



THE COLUMN

MCKETTA DEPARTMENT OF CHEMICAL AND BIOPROCESS ENGINEERING NEWSLETTER

From the Chair

I am thrilled to join Trine and the program as our new chair of the McKetta Department of Chemical & Bioprocess Engineering. As I start my 20th year as a chemical engineering professor, I look forward to meeting and getting to know you – the students, alumni, and the greater Trine community – in the coming years.

While I take over department chair responsibilities from John Wagner upon his retirement, I certainly cannot replace John and his decades of service to the department and its students. I am not the only new face around the department as Jeff Raymond moved to a faculty position in the

Department of Science, teaching biology. James Taylor joined the department in January as the Laboratory Instructor and Technician.

The McKetta Department will continue our goal of recruiting, retaining, and graduating versatile chemical engineers who pursue interesting, successful, varied career paths. The faculty and staff remain focused on being one of the best undergraduate chemical engineering programs in the country. The successes of our students and alumni continued in the last year, which are highlighted throughout the newsletter.

Having served as student chapter faculty advisor to the AIChE student chapters at both of my previous universities, I would like to share a story about our students' recent victory at the regional Chem-E-Car competition. The challenge involves building a shoebox-sized vehicle powered by one chemical reaction and stopped by another chemical reaction. The distance for the car to travel is announced just two hours before the competition begins. At the regional meeting each spring, about 15-20 universities in the Midwest compete. In recent years, a friendly rivalry between my former institution, University of Toledo, and Trine developed as they were two of the cars closest to the line each year. While Toledo inched closer than Trine in 2023, Trine was just a few centimeters from the line in April 2024, earning the first-place trophy.

These students will carry the Thunder ChemE flag to the international competition in late October in San Diego. I look forward to seeing firsthand this team's and other Trine ChE's continued successes.

I am excited to commence another academic year with students excelling in their courses, securing jobs and internships, and experiencing those stumbles that help us grow as people and engineers. From student competitions to one-on-one advising, our faculty and staff will be on the sidelines supporting them. Please reach out to me if you have questions about our program, ideas for helping our program remain relevant in the ever-changing world, or just to introduce yourself and share your stories.

Sincerely,



Matthew Liberatore, Ph.D.
Chair,
McKetta
Department
of Chemical
& Bioprocess
Engineering

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SUMMER 2024

Save The Dates

September 19

Tailgate for Talent Career Fair
(11am-2pm, Thunder Drive)

September 28

Chemical Engineering
Homecoming Tailgate (11am-
1pm, Fawick)

October 10

Chemical Engineering
Networking Night (5-7pm, SDI)

October 25–28

AIChE Student Annual
Conference (San Diego, CA)

Trine takes two top awards at AIChE regionals



From left, Madison Ruen, Natalie Crowner, Dean Campbell and Travis Mersing with their winning ChemE car.

teams design a car that starts and stops using a chemical reaction. The car that travels the closest to a designated distance, which is not revealed until the day of the competition, is declared the winner.

The Trine team of Natalie Crowner of Saline, Michigan, Madison Ruen of Antwerp, Ohio, Dean Campbell of Batesville, Indiana, and Travis Mersing of Swanton, Ohio, topped a field of 14 teams, including those from the University of Toledo, University of Michigan, Ohio State University, Purdue University and Rose-Hulman Institute of Technology.

The Trine car finished 4.4 centimeters from the target distance of 18.7 meters, qualifying the team for the national competition in October ([Video of run](#)). The team also placed third in the poster competition related to the car.

"Safety is the foremost important aspect of the competition, so ensuring you are safe first then still being able to accomplish the task at hand can be difficult," said Mersing, the team captain. "The car functioned precisely as designed, resulting in a final distance from the desired distance that not only the team was happy with, but was good enough

to win the competition. It was also the closest Trine has ever come to the desired distance in a competition."

Top research

Seven Trine students competed with undergraduate research posters, more than any other university.

Alyssa Keptner of Midland, Michigan, won with her poster, "Media Optimization for Biofuels from *Cyclotella cryptica*." Her research examined the best methods for growing a unique cell type that is a promising candidate for bio-diesel production.

"What excites me most about my project is the way it has developed over time," she said. "Since I have been lucky enough to do it for a few years, there are so many new paths or side projects that I have been able to explore and see through, which is incredibly rewarding."

She said the recognition confirmed her decision to attend Trine.

"Trine has allowed me opportunities like undergraduate research, where I get to control the direction of my project, and extracur-

It was a day of firsts for students in Trine University's McKetta Department of Chemical and Bioprocess Engineering.

