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IN THIS ISSUE

- 2 GIRLS SCOUTS & K12 EVENTS
- 2 SPRING SEMINAR
- 3 STELLAR STUDENTS
- 3 MSU NOBCCHE
- 4 ALUMNA SPOTLIGHT
- 5 CORDIAL CARD WRITING
- 5 AICHE CONFERENCE HIGHLIGHT
- 6 CHE & PTE RECOGNITION
- 7 SPRING GRADUATES

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W. Todd French
Faculty Highlight

By Rebekah Hulett & Emma Rich

Raised in Greenville, MS, Dr. French graduated high school in 1985 and started college at U of Southern MS in pre-chemical engineering. He left to attend U of LA-Monroe and began work soon after. Pursuing pharmacy at National Louis University, he fell in love with a microbiology class. His career continued with graduate work at MSU and environmental remediation projects with the Corps of Engineers in Vicksburg, culminating in his Ph.D. A tenure-track professorship seemed like a natural next step.

Asked to expound on his passion for microbiology, he emphasized the omnipresence of



microbes and diverse metabolic capabilities that drove him to the field. After being hired by Dr. Mark Zappi, he worked on biofuels, pushing him to think outside the box. Early on, he “recognized that multi-disciplinary research is the only way to approach complex problems.” He hopes that his work will continue to be referenced and expanded upon.

Dr. French also reflected on his favorite classes to teach at MSU. The breadth of Industrial Microbiology encouraged discussion, and Biofuels allowed him to spark creativity and problem-solving skills in students. He also appreciated the ability to impact students early in Mass & Energy Balances sections. When asked about his plans after work, he

said, “I do not consider what I do to be work. You take the good with the bad, but it is fun.”

Dr. French will retire at the end of spring to be with his family because, as he explains, “God comes first, then my wife and kids.” He has contributed so much to MSU and the department; his favorite part about his job is the students. As a professor, he has constantly encouraged and supported those around him, leaving them with a final thought: “Be free thinkers. You are all extremely gifted. It would be a shame to leave this place and not use those gifts to make everything around you a little better.”

Thank you, Dr. French, for all your amazing work. You will truly be missed!

Havin' a Grand Old Slime | Outreach

By Victoria Taylor



AIChE has enjoyed hosting several STEM outreach events this semester! Our K-12 Outreach Directors, **Hunter Chunn** and **Katie Evans**, have done a fantastic job at planning and executing these events with the help of many ChE and PTE student volunteers.

Girl Scouts Day—planned by Chunn—kicked off this semester's events in January. The 5-hour affair is AIChE's biggest K-12 STEM outreach event every year and is free for

any Girl Scout as an opportunity to earn their chemistry badge. With collaborations from other student organizations, AIChE offered hands-on opportunities to explore chemical engineering using a suite of experiments. NOBCCChE, SPE, and TAPPI each sponsored experiments for the girls. With their help, the girls were also introduced to the world of papermaking and petroleum engineering. Highlights also included the elephant toothpaste demonstration and synthesizing their own ice cream after lunch! Look out for ways to help at the 2025 Girl Scouts Day early next spring.

Evans coordinated AIChE's recent collaboration with a local after-school program, the Brickfire Project. ChE volunteers assisted the students with making slime but with a fun twist. Thermochromic powder was thrown into the mix—starting as a dark blue but turning white when warmed by eager hands! This activity used the powder to teach the students about temperature-sensitive molecular structure changes. They all had so much fun playing with the slime and learning the science behind it!

Thanks to Hunter, Katie, and all our enthusiastic volunteers for your hard work and dedication to our K-12 STEM Outreach!



Pall Corp. PTFEs | Spring Seminar

In March, the MSU AIChE chapter was honored to host **Dr. Steven Gardner**, former faculty, and current Sr. Principal R&D Engineer at Pall Corp. in Pensacola for a seminar on his work. The company plays an important role in many fields: process tech, aerospace, microelectronics, and medicine. However, Gardner specializes in polytetrafluoroethylene (PTFE) and its expanded membrane form. In his captivating talk, he introduced the challenge of

decreasing node size (Moore's Law), the membranes' various applications, and novel production processes, including phase inversion techniques and potential for hollow fiber production.

