep up with the tradition of participating in regional outreach at the Wehle Nature Center. The grant supporting that particular program had come to completion, but we have hopes that it will be renewed. We are currently looking to expand our local outreach into other programs as soon as we can identify those opportunities.

As 2018 came to a close, we typically would have had some other outdoor activity. However, the students decided that they wanted to capitalize on the recent resurgence and popularity of Bob Ross by having some group paint nights. During these paint nights, the Geoclub provided dinner, and the students decided which Bob Ross episode we would participate in that evening. We held our paint nights in the Dynamic Earth lab room, so all could have room to paint, and all could see Bob on the big screen. Not having an ounce of artistic ability to my name, I was apprehensive about how it would go, but it was a huge hit. There was a large turnout, and the students had a great time. In fact, the group enjoyed it so much that we decided to hold an additional paint night about a month later. This was an excellent example of how the Geoclub needs to be flexible when catering to the changing population of students. We do have long-range plans to take another trip to Hawaii in May 2020, so keep an eye out for that.



Geography by Carmen Brysch

For the Geography program, 2018 was a busy year! Gamma Theta Upsilon, geography's international geographic honor society, is thriving at Auburn. We inducted seven new members. GTU has also partnered with the newly developed Geography Student Organization to hold a number of events throughout the semester. Gaining the most attention by far, has been the Department's Earth Day Celebration and Geography Awareness Week activities. As Undergraduate program officer, advising and mentoring activities remain strong. I look forward to continue working with our undergraduate majors and am looking forward to a very productive 2019!



Evan Owen

John Whitmore



Austin Bush and Aubie

GeoClub by John Hawkins

In Spring Break 2018, I led students from our department to the island of San Salvador in the Bahamas as Ron Lewis has done in past years. It was the first time leading the trip by myself but I had eight really good students and everything went fine. One of the students even brought a drone and made a near professional video of our time there - see the link below.

In my version of the field course, we focus on the geologic history and stratigraphy of the island and the hydrology of the interior land lakes using modern technology including newly purchased iPads.



San Salvador! Left to right, back row: Will Cole, Kyle Parsons, Grant Markum, Mason Woodard, Travis Barefield, and Matthew Prausa; left to right, front row: Carly Glidewell and Ethen Maples. Drone video by Grant Markum: <https://www.youtube.com/watch?v=XXE4W0i0c7Y>

Spring Picnic and Annual Awards Ceremony by Ron Lewis

At our annual departmental picnic each spring we hold an awards ceremony to honor our outstanding students. Thanks to gifts from our alums and other friends of the department, donations are used to support our students and our programs in many different ways. One way of recognizing students who distinguish themselves through their academics, research, service, and/or leadership is with scholarships or other types of awards, including plaques and cash. At the picnic we recognize students who received awards in various award categories within our department.

Thanks to the hard work of our departmental Awards Committee (Co-Chairs Phil Chaney and David King, and committee members Chandana Mitra and Chuck Savrda), we have established very well organized nomination, application and voting mechanisms to assure that deserving students are appropriately rewarded for their efforts. We also want to thank the students, including those in the SGE and AAPG student chapters, for their work in setting up the picnic and in presenting their own awards, which include the recognition of select faculty and staff via the "Superhero" awards. We invite our alums to attend each of the Spring picnic and awards ceremonies.



Shifat Monami, Dr. Ashraf Uddin, Sara Gilley and family.

Student Awards 2017-2018

University

AU and COSAM Undergraduate Research Fellowship –
Caleb Eldridge

COSAM Awards:

COSAM Dean's Medalist (Outstanding Senior) for
Geosciences : **Wesley Sandlin**

Outstanding Junior in Geosciences: **Tristan Omdorff**

Department of Geosciences Awards:

Charles "Chuck" Savrda Outstanding Graduate Student
Award: **John Whitmore**

Robert S. Fousek Award for Research in Economic Geology:
Anabelle Kline Md. Mahfujur Rahman

Spencer Waters and Dan Folse Memorial Award:
**Caleb Eldridge
Shifat Monami**

David W. Icenogle Student Travel Grants:

Ethan Burt	Austin Bush
Meredith Moore	Jarrett Roland
Megha Shrestha	Sumaiya Tul Siddique

Departmental Award for Excellence in Education (DAEE):

Apprenticeship Awards: **Skye Walker** (Geology)
Kyle Parsons (Geology)
Christian Parke (Geology)
Travis Barefield (Geology)
Wyatt Gray (Geology)

Geosciences Advisory Board Awards:

GAB Outstanding student awardees

GEOLOGY

Outstanding Undergraduate: **Edward DeMetz**

Outstanding Graduate: **Samantha Eckes** and
John Whitmore

GEOGRAPHY

Outstanding Undergraduate: **Lyric Peete**

Outstanding Graduate: **Austin Bush**

GAB Research awards: **Rahul Bhattacharya**
Neeraja Chinchalker
Morgan Hill

GAB Travel Grants: **Matthew Adams**
Al Emran **Neeraja Chinchalker**
Stephanie Courtney **Leticia De Marchi**
Carleton Foster III **Morgan Hill**
Nicholas Soltis **Sara Speetjens**
Collin R. Sutton **Jacob Thompson**

Special Awards

The 2017 Barringer Award: **Leticia De Marchi**

The John Newton Scholarship: **Md Mahfujur Rahman**

DAAD Rise Internship: **Megha Shrestha**

NSF Graduate Research Fellowships: **Elijah Johnson** and
Stephanie Courtney

Faculty Awards

SGE Superhero Award: **Dr. Charles (Chuck) Savrda**

Special Recognition in recognition of his years of service as
GTU's sponsor: **Dr. Phil Chaney**



Zach Calhoun and Chuck Savrda



Spring Picnic and Annual Awards Ceremony (cont.)



Caleb Eldridge



Ron Lewis, Wesley Sandlin, and Tristan Orndorff



John Whitmore and Chuck Savrda



Shifat Monami



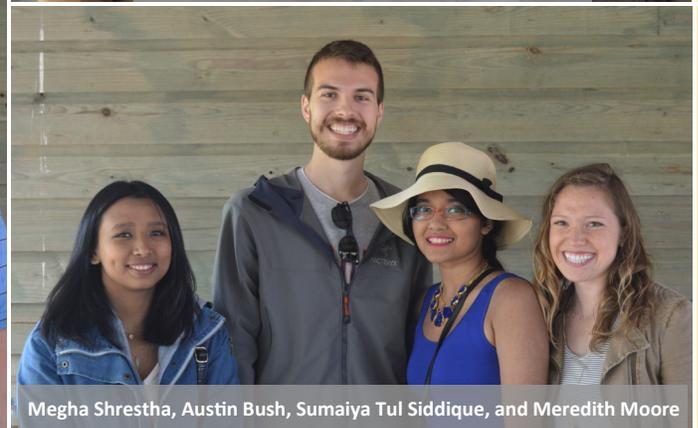
Leticia De Marchi



Md. Mahfujur Rahman and Bob Fousek



Skye Walker, Kyle Parsons, and Travis Barefield



Megha Shrestha, Austin Bush, Sumaiya Tul Siddique, and Meredith Moore



John Whitmore, Jonathon Collier, and Samantha Eckes



Elijah Johnson, Karen McNeal, and Stephanie Courtney

INTRODUCING Vinamra Agrawal



I am a new adjunct faculty member in the Department. I joined Auburn University as an Assistant Professor in Aerospace Engineering in January 2017. My work revolves around understanding material behavior at different length scales and time scales. Materials are, in fact, extremely complex systems, where response at one length scale is governed by material behavior at smaller

scales. As an example, impact craters have features that are observed at the meter and kilometer scales, which are a consequence of processes happening at the millimeter and micrometer scales. These processes, in turn, depend on material response at the nanometer and atomic scales.

My work led me to collaborate with Dr. David King, where we are looking at the formation of shallow marine impact craters and the role of water in their formation. In a collaborative effort involving field work and numerical simulations, we are developing a detailed understanding of the formation of Wetumpka and Flynn Creek craters. This work will eventually help us identify marine impacts on other planets and asteroids.

INTRODUCING Laura Bilenker

I moved to Alabama in September from a two-year post-doctoral fellowship at the University of British Columbia in Vancouver, where I was working with the Multi-Disciplinary Applied Geochemistry Network. I have truly enjoyed joining the Geosciences Department at Auburn.

Many exciting things have been happening in my new research group already. As an economic geologist, experimental petrologist, and geochemist, I am setting up a high-temperature lab that is capable of mimicking the conditions of magmatic/hydrothermal systems, and am about to add a state-of-the-art laser sampling system to the ICP-MS lab (with the help of Dr. Zeki Billor), and working with two great MS students in geochemistry-focused ore-deposit research.

Anabelle Kline (BS 2018) will soon defend her thesis on the Hog Mountain, AL, orogenic gold deposit, which she started under the supervision of Dr. Stefanie Brueckner, who continues as an active committee member. Anabelle



Laura Bilenker enjoying time away from the lab.

also presented her research at the Society of Economic Geologists conference in Keystone, CO, in September. **Raeann Garcia**, new to Auburn from the University of Texas, Austin, is looking forward to summer field work in the Silver City District of Idaho collecting drill-core samples and performing soil surveys with Integra Resources. She is primarily using geochemical and geochronological tools to develop a more detailed genetic model for the DeLamar low-sulfidation epithermal deposit.

The undergraduate members of our group have also been busy: **Evan Owen** has begun a directed study focused on local geochemical exploration, and **Sophie Milich** has joined us as a Geosciences Apprentice helping Anabelle to construct meticulous stratigraphic columns of Hog Mountain. We were also lucky to have **Mei Lu**, a PhD student in economic geology from China, extend her research visitation at Auburn through the end of the fall semester.

In November, I took a break from thinking about metals and high-temperature systems to act as field assistant to Dr. Matthew DeCesare, the manager of Dr. Medina's lab, who will soon do the same for my experimental petrology lab. It was my first time collecting samples from a cave, and I can't wait for the next adventure. I taught the undergraduate Economic Geology course, and I have also enjoyed interacting with the wider Geosciences student population and introducing many enthusiastic members to ore-deposit geology.

The Geosciences students and faculty have welcomed me warmly and I appreciate the Southern hospitality I have experienced thus far. I look forward to updating you all on our experimental petrology and laser-ablation ICP-MS labs in the next eGeotiger!

Continuing Faculty Members

Christopher Burton

It's hard to believe another year has gone by! It's been busy, busy, busy. In 2018, I had the honor of mentoring six talented graduate students as their main advisor. **Sumaiya Siddique** graduated with her MS in Geography and is now a Ph.D. student in Geography at the University of Hawai'i at Mānoa. **Khan Mortuza Bin Asad** (M.S. Candidate in Geography) is working on the development of a global social vulnerability model for earthquakes that will be utilized by the Global Earthquake Model Foundation, a non-profit organization based in Pavia, Italy. **Robin King** (M.S. Candidate Geography) is working to better understand the risk perceptions of Auburn University's student body to climate-related hazards in order to improve risk communication on our campus. **Summer Cliff** (M.S. Program Geography) and **Kristin Younquist** (Ph.D. Program Earth Systems Science) are starting their second semester and will be proposing their respective thesis and dissertation research soon. I have another Ph.D. student finishing his degree program in Risk and Emergency Management at the Istituto Universitario di Studi Superiori (IUSS) in Pavia, Italy. He will graduate in May 2019 and has been shortlisted to become a UNESCO Programme Specialist for Natural Sciences in Kingston, Jamaica. My goal for 2019 is to draft manuscripts for peer-reviewed journal publications with each of my students.



In addition to mentoring, I authored and co-authored two peer-reviewed journal articles and a peer-reviewed book chapter (Cambridge University Press), all of which were published in 2018. Work also progressed on internal and extramurally funded projects. The latter includes finishing up a project with Dr. Phil Chaney that proposed potential sites for tornado warning sirens in Lee County. Geosciences faculty Ming-Kuo Lee, Luke Marzen, Chandana Mitra, and I also kicked off a project funded by NOAA's Sea Grant Consortium to assess community resilience to climate-change hazards along the Mississippi and Alabama coasts. To fund additional projects, I have submitted research proposals to the National Science Foundation and other funding agencies. These have occurred as collaborative efforts with faculty throughout Auburn University, including faculty from the Department of Geosciences; the Department of Civil Engineering; the Department of Biosystems Engineering; the Department of Systems and Technology; the Department of Agricultural Economics and Rural Sociology; the Department of Crop, Soil, and Environmental Sciences; and the School of Forestry and Wildlife Sciences. These proposal submissions have totaled over \$8 million in potential funding, and I am hopeful that some of the pending proposals will be awarded soon.

Phil Chaney

It has been another busy year for water resources and tornado hazards projects. Dr. Chris Burton and I completed a study for Lee County EMA to identify potential sites for community tornado shelters. A great start was made on the development of a global database for Interbasin Transfers of Water (IBTs) with the help of **Daniel Roden, Meredith Moore, and Jarrett Roland** (see www.IBTwater.weebly.com). Congrats to Daniel on graduation and getting a GIS job with an environmental company in Augusta, GA. Jarrett (Irrigation in TN River Valley) and Meredith (Drought Management Plans in the Southeastern U.S.) have both made good progress on their projects and are on track to graduate in Spring/Summer 2019. Jarrett will be moving on to Texas to reunite with his girlfriend and begin his career in GIS consulting. Meredith recently attended the AGU conference in Washington D.C. where EPA representatives showed great interest in her research, so it looks like she may be working for the federal government soon.



John Hawkins

March 2018 was a highlight for the past year. I was able to take 8 students down to San Salvador, Bahamas, to continue in the legacy of Dr. Lewis. In addition to the 8 students, I was also lucky enough to share the experience with my 12-year-old son, William. He had a great time while we worked our way around the island. It was a rewarding experience to be able to share this with him. I am not sure how much he learned about carbonates, but the other 8 students made up for it. We spent our time focusing on the stratigraphy of the island, the hydrology of the inland lakes, and how modern-day observations can be used to make inferences about the older rock units found on the island.



As the spring semester came toward a close, focus shifted toward the upcoming field-camp season. This field season will be one that will be with me the rest of my life. The accident that occurred in late May will be something that I will struggle with most likely indefinitely. I do want to thank the GTAs, Dr. Chong Ma, and the other students in that course for their support during that time.

I took a trip over to Italy to explore the possibility of expanding our study abroad program by partnering with the Foreign Language Department. Tony Hall accompanied me on this trip, and we found that this partnership would be beneficial for our program. We visited Rome, Lucca, Pisa, the Carrera marble quarries, and many other regional highlights. We were the guests of Fondazione Campus in Lucca, Italy, and we hope to explore this partnership further.

David King

During the past year, we continued research with funding from the following sources: Southern Company for stratigraphic research in Alabama, and ACS-PRF funding for a project with Haibo Zou on detrital zircons in Cretaceous strata in Arkansas.



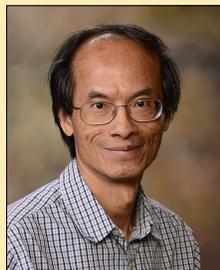
My graduate students are: **Leticia de Marchi** and **Pedro Montalvo** (Ph.D. candidates working on impact craters), **Matthew Adams** and **Neeraja Chinchalkar** (M.S. students working on impact craters), and **Sandor Ricketts** (who is working on Belize stratigraphy). Ms. Chinchalkar is the recipient of the Barringer Award for Crater Research, which is a prestigious honor for her. Ms. De Marchi finished her M.S. degree with me during summer 2018.

I am working on a joint project with Aerospace Engineering professors, including Vinamra Agrawal, that will include digital modeling of impact events such as Wetumpka and Flynn Creek. Also, I have started a collaborative project that may lead to some new funding in the area of carbon sequestration in the deep subsurface with Dr. Uddin. We have collaborative internal PAIR grant funding for this work.

I enjoy hearing from alumni and former students, so keep in touch with our department ... and me. Best wishes.

Ming-Kuo Lee

I began to serve as the new Department Chair after Dr. Mark Steltenpohl finished his second term in August 2018. Along with Geology faculty members James Saunders and Ashraf Uddin, I continued an NSF-funded project investigating how bio-mineralization and geochemical sorption work together to remove arsenic and other toxic metals from groundwater at an industrial site in Florida. This grant has supported the thesis research of four graduate students: **Shahzad Saffari**, **Eric Levitt**, **Ted Wilson**, and **Mahfujur Rahman**. Our industrial partner provided a "Phase-II" grant for supporting a new MS student, **Alicia Fischer**, who is studying the long-term stability of arsenic sequestration by biogenic pyrite at this site. A new PhD student, **Ozan Turkes**, began his research on carbon sequestration in deep saline aquifers. Ozan has participated in the Auburn Presidential Awards for Interdisciplinary Research (PAIR) project for carbon dioxide utilization and storage. Graduate student **Collin Sutton** completed his thesis research on analysis of large hydrologic and climatic datasets in Georgia. Collin's study addressed the fundamental scientific question concerning how groundwater is connected to climate change. Collin Sutton received the 2018 AGU Outstanding Student Presentation Award and 2019 COSAM Dean's MS Research Award. With a grant from the USGS (through Alabama Water Resources Research Center), graduate student **Connor Cain** is investigating the connection of various environmental factors to a



children's leukemia cluster in the Cleburne County, Alabama. I continued to work with Geosciences faculty Chris Burton, Luke Marzen, and Chandana Mitra to assess community resilience to climate-change hazards along the Mississippi and Alabama Gulf Coast with funding from NOAA's Sea Grant Consortium. Thanks to the efforts of Dr. Zeki Billor and Dr. Laura Bilenker, a new laser-ablation unit was recently added to the Geosciences ICP-MS facilities, enabling highly sensitive elemental analysis to be performed directly on solid samples.

Ron Lewis

In 2018 I continued teaching the undergraduate paleontology course, the online historical geology course, Professional Development at the sophomore level, Senior Seminar for Geography as well as Geology students, and the shallow-water carbonate portion of the graduate-level Facies Analysis and Sequence Stratigraphy. I also continued in my role as Associate Chair for Geology and Chair of the Curriculum and Teaching Committee.



Research on modern-day encrusting foraminifera continued with an emphasis on what they eat. Graduate student **Eric Eubanks** completed his study of the forams that are attached to reef rubble on the island of Mayaguana in the southern Bahamas along with the tiny crustaceans, worms, etc. found in the sediment. It seems that these potential food items decrease from nearshore to deeper water, and this helps to explain the decrease in size and number of forams that we have seen on San Salvador, Cat Island, and now on Mayaguana. In November, I presented a talk and a poster on this subject at the national GSA meeting in Indianapolis, IN.

