

Fife Fellow No. 211

Suri Bandler



Suri is double majoring in computer science and mathematics and minoring in literature at MIT. She is a 2016-17 TBII scholar, serves as a teaching assistant in fundamentals of programming and differential equations,

is a staff columnist for MIT's newspaper, and plays intramural basketball. Suri is passionate about understanding human intelligence and the ways in which computer science can be used to understand conscious and subconscious ways of thinking. She conducts research at the computer science and artificial intelligence laboratory that focuses on systematically identifying authors' motivations in political correspondences, like newspaper articles, and addresses questions such as "how can we programmatically predict the impact that author's choices will have on a reader's conclusions?" Her vision is to analyze media correspondences and to identify to readers authors' possible goals. Suri is excited to continue this research as a part of her masters of engineering at MIT next year.

Williams Fellow No. 38

Mikayla E. Barry



Mikayla graduated summa cum laude with a B.S. in biomedical engineering from Texas A&M University, where she performed polymeric biomaterials research for three years. She was selected as Texas A&M's first Beckman Scholar

in 2014 to design materials that improve the safety and longevity of blood-contacting devices. This enabled her to present at national conferences, publish three peer-reviewed articles as well as an honors thesis, and become a 2016 Astronaut Scholar. Mikayla has also invested heavily in research outreach as an undergraduate research ambassador. In addition to her academic pursuits, Mikayla played flute and piccolo for Texas A&M's premiere wind ensemble and enjoys long-distance running, having completed her first marathon this spring. She intends to pursue a Ph.D. in materials science and engineering at the University of California, Santa Barbara as an NSF Graduate Research Fellow and ultimately plans to seek professorship at a tier one research university.

Arm Fellow No. 9

Michael D. Bennett



Michael is graduating from Lafayette College with a B.S. in civil engineering and a B.A. in history. While at Lafayette, he served a year as President of the PA E TBII Chapter. During his term, Michael bolstered the chapter's

lineup of professional and social events and also worked to further its involvement in community service. As an undergraduate, Michael did research work on transportation sustainability rating systems and completed an honors thesis on how to monitor and improve railroad subgrade soil behavior. This fall, Michael will begin work on an M.S. in civil engineering at Virginia Tech with a concentration in geotechnical engineering. After earning his master's degree, Michael plans to work in the transportation geotechnical engineering field and to earn licensure as a Professional Engineer. He is also strongly considering eventually resuming his graduate studies and earning a Ph.D. in civil engineering.

Spencer Fellow No. 62

Grant F. Boggess



Grant graduated summa cum laude from the University of Kentucky with degrees in materials engineering and mechanical engineering. In the fall, he will pursue a Ph.D. in mechanical engineering at Rice University where his research

will focus on improving biomechanical models for stroke recovery. Grant's interest in biomechanics was developed over a span of five years working in UK's interdisciplinary BioMotion Lab. His research on adaptations following ACL tears (leg injuries) led to two publications, one as first author. Grant has been involved in Tau Beta Pi, first serving as initiation chair and later as president of Kentucky Alpha. He has also been involved as president of Material Advantage, as an engineering ambassador, and as a teaching assistant for several courses. Outside of school, Grant is a runner and serves as a Sunday school teacher at his church.

Fife Fellow No. 212

Chantel M. Charlebois



Chantel graduated summa cum laude from Rochester Institute of Technology with a B.S. in biomedical engineering and a minor in sustainable product development. While on co-op, she conducted research on

ventilator-induced lung injury at the University of Vermont and on the synthesis of antibody-drug conjugates at the University of Utah. She is a BMES member and was president of RIT's equestrian team. Chantel has a passion for mentoring her peers in the role of TA for fluid mechanics and supplemental instruction leader for chemistry. Chantel was awarded a TBII Scholarship for 2016-17, RIT Excellence in Student Life Award 2017, and RIT Outstanding Undergraduate Scholar. This fall, she will be pursuing her doctorate in bioengineering at the University of Utah with a neural interfaces track. Ultimately, she plans to contribute to the neuromodulation field and continue her passion for teaching as a faculty member.

Fife Fellow No. 213

Brian P. Cully



Brian, a native of Anaheim, CA, completed his undergraduate degree in aerospace engineering at the United States Naval Academy. His senior year was primarily comprised of independent research analyzing helicopter

blades with modified leading-edge geometries. He also led Navy's club water polo team as president and team captain. Brian plans to earn an M.Sc. in sustainable energy technologies from the University of Southampton in the United Kingdom. He intends to use his background in fluid dynamics to better understand offshore energy and its applications to the naval service. His ultimate goal is to contribute to global sustainability efforts in order to preserve the world's resources for future generations. After graduate school, he is looking forward to service as a submarine officer in the United States Navy. In his free time, Brian likes to surf, hike, take photos, and spend time with friends.

