

FALL 2025



GEONEWS

Mississippi State University | Department of Geosciences



FROM THE DEPARTMENT HEAD

Greetings from the Department of Geosciences!

As we approach the end of another year, I want to express my heartfelt thanks and gratitude for all that we have accomplished together. This year has not been without challenges—changes in operating budgets, faculty transitions, academic restructuring, and shifts in federal funding have all required adaptability and teamwork. Yet through it all, I remain deeply proud and thankful for the strength of our community—our faculty, staff, students, alumni and friends. You have made a tremendous difference in the continued success of our department..

Despite the obstacles, this has been a year of remarkable success and growth. Among the highlights, we welcomed two outstanding new tenure-track assistant professors: Dr. Andrew Birkenstock, a geologist specializing in seismology, and Dr. Mei Yang, a geographer and geospatial scientist whose research focuses on health geographic information systems, or GIS. We are thrilled to have them join our faculty.

This year marked the launch of our new Bachelor of Applied Science degree, designed to help airmen from Keesler Air Force Base transfer military coursework toward a Mississippi State degree. We also introduced several postbaccalaureate certificates that expand our reach and career pathways. On the alumni side, we were proud to welcome P.J. Moore as our newest Alumni Fellow—congratulations, PJ!

Our faculty continue making significant research contributions, publishing impactful studies and securing external grants. Field experiences flourished as well, with courses and research trips to the Bahamas, western Washington, and Appalachia, and our senior geology majors excelled at their external field camps. Special recognition goes to Dr. Renee M. Clary, named a SSRC Fellow, and to Dr. Athena Nagel and Dr. Renee M. Clary for leading student excursions to new fossil parks across the region. Emeritus Professor John Mylroie, Ph.D., continues to be a prolific novelist, adding several new books to his list this year.

It has truly been a busy and productive year, filled with achievements that reflect the passion and commitment of everyone connected to this department. I especially want to thank our donors, whose generosity underwrites so many of these initiatives. Your support makes a tangible difference in everything we do.



As we close out 2025, please accept my sincere thanks for all your hard work, dedication and support. You have made a difference, and you are deeply appreciated. I wish each of you a joyous and restful holiday season, and I look forward to seeing you all in the new year.

Warm regards,

A handwritten signature in blue ink that reads "John C. Rodgers III". The signature is fluid and cursive, with the last name "Rodgers" being more prominent.

John Rodgers
Head, Department of Geosciences
Mississippi State University

CELEBRATING RECORD ENROLLMENT

Mississippi State University



23,563 students



Sustaining 80,000 jobs statewide



**Generating \$3.9 billion annually
for Mississippi's economy**



**Supporting 1 out of every 15 jobs
in the state**

To learn more about this record-breaking year, check out [this](#) release from Mississippi State University's newsroom!

The Department of Geosciences

"Our Starkville freshman class nearly doubled in size compared to recent years, and our online programs continue to flourish—now serving over 315 undergraduate and 100 graduate students. Graduation numbers were equally impressive, with 51 Starkville undergraduates, 47 online BOMP graduates, and 37 online graduate students completing their degrees, or expected to complete, their degrees in 2025."

-Dr. John Rodgers



NEW FACULTY

This fall, we are excited to welcome two outstanding scholars to the Department of Geosciences. Their arrival marks an expansion of innovation, collaboration and mentorship. We are proud to introduce them to our community and look forward to the impact they will make in research, teaching and student engagement!



MEI YANG

With a doctorate in geographic information science from Texas State University and a master's in geospatial systems engineering from Texas A&M-Corpus Christi, Mei Yang's research bridges geography and public health. She investigates how environmental exposures, mobility patterns and sociodemographic factors shape health risks and disparities. Her work supports vulnerable populations and informs public policy.

This semester, Yang is especially excited to mentor students and foster a supportive environment through collaboration. She emphasizes real-world relevance and encourages students to explore how geospatial tools can drive meaningful change!