The first of a series of papers on the distribution of Bahamian encrusting forams appeared in the *Journal of Foraminiferal Research* in October 2018, co-authored with former student **Ray Tichenor** (B.S. 2010). A manuscript is in preparation with former M.S. student **Chris Smith** dealing with the encrusting forams on Cat Island; and the third paper will be derived from Eric Eubanks thesis on the Mayaguana forams. A proceedings volume manuscript with Departmental undergraduates **Sarah Asher**, **Sara Gilley**, and **Sally Sundbeck** on the effects of Hurricane Joaquin on the distribution of encrusting foraminifera at San Salvador, Bahamas, was submitted in 2018 to the Gerace Research Centre, San Salvador.

Like Mark and Chuck, I will be retiring in 2020, so next academic year will be spent finishing things up and passing the torch with regard to some of the courses and curriculum issues I have heavily invested in over the years. I am happy to see that new Chair Ming-Kuo Lee intends to retain Professional Development, Senior Seminar, and Geocommunication in our curricula. I intend to focus on my long-standing interest in "actualistic paleontology" by finishing the book on the subject, which I started years ago, and perhaps by teaching an online course. Robin and I are in the process of a major house remodel, which we plan to enjoy when we are not traveling.

Karen McNeal

I am in my third year here at Auburn University. I direct the Geoscience Education and Geocognition Research Lab, which consists of one post-doctoral scholar, four graduate students (all are PhD students in the Earth Systems Science program), and one undergraduate student. Last year, I successfully team taught the new course "Climate Change and Society" and the "Earth System Science and Global Change" course with Dr. Medina in the Mell classroom building. My group had several recent peer-reviewed papers accepted - most notable was one published in the journal *Climatic Change*, which highlighted our development of a new climate-change concept inventory (Libarkin et al., 2018).



As far as grants, the most notable accomplishment was that two of my students, **Stephanie Courtney** and **Elijah Johnson**, both received the prestigious NSF Graduate Research Fellowship. This is a very competitive award: only six AU students received this fellowship last year. It will support their research and educational expenses for the next three years. Additionally, another student in my lab, Nick Soltis, received the National Association of Geoscience Teachers TA award, which is only given to a few graduate students across the nation annually. We are continuing to work on our two other funded research projects, one of which is an NSF project led by the University of Texas at Austin aiming to understand the impact field geology experiences have on underrepresented high school students and the other is a USGS funded project with the Southeast Climate Adaption Science Center (SECASC), led by North Carolina State University.

In addition to the above activities, I have also served as Chair of the Discipline-Based Education Research (DBER) hires in the College of Science and Mathematics. We have hired a Chemistry educator and a Biology educator so far. This year we are hoping to hire a Physics educator. In the Department this year, I have served as the Chairperson of the Advisory Committee to the Department Chair, the search committee for the Geochemistry Lecturer position, and serve as the Chairperson of the search committee for our newest hire in organic biogeochemistry. On a personal note, my family and I adopted a new lab puppy mix we call "Midnight." Looking forward to reporting on more good stuff in 2019.

Martin Medina



The Paleoclimatology and Stable Isotope laboratory (PSI Lab) is up and running and supporting the thesis research of four graduate students working under my supervision on projects from the US, México, Cuba, and Belize: (1) Ph.D. student from UNAM, Mexico, **Fernanda Lases-Hernandez**, who published her first thesis results in the

Journal of *Geochemica et Cosmochimica Acta* and currently is preparing a follow-up paper, which will also be submitted GCA this year; (2) M.S. candidate **Morgan Hill**, who gave an oral presentation of her thesis results at the AGU meeting in Washington, D.C., in December last year and is expecting to graduate in Spring 2019; (3) M.S. student **Stefan Perriano**, who has produced a 12-thousand-year hydroclimate record from Alabama using a stalagmite from War Eagle Cave, and; (4) M.S. student **Gregory Steltenpohl**, whose thesis work is focused on obtaining U-Th chronologies of speleothem specimens from Belize in order to reconstruct regional climate variability.

Chandana Mitra

Two things in 2018 are worth mentioning. First is the admission of **Austin Bush** to the University of Florida's Geography PhD program. Being his advisor, I feel proud that he is following his dream of becoming a professor one day. All the best to Austin! The other event that made a mark on my 2018 was speaking at a climate change forum organized by the Citizen's Climate Lobby (CCL). The topic of the forum was "Economic Opportunities in a Changing Climate." Several Auburn University faculty members and directors spoke about climate change and impacts. Various Auburn mayoral candidates, city council members, and other politically motivated individuals also attended the event. The success of the event was shown by the attendance and the questions at the end, most of which were intriguing indeed. I am so glad to have been a part of such an endeavor. In 2018, **Alamin Molla** and **Shihab Nur** joined me as Master's students, and **Megha Shrestha** transformed into a PhD student. I am looking forward to working with them in 2019 and beyond.



Adam Payne

This past year was my second full year here at Auburn. It was a good year overall finishing with my alma mater Oklahoma State beating the Missouri Tigers in a bowl game. This year the Geography Students Organization (GSO), for which I am faculty advisor, became a university-recognized student organization. This has been a rewarding opportunity for me as I get to meet with some of our students outside the classroom setting. In the spring, we had the greatest celebration of Earth Day ever at Auburn. This included the first-ever Earth Day Symposium, which helped raise awareness of our student's work. We brought together several departments and recognized the importance of conservation and protection of our Earth. During the fall semester, the GSO sponsored Geography Awareness Week (GAW). We held a drone-flight demonstration and played games like geography trivia and everyone's favorite, global twister. Both of these events attract around 150-200 students helping to raise awareness of our programs. I taught 8 sections of Global Geography this year as well as Political Geography and Economic Geography classes. I hope that students left knowing more than when they arrived.

Stephanie Rogers

Besides continuing to teach GIS, GIS Applications, and Physical Geography, this year I had some time to get involved in research. The Department acquired a Phantom 4 Professional Unmanned Aerial Vehicle (UAV), aka a “drone”, and I acquired a license to fly one. UAVs have revolutionized geographic data collection. We now have the ability to collect high-resolution aerial imagery at local scales in any time interval. In summer 2018, I visited the Nova Scotia Community College’s Applied Research group to learn more about geographic data collection using cutting edge UAVs, including a Lidar system on a Matrice 600 (a very powerful UAV). The photo below depicts some of the fun I have been having. Stay tuned for 2019 results from an Intramural Grant Program (IGP) project with Dr. Lorraine Wolf studying liquefaction sites in the New Madrid Seismic Zone using a UAV and multispectral sensor.



Charles (“Chuck”) Savrda

Greetings and best regards to all. Our field camp tragedy aside, 2018 was a pretty good year. On the research front, I continued my ichnologic and sedimentologic studies of chalk-marl sequences in western Alabama, with a focus on the amazing Moscow Landing section exposed along the Tombigbee River in western Alabama. Parts of this work are being completed by graduate student **Trey Foster**, whose MS thesis on the Paleocene Clayton Formation is nearing completion, and undergraduate **Colt Morton**, who is concluding a Directed Study project on carbonate cyclicity in the Upper Cretaceous Prairie Bluff Chalk. My work at Moscow Landing also resulted in a great paper (if I may say so myself) on the purported K-T boundary impact-induced megawave deposits (aka Clayton sands) exposed there (Palaios, v. 33, p. 555-567). I also fell into another bedrock bioerosion project—in this case involving newly discovered freshwater, lithophagous (rock-eating) shipworms (aka teredinid bivalves) occupying the Abatan River, Bohol, Philippines—with an international group of malacologists led by Dan Distel and Reuben Shipway at Northeastern University.



My family is doing well. Diane has returned to part-time work with a local pre-school, despite breaking her foot on the dance floor at a family wedding (no, I did not step on her). Amanda Savrda (daughter #1) is now teaching both Earth Science and Environmental Science at Auburn High School. CeeCee Cunningham (daughter #2) gave birth to twin boys in April, and Allison Marshall (daughter #3) and her husband Michael are expecting their first baby in early 2019 (that will make 5 grandchildren so far). Cassie (daughter #4), who works for an orthodontist in town, is engaged to be married in November 2019. As for me, retirement is getting closer (June 2020), but I hope to continue research and teaching at some level thereafter as emeritus.



Colt Morton and Trey Foster at Moscow Landing.

Mark Steltenpohl

So it’s now official – my formal retirement date is January 1, 2020! I cannot put into words how happy and excited I am to be winding down my wonderful career here in the Department. Of course I’ll miss everyone on a daily basis, but Laura and I will be retiring here in Auburn, so we’ll be nearby. I’ve asked Dr. Lee to have faculty consider my request for emeritus status, which would allow me to have a desk and hopefully a PC in the Department so that I can visit more frequently while wrapping up drawers full of unpublished research.

Last year (2018) was something of a blur for me. Before rotating off as Department Chair in August, I worked with Dr. Lee to help make his transition to chair as smooth as possible – he will be a great chair! At the same time, I was finishing up my two USGS-funded research projects. **John Whitmore** graduated in December, having successfully defended his thesis project that involved geologic mapping and $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology of rocks on the 1:24k Milltown, AL quadrangle. John now works at the Alabama Geological Survey. **Ben Weinmann** steadily worked on his mapping and U-Pb geochronology on rocks of the Alexander City quadrangle, and he is on track to defend his thesis during Spring 2019. In addition, I was a committee member on a host of other really impressive thesis projects, which is one of the most fun parts of my job!

We will all remember May 24th, 2018, for the tragic accident that claimed the life of undergrad student **Nick Hood** and caused life-threatening injuries to classmate **Cole Burton**. Nick's tragedy was a personal one for me because our families have been connected since childhood days in Ozark, AL. Nick's mother and father, Mary-Grace and Trey, overlapped with me in school, and Mary Grace's mother taught me and my brothers piano. Mary Grace and Trey were famously huge Auburn fans; Trey's father had a big "AU" painted in the deep end of his swimming pool, and Mary Grace attended quite a few of our tailgates! Nick was awarded a posthumous BS degree from our department in December. He will be sorely missed but never forgotten, and you can learn about ways that the Department is honoring his memory elsewhere in this newsletter.

As a result of the accident, I was quickly and suddenly introduced to Cole Burton and his family, each of whom are amazing sources of inspiration. Witnessing their Faith, courage and strength throughout Cole's against-all-odds recovery changed my life forever. "He is Able!" As I was writing this update, Cole was enrolled in one of our online courses with plans to return to our department in the fall of 2019 to resume his degree work. Read more about this remarkable young man and his family elsewhere in this newsletter.

In August, Laura and I began in earnest our collaborative authoring of the book *Roadside Geology of Alabama* (Mountain Press). This outreach project takes us to all corners of the state, driving the main highways and describing the geology along them. It's a lot of work, and it is difficult



to describe Alabama's geology in terms appropriate for Roadside's targeted audience -- laypeople with interests in nature who would visit trail shops and such. We already have about 75,000 unpolished words and we're having a blast! Mountain Press's deadline for the finished product is June 1, 2021, so we're on a good trajectory toward that goal. Don't be surprised when we send some of you a draft of a transect to proof for us!

More on the family front, last May Laura retired after 25 years of teaching physics and chemistry – first at Tuscaloosa Academy, then at Southern Union, and finally at Auburn High School. Last August our son Gregory (26) resigned his position with NOVA Environmental Inc., Raleigh, NC, and was accepted into the MS program in our department. Greg is working on a project with Dr. Martin Medina to measure stable isotopes in a stalagmite sampled from a cave in Belize to further understand climate change and how it affected the demise of the Mayan civilization. We are also proud of our daughter Natalie (27), who loves her job with Premier Spirit Academy here in Auburn. Granddaughter Adelynn (7) remains our absolute delight as Laura and I continue to spoil her, as good grandparents are supposed to do.

We encourage everyone to come visit one of our tailgates this Fall. It's always fun to see you and get caught up on everything! Meanwhile, best wishes for a happy and healthy 2019!

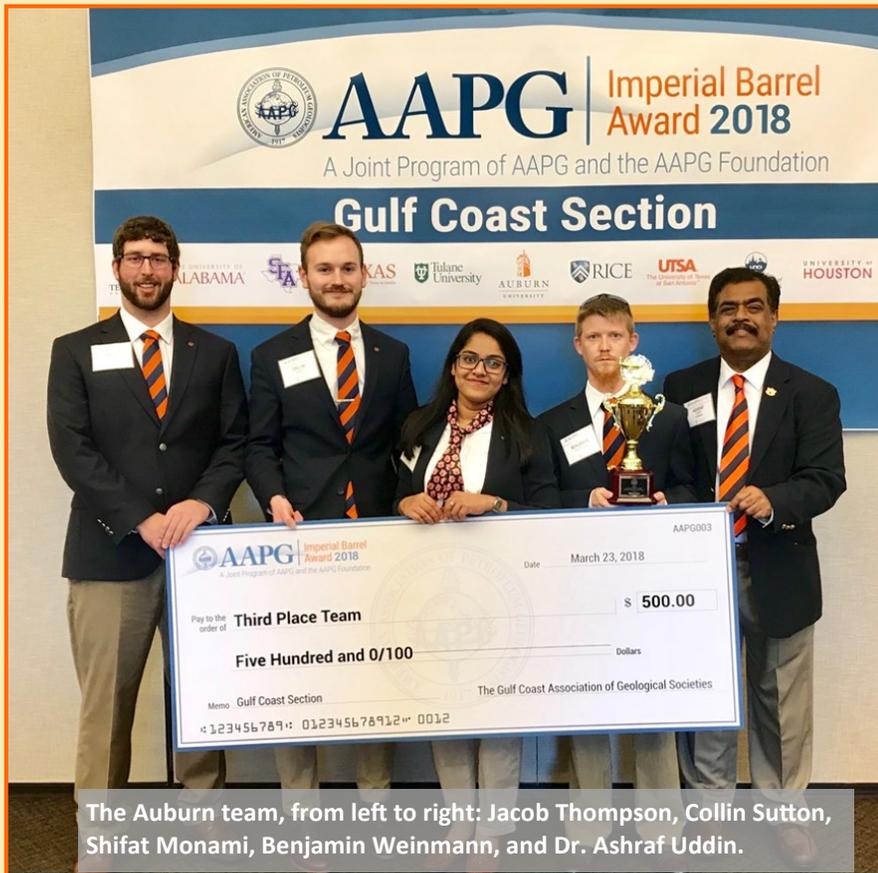
Ashraf Uddin

The Petroleum Geology course (GEOL 5500/6500) was taught for the third year in Fall 2018 with the help of industry experts (Joe Beck and Neville Crowson from Energen) who taught their specialized topics.

The NSF-funded project with Drs. Ming-Kuo Lee and James Saunders continued with success, enabling Ted Wilson to complete his thesis research. Mahfuj Rahman, co-supervised by me and Dr. Lee, continued to work on the project in Macon County. **Zachary Calhoun** completed his Masters' thesis on hydrocarbon characterization and depositional environments of the upper Wolfcamp Formation in the Midland basin, TX, and is currently working with a mining company in Tennessee. **Sharif Mustaque**, a new PhD student joined the HRL group in Fall 2018 to work on eastern Gondwanan sedimentation and tectonics. Prior to coming to Auburn, he completed an M.S. degree at Queen's College, NY. His work will be important because he will compare Permo-Carboniferous sandstones from Australia and Antarctica with those of the Indian subcontinent to get the complete scenario of eastern Gondwanaland.

Also we recruited **Jasmin Naher**, who has started working on sedimentation and tectonics of the northern Bengal basin and southern Shillong Plateau.

Our efforts with the Imperial Barrel Award competition continued very well in 2018. The team was able to successfully win their group consisting of Univ. Houston, Rice University, and University of Alabama. We started taking part in IBA competition in 2011. This year the team was able to bring home an IBA trophy. See the photo on the next page.



The Auburn team, from left to right: Jacob Thompson, Collin Sutton, Shifat Monami, Benjamin Weinmann, and Dr. Ashraf Uddin.

Lorraine Wolf

Hello from the Geophysics corner! (Well, I know it's hard to make a corner in the oblate-shaped Coliseum, but you know what they say about geophysics—just tell us what you want to see . . .). The year started off with big plans, and a fraction of these actually made it to reality. Maybe the idea of New Year's resolutions should be changed to New Year's delusions? The year started off with a trip to Anchorage, Alaska, to attend an NSF-sponsored conference focused on a successful model for assisting underrepresented students through the educational pipeline (that's right—Alaska in January). The model was primarily focused on engineering and Native Alaskan students from rural areas, but the idea was to apply the model to all STEM fields and different target student populations. The conference included our team of 7 from Alabama and teams from 11 other universities throughout the U.S. Each university had its unique issues and obstacles to overcome.



I continued to serve this past year as the Director of the AU Undergraduate Research Office. In collaboration with the Graduate School and the Office of the V.P. for Research, we hosted the annual Student Research Symposium, which included 470 poster and oral presentations! This ever-increasing number of abstract submissions underscores the growing research productivity of our faculty and students. In addition, the office saw the appointment of 90 undergraduate research fellows (up from 68 the previous year) and

publication of 56 research articles and highlights in the Auburn University Journal of Undergraduate Scholarship.

On the Geosciences side of my job, I continued work with graduate students **Rahul Bhattacharya** and **Caleb Eldridge** on their gravity and magnetic modeling, which will they will present at the Spring 2019 meeting of the Symposium on the Application of Geophysics to Engineering and Environmental Problems in Portland, OR. Rahul is carrying forward former student James Taylor's work on the Bellingham basin in western Washington, and Caleb is focusing on structural controls of seismicity in the New Madrid seismic zone (NMSZ). The other student in our group, **John Johnson**, successfully finished his Master's degree in the fall, completing a seismic reflection study of a liquefaction site in the NMSZ. The year was also a good one for publications, with a well-received publication on an unusual sequence of earthquakes near Eutaw, Alabama, authored by former student **Jian Chen** (M.S. Geology 2017).

My final announcement is the acquisition of a new seismic system for geophysics teaching and research. Although the old Geometrics Strataview that many of you remember is still kicking after 22 years, it was becoming virtually impossible to download data. The unit is still operating on its R486 built-in computer (does anyone remember those?). Our new system consists of two Geodes, each with 24 channels, and thus evenly replaces what we had with a modern version. It also operates on a smaller (and much lighter!!) battery, which will be much better received by the students (and their backs).

