Update from the Department Chair, Dr. Warner Cribb

As always, Fall Semester brings many new faces to the Department. In addition to welcoming numerous new freshmen, transfer students and graduate students, we welcomed Dr. Racha El Kadiri to the Department as a full-time professor in hydrogeology and hydrology. Dr. El Kadiri, a native of Morocco, received her PhD from Western Michigan University. Her primary research focuses on use of GIS and remote sensing to study hydrologic/hydrogeologic systems and natural hazards. The Department also welcomed many alumni, their families and friends to campus for homecoming. Despite rain and cool temperatures, over fifty guests attended the Geosciences homecoming tailgate. As part of homecoming week, alumni Scotty Sorrells (Tennessee Department of Environment and Conservation), Greg Upham (Smyrna Utilities) and Brian Roberge (retired) visited introductory Earth Science classes to speak about their geoscience career experiences. In addition, Geosciences alumni Jennifer Pickering (Vanderbilt University and Shell Oil), Tommy Hartzog (Iluka Resources) and Caitlin Shannon (Brown and Caldwell) returned to campus to give colloquium presentations to geosciences undergraduate and graduate students. Other Fall Semester colloquium speakers were Steve Rogers (Tennessee Historical Commission), Jason Unkefer (Brown and Caldwell), Zada Law (MTSU Geosciences), and Dan Larsen (University of Memphis).

Enrollment in Geosciences courses continues to be strong. As has been the case for many years, most new majors are recruited from our general education courses or transfer to MTSU Geosciences from other colleges and universities. The Department is more actively participating in university student recruiting efforts through email communications to all students admitted to the College of Basic and Applied Sciences, hosting visiting high school students on Saturday MTSU Preview Days, and allowing academically talented students from local high schools to visit with Geosciences faculty during weekday classes and laboratories. One of the most valuable services our alumni can provide is to help recruit new students from high schools in their home areas. Beginning Fall Semester 2016, MTSU will initiate a Regional Scholars program which provides discounted tuition to non-Tennessee residents living within a 250 mile radius of Murfreesboro. Many scholarships also are available to Tennessee residents who are first-time freshmen and transfer students (mtsu.edu/financial-aid/). If you know a high school or transfer student interested in the geosciences, or if you are interested in visiting a high school to advertise our undergraduate programs and recruit students, please let me know. I am happy to send you admissions materials and copies of MTSU Geosciences recruiting brochures which you can use to advertise our academic programs.
**Student News**

As always, Geosciences students had a busy and productive semester. Undergraduate students in Historical Geology, Mineralogy, Paleontology and Geomorphology participated in weekend fieldtrips throughout October and November. Over twenty students attended the annual Geoconclave meeting at Fall Creek Falls State Park. Six undergraduate students attended the national meeting of the Geological Society of America in Baltimore and worked as volunteers for both GSA and AIPG. Seven advanced undergraduate students are participating in Fall Semester undergraduate research. Graduate students are involved in a variety of research projects, ranging from study of erosional channel formation to classification of LiDAR datasets using GIS and image analysis techniques. Nine undergraduate and two graduate students will graduate on December 12.

A major change for all undergraduate students this year is that each is now assigned to an academic advisor in the College of Basic and Applied Sciences undergraduate advising center. The academic advisor for Geosciences is Dr. Irina Novozhilova. Dr. Novozhilova holds an undergraduate degree in geology from Saint-Petersburg State University, and a PhD in physical chemistry from the University of Buffalo. Her responsibility is to ensure that each student is taking required courses and making satisfactory academic progress. She also assists students in overcoming any academic or personal challenges standing in the way of graduation. Each student also is assigned to a Geosciences faculty mentor, whose responsibility it is to advise and assist students on course selection, research and pre-professional internship programs, application to graduate school, and geoscience employment opportunities. The expected outcome of the new advising system is improved student retention and graduation rates.
Student Spotlight — Briana Vidal

The past two and a half years as an undergraduate in the MTSU geoscience department have been a wonderful experience. I transferred to MTSU as a sophomore in 2013 and I am so glad that I did. Very quickly I felt like I was part of the big family that is the geoscience department. I have subconsciously been a geoscientist since I was a kid. I always had a rock collection and a dinosaur collection, and I knew that I would be interested in studying the geosciences in college since I was in high school. I actually fell in love with the idea of a career before choosing a major; I have wanted to become a hydrogeologist since my sophomore year of high school. I knew I wanted my career to be something directly beneficial to humans and the earth we live in, and I view water as the most important resource we have. After taking the various geoscience courses offered at MTSU, I have seen all the possibilities within the geosciences from engineering to GIS to petrology. Even so, I am still most interested in hydrogeology and I am currently applying to graduate schools to get my Master’s degree in hydrogeology. I believe that my time at MTSU has prepared me well for graduate school and my future career by providing me with the tools I need to think through a problem using knowledge from all of the geoscience disciplines (in addition to other subjects), and to solve the problem in all of its natural complexity.