On April 6, 16 chemical engineering majors traveled to Ohio State University to compete at the American Institute for Chemical Engineers (AIChE) North Central regional conference.

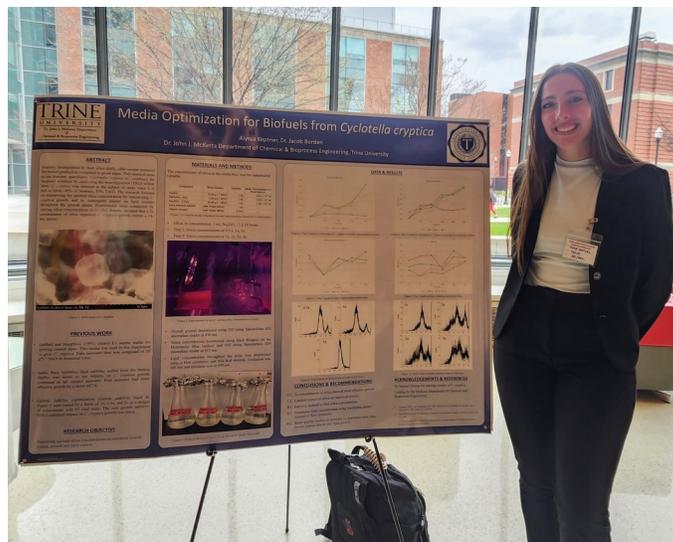
Trine students won the ChemE car and undergraduate research poster competitions for the first time.

Trine also placed second in ChemE Jeopardy, had another student place third for his undergraduate research poster, and placed third in undergraduate research technical presentations.

"We were one of the smallest chemical engineering programs competing — maybe even the smallest — and we were the only school to place in all competitions," said Amanda Malefyt, Ph.D., professor in the McKetta Department of Chemical and Bioprocess Engineering and undergraduate research project advisor.

On target

In the ChemE car competition,



Alyssa Keptner had the top undergraduate research poster, "Media Optimization for Biofuels from *Cyclotella cryptica*." Her research examined the best methods for growing a unique cell type that is a promising candidate for biodiesel production.

riculars like lacrosse while also giving me a quality education," she said.

Gavin Campbell of Leesburg, Ohio, received third place with his poster, "Antibody Panitumumab: Binding to HCT 116 Epidermal Growth Factor Receptor." He continued research within the McKetta Department of Chemical and Bioprocess Engineering seeking to develop an antibody that inhibits colon cancer growth.

"There's so much potential in pharmaceutical research. Antibodies and other therapeutics possess a wide variety of applications in medicine that can help a lot of people," he said.

"A lot of what we do is on our own initiative," he said. "It shows how hard we've worked over the past couple of years and how much we enjoy it. I'm proud of my ability to explain and spread interest for what I do. I overall had a great time presenting and competing."

Annamarie Lechleidner Hartman of Bryan, Ohio, participated in the undergraduate technical presentation competition. Her presentation, "Mitigating the Effects of Road Salt on Concrete," placed third.

"Participating in a research project really helped with developing improved time management in terms of planning an experimental process that takes multiple weeks from experiment start

to finish," she said. "Although it was nerve-wracking presenting in front of judges, the presentation itself helped fine-tune my presentation skills and reinforced my ability to develop a presentation under time constraints that showcases the most important results."

2nd in Jeopardy

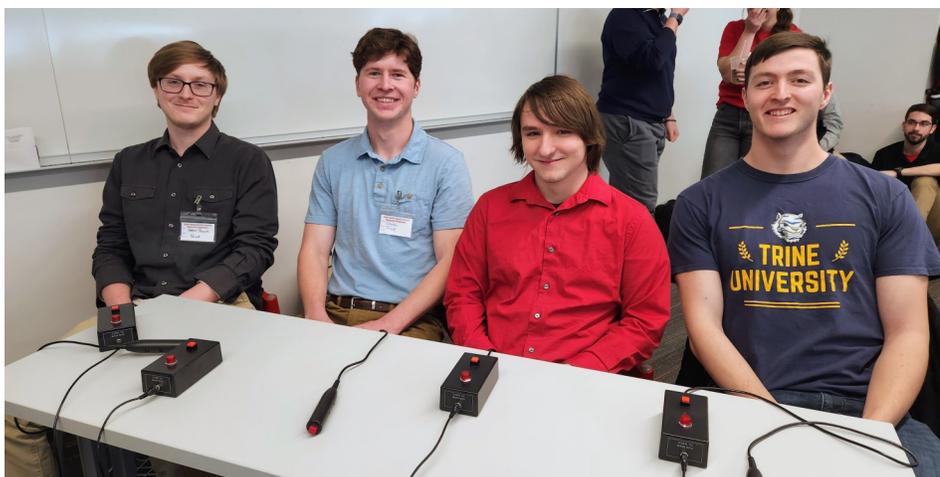
Trine sent three teams to compete in ChemE Jeopardy, with the team of Campbell, Zaavan Clear of Auburn, Indiana, Aaron Phillips of Marengo, Illinois, and Jacob Doyle of Marengo, Illinois, placing second out of 18 teams total.