Haibo Zou

It was an interesting yet challenging year. It started with the loss of the wet chemistry clean room at Petrie Hall in January 2018. Since then, I have had to travel more frequently to use other labs. In spite of these challenges, we managed to keep our lab running and produced four papers: two in Lithos, one each in Tectonophysics and Precambrian Research, and one proceedings paper in 2018. Three graduate students (**Jennifer Cartwright**, **Sara Speetjens Gilley**, and **Karena Gill**) obtained Sr isotope data for their theses from our lab. The thermal ionization mass spectrometer (TIMS, MAT-262) in our lab also produced radiogenic isotope data for scientists from China and Turkey. Two related manuscripts have been submitted and one manuscript is almost ready for submission. In addition to lab-related research, I also did a month of field work during the summer of 2018 collecting young volcanic rocks in NE China and Inner Mongolia, including sites in the Mount Changbai and the Aershan-Chaihe volcanic fields.

Matthew DeCesare

I've enjoyed my first full year in the AU Geosciences Department during 2018, and what a year it was! After running thousands of stalagmite-carbonate samples, I became well acquainted with the Thermo Gas Isotope Ratio Mass Spectrometer and Gasbench II that I operate in the Paleoclimatology and Stable Isotope Laboratory (PSI Lab). This year I diagnosed several issues and was ultimately able to improve the efficiency and precision of the mass spectrometer. I also analyzed stable isotope ratios of hundreds of cave drip samples using our Picarro stable isotope analyzer – data and interpretations were published in the paper *Long-term monitoring of drip water and groundwater stable isotopic variability in the Yucatán Peninsula: Implications for recharge and speleothem rainfall reconstruction*, published in *Geochimica et Cosmochimica* by Lases-Hernandez et al., of which I am a coauthor.

In the spring of 2018, I visited MIT for six weeks to learn and perform Uranium-Thorium radiometric dating on several stalagmites to establish their age and rate of growth. These data are being used for graduate student projects. Learning new methodologies and scientific techniques in such a prestigious environment was an extremely rewarding experience.



Matthew in Río Secreto, Playa del Carmen, Mexico.

Adventure was also a theme for 2018! I visited two new countries to collect stalagmites and establish new relationships with collaborators. This included an archeological site in the jungles of Belize where we identified several potential stalagmites for future analysis as well as meeting collaborators from the University of Belize. In addition, I traveled to Playa del Carmen, Mexico to visit Río Secreto caves, where many of the speleothems and water samples I've analyzed were obtained. I explored the cave system, met with collaborators, and learned new techniques for setting up drip-water collection. I also explored two cave systems in Alabama. War Eagle Cave, in Scottsboro, involved a 137-foot vertical descent – which was quite an adventure! I was accompanied by Dr. Medina's Master's student, Stefan Peritano, who assisted in setting up several drip catchments and temperature-humidity sensors. Key Cave, located in Florence Alabama, was another unique experience. I visited this cave with Dr. Laura Bilenker (Geosciences) and Alexandra Tsalickis, a Master's student from the Department of Crop, Soil and Environmental Sciences, and we collected guano cores and a stalagmite. We are working on a collaborative project focusing on paleoclimate and bat population dynamics.

I look forward to another exciting year collaborating with faculty at AU, continuing to take part in more caving expeditions, and collecting more samples to run in the PSI Lab!

Anthony (Tony) Hall

Work as the Lab Teaching Manager has been the same -- with a new adventure constantly. Whether it is resupplying the undergraduate labs or helping a new professor set up new equipment in a lab or changes in the course scheduling system. The Dynamic Earth distance learning course, GEOL 1103, has been going very well. It continues to bring its own challenges to the table.



I continued to shoot photography in my spare time. I still shoot with the Athletics Department as a sports photographer at times. This year I was able to travel with the Equestrian team to Nationals in Waco, Texas, where the team won their fifth national championship.

Earlier this year, I was given the opportunity to shoot the NASCAR cup series races at the Atlanta Motor Speedway. I was in the pits, in the garages, and in with the fans. It was amazing to be so close to the action. Having never been to a race before, I didn't know what to expect, but words can't truly describe the atmosphere I experienced. I was able to meet some of the legends of racing and some of the legends to be.

In continuing to grow my photographic opportunities, I have ventured into aerial photography by becoming a certified sUAV (drone) pilot. I partnered with a local wedding



photographer, Miranda Beason, to produce aerial shots of weddings and venues and to be the second photographer for the weddings.

To display my work, later in the year, I launched a new website at anthonyhallphotos.com where you can see both still and video products. More pictures and video will be coming as I have many new exciting plans scheduled for 2019!

War Eagle!!

Chong Ma

In 2018 I continued to teach Structural Geology in the spring and and to co-teach Field Camp in the summer with groups of new students. The big news in 2018 is that my colleagues and I submitted four research manuscripts to be published on a variety of journals including *Geology*, *American Journal of Science*, *Lithosphere*, and *Gondwana Research*. The research projects are about the following: (1) from the Alleghanian to the Atlantic: extensional collapse of the southernmost Appalachian orogen; (2) the formation, docking, and orogen-parallel transport of a Taconian arc and back-arc basin: the Dade-



ville Complex in the southernmost Appalachian orogen; (3) from mantle depths to the Caledonian foreland: the exhumation of the ultrahigh-pressure Seve Nappe Complex, central Jämtland, Sweden; and (4) the formation and exhumation history of chromitites from the Köyceğizophiolite (SW Turkey): implications for microtextural and compositional characteristics of ultrahigh-pressure (UHP) mantle-hosted chromitites. So far, the *Geology* paper has been accepted for publication, and the *American Journal of Science* paper is currently in revision according to comments from the reviewers. Overall, my teaching and research went well in the past year. I am looking forward to 2019 and expect to make more contributions to the Department of Geosciences.

Ashleigh Rudd

I joined the Department of Geosciences in March 2018 as an Office Administrator. However, my job doesn't stop there. I now sit at the desk formerly occupied by Sheila Arington, so I am inspired by that, and I try to serve the students and faculty with gratitude and dignity.



I grew up in LaFayette, Alabama, and graduated from Auburn University. Prior to working in Geosciences, I worked at Heartstrings for nearly eight years and at a local hair salon as a cosmetologist. Outside of work, I enjoy spending time with my seven-year-old son, Brantley. He definitely keeps me busy and keeps me on my toes!

I've enjoyed working in Geosciences and getting to know all of the faculty, students, and other staff members. I look forward to experiencing the continuous growth of the department and am excited to be a part of such a wonderful department.



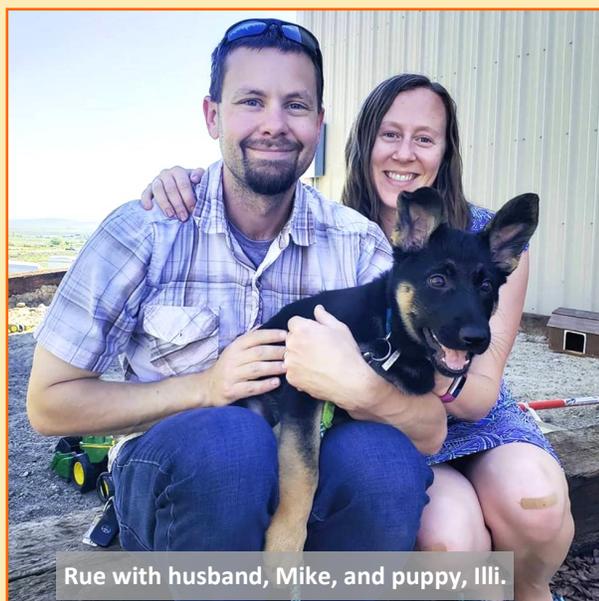
Ashleigh suggested we all wear "ugly sweaters" to the Christmas party. Shown here are some of the contest finalists; left to right, Tony Hall, Ashleigh Rudd, Sandor Rickets, Anabelle Kline, Trey Foster, and Alicia Fischer.

Alumni News

Note to all alumni: Please let us hear from you so we can include you in the next eGeotiger!

Rue Anne Beyer (M.S. Geology 2012). It's been another busy year here in Elko. In mid-January I was given an awesome opportunity to be the main project geologist for the Genesis Complex on the Carlin Trend. Genesis is a complex deposit in terms of structure, alteration, and ore body. I've definitely been challenged with the new responsibilities, but it's been very rewarding. Newmont also gave me the opportunity at the beginning of September to take an ore deposits mapping short course taught by the University of Arizona. It involved a ten-day excursion starting from Vegas and traveling to various places in eastern California and Nevada to look at different ore-deposit styles and how to map them. We spent the bulk of our class in Yerington, NV, looking at copper porphyry systems and learning the Anaconda-style of mapping.

On a personal note, Mike and I are settled in our new home and gearing up to landscape the front and backyard in 2019. We also added a new member of our family, a German Shepherd puppy named Illiniza, but we call her Illi. We named her after the volcano I climbed in Ecuador in 2016, Illiniza Sur. She is a rambunctious handful, but we love her, and she's been a great little hiking and running companion.



Rue with husband, Mike, and puppy, Illi.

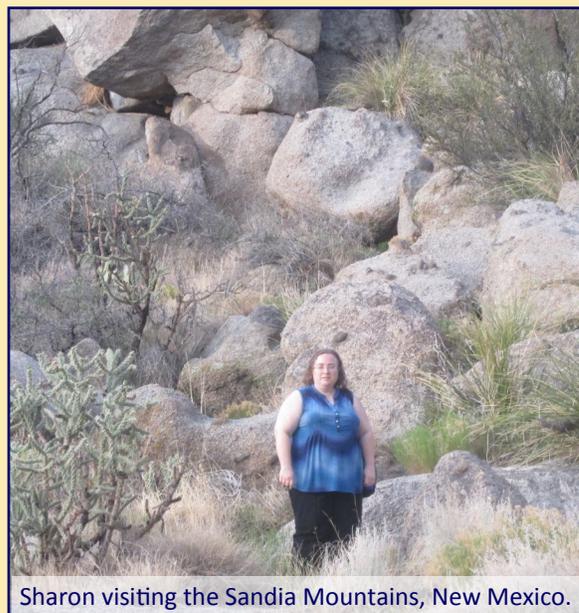
I had two big climbing adventures this year. The first was back to Ouray, CO, again for some more ice climbing. My guide decided to really push me by having me climb up a 600-foot multi-pitch route where the first 100 feet was vertical. It was tough, and I struggled hard on it. I took several falls and my hands became so fatigued from gripping the ice tools that I couldn't bend my fingers. I pushed through it and made it up the route, but ended up in physical therapy afterwards with a sprained wrist. My second big adventure was a trip to Peru to climb three peaks in the Cordillera Blanca: Ishinca, Nevado Urus, and Pisco Oeste. These peaks were about 18-19,000' in elevation, and climbing them was very different than Denali and the volcanoes that I'd climbed in

the past. The climbing in the Cordillera Blanca is a lot of fun and provides for some challenging terrain. I had an awesome team to climb with, and we were treated to home-cooked Peruvian delicacies everyday by our camp chefs. I definitely can't wait to go back and do some more climbing in that area. Next year, though, Mike is actually going to join me, albeit reluctantly, to climb Kilimanjaro.

Sharon Browning (B.S. Geology 2000, M.S. Geology 2003). I am now in my 11th year at Baylor University in my position as Geoscience Lab Coordinator, where I am responsible for our graduate teaching assistants and the curriculum for our introductory lab courses. We have approximately 500 students each semester in six different courses. As you can imagine, it is both a challenge and a pleasure to engage primarily non-science majors with the wonders of geoscience.

My second focus at Baylor is community outreach. We have consistently partnered with local K-12 schools, community groups, and our own Mayborn Museum to engage members of the Waco, TX, community in geoscience activities. Our tsunami tank and earthquake hazard models are especially popular.

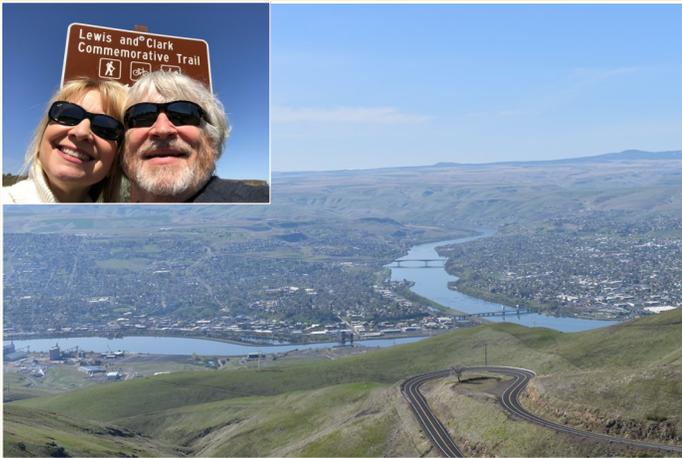
On a personal note, my daughter is now a junior at Baylor, majoring in film and digital media. I have tried to convert her to more scientific endeavors, but she only rolls her eyes. I do miss seeing Auburn's beautiful campus, and hope to be able to visit soon.



Sharon visiting the Sandia Mountains, New Mexico.

James Edward Clark, Jr. (B.S. Geology 1972; M.S. Geophysical Sciences—Earth and Atmospheric Sciences, Georgia Tech). This has been another adventurous year with many geology field trips. In April we followed the Lewis and Clark Trail from Lewiston, Idaho, and Clarkston, Wash-

ington to Oregon along the Snake and the Columbia Rivers. In October we traveled with the AU Alumni Travelers and marveled at the geologic wonders of Iceland, the land of fire and ice. This past month of December we checked up on the volcanic activity of the Big Island of Hawaii and were saddened to hear the personal stories of loss and the closure of the geothermal plant. We said good-bye to 2018, and we are looking forward to future geology trips to the western United States.



Lewiston, Idaho, and Clarkston, Washington, and the Snake River flowing between the two cities after exiting the hills from Hells Canyon.



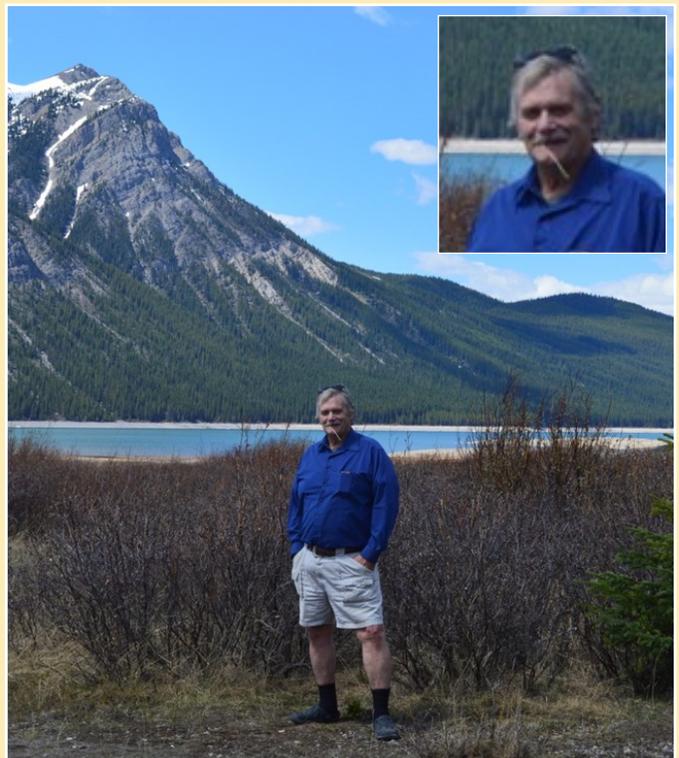
James and Kathy at black sand beach with basalt columns, Iceland.

Jacob Colbert (B.S. Geology 2014). I attended Auburn University from 2010-2014, arriving from Perdido, Alabama. The Department was in Petrie Hall, where many days and nights were spent in the basement or in Hayley Center reviewing coursework, studying for exams, and practicing mineralogy. *[Editor: See the anniversary section of this newsletter for more of Jacob's reflections on his time at Auburn.]*

After leaving Auburn, I received an M.S. in Safety and Health and then accepted a job with the Tuscaloosa Testing Laboratory in Tuscaloosa, Alabama, where I consulted as an Environmental Staff Professional. After leaving consulting, I joined Nyrstar Middle Tennessee Mines as an Environmental Advisor and then became their Safety and Health Coordinator. This last year I continued my employment with Nyrstar, which is the second largest zinc metal producer globally.

John Counts (B.S. Geology 2005). I was a student at Auburn from 1999-2005 and have been a geologist in the industry and in academia for the past 13 years since I left. Over the past year, I finished up a research position with the oceanographic institute IFREMER in western France, and have recently started my second postdoc with University College Dublin in Ireland. *[Editor: See the anniversary section for more from John Counts.]*

Joe Harrer (M.S. Geology 1986). After 30 years of practicing environmental hydrogeology all across the US and Canada, I started an independent hydrogeologic consultant firm [see next page]. This summer I moved back to San Marcos, Texas, to take advantage of the mild winters. I spend vacations in Costa Rica.



See Joe Harrer's company, "Anthropocene Solutions: A water science and engineering company" at anthrosolv.net (below).



Wayne Holt (B.S. Geology 1981). Since graduation I went on to serve in the Army, pursue a career, and try to make life better for all of us. My career has been a pleasure and life has been so fast that it's been a blur.

I thought I had retired, but Marathon Oil dangled a carrot in front of me to go help out on a fracking project in the Permian Basin (Carlsbad, NM), again! Having lived there 10-13 years ago, it was a déjà vu moment. Since they are allowing me to work rotational (21 on / 28 off), paying for the plane tickets and the motel, I decided to go ahead and do it. So far, it's been terrific as I get to stay in the U.S., and the work is even somewhat fun! So, you could conclude that I'm only semi-retired and enjoying what it brings.

My wife Patricia and I are using the off time to travel and visit with the kids/grandkids. You really do need to take time and smell the roses. I've been blessed to be married to a wonderful wife and have a terrific family that loves me. Yes, money and career are nice, but the most valuable thing in life is a loving family.



Patricia and Wayne at Blue Angels

Herb Martin (B.S. Geology 1979). After over 35 years working all over the world, but living in Houston (25 years) and Oklahoma City (10 years), I retired in the fall of 2017. Just seemed like the right time - so many round numbers aligning. With 35 years on the job at one company (well, Devon bought Pennzoil, but I never changed jobs), being 60 years old, and about to celebrate 35 years of marriage to Marynm (met her at LSIU while getting my M.S.).