Gardner provided samples for each production stage and emphasized broader applications as alternatives to distillation. An engaging Q&A followed.

Thank you for your insights, Dr. Gardner!



Corny Corner

What do you call a benzene ring with iron atoms instead of carbon atoms?

See p. 4.

ChEs Got the Beat! | *Stellar Students*



Aside from busy class schedules, MSU chemical engineering students pursue many other activities. March 7 marked the inaugural performance of the MSU Symphony Orchestra, which included **Darnell Burton** (Violin, not pictured), **Hunter Chunn** (Violin, right), and **Aaron Leal** (Trombone, left).

MSU NOBCChE | *Exclusive Feature*

By Josh Bowman

The ChE and chemistry students recently restored the MSU chapter of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) which received its official charter last September, as noted in the fall issue. I had the opportunity to converse about the chapter with **Lillian Knight** of Madison, Chapter President, and her Vice, **Asiah Clay** of Jackson—both senior ChE students.

The national organization has student and professional chapters across five regions in the US, and members have access to scholarships, grants, and career/research postings through the

organization (as well as free membership with the ACS). Clay detailed, “It’s important to have a community of people that understand you on a cultural level—that can help build each other [in STEM fields]. Like AIChE, it serves as an outlet for students’ academic and professional growth.” Both officers expressed the chapter’s role in helping students find their “why” in studying STEM.

Drs. Julie Jessop and Colleen Scott serve as co-advisors for the chapter and are incredibly proud of its recent work. Knight and Clay noted that participation in the chapter involves service events like K-12 STEM outreach, which involves science demos for stu-



NOBCChE-hosted info session attendees


dents of color. Partnership with local professionals through events like resume/interview workshops is also key; at the end of March, NOBCChE hosted a symposium of three panelists on navigating corporate environments as professionals of color.

About the conference last September, Knight included that, at the 50th Anniversary Conference Gala, Mae Jemison (see p. 6) was invited as the keynote speaker. Clay noted that the intimate quality of the conference and its specificity to chemical fields were highly appreciated by attendees.

General body meetings take place on a Tuesday evening each month; Knight and Clay both emphasized the ability to gain something from events, regardless of major or background.

Find more information:

che.msstate.edu/nobcche/

 @msunobcche



Symposium: “Navigate through Corporate America as a POC”

Bianca Thomas Stamps ('18) | Alumna Spotlight

By Josh Bowman

Stamps was selected as one of the 2024 Reveille 25, a program highlighting young alumni. I had the honor of speaking with her about her journey and advice for prospective chemical engineers.

Key Involvement

- NSBE Workshops
- SWE Workshops
- Recruitment Efforts

Career Snapshot

- Process Simulation Engineering
- Regulatory Affairs Engineering
- Process Engineering
- Design Engineering

Initially, Stamps planned to become an actuary, but guided by a teacher with a ChE background, she shifted her focus. In college, she undertook internships at Dow, PACCAR, and Chevron—where she works now; throughout, she refined her interests in simulation. She summarized her current work: “I like to tell people that ‘I put plants into computers,’ [starting with P&IDs, equipment, specs, and process information.] So essentially, the plant model should run exactly like the plant in the field.” Stamps credited her experience in steady-state process engineering for her success in this role: “I’m able to say things like ‘Oh, this small of a temperature dif-

ference is fine, but this pressure difference is not.’ I can decipher what is and isn’t realistic for a plant because I’ve worked in one.”

Stamps has much to offer in terms of advice for future chemical engineers. First, she underscored the value of gaining experience as early as possible: “Intern, co-op, research! It is so important to know about the industry you are going into before making a decision. It is harder to move to a different industry in the first three to five years post-undergrad because [of perceived inexperience].” Following that, she stated the critical importance of finding your motivations: “For me, my ‘why’ is students and marginalized communities ... By the end of February, I was leading one of my company’s affinity groups—networks [fostering inclusivity]. By August, I was also recruiting at MSU. I’ve spent my career balancing my role as an engineer while also giving back. Luckily, I haven’t had to sacrifice one for the other, but my ‘why’ gives me the energy I need to complete my ‘what.’” Stamps also encourages you not to take a job offer just because it is the only one available—to ensure the job meets your own criteria of what’s important.