Their team won both its preliminary and semifinal rounds to advance to the final competition against the University of Akron and the University of Wisconsin-Madison.

Akron won with 6,100 points, followed by Trine with 5,600 and UW-Madison with 0.

"We played well, taking chances when we had to in order to get a lead and playing conservatively with that lead to ensure we progressed to the finals," said Doyle, the team captain. "While we weren't able to pull out the victory in the end, we still kept it to an extremely close competition, being in the running all the way until Final Jeopardy."

The team received an at-large bid to national competition, based on the outcome of other regional competitions.



The ChemE Jeopardy team took second place at AIChE regionals. From left, Aaron Phillips, Gavin Campbell, Jacob Doyle and Zaavan Clear.

Become an AIChE sponsor



As president of our AIChE student chapter, I invite you to consider becoming a sponsor of our chapter.

This October, 12 students plan to attend the AIChE Annual Student Conference in San Diego, CA, to compete in the ChemE Car, ChemE Jeopardy, and ChemE-Sports competitions, as well as the undergraduate research competition. Conference registration, hotel, and airfare costs have risen significantly, now totaling over \$10,000/year.

Throughout the year, we aim to host multiple industry speakers, a fall networking night, plant trips, and ChE social events.

These events would not be possible without alumni support. Please contact me if you can lend time toward a site visit or speaking opportunity!

Sponsorship opportunities range from \$100—\$1000+, with varied levels of recognition. Any donation is greatly appreciated. Checks can be made out to *Trine University Chemical Engineering - AIChE*. Online payments are also accepted through [Give Here](#). (Please select "Other" and specify *Chemical Engineering - AIChE*).

Thank you in advance for any support you and your company can provide.

Cordially,

Noah Glassman
BSCHE 2026
Trine AIChE Student President
naglassman19@my.trine.edu

Iron Dynamics Sponsors Two Industry Projects

Seniors test speed, temperature in iron production

Does adjusting speed and/or temperature result in better briquettes for iron production?

That's the question this senior design team set out to answer.

Chemical engineering majors Takeshi Alvarez of Southlake, Texas, Eden Diller of Fort Wayne, Indiana, and Caterina Staton of Mongo, Indiana, tested multiple run speeds and operating temperatures in the process Iron Dynamics, a division of Steel Dynamics Inc., uses to produce iron briquettes that are melted to make pure iron.

Touring, then testing

Staton said she was drawn to the project by the opportunity to work for Steel Dynamics. She was familiar with the company through family members who work there.

"I have experience solely in the food production industry, so this project exposed me to a whole new industry," she said. "I liked how abstract the process improvement was. Iron Dynamics allowed us to explore what we believed could make process differences."

The group began by touring the Steel Dynamics plant to observe the iron production process. They then brainstormed and met with advisors at Iron Dynamics to determine the relevant variables.

"After this we evaluated the possible variables for testing feasibility. The variables were then narrowed down to run speed and temperature," Staton said.



From left, Takeshi Alvarez, Caterina Staton and Eden Diller toured the facility and made use of both SDI and Trine equipment to perform the analysis.

The group manipulated run speed by varying the amount of energy fed to the briquetter, and temperature by putting the binder and dry mix in a freezer or hot water bath. They measured the content, strength and microstructure uniformity of the resulting briquettes.

They found that optimum briquettes were obtained by reducing the speed of the briquetter rolls while maintaining the same temperature.

"By changing the speed, we were able to increase the average strength of the briquettes, contributing to less fine material within the product and improving the performance of other downstream processes," said Diller.

"We discovered that improving briquettes would result in less recycled material, an increase of briquetter roll life and a higher smelting capacity in downstream processes, which combined has the potential of saving Steel Dynamics millions of dollars."

New industries, skills

Staton said the concepts she has learned at Trine helped her understand and predict

the underlying dynamics of the process.

"It also allowed me to understand how to analyze the data to interpret the results," she said.

Staton, who plans to work in the food industry, said the project exposed her to another industry and helped her understand project-based work dynamics and how to effectively work in a group.