I am now enjoying doing more fun things like camping in our new camper and spending time with the family -- Sallie (two AU degrees), her husband Josh, and our two grandkids! and Sam (also an AU degree in geology, working on his M.S. from OSU). We like Oklahoma City and plan to stay here for the foreseeable future. And retirement is a full-time job for us, and we don't plan to give it up.

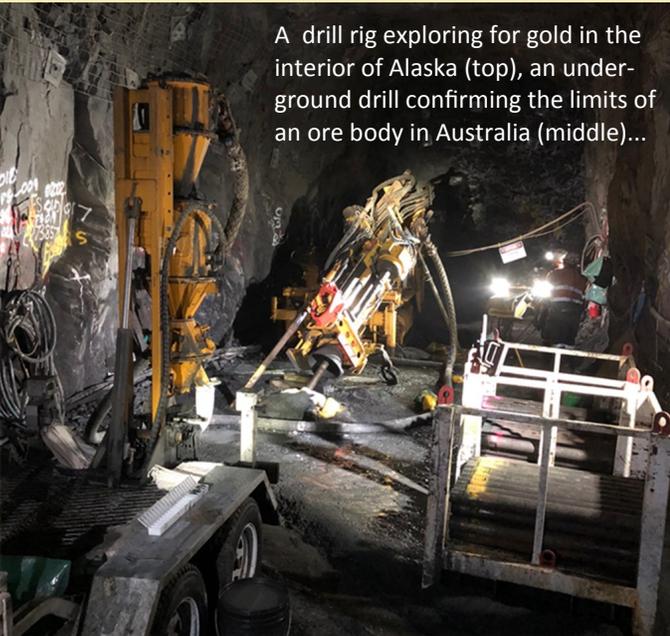
This past year, we met old AU friends Art and Carol Merkle, who are part-time retired in Idaho. We were up in Jackson WY for the eclipse! That was a fun time, hiking in the mountains. Also took a trip to Cancun for a friend's wedding (see photo).

Hard to believe I've been gone from AU nearly 40 years....Cheers and War Eagle!

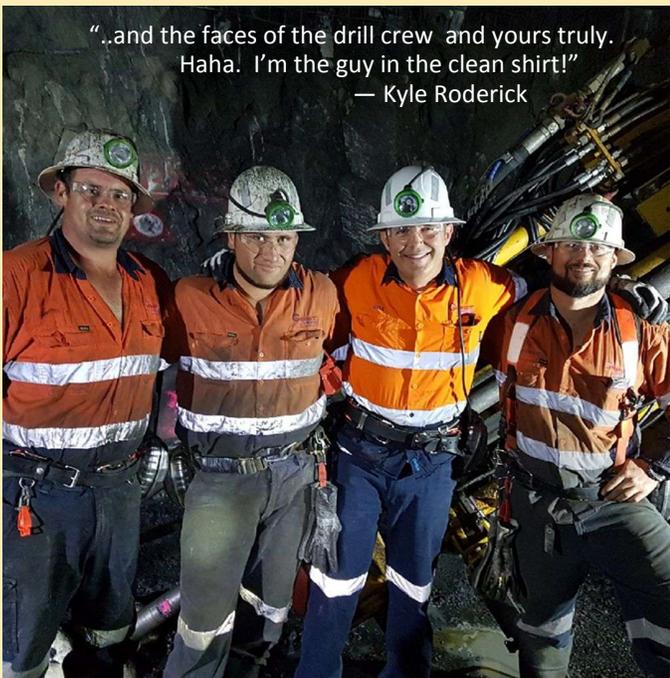


Herb and Marynm at Cancun

Kyle Roderick (B.S. Geology 1994). I started with BHP Minerals in Charlotte, NC, the summer after I graduated from Auburn and have worked in mineral exploration ever since: at First Environment in Kennesaw, GA; then spent a couple of years at South Dakota School of mines; then Homestake Mining Company, Lead, SD; followed by Vulcan Materials in VA and KY; Carmeuse Lime in Black River, KY, (Raw Materials Manager); and Boart Longyear, Salt Lake City, UT (Contracts Manager). I am now President and CEO of First Drilling, Montrose, CO, a leading multinational drilling services company operating in North and Central America and Australia. A geology degree tied to operational experience in the mining business is a tremendous platform for a career in the natural resource space!



A drill rig exploring for gold in the interior of Alaska (top), an underground drill confirming the limits of an ore body in Australia (middle)...



"...and the faces of the drill crew and yours truly. Haha. I'm the guy in the clean shirt!"
— Kyle Roderick

Sarah Sheffield (M.S. Geology 2013). After graduating with my M.S. from Auburn and getting my Ph.D. from the University of Tennessee (2017), I moved to Tampa, FL, to become a Visiting Instructor at The University of South Florida. Since then, I was hired in the newly opened tenure-track position, so I am now an Assistant Professor. I teach a range of classes in soft rock geology, including sedimentary petrology, paleobiology, and introductory geology, which is a lot of fun! I have been working with faculty and students from USF on a host of different projects. These include studies of echinoderm fossils and their patterns of evolutionary change, morphology, and growth, as well as projects that aim to improve scientific communication to broad audiences across different media platforms. I am very active in science outreach, and I love working with people of all ages to show them my favorite things about science.



Sarah works to increase scientific literacy in the community and to encourage young girls.

Outside of science, I've been taking advantage of Florida's natural resources and spend a lot of my time exploring and kayaking Florida's numerous parks and rivers with my husband and two dogs.

Eric Woerner (M.S. Geology 1981). I was one of the first AU Geology graduate students [see *memories section*]. I was in ROTC at the University of Tennessee for my undergraduate work, and that led to five years of active duty. I went to Ft. Belvoir, VA, in August '81 and went to various army schools, including an advanced course in topographic engineering.

Later I did alluvial mapping in the Mississippi River Valley and wrote foundation reports on locks and dams under construction. I spent 12 years as an active army engineer and 20 years as District Geologist for Vicksburg Engineer District. After years of extensive traveling, I retired five years ago. Now my wife, Viki Leach Woerner, and I are enjoying retirement. Some of my interests are flying both rotary- and fixed-wing aircraft, raising chickens, and scouting. Life is good.

In Memoriam by Mark Steltenpohl

We will all remember May 24th, 2018, for the tragic accident that claimed the life of our undergrad student **Nick Hood** and caused life-threatening injuries to classmate **Cole Burton**. Both students were participating in our Summer Field Camp (GEOL 3650) course along with 14 other classmates when an impaired driver lost control of her vehicle and swerved off the road, hitting Nick and Cole. Both students suffered severe head injuries and were airlifted to UAB's trauma center where they spent a month before Nick passed away and Cole was moved to Shepherd's Rehabilitation Center in Atlanta. What follows are some of my memories of Nick, and what the Department and the Geosciences Advisory Board (GAB) has done and are doing to preserve Nick's memory -- and how you can help as well.

Nick's tragedy has been a very personal one for me because our families have been intertwined since my early childhood days in Ozark, AL. Nick's mother and father, Mary-Grace and Trey, overlapped with me and my brothers in school. Mary Grace's family attended the same Church as us, and her mother taught us piano lessons. Trey and Mary Grace were always huge Auburn fans. Trey's father was famous in Ozark for the big "AU" painted on the bottom of his swimming pool! Some of you may remember having met Mary Grace at a number of our tailgates when we were in Petrie Hall.

I never taught Nick, so what I know about him comes from my association with his family and from what I observed myself during my many encounters with him, particularly in the student lounge where he was constantly working. So, I feel that I knew him quite well...

In the student lounge where he sat most every morning, I have many wonderful memories of time spent with Nick. I always took pride in being the first in the Department each morning, but I met my match with Nick. Some mornings at 3:00 he would already be here, and after pressing him a little he'd explain that he was there all night working. I told him that at my age I couldn't compete with that! He had his "office" set up in one corner of the student lounge next to the coffee machine. We'd chat about his parents, and swap Eagle Scout stories; he and I were in the same scout troop albeit separated by some 45 years or so. Like me, his love for the outdoors led him into the geosciences. In the student lounge, he was always working hard on homework, studying for an exam, or just doing extra work to stay on top of



Colt Morton, Nick Hood, and Matthew Prausa on a trail in northwest Georgia

things. Clearly he was a very hard worker with a solid work ethic. Even in those early hours in the student lounge, having been up all night, Nick always appeared joyful to me. I'm not one for small talk, but he was gracious to drop everything to entertain my questions about his mom and dad and how his studies were going while I put on a pot of coffee. Watching him made it clear to me that he was a friend to everyone he met, and that he'd give you the shirt off his back. He once leant me a knee brace when I had casually complained one morning, apparently too much, that I was having some pains... He had remarkable people skills, which was not surprising to me knowing his mother and father. My wife Laura and I really admired his skills and demeanor as a bar-tender at Ariccia, and we marveled at how he maintained that job while succeeding in our difficult and time-consuming, lab-intensive curriculum.

He was a little older than most of his peers, and his eyes twinkled when he was placed in teaching or service

positions. He enthusiastically volunteered to help out with departmental and COSAM-wide service or outreach events.

Perhaps the highest compliment to Nick's abilities, however, were from GAB members who provided mock interview sessions in April 2018. I remember I was helping the students to navigate the maze of the Haley Center to find the rooms that we had reserved for their particular interviews. When I dropped off Nick, I was a little surprised that he had three GAB members for his interview: Bob Fousek, a decorated Vietnam War chopper pilot; Joe Howle, a former AU wrestler; and Herb Martin, who had moved up to the highest levels of Devon Energy. I remember how nicely dressed Nick was, a very handsome, professional looking young man. Chuckling a little to myself as I left him there because I knew that this was an especially tough crowd for him to face, all with exceedingly high expectations and none who suffered fools gladly. After the interviews were completed, however, each of the three interviewers made a point to visit me to tell me how impressed they were with Nick's performance. They each said -- in spite of the Mohawk, how impressed they were with Nick's necessary people skills, work ethic, and professionalism.

Nick Hood operating the wet saw for the middle school students at the COSAM STEM event, 2017



I'm sure that you all will agree that the AU Family is a real thing, especially in a small department like ours. The accident on May 24, 2018 took a member of our family and we will make sure that he will always be remembered. Last December Nick posthumously received his B.S. degree in Geology, something that he worked very hard to achieve. We have memorialized his "office" in our student lounge with the collage of photographs and an AU office chair engraved with "In Memory of Nick Hood." But photographs fade and furniture wears down, so we are working with the GAB toward preserving Nick's memory permanently through the **Nicholas L. Hood Endowed Memorial Scholarship**, which was the way Nick's family wanted him honored in lieu of flowers at the time of his passing. As of this writing, \$3.3K has accrued in the fund, and this August an anonymous alum has promised to donate \$10K. Together with the COSAM development office, our goal is to establish the endowment with the minimum \$25,000 so that we may award a \$1,000 annual scholarship to a deserving Geosciences student. This award will be a comfort to those who knew and loved Nick, and will ensure that his passion for the geosciences will extend to future students in perpetuity.

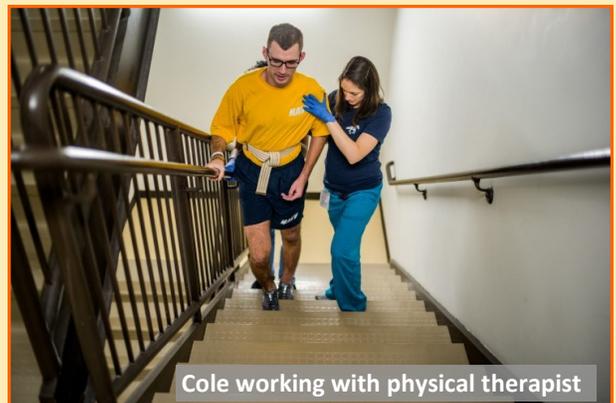
I will retire on January 1, 2020, after 30 years of service to AU Geosciences. If you have any thought to give me a retirement gift, please consider this - the only thing I want is to see that the Nick Hood Memorial Endowment is fulfilled.



Recovery! by Ron Lewis

Howard "Cole" Burton suffered internal injuries and brain trauma in the accident that claimed Nick's life and was in a coma for approximately 20 days while at UAB's trauma center. Although it was touch and go for a period of time, family and friends did not give up hope or stop praying. Once able to travel, he was moved to the Shepherd Center in Atlanta, where the story of his recovery is given as a feature story, "A Day in the Life of Cole Burton" <https://news.shepherd.org/a-day-in-the-life-of-cole-burton/>

Thanks to the excellent, state-of-the-art medical care he has received and the loving support of family and friends along with Cole's courage and strength of character, he is making an amazing recovery. Cole plans to return to the Department in the Fall of 2019 to resume his degree work.



Department of Geosciences Advisory Board by Jonathan Collier



GAB members at the beach during the spring 2019 GAB meeting in Galveston, Texas. Left to right: Jonathan Collier, Anne Hall, Goodney Zapp, Jochen Floesser, Jennifer Glidewell, Stephen Glidewell, Wesley Diehl, Tim Demko, Paige Walton, Andre Klein, and Herb Martin.

The Geosciences Advisory Board (GAB) continued to play an important role in the growth of the Department. Early in the year, the GAB formed the Student Career Assistance Committee (SCA) to help the AU Geoscience students find Internships and Co-op opportunities. That charge was expanded to include helping students make contacts for any type of employment opportunity, helping them build resume-writing and interview skills, and answering questions about career opportunities in our fields. These goals are designed to support the student career development efforts of the department's faculty.

In the first week of April 2018, the GAB held an open forum at the Department for any geoscience students, graduate or undergraduate. This forum consisted of short informal presentations by various alumni employed in geoscience related fields, to inform the audience as to what their jobs are, and how they found them. Mock interview sessions followed, to help students prepare for employment hunting in a safe and constructive setting. The spring meeting was held in Galveston, Texas (photo above) during which committee work progressed.

In October, the GAB held another Career Forum event at Auburn University, during which GAB participants talked about how they use their education, how they secured their jobs, and tips for students on how to get engaged in the profession. Once again attendance included undergraduate as well as graduate students. It was a very successful event, with 24 mock interviews, including environmental, oil & gas, geospatial, and general geosciences categories.

Board members continue their generous financial support of the Department. We fully expect to fulfill our goal of funding a \$250,000 endowment Fund for Excellence and have recently awarded our second financial student award to help bring minority students into the Department. We're actively growing -- we have more than doubled our membership since the GAB was founded in 2013.

We continue to pursue meaningful ways to support the students and faculty and are always looking for more Geoscience Alums who have a passion to give back. If you're interested in joining us, please do.

In conjunction with the fall meeting, the Department held an open-house featuring research laboratory exhibits and an anniversary celebration during which graduate students were in Halloween costumes. An oral presentation outlined the history of the department from its beginnings in 1968 until the present -- organized to mimic the geologic time scale; see the final section of this newsletter, which adds alumni memories of their time at Auburn. -- Editor



Board member Jochen Floesser during his graduate student days at Auburn. His Halloween party costume was meant to indicate that he was from southern ("hillbilly" "hat") Germany (the lederhosen).

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We are almost there!

The earnings from this permanent endowment will aid the Department of Geosciences in enhancing educational and research capabilities, recruiting exceptional undergraduate and graduate students, growing and enhancing the department's size and reputation, and maximizing employment opportunities for graduates.

NEXT: The Nicholas L. Hood Endowed Memorial Scholarship: see page 21.



Invest in the Geosciences at Auburn!

State funds and tuition pay only a small part of the costs to recruit and retain the best faculty and graduate students and support the undergraduate programs that are the hallmarks of the Auburn experience. Private funds sustain and enhance these extraordinary opportunities for students and faculty. The Department of Geosciences continues to provide the best possible education for our undergraduate and graduate students. Each year, private support provides the funding that helps support Auburn's margin of excellence. With our new Ph.D. program in Earth System Science, private giving is now more critical than ever. Please make your gift today via our secure website:

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We continue to welcome your gifts to any fund in the Department of Geosciences, and we hope you will consider any of the following funding priorities:

Geosciences Department: This unrestricted account provides the Chair with the most flexibility to apply support to the Department's most immediate needs, such as student and faculty travel, research, and equipment.

Geosciences Advisory Board: Our Advisory Board includes alumni, corporate, governmental, and community members who help support students, faculty, and staff in our department. The Board serves as a liaison with the geoscience business community and government entities to promote the interests of our department within Auburn University, the state, and beyond. The Board helps in our recruiting and retaining the most talented, motivated, and competent students and faculty by providing scholarships, grants-in-aids for research, CO-OPs, and internships, as well as support for our departmental seminar series and the GeoClub. The \$250,000 "Fund for Excellence" endowment is now nearly complete: we will most likely meet the goal before the Fall 2019 term begins. Now we turn our attention to the **Nicholas L. Hood Endowed Memorial Scholarship** (see p. 20). This new fund is designed "to establish a minimum \$25,000 endowment to award a \$1,000 annual scholarship to a deserving Geosciences student to ensure that Nick's passion for field studies will extend to future students in perpetuity."

Geology Alumni Endowed Scholarship: Provides scholarships for deserving undergraduate students in geology.

Cook Professorship: The Robert B. Cook Endowed Professorship recognizes excellent geology and geography faculty by providing competitive salaries and resources for research, travel, and professional development. Financial support from the Cook Professorship allows us to continue to attract and retain top-quality instructors and researchers. Recipients are exceptional individuals who have earned their recognition through continued outstanding leadership in research, instruction, and outreach.