To learn more about Yang's journey and interests, including her love of badminton, visit [@msstategeosci](#) on Instagram for her full spotlight!

ANDREW BIRKEY

With a doctorate in earth and planetary sciences from UC Riverside and a bachelor's in geology from the University of Illinois at Urbana-Champaign, Andrew Birkey's research explores the deep interior of our planet using seismic energy from earthquakes. His work leverages geophysical methods like seismology to investigate Earth's hidden dynamics to advance our understanding of the mysteries beneath our feet!

This semester, Birkey is especially excited to ignite curiosity in students and foster a deep appreciation for how the world works. He emphasizes discovery and critical thinking for students to engage with geology as a lens for exploring Earth's complexity.

To learn more about Birkey's journey and passion for geoscience, visit [@msstategeosci](#) on Instagram for his full spotlight!





COLLEGE OF ARTS & SCIENCES ALUMNI FELLOW—P.J. MOORE

Paul J. (P.J.) Moore III, of Spring, Texas, is an accomplished geoscientist with more than two decades of experience in geological research and exploration. A native of Vancleave, Mississippi, Moore earned a Bachelor of Science in geology from Mississippi State University in 2002. He went on to receive a doctorate in geological sciences from the University of Florida, focusing on aqueous geochemistry and physical hydrogeology. While at MSU, Moore was influenced by his undergraduate advisor, John Mylroie Ph.D., whose passion for science and adventurous approach to life helped shape his academic path.

That inspiration, coupled with early encouragement from his aunt, a geologist herself, fueled his lifelong fascination with earth sciences. He credits MSU for laying the foundation for the scientist he has become. For the past 16 years, Moore has worked for ExxonMobil, most recently spending four years overseas as a research lead at ExxonMobil Research Qatar. There, he led projects focused on understanding coastal aquifers. Beyond his professional work, Moore has remained actively engaged in the scientific community. He has written more than 20 articles in peer-reviewed journals and served on the board of

directors for the Karst Waters Institute for 15 years. He is also a longtime member of the American Association of Petroleum Geologists, the Geological Society of America and the National Speleological Society. A dedicated supporter of Mississippi State University, Moore has established an endowed fund to benefit the geosciences department. He remains passionate about inspiring the next generation of scientists and representing MSU with pride wherever his career takes him.

Congratulations, P.J.!

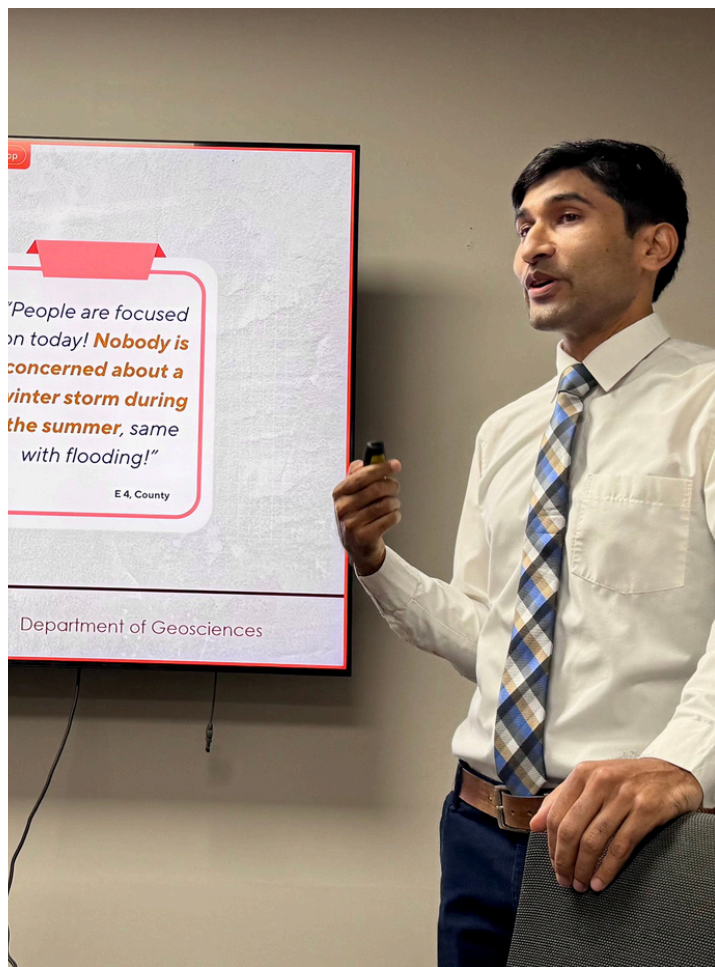
The Department of Geosciences is proud of your efforts and achievements. We are thankful for your commitment to the field of geosciences!