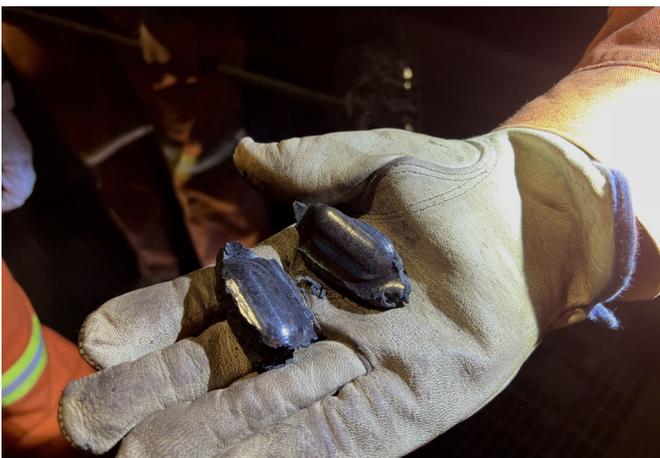
Diller, who previously had interned with SDI, has accepted a job with the company upon graduation as a cold mill process metallurgist.

"Overall, working with the Iron Dynamics Division has been a one-of-a-kind experience provided by Trine University," she said. "Not many college students can say they've worked hand-in-hand with senior-level engineers, solving actual problems effecting their production. I can safely say we all learned quite a bit about the practicality of engineering."

Project seeks ways to prepare iron more efficiently

When dealing with millions of tons of metal, you want to work as efficiently as possible.

Seniors Alexandra Davidson of Glenside, Pennsylvania, Jake Doyle of Marengo, Illinois, and AnnaMarie Lechleider Hartman of Bryan, Ohio, looked at the



composition of iron briquettes that are melted, to see if different ratios or varieties of materials would reduce waste.

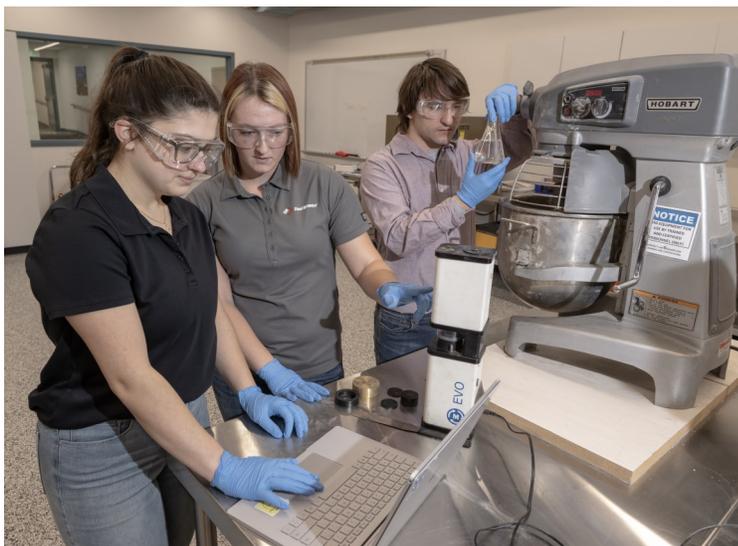
More iron, less waste

The group examined ways to optimize the compressibility, which refers to the ability of the front-end solid mixture to be packed into small briquettes for melting, of the iron feed.

“As feed compressibility increases, more material can be fit into any given briquette, allowing for increased production capabilities,” said Hartman. “This project has the potential to increase compressibility of the feed mixture, resulting in less loose material upon briquetting the feed and less wasted/recycled material, which would in turn result in a higher production throughput throughout the entire process of creating liquid iron and subsequent steel products.”

The briquettes are held together with a mixture of lime and chemical byproducts that react and act as a glue. The team examined what happened with different ratios of binder to lime, as well as with different lime varieties.

“We ended up looking at the change in mixture density before and after it had been compressed to the extent of its capability, using this density difference to characterize each mixture,” said Doyle.



From left, Alexandra Davidson, Annamarie Hartman and Jake Doyle looked at the composition of iron briquettes, to see if different ratios or varieties of materials would reduce waste.

The group ultimately found there were not enough differences in the compressibility of the resulting briquettes to advise SDI to adjust their current operating parameters.

Real-world skills

Davidson said team members were attracted to the project by the opportunity to apply their learning to potentially have a real-world impact.

“One of the most valuable skills we were able to apply throughout this project was general problem solving,” she said. “We faced many challenges in the process of figuring out how to test our samples and acquire meaningful results. Ultimately, we came back to the idea that sometimes the simplest solution is the best one, veering away from technology

and to some more crude techniques to get the best results possible.”