In addition to my coursework, I have been able to serve as Vice President of our AIPG student chapter and President of our SGE chapter, work in the Geospatial Research Center, volunteer for an MTSU Women in STEM Expanding Your Horizons (EYH) event, and participate in an NSF-funded Research Experience for Undergraduates (REU). At the EYH event, I was able to help Novella Greer, a fellow geoscience student, lead a geology workshop for the middle school girls attending the conference. We taught them a little bit about what a geoscientist is and the various careers that someone with a geoscience degree could pursue, and we led them in a fun activity of looking for “rubies” in some hand samples we gave them. The REU that I participated in was administered by Vanderbilt University in conjunction with Mercyhurst University. The overall research was focused on ignimbrites in Arizona, and the other participating students and I were able to go through the entire research process. First we went into the field in January to get a sense of the questions needing to be answered in our region of interest. Then we went back home and did secondary research reading papers that have been published for that region related to our overall topic, and decided on specific research questions. We went back into the field in May to collect samples and make field observations, and then we split up between Vanderbilt and Mercyhurst to do lab work. The students at Vanderbilt were focused on geochemical work and those at Mercyhurst, including me, were focused on GIS and remote sensing work. Finally, we wrote abstracts and presented posters at the 2015 GSA annual meeting in Baltimore. If you are interested, my abstract is posted online as paper number 210-44 in the 2015 GSA abstracts.
Dr. Henrique Momm was born in Florianópolis, Santa Catarina, Brazil. He has showed interest in exact sciences and computers since his early ages. Before attending high school, Dr. Momm used to spend his afternoons implementing computer programs using Basic programming languages to develop games. This interest in exact sciences motivated him to attend a technical high school focused on electronics design and maintenance rather than the traditional high school. In 1999, he received a Bachelor of Science in Civil Engineering from the Federal University of Santa Catarina (Brazil). Inspired to pursue higher education in the field of remote sensing and Geographic Information Systems (GIS), Dr. Momm came to the U.S.A. and graduated with a Master of Science from the Civil Engineering department and with a Ph.D. from the Department of Geology and Geological Engineering, both at The University of Mississippi.

Dr. Momm initiated his professional career as a Visiting Assistant Professor at The University of Mississippi, where he taught classes in GIS, remote sensing, and spatial analysis. Subsequently, he held a position as a research civil engineer with the National Sedimentation Laboratory (NSL). Dr. Momm joined the Department of Geosciences faculty in August of 2012.

Dr. Momm’s research interests are in the integration of Geographic Information Systems and Technology (GIS&T) with computational methods for improved understanding of Earth functions. He is passionate about research and an avid proponent of multi-disciplinary teamwork. An example of his research activities is a NSF-funded project in which Dr. Momm is working with collaborators from SUNY University of Buffalo and NSL to perform laboratory and field experiments focused on emergency, evolution, and persistence of small erosional channels. His research involves developing technology for converting large volumes of geospatial datasets into information. These efforts consist of the implementation of novel technology based close-range photogrammetry, GIS, and image analysis.

At MTSU, Dr. Momm enjoys mentoring graduate students, teaching graduate-level courses and working with his colleagues at the Department of Geosciences. When he is not working, Dr. Momm likes to spend time with his family and cycling.
Alumni and Friends – Mentoring and Giving!

An important new initiative in the Department of Geosciences is greater involvement by both alumni and friends in the lives of our students. Please keep Warner.Cribb@MTSU.edu updated with your current mail and email addresses. You are invited to join the MTSU Geosciences Facebook page, and to follow the Department on Twitter @MTSUGeosciences. Alumni and friends always are welcome to visit campus and to share their professional experiences with the students.

The faculty sincerely hopes that you also will consider making a one-time or recurring gift to our student scholarship fund. **Funding student scholarships is the number one financial priority for the Department of Geosciences!! We cannot do this without your support.** As MTSU Geosciences expands its teaching and research programs, the Department attracts an increasing number of highly qualified students interested in geoscience careers. Unfortunately, the rising cost of tuition and fees is the determining factor for many students in deciding whether or not to pursue and complete their degrees. Please consider making a contribution to one of the scholarship funds named in the honor of retired Geosciences faculty members: **Dr. Ralph Fullerton, Dr. Burt Bordine, Dr. Albert Ogden and Mr. Paul O’Farrel.** Making a one-time or recurring gift to these scholarship funds is easy through our giving website: [http://www.mtsu.edu/supportgeosciences](http://www.mtsu.edu/supportgeosciences)

Upcoming Events/Important Dates

Fall Semester Graduation – December 12

Winter Break for Students – December 11 to January 18

First Day Spring Semester – January 19