GRADUATE RESEARCH

The Department of Geosciences proudly recognizes the achievements of our graduate scholars this past year. "Nine doctoral students and 14 master's thesis students successfully defended their work—a true testament to the dedication of our graduate faculty, who have done yeoman's work mentoring and guiding these scholars." – Dr. John Rodgers



Johnathan Leard defending his dissertation, "Mississippi Pre-Loess Terrace Deposits: Dissertation of Aggregate Resources." For more information about Johnathan's research, click [here](#)!



Udit Bhatta defending his thesis, "Building Flood Resilience in Mississippi: Readiness Gaps Index and Insights from Spatial Analysis." For more information about Udit's research, click [here](#)!

We applaud all of our graduate students who successfully defended their work this past year! In this issue of GeoNews, we highlight the two research presentations from this semester. Their individual spotlights can be found on the Department of Geosciences' Facebook and Instagram profiles. Congratulations Johnathan and Udit!

Graduate research is more than a milestone; it is a journey of discovery, persistence and collaboration. On the next page, you will find reflections from our graduate students as they share their experiences, insights and encouragement for those who will follow in their footsteps. Together, these voices remind us that scholarship thrives in community, and every defense marks not just an ending, but a new beginning.

GRADUATE STUDENT EXPERIENCE

"Graduate school has taught me patience, resilience and adaptability. Research doesn't always go as planned. Datasets can be incomplete, models can fail, but each challenge becomes an opportunity to learn and innovate. I've learned that I thrive in collaborative environments and that I enjoy mentoring others. I've also gained a deeper appreciation for the link between science and service, how research can directly inform environmental management and community decisions.

My advice is to choose a program not only for the research topic but also for the mentorship and environment it offers. Ask questions, visit labs and understand how the advisor's expectations align with your career goals. Build strong quantitative and coding skills early, and don't be afraid to reach across disciplines. Most importantly, see graduate school as a journey of discovery rather than just a path to a degree."

Hafez Ahmad

Ph.D. Candidate, Earth & Atmospheric Sciences

Hometown: Chattogram, Bangladesh

"I hope to continue conducting tropical cyclone research as a post-doctoral researcher or faculty member. Attending graduate school has given me the knowledge, training and experience necessary to develop my own research program in the future. Furthermore, through this experience, I've had the opportunity to connect with numerous experts in the field which will be helpful in forming collaborations throughout my professional career."

Kayleigh Addington

Ph.D. Candidate, Earth & Atmospheric Sciences

Hometown: Lexington, Virginia

"I learned so much more about meteorology and realized that with enough determination and patience, I can complete a doctoral program."