Though team members are headed in vastly different directions — Hartman is going to work for SDI as a process metallurgist, Doyle will return to Trine this fall to complete a double-major in chemical engineering and mathematics and Davidson will compete her MBA at Trine — they said the skills they learned and put into practice will help them in their future pursuits.

“The project management, problem-solving and teamwork skills we were able to develop over the course of this project will benefit us all greatly as we continue forward in our careers,” Davidson said.

Are you interested in sponsoring a design project?

One of the most effective ways to prepare students for employment is through mutually beneficial company sponsored projects. We would very much appreciate your organization's participation in our senior capstone projects.

Here are some guidelines to consider for our industry-sourced senior projects:

- Project teams consist of 3 to 4 students and should have a significant engineering work scope.

- Students work about 1-3 hours per week until end of November to develop project scope, deliverables, milestones and schedule.

- Students work about 5-7 hours per week starting in January on execution of the project.

- We ask that someone from your company serve as a mentor to share necessary data and information about the project, host a plant tour / site visit, and provide feedback to students as needed.

- Projects are presented at the Engineering Design Expo (April 25, 2025).

Additional 2023/24 projects included:

Rotary Dryer Design & Backend Baghouse Design (Carmeuse), Development of Process for Extracting Oil from Hops (Root9 Hop Farm), In-Line Cooling of Polyimide Fluids (DuPont), Recent Developments in Sterile Filtration (Pfizer)

If you are interested in learning more, please reach out to Jacob Borden, bordenj@trine.edu.

Power to gas: Trine group's project seeks to convert excess energy to usable methane

It's hard to know what the future of renewable energy holds, but a Trine University team has an idea for what it could look like.

Chemical engineering majors Travis Mersing of Swanton, Ohio, Zaavan Clear of Auburn, Indiana, and Alexandra Davidson of Glenside, Pennsylvania, designed a concept for a plant that would use hydrogen produced by renewable energy to create methane, which could be stored and later used in the power grid.

The project was entered in the annual national Student Design Competition held by the American Institute of Chemical Engineers (AIChE). Students in Trine's McKetta Department of Chemical and Bioprocess Engineering complete a project for the competition in addition to their industry-based senior design project, either as an individual or part of a team.

Trine students completed eight unique design proposals for this year's contest.

In the competition, chemical engineers from a designated company devise and judge a student contest problem that typifies a real, working chemical engineering design situation.

"This year's contest problem does a good job of highlighting some of the global challenges facing society and how chemical engineers are addressing these challenges," said John Wagner, Ph.D., and former chair of Trine's McKetta Department of Chemical and Bioprocess Engineering.

Winners will be announced in mid-October and will have the opportunity to present at the annual AIChE student conference, held Oct. 26-28 in San Diego, California.

Leftover power

This year, teams were tasked with designing a power-to-gas plant, which uses renewable energy such as wind or solar to split water into hydrogen and water. The hydrogen is combined with captured carbon dioxide to produce methane, which can be used in the power grid as natural gas.



From left, Zaavan Clear, Alexandra Davidson and Travis Mersing designed a concept for a plant that would use hydrogen produced by renewable energy to create methane.

Once the research was done, the team applied principles learned through their coursework to produce their final design.

"From completing material and energy balances over the system, to taking into consideration reactor kinetics, to completing an economic analysis on the entire plant, we had the opportunity to pull pieces of information from each of our classes and combine them to produce a complete design," Davidson said.

One of the challenges the group overcame during the process was estimating the scale of the equipment needed without being able to build it.

"We could calculate that we were going to capture a given quantity of CO₂, but we had to verify that the equipment sizes related to these calculations were realistic. This involved cross-checking materials of construction and equipment sizes to existing processes and standards of practice," Mersing said.

In addition to the opportunity to apply concepts from their engineering classes, the team enjoyed learning and practicing project management skills.

"Being handed a very broad project and given one month to fully develop a design and complete a process evaluation required a lot of planning and communication among team members," said Clear. "Of our graduating class, probably only one or two students will have a career in design, but all of us will find ourselves in need of good project management skills regularly."

Such plants reduce carbon emissions and reduce energy waste in renewable sources by converting excess energy into a form that is usable in the current power grid.

Designs had to effectively manage safety risks, determine the most economical, reliable and environmentally friendly carbon dioxide source, and develop the best method of delivering methane that could be used in current distribution systems.

"We were excited to have the opportunity to apply everything we have been learning over the past four years into one project, knowing chemical engineering students all across the country would be completing the same challenge as well," Mersing said.