From her undergraduate studies, she cites problem-solving and critical thinking as highly important skills, “I learned them for sure in Dr. Pearson’s class. We always had to ‘just think about it.’” But she also



Stamps in Bali, Indonesia

heavily emphasizes the value of professional soft skills and networking, explaining, “We have so many programs, tools, and even AI now that can help regarding engineering. The best way to hone [soft] skills is to put yourself out there.” She recommends [The Laws of Human Nature](#) for a deeper dive into managing workplace relationships.

Congratulations again, Bianca Stamps! Thank you for representing the program so well.

Corny Corner
A ferrous wheel!

Cordial Card Writing | Outreach

By Victoria Taylor

In February, AIChE crafted Valentine's Day cards for the senior citizens at the Carrington Nursing Center in Starkville (top photo, right). Many of our students came together to create cards with sweet messages. The seniors absolutely loved their Valentine's surprise and enjoyed reading all the cards.

Students from AIChE and NOB-

CChE also made candy bags celebrating Black History Month. These bags had notes honoring distinguished black chemists and chemical engineers; student volunteers distributed the goodies at the Boys and Girls Club of Starkville (bottom photo, right). The kids were ecstatic! Thanks to our community service chair, **Anyah Hardy**, and volunteers for making these projects possible!

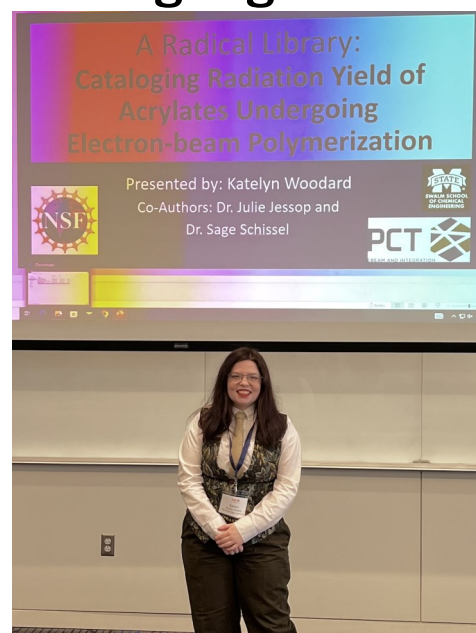


Expedition Auburn | Regional Conference Highlight

Each spring, representatives of the MSU chapter of AIChE travel to participate, compete, and learn at the Southern Student Regional Conference—this year hosted by Auburn University on March 15 & 16. Attendees were excited to share their experiences.

Though our team did not take home the gold this year, the ChemE Jeopardy event is a perennial favorite of

MSU chapter students. **Grant Borgognoni** served as our team's captain. He described: “[The] competition was an enriching experience and a thoroughly successful and enjoyable event. Our team delved into myriad ChE topics, challenging our knowledge, practice, and quick-thinking abilities. The inviting atmosphere was full of spirited competition from competing schools. [It] not only tested our aca-



MSU Delegation (from back, left): Paul Gramelspacher, David Tindoll, Brady Gill, Grant Borgognoni, Robert Phillippe, Victoria Taylor; Katelyn Woodard, Marian Waltman, Catherine Boltz, Shreenithi Lakshminarayanan, Lucie LeBlanc

ademic skills but also provided a fantastic opportunity to connect with fellow students and enhance networking skills.”

Shreenithi Lakshminarayanan offered a summary of her time and a call for future attendees: “As an initial exposure to AIChE conferences, the meeting at Auburn was a great experience to explore a subset of what AIChE offers and a preview of what is to come at national conference. I competed with the Jeopardy team, but

(Continued on next page)

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when that wasn't happening, I was able to see several research posters, technical presentations, and visiting companies. Attending is a great step in getting more involved with the MSU chapter."