Jason Paul Finley

Ph.D. Candidate, Earth & Atmospheric Sciences

Hometown: Sherman Oaks, California



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LIFE AS A #GEODAWG

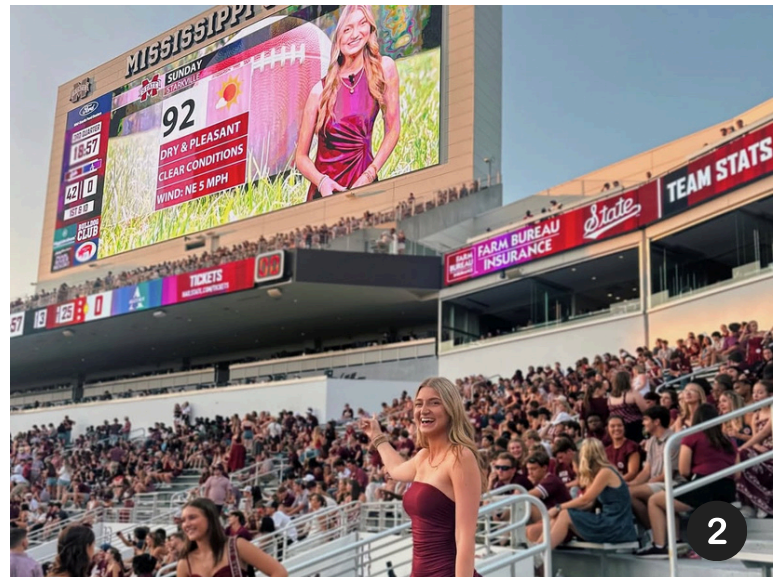
#1: Adam Skarke teaches his geology students about ground penetrating radar.

#2: Students participants in the Appalachia Field Work Experience at the Great Smoky Mountains Institute at Tremont display their maroon pride.

#3 & #5: Meteorology students participate in the National Weather Association's 50th Annual Meeting.

#4: Faculty meet with graduate students.

#6: Participants enjoy Trick-or-Treat & Meet for Halloween.



Life as a GeoDawg is more than classes and labs. It is friendships, fieldwork and moments that shape our journey at MSU. These snapshots capture the spirit of our department and the pride we share in being part of the geosciences family. Being a GeoDawg means learning with passion, supporting one another and celebrating the journey.

#1: Students take observations during the Field Work Experience.

#2: Meteorology student Sadie Morris forecasts the weather in Davis Wade Stadium.

#3: Taylor Pattinson (Ph.D. student) receives a gift basket on the first day of class.

#4: Students take a selfie on the first day of class.

#5: A storm nears campus (Photo submitted by Coby Sanchez.).

#6: John Rodgers readies for Trick or Treat & Meet.



LIFE AS A #GEODAWG

GIVING BACK



Alumni and friends can learn more about the Department of Geosciences at <https://www.geosciences.msstate.edu>. Please visit the website and our social media pages often, as the department has incredible events on a weekly basis.

The Department of Geosciences provides an exceptional academic experience for our students and faculty. To achieve this goal, we rely heavily on private gifts, and we are all very grateful for the support our alumni and friends have given throughout the years.

We hope you will consider supporting some of our current departmental priorities that will allow our students and faculty to thrive within and outside the classroom. Please reach out to Director of Development Sara Frederic in the College of Arts and Sciences who can assist you with your giving journey.

If you would like to support the Department of Geosciences electronically, please visit [here](#) or scan the QR code, select the Department of Geosciences box, and complete the remaining fields.



If you prefer to support via mail, please send your gift to:

MSU Foundation, Inc.

Attention: Sara Frederic

P.O. Box 6149

Mississippi State, MS 39762

Please make checks payable to - MSU Foundation, Inc.

Congratulations to our 2025 Fall Graduates!

The Department of Geosciences celebrates the accomplishments of our fall graduates. Your dedication and resilience have shaped not only your academic journey but also our community at MSU and the future of our field.

As you step into the next chapter, you carry forward the curiosity, passion and determination that define geosciences. Your achievements are a testament to your hard work, and we can't wait to see the discoveries, insight and impact you will bring to the world.

We honor your hard work, applaud your success and look forward to seeing the mark you will make on the world.

Please stay connected! We would love to hear from you from time to time, and Hilbun Hall will always welcome you back for a visit.

Once a GeoDawg, Always a GeoDawg!

Congratulations, and Hail State,
The Department of Geosciences Family

STAY PLUGGED IN

KEEP UP WITH THE DEPARTMENT OF
GEOSCIENCES ON SOCIAL MEDIA!



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ONLINE**

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