Balancing safety, cost, impact

The Trine team began by extensively researching current, past and future processes and technologies, then determining which offered the best balance of cost, efficiency and environmental impact.

"We were largely concerned with ensuring we had a safe, functioning design that also met our environmental and production goals," Davidson said. "Since much of the design utilized newer, less developed technologies, we knew cost would be an issue, so we ended up analyzing how future price structure changes could improve the viability of the design."

Chemical Engineering Student Accolades



Danielle Gargiulo received the Jannen Renaissance Award, given to graduating seniors who exhibit a breadth of interest and accomplishments consistent with Renaissance ideals. In addition designing e-week banners, Gargiulo's undergraduate research focused on characterization and development of red pigments. Outside of Chemical Engineering, Gargiulo is a lacrosse player, cake decorator, bass guitarist, and future tattoo artist.



Chemical Engineering senior, Zavaan Clear, participated in the Ketner School of Business Collegiate Sales Cup and came away with first place. Clear also served as a member of the Ehinger Fellows Program.

Congratulations to the class of 2024! Graduates have currently accepted positions with Fresenius Kabi, Johns Manville, Shambaugh & Son, Steel Dynamics, SABIC, Trine University MBA program, and the University of Cincinnati Medical School.

Department Awards



Department Outstanding Freshman – **Madison Small** (Henderson, NV)



AICHe Donald F. Othmer Sophomore Academic Excellence Award – **Noah Glassman** (Greenwood, IN)



Department Outstanding Sophomore – **Isaac Braun** (Portland, IN)



Department Outstanding Junior – **Alyssa Keptner** (Midland, MI)



Department Outstanding Junior – **Natalie Crowner** (Saline, MI)



Department Outstanding Senior – **Alexandra Davidson** (Wyndmoor, PA)



True Grit – **Travis Mersing** (Swanton, OH)



Most Improved – **Danielle Gargiulo** (Downers Grove, IL)

Alumni Highlights

ERIKA KENDALL '22

MANUFACTURING ENGINEER, ROLLS-ROYCE

Read more →

[Grad at Rolls-Royce](#)

“ I knew going into interviews that I would need to sell my chemical engineering degree and apply it to the job. The application process is all about selling yourself, so it's important to show what you offer and how that provides benefit to the company. ”



SHERRIE RISER '22

LEADERSHIP DEVELOPMENT PROGRAM, ELI LILLY

“ I know how my work fits into the bigger picture of making life-saving medicine and it's so truly rewarding! ”

Read more →

[Passion for lab work at Lilly](#)



KAITLYN BROCK '17

ChE graduate Kaitlyn (Clark) Brock was inducted into the Athletics Hall of Fame for her performance as an award winning outfielder and slugger on the thunder softball team. She was the 2016 recipient of the Cheryl L. Coons Award for top female student athlete.



VIPUL SHAH '96

**COMMENCEMENT SPEAKER
2024 DOCTOR OF HUMANE LETTERS**

“ Go out and win with confidence. Be humble and have fun along the way. ”

Read more →

[Commencement](#)

[Shah to address graduates](#)



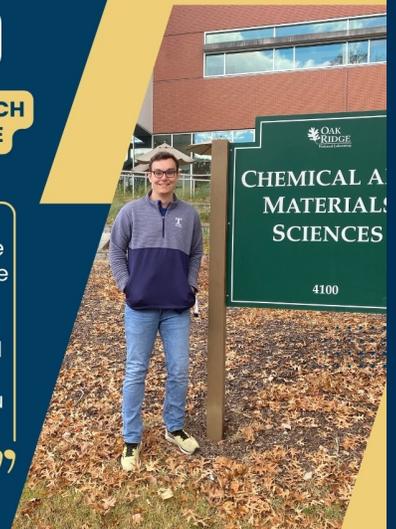
BLAKE TRUSTY '19

POSTDOCTORAL RESEARCH ASSOCIATE, OAK RIDGE NATIONAL LABS

“ There is an abundance of opportunity available if you're willing to venture a little outside your comfort zone and people are willing to give you the shot if you have the enthusiasm. ”

Read more →

[Trusty continues success](#)



ALEXANDRA DAVIDSON '24

**MBA STUDENT,
TRINE UNIVERSITY**

“ I never walk across campus without passing and saying hi to a friend or professor, and it never fails to brighten my day! I wasn't quite ready to leave just yet! ”

Read more →

[Space for everyone](#)



CHE expands STEM outreach events

Impact Your Future

More than 100 students from four area high schools learned about STEM careers and took part in hands-on activities related to science and engineering at Trine University's "Impact Your Future: Careers in Engineering and Science" event on Feb. 22.