Aside from competitive events, **Paul Gramelspacher** had the opportunity to present his research on the effects of selenium doping on BaZrS₃ nanocrystals. Having also presented her work to a panel at Technical Presentations, graduating senior **Katelyn Woodward** remarked: "[Conference]

was an excellent opportunity to challenge my professional and presentation skills with those at various career stages. I not only highlighted the long-term polymer research that is occurring at MSU but also how this work applies to the wider chemical engineering industry. Overall, the Regional Conference is a great chance for less exposed students to observe the pacing and standard events at an AIChE conference."

Students, be sure to get involved prior to the 2024 Annual Student Conference in San Diego this October!

ChemEs in History

Mae Jemison, the first female African American astronaut, launched into space in 1992 to study biofeedback and autogenic training among other projects. As a chemical engineer and physician, she remains an advocate for STEM education.



Bagley Banquet | Recognition

On February 22, the Bagley College of Engineering hosted its annual Distinguished Engineering Recognition Banquet. Among its honorees, two alumni were recognized as Distinguished Fellows, along with a College Hall of Fame inductee.

Ray C. Dillon (ChE '77, left) is a name you may recognize from last issue's alumnus highlight. He started as a process engineer at Crown Zellerbach, eventually assuming its executive vice presidency; he then served as CEO of Deltic Timber. He credits lessons learned from family farm work for his success and serves on the Dean's Advisory Council.

Bobby D. Sandford (PTE '90, middle) first obtained experience in oil/gas with Halliburton Services. After his time at MSU, he began with Chevron at US and Kazakhstan sites with subsequent contract roles in energy. Mr. and Mrs. Sandford have two scholarships established in their

name—in engineering and education.

Cody LeBleu (PTE '24, right) started in production operations before his time at MSU. Here, he secured grants to repair lab equipment and served in community college recruiting efforts as chapter president of SPE. After a few years in drilling, he aims to start an oil company.

Many congratulations!



Spring Celebrations

ChE Senior Banquet (left)
Crawfish Spring Fling (below)
AIChE Shrimp Boil (right)



Congratulations to our Spring 2024 ChE Graduates!

Alexa Beets Ω	Tristan Glass	Ewan Robinson
Dylan Bond AΩ	William Glass	Jacob Rodgers Ω
Michael Borden	Eli Hannon	William Rogers
Nicholas Bouldin A	Alanna Hauer Ω	Sydney Rushing
Timothy Brown	Glyn Heath	Tristan Saucier
Connor Bruce	Robert Hinson	Mary Sternenberg Ω
Cassidy Budgins Ω	Kaitlyn Kirksey AΩ	Noah Stevens
Nicholas Carl	Lillian Knight A	Josh Strong AΩ
Ethan Catrett	Michael Landsgaard Ω	David Tindoll AΩ
Carli Cole Ω	Ethan LeBlanc	Christopher Walton
James Coleman	Luke Losordo	Nicolas Weekley
Kassidy Cowart Ω	Kaelyn Martinez	Justin Whittington
Landon Draughn	John Metcalfe	Arlon Wise
Faith Eldridge Ω	Ashlyn Page	Katelyn Woodard AΩ
Rebekah Hulett AΩ	Thomas Parker	A - AIChE
Matthew Fields	Payton Rehm	Ω - ΩXE
Finnis Ginder AΩ	Emma Rich AΩ	

Thanks to everyone who contributed to making this issue a success! Look for the next issue this summer.

Josh Bowman
Newsletter Editor



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The Global Home of Chemical Engineers

Corny Corner Suggestions?

We'd love to hear them.
Email Dr. Bill Elmore at elmore@che.msstate.edu.

Alumni Engagement Opportunities

The Swalm School is proud of its graduates! You are inspirations to current students; there are opportunities to continue engagement.

Keep us abreast of your latest accom-

plishments for the newsletter, website, and social media.

Volunteer to give a professional development seminar for CHE 3331. Presentations this semester included Networking, Lifelong Learning, ChE Career Path Flexibility, Bringing Your Full Self to Work, Sustainability, Recovering from

Failure, and Budgeting & Investing.

Participate in the Swalm alumni mentoring program. Mentors contribute to the professional preparation of their mentees by interactively sharing their knowledge, experience, and counsel.

Those interested can email Dr. Julie Jessop at jessop@che.msstate.edu.

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