For questions about creating scholarships and professorships, stock or estate gifts, specific programs, and suggestions on how you can support the Department of Geosciences, please contact COSAM development at the address below:

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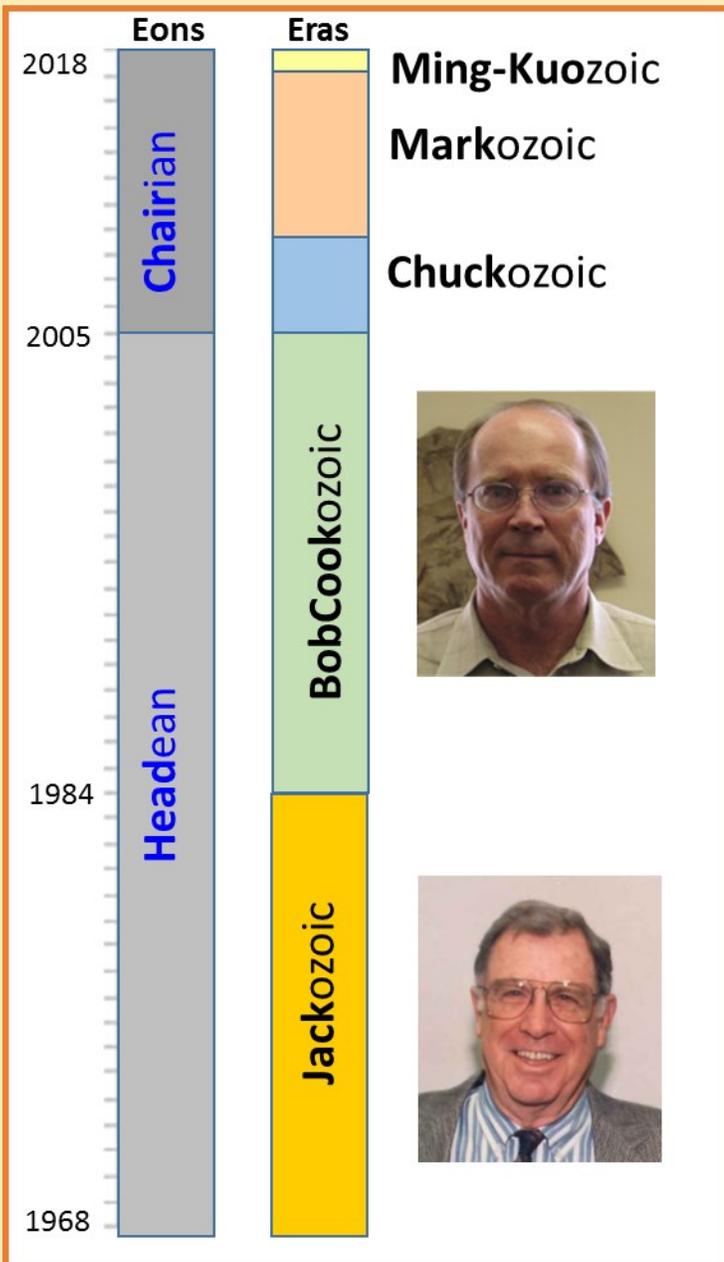
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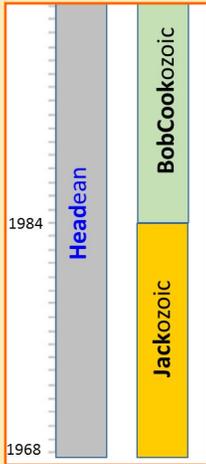


MEMORIES of Past Years 1968-2018

We can't resist the temptation to look back on the last 50 years of the Department's history as if it were geologic time. Just like the Earth, the Department's early years were tumultuous and uncertain. Long periods of time were delimited by the Department leadership: Jack Carrington served as Head for eighteen years, and Bob Cook for twenty one years, before the current switch to Chairs, who serve four-year terms. Thus the **Headean** Eon (compare Hadean) or PreChairian (Precambrian).

The current eon can be divided into three eras based on the Chairs: Chuck Savrda, Mark Steltenpohl, and Ming-Kuo Lee (think Paleozoic, Mesozoic, and Cenozoic). In the pages that follow, alumni and faculty share what it was like when they were here. We have come a long way, and we have a long way to go.





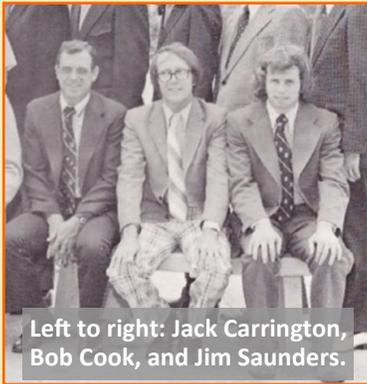
The Jackozoic Era

1968 -1984

Jack Carrington came from Birmingham Southern in 1967 to begin the Department of Geology. By the next fall, he had created a full-blown curriculum model even though there were only a few faculty members. The early days were characterized by a focus on undergraduate teaching with an emphasis on getting students into the field – in every class, including the intro courses! Faculty were expected to be in their offices from 7:45 a.m. to 4:45 p.m. in case students needed them. There was little expectation of

research, and no lab space in the Haley Center where we were housed as part of the College of Arts and Sciences.

In 1972, there were five faculty members in Geology, including the newly arrived **Bob Cook**. **Jim Saunders** was a student, as was **Sheila Arington**.



Left to right: Jack Carrington, Bob Cook, and Jim Saunders.

Faculty turnover was high; there were four paleobotanists – one after the other from 1968 to 1978 when **Bob Gastaldo** was hired. Towards the end of the era, the MS program was started in Geology, space was expanded somewhat and the budget was marginally expanded. People began to stay. The department received its first NSF grant under Carrington's leadership, and its first set of PC's were purchased and in place during his tenure as Head. For years there were only two telephones in the department. If a faculty member got a phone call, it was taken in the main office after being buzzed on a departmental intercom system.

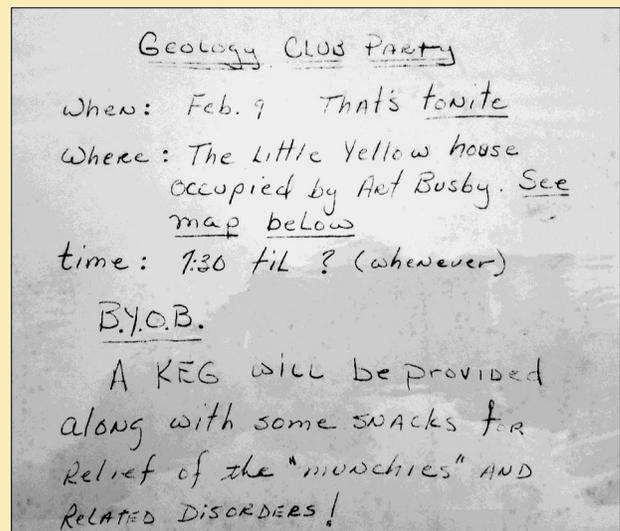
Jack expanded the department to ten faculty and implemented the first several GTA's in support of the new M.S. program. Through his wise insight, both **Eva Lilly** and **Sheila Arington** were hired early in this period.



Bob Cook:

There are things that stand out from those early years in the department. We had a rule that every class had a field component. That required renting large busses and going to five stops in the Auburn-Opelika area. It was fun but costly. We finally had to stop those huge trips because of the cost. We were on the 8th floor of Haley Center at the northeast corner. We had our two elevators near the offices and it was a constant irritation having to wait and wait for them. The campus was not pedestrian and it was a simple matter to drive around on what are now sidewalks and park in the many convenient parking lots, now buildings. The faculty had their own dining room with hot food line and cashier in the old student union building. Even though the University Club put up \$50K toward that building for the promise of that continuing service it dwindled to free desert and finally nothing, not even the private room. I began to realize that university promises can mean very little.

In 1974 Whites came out with the first discriminating metal detector. It passed by iron like it was not there. So, a college campus with many old lawns and many many dorms housing students who were not allowed to have cars (that came along in the sixties) seemed like a piggy bank of sorts to me. Auburn was a conservative place back then. So, where did students go to smooch and what happened to all those coins that were lost from their pockets during all the shuffling around. Well, go behind Cater hall and you will see a lawn that was apparently used to house lost silver dimes and quarters. We had a student who bought a detector also and he and I searched those lawns every evening after work for two years before anyone else realized what we were doing. By then of course the money had been found. It was a good hobby for a while.



*The best party of the year back then was the Halloween party. No costume, no entry. There were many great costumes. **Eric Woerner** and **Tony Gray** came as the Crude, Lewd, Nude, Dudes and had to be sent home; **Professor Burnell** came in only a trench coat, opening it late in the evening to expose maybe a hundred railroad flares taped all over him- a mad bomber. One student came as an air-*

plane propeller, very clever. I came as Fonzie's brother, Monte Rock the Third, Farrah Fawcet, one of Dolly Parton's boobs, and on and on. **Professor Gastaldo** came as a motor home made out of a refrigerator box. It looked good and so we put him in the back of my pickup truck, hauled him to the Coliseum parking lot that was at that time used for camper parking on football weekends (which it was) and he claimed one of the last spots, positioning the box/camper in the middle of the space and refusing to move. We had to protect him. Space in that lot was very dear back then.

There was a lake out at fisheries called the Governor's Lake. It was stocked with huge bass and catfish. Of course it was strictly off limits, heavily posted, and surely not some place you would go without an invitation. One of our students got wind of this and began to sneak in at night. It wasn't long before I was going through the woods with him to exercise the whoppers. We released every fish but I have never caught fish that large anywhere else. Once we decided that the place was so isolated that it would be no problem to go out there during the day. We got caught, of course, but not captured. In the mad dash through the woods I lost my fishing tackle and never built up to courage to go back and look for it, or to fish that lake again. My guess is that the present governor has no interest in fishing anyway.

In the early days the Department seemed to have a revolving door for faculty. Teaching loads were high, research

The best party of the year back then was the Halloween party. No costume, no entry. There were many great costumes. Eric Woerner and Tony Gray came as the Crude, Llewd, Nude, Dudes and had to be sent home.



space and equipment did not exist, tenure was almost impossible to achieve, and we had no graduate program. Some of the professors who spent time here in the early years were **Rolf Aadland, Jim Burnell, Ruth Stocky, Bob Pierce, Dan Womochel, Ray Christopher, Ron Taylor, Ed Gilbert, Ed Newnan, Nabil Saman, Greg De-Ratmiroff, Peter Salpas, Dave Whittington, Enid Bittner, Clayton Gardinier**, and a few others.

Sheila Arington:

I had the good fortune, though I did not realize it at the time, to join the Department of Geology in its early days. I was hired by Dr. Jack Carrington as a part-time student worker in the summer of **1974**. I had just completed my freshman year at Auburn and while this was not my first job, it did not take long to realize that there was something different about this job. Early into **1975** I started full time. There was little of what we currently call technology in the department; one telephone for 5 faculty members, no computers, just a few electric typewriters, no copy machines, just a mimeograph machine that required stencils and a can of purple ink. I wore the purple ink stains on my fingers like a badge of honor. When I joined the department, it had only been up and running about 6 years and the staff consisted of 5 faculty members and one other secretary, **Eva Lilly**. Everyone shared several small cramped offices on the 8th floor of Haley Center. During the Haley Center days, office supplies were not delivered to the office, so it was convenient to have the bookstore just a few floors below us. I made many trips up and down in the elevator to buy supplies.

There were no restaurants or dining facilities close by except for the vending machines in the basement lounge area. I could not afford the cost, so I brought my lunch most every day. My two favorite lunch spots were the Eagle's Nest on the roof of Haley Center or the lawn around the Eagle's Cage. Before the current open green space behind the bus terminals, there was a large parking lot that separated Haley Center from a large grassed area. And in the

center of the lawn was a large open cage that was the home to Auburn's mascot, our beloved eagle, War Eagle II. I really enjoyed eating lunch on days when the weather was nice and watching our beautiful mascot.

My main job duties were duplicating 100's of tests, handling reimbursements for travel and many of the day-to-day business of the Department and the professors. But there was another part of the job that I really looked forward to. I was responsible for arranging locations and arrangements for our annual picnics and meetings. But closest to my heart was the department Halloween Party--an annual celebration where the faculty and students would dress up and see who could outdo each other with the best costume. There are many great memories and friendships that were made during this celebration along with many other social and professional gatherings.



That's how I came to realize that this was not just another job. I suddenly found myself a part of a small band of passionate teachers and enthusiastic students that were more like a family than just a collection of instructors, students and administrators. Each supporting the other both academically and socially, I watched the

department grow under Dr. Carrington's leadership. The faculty steadily increased in numbers as the student numbers grew and soon we moved to the 2nd floor of Haley Center into a much bigger space. Eva and I finally got our own offices. We finally got desktop computers and the old office typewriters were replaced by the newest technology, including the new Xerox copy machine. No more purple fingers. Much needed and appreciated labs and research areas were built, and a new master's degree program was added. The increase in the labs and research required the hiring of a department technician. One of our own, Art Busby was the first, followed by John Simms and now Tony Hall.

I suddenly found myself a part of a small band of passionate teachers and enthusiastic students that were more like a family than just a collection of instructors, students and administrators. Each supporting the other both academically and socially, ...

Herb Martin

In 1975 when we arrived for our first classes in the Fall quarter (we were on quarters back in those days) the department was located in the southwest quad of the Haley Center, on the second floor. Dr Carrington was Department Head, and we had a pretty big group of majors moving through the department as a group. I'd guess we had 25-30 majors at the time, including several I still am in contact with - **Art Merkle, Ken Reynolds, Wally McCord, and Don Muth** in particular. Also in that class were **David Sibley, P.D. Wilkins, Ralph Bice, John Reece, David Brown** and lots of others who are slipping my mind....

The professors included **Dr. Bob Pierce** (who left to go back to oil & gas), **Dr. Sears, Dr. Bob Cook, Dr. Ed Pierce, Dr. Nabil Samman** (he was a little crazy), **Dr. Black** (he was also kinda crazy), **Dr. Ed Nunan** (who also went to oil & gas after a while), **Dr. Dan Womochel**, and **Dr. Bob Gastaldo**. Again, I am sure I am forgetting some, but that is quite a memorable group!! Even more amazing, both Eva and Sheila were there, as they remained virtually ageless for the next 35+ years!!

I recall a particularly memorable field trip over Spring Break, to the Knoxville area, Pisgah Nat'l forest etc. It was mostly a structural field trip. The night before we left, some of us attended a big ole keg party, and we brought our hangovers and leftover beer with us! Those were different days. There were some fun-filled nights in tents in the National Forest, and one particularly memorable group crash in John Reece's family cabin. Fun days! Our field experience back in those days was just in the Auburn area, where we learned basic field methods and then had a quarter-long field mapping exercise. In mineralogy, we used a flame-heat based method for mineral identification that was quite unique and a bit antique. But cool! **Drs. Carrington and Black** taught us how to breathe and yet continuously blow the heat onto the crushed mineral samples.

Wayne Holt

My time at Auburn was **1976 through 1981** and at that time we were on the quarter system. Jack Carrington was the Department Head and Dan Womochel was my academic advisor. We were a small department in Haley center with less than 70 students. There was no Masters program - strictly undergraduate studies. By the time I completed my undergraduate degree, the first Masters Degrees were being offered and about 8 students were enrolled. I did not pursue a Master's degree as I was tired of eating peanut butter, boiled eggs, Ramen noodles, and driving a 15-year-old, worn out, hand-painted Jeep Wagoneer named "The Animal". The University had about 15,000 students and the town was about the same size. In fact, in my opinion it was a perfect set up and easy to get around in. The Department Halloween parties were a ton of fun, and getting to watch Auburn upset Alabama in sports was a treat. While at Auburn, for my academic quarters, rebuilding old houses in Opelika helped me earn money, make lots of friends, and taught me carpentry/electrical skills that have served me well throughout life.

As a Co-op student, I attended school one quarter and worked the next. My Co-op employer was Reese E. Mallette Associates, a mining Geology/Engineering Company in Birmingham. There, I lived in the basement of my sister and brother-in-law's home in East Lake. The Co-op program prolonged my graduation date 1 ½ years, but it added practical experience to an excellent academic education. **Herb Martin, Art Merkel, Henry Brooks, Laura Waters Folse, Roberto Santo Thomas, Ken Tuck**, and many others attended at the same time. My roommate was **Tim Cook**, who later went on to head up the largest company in the world: Apple Inc. ... just wish some of his intelligence had rubbed off on me! Late night labs with my fellow students was probably the most fun academic undertaking, with Optical Mineralogy being the late night extravaganza.

Eric Woerner

I was one of the first graduate students in the Department. I graduated in 1981, but I had an ROTC scholarship from undergraduate school at the Univ. of Tennessee ('79) which obligated me for five years of active duty. I entered active duty at Ft. Belvoir, VA, in August 1981 and went to various army schools including Engineer Basic and an advanced course in topographic engineering, among other courses. I did a three-year tour as a geologist at the Waterways Experiment Station, which is the largest R&D laboratory in the free world. I conducted alluvial mapping in the Mississippi River Valley and wrote foundation reports on locks and dams under construction on the Red River.

After spending five years in Hawaii as a topographic engineer, I had a final assignment as District Geologist for the Army Corps of Engineers, where I did risk assessments on dams and levees as a part of a national inspection team. I was a registered professional geologist (PG) in three states. Pretty good assignments for an army officer.

After years of extensive traveling, my suitcase handle broke, and I retired five years ago after 12 years as an active army engineer and 20 years as District Geologist for Vicksburg Engineer District.

I married Viki Leach Woerner, who was the only female Aubie (1980), when the first Aubie mascot was born. Viki worked as a student assistant to **Sheila Arrington** and typed my MS thesis for \$1 a page -- I thought I was being robbed! There were no computers back then, and the IBM Selectric typewriters with correction tape were just out.

John Simms

The first person I met when I came into the department was **Eva Lilly**. My advisor was a young **Bob Cook**. I may have the distinction of being the only or one of the only undergrads who was in the department at some point when each of the Waters' (**Johnny, Rory, and Laura**) were there. The neat thing about being such a small department at the time was the opportunity to get to know all the students, faculty and staff on a more informal basis. I met **Sheila** when she was a work-study student with the Department. She, Eva and I were probably the only ones who were in the department when Bob Cook turned 30, 40, 50 and 60. I have too many memories of each of my professors to share. ...I thank all of those who helped me along through all my years as a student and staff member. In closing, I remember a grad student from another department enrolled in our GIS class when she said something to the effect of "I like this department. You are all always laughing and having fun!"

David King

Since I arrived here in September 1980, many things have changed. Our first Department Head, **Jack Carrington**, told me that faculty are here as teachers first, and we do research when we have the time. Not so anymore, I should point out. From 1980-2000, we taught on the quarter system, but starting with Fall 2000, semesters replaced the old system. In the quarter system days, I taught many sections of introductory geology (internal and surficial), engineering geology, stratigraphy, and advanced stratigraphy. With the semester system, I have taught many other classes including physical and historical geology, planetary geology, dinosaurs, facies analysis, sequence stratigraphy, and classes outside geology (Human Odyssey, Concepts of Science, and Sustainability). I have worked on several kinds of research, both basic and applied. Initially, I was interested in sedimentology and sea-level change, and focused on the Alabama Coastal Plain. Then, I became interested in the same sort of thing but in the Coastal Plain of Belize. I also became interested in cosmic impacts in Earth history, which led me to the KT (Cretaceous-Paleogene) boundary and to impact craters like Wetumpka, Flynn Creek, Chesapeake Bay, and Chicxulub. I have taught about 8,000 students over the years since fall quarter 1980. I have supervised 32 Masters' students and now have one Ph.D. student.