While the inaugural event last year focused on chemistry and chemical engineering, the 2024 version included Trine's science, biomedical engineering and chemical engineering departments.

As a result, student numbers increased from 66 to 115, representing Jonesville (Michigan), Camden-Frontier (Michigan), Central Local (Ohio) and DeKalb Central schools.

"There are so many overlaps in career options between biomedical engineering, biology, chemical engineering and chemistry, it made sense to expand the program to include all these departments," said Amanda Malefyt, Ph.D., professor in Trine's McKetta Department of Chemical Engineering and organizer of the event.

"We wanted high school students to have the opportunity to see, through firsthand experiences, the differences between degrees in engineering and hard science



and the numerous options Trine has to offer. We also wanted to build their excitement toward the possibilities their future holds."

Students were able to pick from multiple activities, such as separation and purification processes, large-scale distillation, water pollution remediation, construction of 3D-printed kinetic hands and hip joints, virtual reality for prosthetic design, Anatomage virtual dissection, invertebrate analysis, forensic science fingerprinting and tours of biomedical engineering, chemical engineering, biology and chemistry labs.

Alexis Zeiler, a science teacher at Jonesville Community Schools,

said she brought students last year and this year because it offers a great opportunity for them to see what their opportunities are after high school.

"Many high school students are focused on going to college, but not necessarily what they will do after graduation," she said. "Trine works with so many industries and has so many opportunities for their students, that I hope it helps our high school students to think about careers in science and engineering."

The six teachers who brought their Advanced Placement or dual credit biology or chemistry classes were able to participate in seminars and networking activities, which included a tour of Trine's makerspace and heat pressing T-shirts.

"Growing this program not only helps us connect with more students, but also helps us build and strengthen connections with local area teachers as we work together to educate and equip the next generation of students," said Malefyt.

The event ended with lunch and a tour of Trine's Angola campus.

A dozen Trine faculty and more than 40 students assisted with the event.

All outreach events were fully funded through a Lilly Endowment grant.





MSD students learn about engineering, computing during career day

Trine University faculty and students introduced third- through fifth-graders from the Metropolitan School District of Steuben County to multiple engineering and computing fields during MSD's Career Day on May 20.

Wendy Yagodinski, chair of Trine's Department of Computer Science and Information Technology, Jeremy Goossens, director of esports, Gary Greene, Ph.D., chair of the Reiners Department of Civil and Environmental Engineering, and Amanda Malefyt, Ph.D., professor of chemical engineering, along with students from Trine's Franks School of Education, interacted with more than 500 MSD students at the event.

"Wendy has been doing quite a few outreach visits related to virtual reality and extended reality with Carlin Park Elementary School," said Malefyt. "They reached out to her to see if she wanted to participate in the Career Day."

"We then decided to create a booth that provided a more well-rounded view of the programs we offer within the Allen School of Engineering and Computing at Trine to showcase the variety of activities and careers engineering and computing can encompass."

Students were able to use a Microsoft HoloLens mixed reality headset to construct augmented re-

ality play spaces. Third-graders made slime, fourth-graders constructed airplane designs and tested flight distance and time, and fifth-graders built foam-board truss bridges.

Trine hosts first overnight engineering and computing camps

Two new camps at Trine University, hosted by the Allen School of Engineering and Computing, allowed high school students the opportunity to gain hands-on experience in engineering and computing fields.

The Tech Titans and Engineer Your Future camps ran for three days in July, with campers staying overnight on campus and eating in the Whitney Commons Cafe.

The Engineer Your Future camp, gave students the opportunity to take part in hands-on activities exposing them to electrical, civil, mechanical, chemical, biomedical and aerospace engineering as well as design engineering technology.

The chemical engineering portion involved making ice cream and chocolate, developing a separation process, and learning about distillation. Upcoming seniors Taylor Early (Hicksville, OH), Madison Ruen (Antwerp, OH), and Josh Scott (Ossian, IN) volunteered for the event.

Evening entertainment included water bottle rocket design, a Smash Bros tournament, ice skating and a big-screen showing of the movie *Ready Player One*.

The dates for the 2025 camp will be June 9–11.



James Taylor Lab Technician and Instructor

The department welcomed James Taylor to the position of Lab Technician and Instructor in January.

Within this role, Taylor will head up ordering, maintenance, and upgrading of all department lab facilities and supplies. In addition, he assists with instruction of lab courses and oversight on student projects.

"I enjoy interacting with the students and teaching hands-on material. I look forward to building labs that will help integrate engineering knowledge with technician experience so that our graduates are able to relate and work seamlessly with technicians wherever they may go," said Taylor.