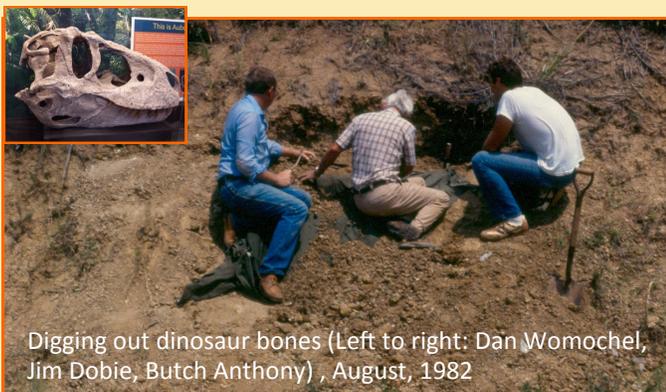


Richard Esposito B.S. 1984 M.S. 1987	David King, Jr. (Asst. Prof.)	Jerry Wiley M.S. 1987	Steve Castleman 1985-1987	Michael Skotnicki B.S. 1983 M.S. 1985
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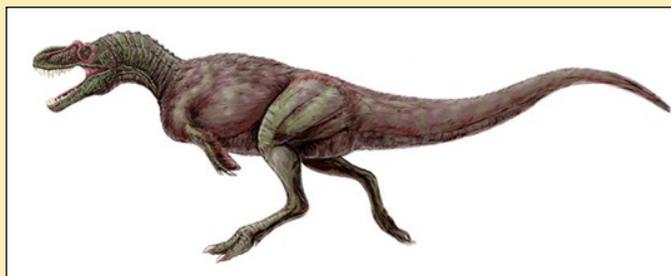


I like this department. You are all always laughing and having fun!

I think that my three most interesting accomplishments over the years at Auburn have been: finding the most complete eastern North American tyrannosaurid dinosaur (Appalachiosaurus) (1982); confirming that the Wetumpka structure is in fact an impact crater (2002); and my extensive revision and co-authorship of the widely used historical geology textbook, *The Earth Through Time* (11th edition (2017), with Hal Levin). There have been many other things, of course, but these three things stand out in my mind. My favorite thing about working as a faculty member at Auburn has been my contact with students and seeing them progress in their understanding of geology. It is often said (and I know this to be true): if you really love what you do, you never really work a day in your life.



Digging out dinosaur bones (Left to right: Dan Womochel, Jim Dobie, Butch Anthony) , August, 1982



Emmert Beers

I graduated from AU in 1982. **Dr. King, Dr. Womochel, Dr. Gastaldo, and Dr. Cook** were some of my favorite professors. I remember Dr Womochel took our class on an overnight camping/field trip to Little Stave Creek in southwest Alabama for a fossil hunting trip. I think his background was part Arizona cowboy, and he cooked some awesome sourdough bread in a dutch oven for us. I also remember Dr. Gastaldo taking a group of us to a coal mine in the Brookwood area and finding awesome fern fossils. Dr. Cook had lots of cool "Indiana Jones" type stories from his time exploring in South America, though I don't remember him ever using a bullwhip. I have many good memories from my time at AU, and my Geology degree has served me well in the oil business and environmental consulting.

Mike Gibson

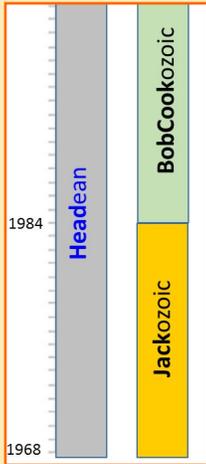
I arrived in Auburn in the Spring quarter of 1981 after graduating from William and Mary in 1979 and then spending a year as a hotel manager in Williamsburg. The move was to completely change my life. Great memories come to mind about my time at Auburn.

Graduate stipends were pretty low during these early years of the M.S. program at Auburn, and I desperately needed money if I was to continue my coursework (I can honestly say these were the poorest years of my life). **Bob Cook** came to my rescue (thank you, Bob!), first by getting me a U.S. Steel scholarship for a year and then by employing me as a field student in his work with General Shale and then Callahan Mining; the later involved exploration for tin in the Rockford, AL, area and gold in Georgia. Most of my second year at Auburn was spent living in cheap hotels for days on end that merged into months with **Tim Frinak** and **Art Busby**. So many snakes and scorpions and hours a day hauling buckets of sediment to creeks to pan. So many practical jokes the graduate students always pulled. A favorite was to put auto-foolers on the professor's car engines to make the car smoke and pop when the engine started. Then there were the marathon Uno games at **Bob Gastaldo's** and the Halloween parties (Gastaldo made a very convincing woman one year!).

For the 1983-1984 year, I had the great fortune to have my first real paleontologist job as an Instructor in the Auburn department after the departure of **Dan Womochel**. I taught Physical Geology, Historical Geology, and Paleozoology that year. Not only was I a new faculty member, but I had just gotten married during the summer between finishing my thesis under Bob Gastaldo and starting my instructorship. I met Edie while teaching labs at Auburn (but we did not start dating until she had finished the course – kept it professional!). My wife Edie and I left Auburn in August of 1984 to begin my Ph.D. at the University of Tennessee, just as **Ron Lewis** was beginning his faculty position. Auburn had given me a strong foundation that served me well... and so many memories!



Left to right: Art Busby, Tim Frinak, and Mike Gibson in 1983 while working for Calahan under Bob Cook. Note the cow skull tied to the grill of the field vehicle.



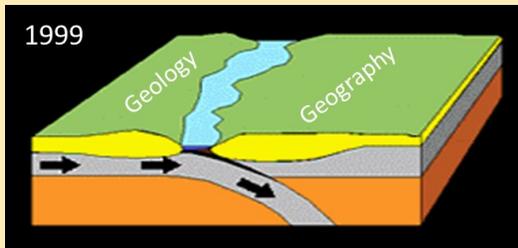
The BobCookozoic Era



This era was a time of increased emphasis on research and external funding as the Department was compared to other COSAM departments such as physics and chemistry.

Tectonic shifts occurred in the early part of the era. In 1985, Geography moved into the Haley Center (it was later to move to Tichenor Hall in 1994, and back to Haley again in 2006). Also in 1985 Geology faculty offices were moved to Petrie Hall, which provided research lab space for the first time.

Geology became part of the newly formed College of Sciences and Mathematics (COSAM) in 1986. A continent-continent collision took place in 1999 when Geology and Geography merged to form a single department.



A catastrophic subduction of the department was averted by Bob Cook when it was proposed that geology be removed from the university's curricula as a core science; this would have resulted in the mass extinction of graduate student support.

The size of the faculty increased with the origin of Ron Lewis (1984), Chuck Savrda (1986), Mark Steltenpohl (1989), Jim Saunders (1992), Lorraine Wolf (1993), Willis Hames (1994), Ming-kuo Lee (1995), and Ashraf Uddin (1999), who replaced Bob Gastaldo.

The field methods course begun by Jack Carrington was continued by Mark Steltenpohl, and the summer field camp course began to include a western-states component in 2002 with the help of Chuck Savrda.

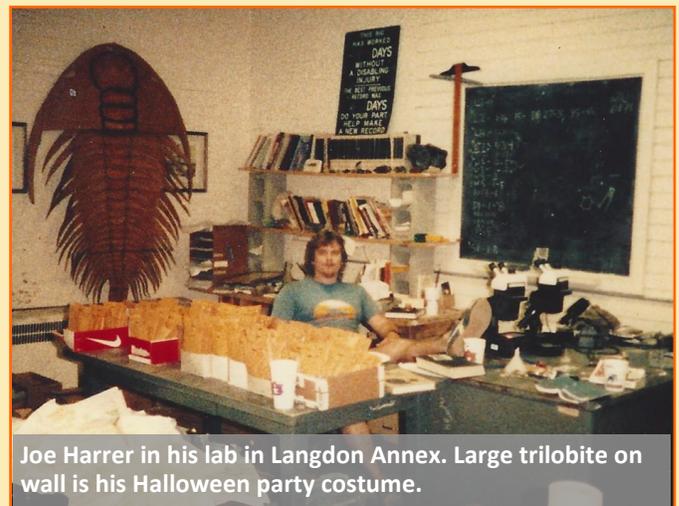
Near the end of the era (2000), the University switched from the quarter system to the semester system. The Department used this occasion to revise the graduate courses in Geology. Only one course was required of all students: a professional development course called Geocommunication.

Ron Lewis

*I came to AU in the fall of 1984 from Oberlin, Ohio. I was invited by the chair of the faculty search committee, **Bob Gastaldo**, and the new Department Head, **Bob Cook**. I stayed in the Heart of Auburn Hotel across from Funchess Hall. There was no Sam's, no Tiger Town in Opelika. There was an Italian restaurant (Denaro's) across from Toomer's drug store. We bought our rapidograph pens at J&M. Bo Jackson was amazing on the football field.*

*The Department was housed in the second floor of Haley Center; my office didn't have any windows. We had a Master's Program in Geology. **Joe Harrer** was my first graduate student; he had already started a project on foraminifera of the Clayton formation under the direction of **Rolf Aadland**. Other faculty members included **Enid Bittner** (structural geology), **Peter Salpas** (geochemistry), **Clay Gardinier**, and **David King**. David and I are the only current teaching faculty who date from those days.*

A few years later, I served on a search committee to hire a faculty member in sedimentary petrology; David was chair of the committee. We had an application from a young man from California. I understood that we were looking for someone in diagenesis (what King called "a tube man"), so I said this fellow did not fit the bill as he studied trace fossils. David said that he looked so good on paper that we should invite him in anyway. I remember the guy's interview talk where he showed a photo of himself in the field, and he was pretty thick around the middle; he said it was a "sympathetic pregnancy" as his wife was pregnant with their first child at the time. We hired him.



Joe Harrer in his lab in Langdon Annex. Large trilobite on wall is his Halloween party costume.

Halloween parties were a major departmental event at the time. My wife (Nancy) and I went as the Reagans during his presidency (we already had the first names).

*I took a short course in March 1986 on the geology of San Salvador island in the Bahamas. In June I took students from the Department in order to teach a field course on carbonate sedimentation. Participating students were **Mark Peebles**, **Rick Esposito**, **Randy Hunt** (graduate) and Jack Carrington's son, **Rob** (undergraduate). (In March 2016, thirty years later, I took a student group on an anniversary tour of the island.)*



Left to right: Rick Esposito, Bernie Storr, Randy Hunt, and Ron Lewis. First AU trip to San Salvador, 1986.

Chuck Savrda

I was hired in the Department in the fall of 1986, despite the fact that, when Sheila Arington, on behalf of Department Head Bob Cook, called to invite me for an interview, I asked her "Where in Texas is Auburn?" Maybe that is why I was hired at an annual salary of \$25K and with a meager start-up account of \$3,000.

I arrived at AU shortly after the Department (then just Geology) moved from Haley Center to Petrie Hall and just before the Department was transferred from what was the College of Arts and Sciences to the newly formed College of Sciences and Mathematics (COSAM). I had to wait a year or two before I had a laboratory, which finally came when the Department gained control of more space in Petrie Hall. I eventually set up my lab in **Chris Chalokwu's** old office, but it took another few years before lab counters, cabinets, and a sink were installed. In my early years, AU was still on the quarter system and I, like most of my faculty colleagues, taught two courses, five days a week, nearly every term. Research infrastructure was poor and teaching loads were high. But, we prevailed!

Through the late '80's and mid 90's, I had the pleasure of working with a number of fine students, including **Rick Huchison** (my first MS student), **Susan Abston**, **Kate Ozalas**, **Mike Smith**, and the Demopolis Chalk cyclicity boys, **Jeff Warren** and **Rob Locklair**.

In 1995, **Bob Gastaldo** and I were recruited to serve as Co-Editors of the SEPM journal PALAIOS. Little did we know that our stint as Co-Editors and members of SEPM Council would overtake our lives for six years. These were the early days of the internet, when electronic mail consisted of using a line-command program called Pine and all other functions that we consider normal, today, were still done using the US Postal "snail mail" Service. Our tasks were to evaluate and decide upon acceptance or rejection of contributed manuscripts. However, daily secretarial work—the tracking of reviewers and manuscripts, post-production efforts, etc., were superbly handled by Elvira Gastaldo who occupied a small area outside of Bob and Ron's office. She did a great job and we kept her on for those six years, despite that fact that she was sleeping with one of her bosses. During these PALAIOS years, I enjoyed working with students **Judd Mahan** and **Ricky Schaeffer**.

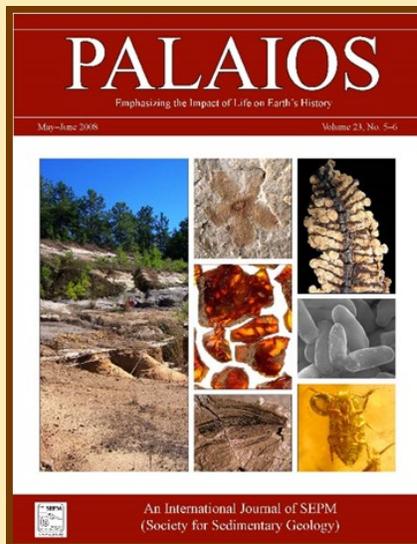
I stayed in the Heart of Auburn Hotel across from Funchess Hall. There was no Sam's, no Tiger Town in Opelika. ... Bo Jackson was amazing

In 2002, Mark Steltenpohl and I co-taught our Summer Field Camp "out west" for the first time, with students **John Counts**, **Gabe Kassos**, **Stephanie Park**, **Loren Petruny**, **Will Sitz III**, and **Jamey Turner**. Mark and I ran this trip "by the seat of our pants," and mapped key field areas along with the students.



Left to right: Loren Petruny, Jamie Turner, and Stephanie Park, 2002.

Toward the end of this era, during the early 2000's, my research efforts diversified. My students, including **Trent Hall**, **Rick Urash** and **Devi Prasad Udgata**, continued work on ichnosedimentologic applications in sequence stratigraphy and trace fossil preservation. However, fossil-lagerstätten also became a focus, thanks to two students, **Sean Bingham** and **Terry Knight** (supervised by **Ron Lewis**) who discovered the now somewhat famous Ingersoll shale. These two fellows were responsible for documenting the sequence stratigraphic and paleoenvironmental contexts, biotic composition, and taphonomy of this thin but extraordinarily fossiliferous claystone unit in the Cretaceous Eutaw Formation exposed near Phenix City, Alabama. The project on the Ingersoll shale biota -- including a diverse fossil flora, amber with inclusions, and fossil feathers, was likely the most fruitful one during my time at Auburn.



Of course, other great things have happened since the mid-2000's. But, I will wait to reminisce on these when we put together the 100th anniversary edition of the eGeotiger. I will be 111 years old at that point and, thus, should have a lot more to report.

Mark Steltenpohl

I joined the Department in August **1989**. I think the faculty were attracted to me for my background in Alabama geology, with my B.S. and M.S. degrees from that other school across the state, and I had been working at the State Geological Survey of Alabama for three years when I interviewed for the job. Back then, faculty were mainly hired to teach, so we only had a little time to dabble in research. I taught Physical Geology, Structural Geology, and Field Methods. We didn't have a summer field camp course back then, but with time the field methods course evolved into GEOL 3650 Field Camp. Initially, I developed several field exercises from some of those that I had been taught as an undergrad at the UoA or later GTA-ed as an M.S. student there. I also incorporated week-long field exercises in the TN, NC and GA Blue Ridge based on my PhD work at UNC-Chapel Hill. Later, once Dr. Savrda began co-teaching field camp with me, we developed our "out-west" exercises.

Some of my fondest memories are those times with students, especially working closely with them 24/7 in the field; some of our students had never been camping or traveled outside of the state. Later, as universities across the US evolved into a more business-style of administrative operation, we too were required to become more strongly immersed in research in order to secure external sources for funding. I always appreciated the flexibility that I was provided to conduct research in our department. I enjoyed maintaining two research programs: one in the southernmost Appalachians and one in the arctic Scandinavian/Greenlandian Caledonides. Summers were always a busy time for me. After teaching field camp, I would immediately leave for Norway with anywhere from one to four students to get in a field season there. I'm sure my family paid a price for this but my wife is a geologist too, and it's an understood fate of a field/structural geologist.

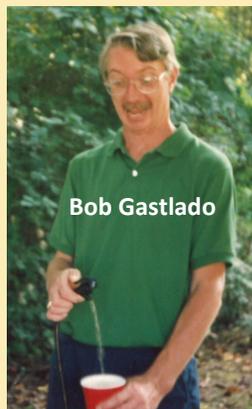
Most of the students who went with me to Norway had never been on a plane before, and watching them immerse into a new culture, take in the midnight sun, and the northern lights were great experiences for me. I remember **Steve Van Winkle** speaking "special English," using a very loud voice and many hand gestures, and after a month or so he oftentimes unwittingly launched it on me. **Jonathan Grimes** flagged down a couple teenagers skiing on a fjord one night, and having donned one of their wet suits he spent a half hour with them hooting and hollering in exhilaration. **Wes Buchanan** made blood-curdling cries as he took a six-second bath in an icy lake in East Greenland. And in Alabama, **David Keefer** once bounced a 3-lb crack hammer off of a rock to delicately leave a perfectly circular bruise on his forehead that lasted about a week. And **Wes Sterling** very nearly lost his ability to procreate when he decided to attach a bike inner tube to two trees and attempted to launch a melon across Lake Martin... Cherished memories of the department also include **Sheila Arington** and **Eva Lilly**, who were so welcoming to me and my family throughout our times together in Auburn. Tailgating memories, particularly at Petrie Hall are cherished too. All of the alums dropping by, many simply passing by happen-chance – what a hoot!



Mark and Laura as they were leaving Tuscaloosa



Left to right: Chuck Savrda, Betty Cook, Mark and Laura Steltenpohl, and Peter Salpas



Bob Gastlado



David Keefer

After Mark Steltenpohl, faculty members were added in rapid succession — one each year from 1992 to 1995.

Jim Saunders 1992 (91?)

Lorraine Wolf 1993

Bill Hames 1994

Ming-Kuo Lee 1995



Bob Fousek

I came to Auburn in 1993 at the age of 47 to pursue a masters degree in geology. Bob Cook, Department Head, was my major professor, and the faculty was much smaller than it is today. The ones I remember being at Auburn during my time, in addition to Bob Cook, were Chuck Savrda, Mark Steltenpohl, Jim Saunders, Ron Lewis, Chris Chalokwu, David King, Bob Gastaldo, and Lorraine Wolf. I was immediately impressed with the camaraderie between students and faculty. I have many fond memories of parties, afternoon beer with lots of lies that got better with more beer, and the Steltenpohl's proclivity for sneaking into the party hosts bedrooms and tying their underwear into knots.

I graduated in 1996 and worked in industry for a few years and than returned to Auburn in 2000 and started a consulting company that caters to the mining industry providing a range of services that includes supervising drilling programs, geologic mapping, petrographic services, greenfield site location, expert witness testimony, and a host of other services.

I have been fortunate to maintain a strong relationship with the Department over the years to include afternoon gatherings to drink beer and tell more big lies. In 2008 I was honored to receive the Outstanding Alumni Service Award from the department. In 2013 I worked with Mark Steltenpohl to create the Department of Geosciences Advisory Board and was honored to serve two terms as Chair.



Bob Fousek being presented the Outstanding Alumni Award at a reception in Fall 2008. Bob was recognized for his long-standing advocacy of the Department and its students. Left to right: Mark Steltenpohl, James Thomka, Greg Dyer, Bob Fousek, Lee Beasley, Lorraine Wolf, Kevin Bogdan, and Thomas Key.

LORRAINE WOLF

*In 1993 I made my way to Auburn from Washington, DC, where I was working at the National Research Council after a post-doctoral stint with the Air Force Geophysics Lab in Boston. My husband and I were seeking to land in the same town with two careers, and Auburn offered this. It took a bit of adjusting, but with supportive colleagues and a guiding hand from our Department Head, **Bob Cook** (who was equally adept at wacking you with that hand when called for), I settled in for the long haul.*

*My fondest memories are the ones that make me laugh: the first trip to Wetumpka to scout out a gravity survey line with **Chuck Savrda** when we ran into a couple of territorial canines and Chuck handed me the shovel and hid behind me (or maybe it was the other way around); our trip to Arkansas with **Jonathan Collier** who could literally carry every piece of our equipment simultaneously (I was convinced his mother was an octopus); the Halloween party where **John Simms** dressed up as a punk rock star complete with the nose ring, bald head, and tight pants (very scary in many ways); the time the geophysics class was invited by **Bob Fousek** to do a field survey and **Todd Grant** missed it because he was stuck behind an overturned chicken truck and was frantically trying to capture runaway chickens (he's a vegetarian); and lastly, the seismic noise survey with **Kelli Hardesty** in Arkansas that generated too much noise from young men in trucks who were interested in striking up a conversation with Kelli.*



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Kelli Hardesty in the field

*My fondest memories are the ones that make me laugh: the first trip to Wetumpka to scout out a gravity survey line with **Chuck Savrda** when we ran into a couple of territorial canines and Chuck handed me the shovel and hid behind me ...*



Bill Hames (center) introducing ANIMAL to Art Merkel and Herb Martin in Petrie Hall.

Ming-Kuo Lee

My first job after receiving my Ph.D. (Univ. of Illinois, 1993) was with a major oil company. It did not last long as crude oil prices at the time hovered around \$10/barrel. I started looking for stable university jobs everywhere with more academic freedom. My academic career began with a Visiting Assistant Professor position at Temple University in Philadelphia. I first met Dr. James Saunders when he interviewed for an Endowed Professor position at Temple. He showed his loyalty to Auburn and did not accept Temple's job offer, but we got to know each other, and this started our 20+ years of research collaboration. In 1995 Jim was able to convince Dr. **Bob Cook** (as Geology Department Head) and the rest of the faculty (including Drs. **Savrda, Steltenpohl, Lewis, King, Hames, and Wolf**) to hire me as an Assistant Professor. During our house-hunting trip after the interview, Bill Hames kindly offered to share his house (owned by Mark Steltenpohl), along with his lovely cat (I cannot remember her name), for me and my wife Wendy. Hames' cat showed her southern hospitality by knocking on the door and keeping us company all night long. Wendy loved the town -- we then settled in Auburn and you know the rest of the story.



My first research project at Auburn was funded by the American Chemical Society and Culberson Sulfur Mine. AU Geology alumni Joseph Crawford offered a summer internship to my first graduate student, **Daphne Williams** (MS, 1997), in west Texas. After Daphne, three more graduate students continued that long-lived project for their thesis research until sulfur and



gas prices crashed in the late 90s. I used my start-up (yes, there was such a thing in the 90s) to buy a SGI desktop supercomputer still operated on Unix system. The computer produced many research articles for 20 years, and sometimes I think it should be awarded tenured status. I kept my SGI baby until 2016 when the department was relocated from Petrie Hall to the Coliseum.

As a boy who grew up in Taiwan of course baseball is my favorite sport. I remember Dr. Cook kept bragging about his pitching skills, almost making it all the way to the big leagues. I was awarded the Robert B. Cook Endowed Professorship in 2010 -- it was a great honor for me as Bob carried the Department on his shoulders for decades. Yes, the department survived well and is now moving forward with a new Ph.D. degree program starting in 2018 -- our 50th anniversary year. War Eagle!

Kyle Rhoderick

My time at Auburn as a Geology major made a lasting impact on my life and prepared me for a career that has taken me around the world. I will always be grateful to the great faculty who shared their knowledge with us.

Below are a few little highlights!

Entry level classes in Haley Center: **Chuck Savrda** told the class, "Even if we don't major in Geology, at least we could be entertaining on road trips as we passed by road cuts!"

Mark Steltenpohl, stereonet, and the basement of Petrie Hall.

Jack Carrington and a plane table and Alidade mapping campus during summer geologic field methods class.

Chuck Savrda and eolian features and ripple marks in sedimentology.

Chris Cholokwu teaching igneous petrology and making a profound impact on me.

Field Trips to Mt. Cheaha with **Mark Steltenpohl**, structural geology, mylonitic fabrics, campfires, guitars and great times with classmates..

Jim Saunders, Geochemistry and Sleeper Deposit gold samples!!!! Wow!

Robert Cook lighting the fire in me on Economic Geology that still sticks with me today....the idea of finding the metals and materials that make our modern world possible is the "why" for my profession.

Last but not least, **Ron Lewis**, Paleozoology and paleobotany. San Salvador, crinoids, scuba tanks, and one of the best weeks of my life -- diving, learning, exploring and having an absolute blast!

I was awarded the Robert B. Cook Endowed Professorship in 2010 -- it was a great honor for me as Bob carried the Department on his shoulders for decades.

Charlie Waltman

First, I'd like to thank my advisor Dr. Bill Hames for his guidance and recommendations during my time at Auburn. There is so much to say- how can I start? Thank you, Bill.

My story began while I was studying at Virginia Tech, under the supervision of Bob Tracy, who coincidentally was Bill's mentor as well. Dr. Tracy knew I was eager to pursue a Master's degree, and Dr. Hames had recently secured funding from NSF for a multi-year field study in Norway. I jumped at the chance. That summer, I received notice while at field camp in New Mexico, that I was accepted at AU! What a fantastic way to learn that you would be working with top-notch hard rock geologists! I was a 'hard rocker' – metamorphic assemblages and pegmatites please!



I travelled to the Lofoten Islands in Norway during the summer of 1996. I couldn't have been happier! Bill travelled with us for the first week, showing us how to navigate the way ahead. I really appreciated learning how Nutella on fresh bread made the long days better! Well, my field partner left abruptly due to a family emergency. I was left alone in a foreign country, living somewhat remotely in a tent above the arctic circle! Luckily, the folks in and around the Lofoten Islands were super-friendly and helpful. I walked to town once a week for supplies and a bed at the hostel, and stopped by the post office -- due to the delay in receiving mail, my field partner's wife had sent care packages in a chain -- I continued to receive these packages of coffee and chocolate for weeks!

During the summer above the arctic circle, there are 24 hours of daylight. I regularly found myself at the outcrop at 10 p.m.! The time really didn't matter. In fact, when I was back in town, people would stop me and ask how things were going because they heard my rock hammer last night. Oops! It was kind of fun being a stranger but a celebrity of sorts in a small fishing community. People knew I was a student and helped when they could.

I defended my thesis in 1997; it was a dual-study of trace element geochemistry and geochronology of metamorphic rocks in some of the most deeply subducted rocks

in Norway. This work, alongside of the other courses at AU, prepared me for the future as a geoscientist. I really enjoyed our trip to the Bahamas with Dr. Lewis (of course), camping with and helping the undergrads on field trips, leading the structural geology labs, and enjoying the camaraderie with fellow grad students. I was the president of the Geology club and kept up the fine tradition of the spring cookout and especially the Halloween barn party.

Fast forward 21 years: We live in Denver, CO, and I work in the petroleum industry. My wife and I have been married for 13 years, and we have two budding geo-kids. We love to go geocaching and camping. I'm an active Scout leader as well. So, in closing, I'd like to give thanks to AU, and shouts out to my fellow graduates -- many of whom I am still connected to and some not. If not, let's connect! My contact info is Charlie.Waltman@gmail.com War Eagle!

Sharon Browning

I came in the fall of 1998 as an undergraduate student. As a single parent, I was concerned that I might not be able to fulfill the requirements, especially when it came to class field trips with an 18-month-old. What I found was a department who fully supported my success- including **Ron Lewis, Chuck Savrda, James Saunders, David King, Ming-Kuo Lee, Lorraine Wolf, Bill Hames, Bob Cook, and Mark Steltenpohl, and Shelia Arrington**. We were in Petrie Hall at the time, across from the Haley Center and in front of Jordan-Hare.

I completed my undergraduate degree in 2000, then went on to work with **Lorraine Wolf and Ming-Kuo Lee** for my Master's thesis, graduating in 2003. The 9-11 attacks occurred during my time at Auburn. I was a TA in the physical geology lab at that point, and we were scheduled to teach igneous rocks that day. I did not see the towers fall on TV, but I heard the radio announcer (Tom Brokaw?) describe the scene as I was driving down College Street on the way to class.

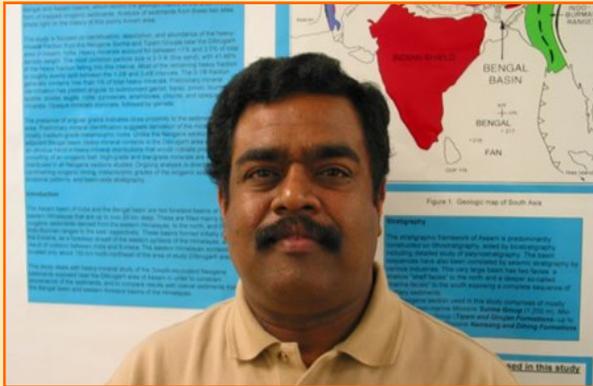
My favorite memories are attending the 2001 Auburn-Florida game with my office mate, **Stephanie Mager** – we won the game 23-20 while Florida was ranked #1 in the country and still coached by Steve Spurrier. Towards the end of my time at Auburn, the Department acquired a cast of a T-Rex skull and placed it just inside the entrance of Petrie Hall. My daughter, who was 4 years old at this point, would close her eyes as she passed "the monster."



Stan with Chuck Savrda after having been stolen in 2005 and recovered by the Auburn police department.



Phil Chaney
1998



Ashraf Uddin

I joined the department in the fall of **1999**, after **Bob Gastaldo** left to join Colby College, ME. Both **Ming-Kuo Lee** (who was on a sabbatical at the time at FSU) and **Bill Hames** were instrumental in my joining Auburn. **Bob Cook** was the Department Head at the time. **Eva Lilly**, **Sheila Arington**, and **John Simms** were in the main office. Auburn University was on its last term under the quarter system, and Geography was about to join Geology. In that Fall quarter **Bob Fousek** (AU alumnus) took my family to an Auburn-UF football game. As I was coming from FSU, remembering the serious rivalry between UF and FSU, I put on a Seminole (FSU) t-shirt under my jacket. Auburn actually won that evening, although Auburn was an underdog at the game!

I visited NSF in the summer of 2001 where I found out I received my first NSF grant. I was actually thrilled to be awarded several NSF grants from 2001 to 2005. Trent Godwin and I went to the field in northern Bangladesh around the Christmas holidays of 2001, and I still remember when both of us crossed the border to India without any passport to collect samples from the oldest Paleogene sequences -- the border patrol guards of both countries were chasing us! We safely returned to the right side of the border, and I am sure Trent would still say that was the most exciting part of that field trip! The following year, I went to Assam, NE India. When I landed in Dibrugarh airport, a guy welcomed me who could not speak English but handed me a piece of paper which said he was appointed by the government of India to protect me. He showed me his gun inside his shirt. I still remember he was very helpful during that trip and actually assisted me (not with his gun) by carrying Paleogene silicified sandstone samples back to the field vehicle!



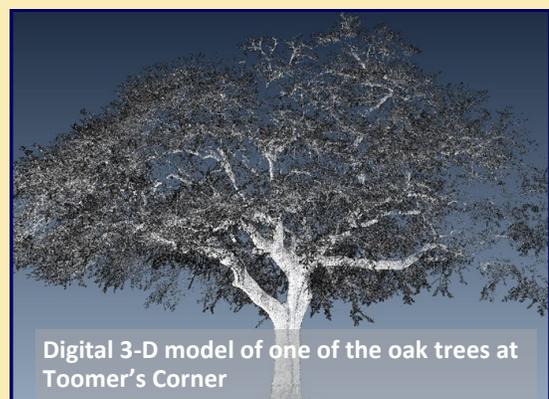
Auburn's first IBA team: Left to right: Dr. Ashraf Uddin, Jonny Prouty, Iftekhar Alam, James Markin, Ross Tucker, and Suraj Bajgain.

We started our first competition of the Imperial Barrel Award (IBA) in 2011. I still remember our five students did an excellent job by putting Auburn on the map and showing the path to success.

The IBA teams of 2012, 2013, 2014, 2015, 2016 and 2017 were also instrumental in paving the way for future success. The most recent students of IBA 2018 made an excellent presentation, which allowed Auburn to be placed at the competition. We surprised many at the audience in Anadarko where the only sound in that room was coming from our slapping hands giving each other high fives! The team of 2018 thanked all our IBA team members since 2011.
War Eagle!

Luke Marzen

I work with the latest geospatial technologies to aid in my research. After the 2010 poisoning of Toomer's Oaks, I used a ground-based LIDAR system in order to help digitally preserve a 3-D model of the Oaks. This led to an interdisciplinary grant through the US Forest Service and the investigation of tree metrics and urban forests.



Digital 3-D model of one of the oak trees at Toomer's Corner

2018

Chairian

2005

1984

Headean

1968

The Chuckzoic Era 2005 - 2010



This marks the beginning of the **Chairian Eon**, with Chairs serving a maximum of two 4-year terms. The departmental library in Petrie Hall was converted to a conference/teaching room, and the old conference room was transformed into graduate microscope lab (later it became the much-needed student lounge).

Faculty committees were revised under the model of “shared governance.”

Zeki Billor joined the Department in 2007 and began support activities of the Auburn Noble Isotope Mass Analysis Laboratory (ANIMAL) under the direction of **Bill Hames**. **Haibo Zou** was added to the faculty to replace **Bob Cook** in 2008, and a second mass spectrometer was added.



Zeki Billor in the ANIMAL lab in Petrie Hall

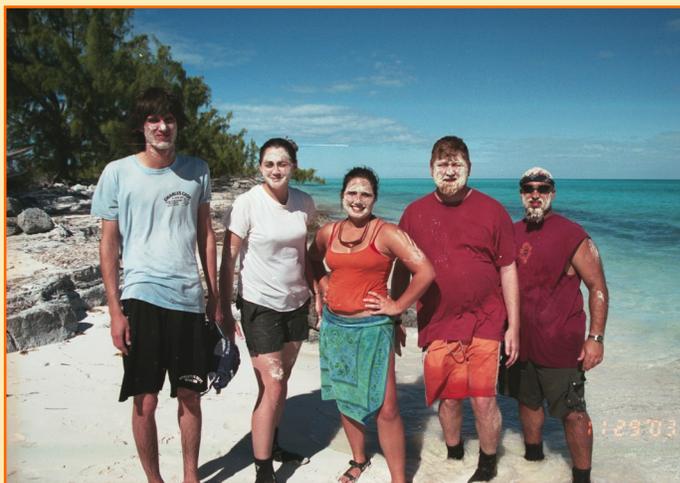
After a long hiatus, the departmental newsletter, the Geotiger, formerly edited by Jim Burnell and then by Ron Lewis, was exhumed and redeposited in 2009 as the eGeotiger, an electronic version of its ancestor.

A catastrophic event marked the end of this era; COSAM Dean Marie Wooten was killed in a car accident in November 2010, and the first departmental Chair Chuck Savrda took over as Interim Dean, and Mark Steltenpohl took over as (Interim) Department Chair.

John Counts

I got my B.S. at Auburn in 2005 and have been a geologist in the industry and in academia for the past 13 years since I left. Over the past year, I finished up a research position with the oceanographic institute IFREMER in western France, and have recently started my second postdoc with University College Dublin in Ireland.

*I can definitely trace my career back to my experiences at Auburn, and Drs. Lewis and Savrda in particular. My time at Auburn gave me the motivation to continue in the field, as well as the fundamental education that I needed to succeed in my subsequent work. I was part of the first field camp that went to Colorado, where some of us (not me!) got a little too 'hands-on' with the rocks at Capucin volcano and got in a bit of trouble with the park rangers. I also went to the Bahamas for Carbonate Depositional Systems- the attached photo is from Olivia's camera and was taken in 2003 -- it shows me, **Loren Petruny**, **Olivia (Buchan) Turner**, **Trent Hall**, and **Rick Urash** demonstrating the concept of “carbonate facies.” Both of these were inspirational trips. I think the department only had 12 professors at the time, and just a handful of upper-level undergrads and M.S. students. Almost all of us went on to become professional geologists, and I feel like Auburn, despite having a relatively small department, has been very successful in producing graduates that have an impact in the larger geoscience community.*



John Hawkins

I was fortunate enough to be able to return to Auburn in 2008 to seek a second undergraduate degree. I enrolled Fall of 2008, and due to already having an undergraduate degree from Auburn (secondary science education), I primary needed only geology courses to graduate. My first semester



I remember sitting in Paleo and thinking “I had this guy as a teacher ten years ago for historical, here we go again.” That course turned out to be just fine, even after getting my butt kicked by the Paleo lab midterm.