Taylor has a background in applied science with specialization in power generation. He spent two years as an electrician and HVAC specialist with campus operations. Prior to Trine, Taylor worked four years installing wind turbines across the nation.

When he's not in the office, he can often be found doing home projects, weightlifting at the gym, trying new activities like paddleboarding with his wife Jessica, or spending time with his pets, Sparky (left) and Nugget (right).



Thank You For Your Support

We are beyond thankful for the level of giving achieved by Chemical Engineering alumni. We acknowledge the following alumni, supporters, and organizations for contributing to the university and ChE department during the past academic year. Your donations provide scholarship opportunities, help students attend conferences, purchase new lab equipment, aid in undergraduate research, fund outreach activities and support department social events.

ChE Alumni Donors to Trine University

Brian Alexander, David Bacehowski, Jordan Baker, Karen (Alston) Bell, Zachary Bell, Tyler Boscoe, Isaac Braun, Charlotte (Gerig) Brent, Howard Caine, Nicholas Cassidy, Joshua Chapman, Eric Chris, Brandon Collins, Andrew Dee, Adam Dills, William Eckstrom, Gregory Goodridge, Jonathon Guscinski, Andrew Hein, Jacob Honkomp, Robert Huba, Joseph Jackson, Erika Kendall, David Keptner, James Kerr, Caleb Knust, Kenneth Kodger, Jennifer (Jackemeyer) Krupp, Lucas Krupp, Donald Kuhn, David Laston, Richard Linard, Amanda (Portis) Malefyt, Kristen (Keller) Manivilovski, Michael Manivilovski, Nicholas Miller, Patrick Mills, Richard Mohler, James Nespo, Micah (Dwenger) Oertel, Cameron Orr, John Owen, Kyle (Canales) Reis, Dennis Richardson, Christopher Sanchez, Glenn Schmidt, Brandon Shearer, Alexandria (Claudy) Smith, Bruce Smith, Kaitlyn Steers, Jason Stofleth, Keegan Tackett, Adam Taloni, Eric Taylor, Blake Trusty, Prescott Van Horn, Chad Walters, John Wiedenman, Mitchell Wyss, Brittany (Minnich) Zembala

Donors to Chemical Engineering

Dan Fritz, Kristen (Keller) Manivilovski, Michael Manivilovski, Mike McKetta, Pamela Mills, Patrick Mills, John Owen, Kristy Owen, Chester Pinkham, Eric Taylor, Prescott Van Horn, Dianna Whorley

Company Gifts to Chemical Engineering

Bank of America Charitable Gift Fund, Charities Aid Foundation of America, Helen and John McKetta Jr. Charitable Foundation, Steuben County Community Foundation, The Medtronic Foundation

Donations of Time and Talent

Beyond financial support, so many alumni have stepped in to provide industry opportunities and mentorship for our students. From GE 101 interviews to senior design experience, your time and advice is invaluable.

Professional Advisory Board Members: Chris Barr, Leisha Beutler, Charlotte Brent, Drew Clark, Eric Chris, Eric Taylor, Bob Huba, Jim Miesle, Aury Keller, Jennifer & Lucas Krupp, Monica Keil, RJ Flowers, Jennifer Guard, Cameron Orr, Chet Pinkham, Chris Pontorno, Crystal Sattler, Marc Snyder, Craig Wiley

Industry Project Mentors: Ian Fahrenkrog, Brooke Hardy, David Keptner, Brandon Villanueva

Guest Speakers and Panelists: Kelsey (Ortiz) Balka, Jonah Blanchard, Amy (Newell) Boysen, Kaitlyn (Clark) Brock, Josh Chapman, Roger Chase, Grace Curtis, Brooke Hardy, Erika Kendall, Lucas Krupp, Noah McClellan, Patrick Mills, Jacob Nantz, Jarred Packard, Sherrie Riser, Laurel (Smithson) Rodes

Equipment and Facility Updates

In Fawick, we have recently renovated the measurements lab into a food lab, with the ability to produce coffee, chocolate, ice cream, and fermented beverages. Dr. Liberatore will be expanding our rheology capabilities. A long-term goal is refreshing the appearance of the Moore Lab.

To continue the momentum we have experienced, it will take many gifts of all sizes. To learn more about supporting Trine and Trine ChE, contact the Trine University Office of Advancement, advancement@trine.edu.

Stay Connected

As you continue your path in life, please stay in touch. You can email faculty directly with updates and photos, change your contact information through trine.edu/alumni, or join our [LinkedIn](#) page and follow the school of engineering on social media [@trineengineering](#)!