I attended Auburn from **1996-2002** for my first degree, and I did have to live through the transition from quarters to semesters. I do like telling students now how much the campus has changed since then. I usually talk about the large eagle’s cage and green space that use to be where the student union is now. I also tell them how, when I was a student, you could drive to just about any part of campus. The town has gotten a lot busier and less charming. I use to love getting to campus early and walking over to the BBQ House for breakfast. That always made working in the mineralogy lab early in the morning a lot more enjoyable.

In **2010** I entered the graduate program and spent that first summer working with **Jonny Prouty** in Norway. We spent six weeks together and **Dr. Steltenpohl** came over and worked with us for about a week after we had been over there a month or so. I remember that we had to drive all over northern Norway to collect specific samples for a project that he was working on. By this point in time, it is safe to say that my patience was wearing a little bit thin. The trip back to where we were staying on that last day was a five-hour drive. I was trapped in the back seat of a small car with Jonny Prouty and Mark Steltenpohl. They starting making weird noises just to keep themselves entertained, and it was all I could do just to make it back to the hotel. When we pulled up everyone got out of the car. I just sat there, with the doors closed, finally a moment of peace. Other people that I remember from that time period include Josh Lively, Ray Tichenor, and James Taylor.

In **2013** I joined the faculty, and that provided me the wonderful opportunity to experience the Department as an undergraduate, graduate student, and faculty member.

After a long absence, Johnny Prouty (see above) returned to Auburn to complete his thesis, earning him the “Zombie Award.”



Haibo Zou

I first heard of Auburn University because of Charles Barkley when he was a member of the first Dream Team of basketball in the 1992 summer Olympic Games. In the fall of **2008**, I was hired in the Department when **Bill Hames** was the search committee Chair and **Chuck Savrda** was the Department Chair. On my way from the University of California at Los Angeles to Auburn University by car, I was stopped at a highway inspection station in Texas. The officer asked me about my destination. I said Auburn University. He said “Oh, you are going to Charles Barkley’s university”, and quickly let me go. Several years later I arrived at the Seattle airport from an international trip and had my suitcases searched. The inspector asked for my work information, and I mentioned Auburn University. He said “Oh, you work for Charles Barkley’s University”. Barkley is well-known all over the world. The Charles Barkley endowed professorship at Auburn University held by Ed Thomas must be one of the most famous endowed professorship in the world.



I have many fond memories at Auburn University. Just a few examples. In a party to honor department seminar speaker Asish Basu at my home, **Ron Lewis** brought a bottle of Alabama muscadine wine. Since then, I have been in love with not only muscadine wine but also the local muscadine grapes. During a field trip to the Wetumpka meteorite crater, **David King** showed me that big tall ant nests contain information about the unexposed rocks underneath. The trip with **Zeki Billor** to Houston to bring the mass spectrometers home was highly memorable, which may need a book to describe. **Jennifer Cartwright** and I were welcomed by sudden hail when doing field work at Valles caldera in New Mexico. My students and I also have good memories of the mass spectrometer lab when we obtained high-quality isotope data.

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The Markozoic Era

2010 - 2018

The Markozoic is the middle of the three eras in the Chairian Eon (think Mesozoic). Staff turnover at the start of the era included **Delaine Tease** who replaced **Eva Lilly** in 2012 after Eva's record-breaking 42 years of service, and **Tony Hall** who followed **John Simms** after his 25 years of work in all things technical after he replaced **Art Busby**. **Sherry Faust** (Geography) retired as well after 6 years in the Department, and **Audrey Hollis** was also added in 2012.

Chandana Mitra joined the Department in 2011 representing climatology, and in 2014 a much-needed geomorphologist, **Stephanie Shepherd**, was added. Associate Chairs and Undergraduate Program Officers were added to the administrative organization of the Department. **Lorraine Wolf** was named Director of Undergraduate Research in 2011

Three of the most important events in this era were (1) the origin of the departmental Advisory Board in 2013, (2) the adaptive radiation of curriculum offerings to include Study Abroad courses, and (3) the move to large-classroom instruction by lecturers, which freed time for tenure-track professors to develop upper-level classes and to pursue published research on externally funded projects. **John Hawkins**, hired in 2013, became a key player both in

the classroom as a popular teacher and in the field where he took students on international trips.

Jim Saunders retired in 2015 and was replaced by **Stephanie Brueckner**. **Sheila Arington** retired the next year amid a LARGE retirement party and funds to take a long-planned Alaska cruise. Near the end of the era (2016) the department name was changed from Department of Geology and Geography to the Department of Geosciences. The Department won the University's Departmental Award for Excellence in Education (DAEE) for 2016, and in the same year another tectonic shift resulted in the Geology faculty moving from Petrie Hall to the Coliseum.

In recognition of all of these accomplishments, **Mark Steltenpohl** was first of a series of "Superhero Awards"—one given each year to outstanding faculty/staff members by the student organization, Sigma Gamma Epsilon (SGE).



Eva Lilly



Delaine Tease



John Simms



Tony Hall



Sheila's Reflections Upon Retirement

Over my 42 years there was lots of packing and moving to accommodate and make space for the growing faculty, student body and staff. There were many challenges, but each move always brought about exciting changes.

Some of my best memories have come from the hundreds of students that I have met over the years. Getting to know them and their stories about why they chose geology for their preferred classes or major and why they chose Auburn University over other schools. Helping them with schedules and being there with a listening ear and shoulder when the rigors of studies and living away from home for the first time became too overwhelming for them. It made me feel that I provided a useful service and that I had an important role in this department.



I developed a connection with those students, many of whom I am still friends with today. The same is true with the faculty. We have been here for each other when there were celebrations and tragedies in our families. We celebrated our babies being born, their birthdays, graduations and even some weddings right here in Auburn. And many of us have built our homes here and still live here, continuing to help and look after each other. **Eva** and I became very close and our relationship was more like two sisters working together. We shared our love and respect for each other for a long time. Another fond memory was when I received the University Employee of the Month for the Secretarial Division in December 1992 and later named the Employee of the Year for the same division. What an honor!

There has been one thing that has never changed, and that is the spirit of comradery and collegiality and caring for each other, celebrating, supporting, and guiding each other. I truly believe this is what has brought Geosciences to this 50-year milestone celebration. I hope that spirit of caring and support for each other will never change and will keep the Department strong and carry it another 50 years into the future.

Rue Chitwood Beyer

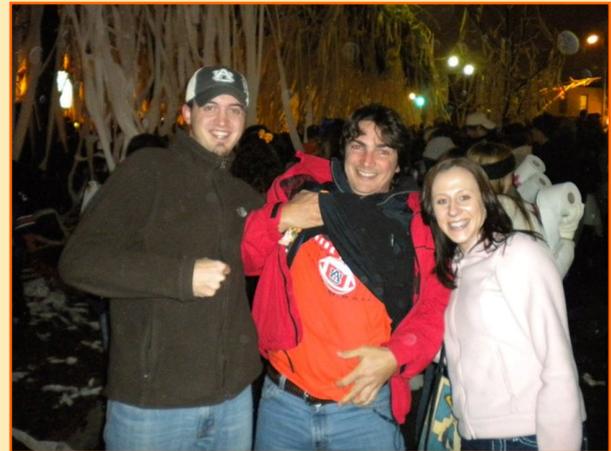
I arrived at Auburn in the fall of 2010 as a graduate student under **Dr. Saunders**. Back when I was finishing up my undergraduate degree at Alabama, I mentioned to my geophysics professor, Andrew Goodliffe, that I was interested in going into mining. He then mentioned my name to Dr. Saunders and gave me his e-mail to contact him, and he decided to bring me in as a graduate student. At Dr. Saunders' suggestion, I flew out to Reno, NV, in May of 2010 to attend the Geological Society of Nevada's Symposium that is held every five years. There, I met several industry people

who were Auburn grads. When I moved to Auburn from Tuscaloosa, I settled into a place near campus and fell in love with the town.

The Department was still in the old field house building next to the stadium [Petrie Hall], and I shared an office with **Collins Aseto** next door to **Zeki's** office on the first floor. Dr. Saunders was able to get me an awesome thesis project doing geochemistry work at Newmont's Midas Mine, and I wound up living in Winnemucca, NV, during the summer of 2011 as an intern for Newmont doing my fieldwork.

My time in Auburn was great and even though I'm an Alabama graduate and former track and cross-country runner for the Crimson Tide, I have a lot of love for Auburn. I've never lived in a town where every single person I met was very friendly, and I found the town's atmosphere to be relaxing and a great home for two years. Some of my favorite memories from my time there involved a group of us from the geology and chemistry departments going to Quixotes every Wednesday for their burger night, several trips to Chewacla State Park to explore and fish, and one night where we organized a capture the flag game on the campus. My first year there was the year we won the national championship with Cam Newton, and I won't lie, it was fun rolling Toomer's Corner with fans and classmates.

I feel very honored to be an alumni of Auburn's Geosciences Department. The faculty, staff, and colleagues there during my time helped me get to where I am today, and for that, I'm very grateful



ABOVE - Left to right: Ross Tucker, Pascual Tabares, and Rue Beyer celebrating the national championship at Toomer's Corner, 2011.

LEFT - Rue Beyer with Stan on Graduation Day, May 2012.

Jacob Colbert

I attended Auburn University from 2010 to 2014, arriving from Perdido, Alabama. The Department was in Petrie Hall where many days and nights were spent in the basement or in the Hayley Center reviewing coursework, studying for exams, and practicing our mineralogy.

I was able to complete two undergraduate research projects while at Auburn. The first was with **Dr. Mark Stelenpohl** and **Trey Singleton**, where we helped compile an EDMAP Project of the Geology of the 1:24,000 Buttston, Alabama, Quadrangle. The project required us to work with the USGS and NPS to map the geologic features, processes, and resource management of Horseshoe Bend National Military Park. The second project involved **Dr. Ming-Kuo Lee**, **Andrew Besu**, and **Christopher Marlow**. Together we used XRD and XRF equipment to perform quantitative chemical analysis of oil shales in the Black Warrior Basin and studied the transportation of heavy metals. During my time at Auburn, I worked with **Dr. King** and many other students in the Department as a Concepts of Science Teaching Assistant.

After leaving Auburn, I received an M.S. in Safety and Health. Then I accepted a job with Tuscaloosa Testing Laboratory in Tuscaloosa, Alabama, where I consulted as an Environmental Staff Professional. After leaving consulting, I joined Nyrstar Middle Tennessee Mines as an Environmental Advisor, then became their Safety and Health Coordinator. One detail I will always remember is **Dr. Saunder's** excitement in Economic Geology when we would discuss the Mississippi Valley Type Deposits and specifically one of Nyrstar's mines, the famous Elmwood mine.

When I was living in Auburn, the city was booming. The team had just won the NCAA National Championship and then proceeded to win the conference in 2013. Getting to see the National Championship, "Kick Six," and "The Prayer at Jordan Hare" are memories I will cherish. In my final year at Auburn, we were told the Supper Club would be taken down. I enjoyed the engagement of the Department—we had an intramural soccer team, camping trips, and some of the best peers anyone could ask for.

Sarah Sheffield

While at Auburn, I was a teaching assistant for the historical geology and paleontology classes and led Geoclub field trips to fossil collecting localities in northern Florida. My thesis, which I wrote under the direction of **Ron Lewis**, was focused on the growth and systematics of a Pennsylvanian-age group of crinoids. This work led me to continue my research in echinoderm paleontology for my Ph.D. at the University of Tennessee.

I presented my Masters research during my time at Auburn at GSA conferences in San Juan, Puerto Rico, and Charlotte, North Carolina. I also did some work with Ron Lewis on foraminifera in the Gulf Coast; we collected data to determine whether or not oil spills in the region negatively affected these organisms. I also worked as a science tutor for the Auburn Athletic Department. My favorite place to go in Auburn for lunch was Big Blue Bagel on College Street!

Here's a photo with **Audrey Hollis** (left), myself (center), and **Sheila Arington** (right). Audrey and Sheila were the office staff during my time at AU and some of the most wonderful people I've had the opportunity to meet! This photo was taken immediately before my M.S. thesis defense in Petrie Hall, where the geology building was located during my time there.



Left to right: Front row, Josh Poole, Chris Marlowe, and Nick (Stephen) Rodesney; Behind, Cheryl Wilkes Coker, Stan, Kirsten Guerra, Sarah Sheffield, Joel Abrahams James Taylor, Dec. 2012.

Stephanie Shepherd

I am a relative newcomer to the Department; I started in the fall of 2014. In such a short time there have been big changes in the department. It is fun and exciting to be a part of such a dynamic department. When I started, my area of expertise, Geomorphology, was unique in that I teach and advise in both the Geography and Geology degree programs. Some of my fondest memories so far revolve around field work with my students – conducting biological surveys in streams by "shocking" fish with **Lainey Le Blanc** (MS GEOL 2016); paddling, wading, and swimming to take measurements at the Buffalo National Scenic River with **Sara Speetjens** (BS GEOL 2016, MS GEOL 2018) while I was 7 months pregnant; and digging trenches in 17 degree temperatures with **Benjamin Swan** (MS GEOG 2017), **Samantha Eckes** (MS GEOL 2018), and **Mike Salisbury** (MS GEOG 2018) also at the Buffalo River.



Geomorphology Lab Group (Mike Salisbury, Sam Eckes, Dr. Stephanie Shepherd, and Benjamin Swan) hiking to a modern landslide along the Buffalo River, Arkansas.



ABOVE : John Hawkins teaching introductory geology in the renovated Langdon Hall annex.

BOTTOM: The first Auburn geology class to go the famous Siccar Point outcrop in Scotland, led by John Hawkins as a Study Abroad course.



The newly formed Geosciences Advisory Board, 2013. Front row, left to right, Mark Steltenpohl, Wally McCord, Bob Cook, Mike Forster, Jill Johnson, Jochen Floesser, Benny Nolen, Jonathan Collier; Back row, Nathan Sills, Chuck Savrda, Herb Martin, Kevin Bogden, Bob Fousek, Jonathan Grimes, Joe Howle, Jeff Cowen, and Rick Esposito.



Siccar Point, 2015

Students sitting right above the Siccar Point unconformity. From left to right (bottom row): Caleb Howard; (middle row): Morgan Barkley, Sally Sundbeck, Sara Speetjens Gilley, Austin Russell, Wilfred Woolf; (back row): Kelly Kindgren, Sara Asher, Anabelle Kline, Reed Stewart, and Kenny Moss.

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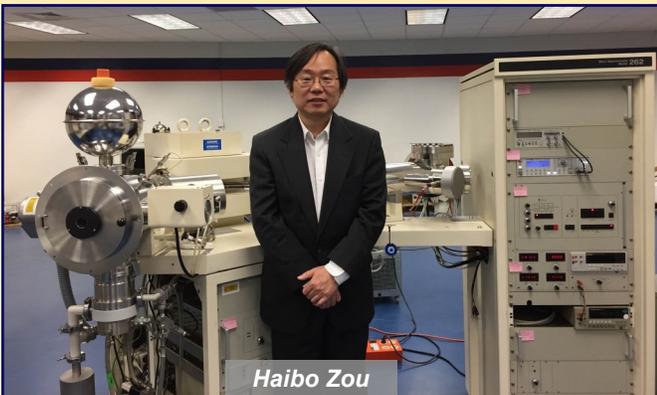
The Ming-Kuozoic Era



Also known as the **Ming-Kanthropocene**, this forward-looking era retains the strong foundation established in previous decades but adds an emphasis on viewing the Earth as a system. The impacts of humans on the planet is investigated by a climatologists **Chandana Mitra**, **Martin Medina**, and **Karen McNeal** as well as GIS-oriented geoscientists such as **Luke Marzen** and **Stephanie Rogers**. Chris Burton's research focuses on human-environmental interactions, including natural hazards and disasters. Groundwater and surface waters continue to be studied by **Philip Chaney** and **Ming-Kuo Lee**, who also continues the environmental research begun by Jim Saunders and Ashraf Uddin.

Marilyn Vogel now teaches Concepts in Science. **Laura Bilenker** begins in this era as an economic geologist replacing Jim Saunders, and we have expanded into the area of Science Education with the hire of **Karen McNeal**. This era will also see the retirement (mass extinction?) of **Ron Lewis**, **Chuck Savrda**, and **Mark Steltenpohl** in 2020.

Thanks largely to the efforts of Dr. Lee, we now have an interdisciplinary Ph.D. program in Earth System Science. We also continue to increase our holdings of research equipment. We now have seven mass spectrometers and the ability to do EMPA (electron microprobe analysis) and SEM (scanning electron microscopy).



Haibo Zou



Chandana Mitra



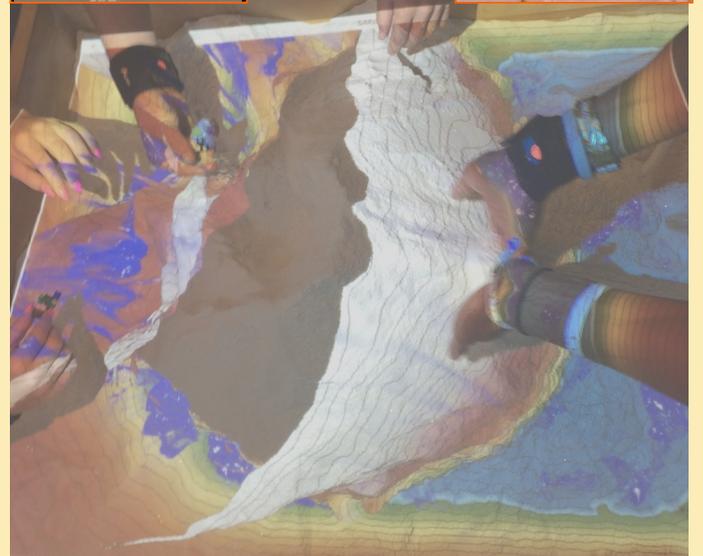
Martin Medina



Karen McNeal



Marilyn Vogel



Stephanie Rogers



Chris Burton



Laura Bilenker