Matthews Fellow No. 20

Michael R. Dunn



Michael graduated summa cum laude with a B.S. in civil engineering from The University of Alabama. He concentrated his undergraduate studies on transportation and has performed research projects

over the past three years, focusing on traffic microsimulation and efficiency. Through internship experience, he improved mission status reporting for NASA's launch services program, co-authored a report on interstate congestion for the Alabama Department of Transportation, and studied the effects of winter weather on vehicle collisions for the National Weather Service. Michael was a construction captain for UA's concrete canoe team and has engaged high school students in camps and outreach events on transportation. He enjoys playing and learning about music and golf and has been heavily involved in UA's Catholic Student Center. Michael will study transportation at graduate school at The University of Texas at Austin.

GEICO Fellow No. 2

Kyle J. Gilman



Kyle graduated with honors from the University of Wyoming with a B.S. in electrical engineering and a concentration in bioengineering. He served as the Vice President of Projects for Wyoming Alpha and as secretary of

the UW IEEE chapter. Kyle also promoted STEM outreach and engaged with K-12 educators in workshops to help them design engineering lessons for their classes. During an internship with the U.S. Air Force Research Laboratory, he developed an interest for computer vision after researching its applications for materials microstructure characterization and quantification. His work produced novel segmentation techniques of polymer matrix composite fibers using complex phase-coded Hough filtering and SIFT. He is continuing similar research during another internship with AFRL this summer. Kyle will pursue a Ph.D. in EECS at the University of Michigan where he intends to study computer vision and machine learning with biomedical applications.

Anderson No. 11

Katherine A. Hollar



Katherine graduated summa cum laude from Boise State University with a B.S. in mechanical engineering and a minor in biomedical engineering. She served as an officer in several organizations, such as TBII,

Society of Women Engineers, and the Future Alumni Network Club. She also provided academic support and instruction as a college of engineering peer ambassador and as an undergraduate teaching assistant. She also conducted research in the biomedical field, where she verified original software to assess fracture healing and developed an imaging technique to measure wear in joint prosthesis. Furthermore, she is first-author on a publication that details the imaging procedure. Katherine was selected as a 2017 Boise State Top Ten Scholar. She will pursue an M.S. in mechanical engineering with the intent of earning a Ph.D. in bioengineering. Her dream is to become an academic researcher and professor, and to inspire students, who like her, have a natural curiosity in engineering.

King Fellow No. 56

Rebekah R. Koehn



Rebekah will graduate summa cum laude from Valparaiso University with a B.S. in mechanical engineering, a minor in biomedical engineering, and a humanities-based associate degree from the interdisciplin-

ary honors college. She was TBII Chapter President and has served in over 26 other leadership positions throughout her undergraduate career, including as vice president for four organizations, simultaneously, during her junior year. At Valpo, she conducted three years of biomechanics research with a focus in athlete injury prevention. She plans to continue performing biomechanics research, pursue a Ph.D. in mechanical engineering at The Ohio State University, where she has been awarded a four-year fellowship, and work in a neuromuscular biomechanics lab for her dissertation research. After a career in biomechanics, she hopes to take a faculty position at a small teaching university to mentor younger students and pass along her joy for learning.

Fife Fellow No. 214

Mark R. LaFollette



Mark graduated with a B.S. in chemical engineering with honors from the University of Kansas. He served as Kansas Alpha Vice President and on the AIChE officer board and was involved with the engineering student council.

In these roles, he helped plan parts of the KU annual engineering expo, a large STEM outreach event, and events for students to network with industry representatives. Through KU engineering ambassadors, he took part in undergraduate recruitment and STEM outreach events for local high school groups. His undergraduate research focused on the hydrothermal liquefaction of algae into biofuels and the characterization of the reaction products. He took part in a summer undergraduate research fellowship at NIST in Boulder, CO, working on fuel mixtures and characterization. He will pursue a Ph.D. in chemical engineering at the University of Delaware and intends to focus on catalysis. He hopes for a career in industry or at a national lab.

Fife Fellow No. 215

Victoria S. Marks



Victoria graduated with a B.S. in biomedical engineering and minors in chemistry and electrical engineering from the University of Miami, where she was TBII President. In meetings with the engineering advisory board, she

ensured fellow students had a voice in the college. She pursued her passion for community activism as co-chair of the social justice event, Tunnel of Oppression, and by organizing service days throughout Miami-Dade County as a member of Strive service and leadership team. During three years of research, Victoria assisted on projects ranging from decreasing damage during cochlear implants to improving neural electrode arrays. As a summer research assistant at the Miami Project to cure paralysis, she investigated gene therapy and axon regeneration. She will pursue a Ph.D. in biomedical engineering and physiology at the Mayo Clinic Graduate School of Biomedical Science. She plans to continue research in neural engineering and to improve treatments of neurodegenerative diseases.

Record Fellow No. 1

Conor D. Martin



Conor graduated summa cum laude as an honors scholar from the University at Buffalo with a B.S. in aerospace and mechanical engineering and minors in physics and mathematics. He was involved in campus activities,

served as TBTI Chapter President, a teaching assistant for first year courses, and a research assistant for two years in the micro and mesoscale combustion lab. His research developed a mesoscale burner array for use in experimental studies on small scale flame instabilities. Conor has also worked as a summer undergraduate research fellowship student at Purdue University developing an optical probe for use in imaging in cylinder combustion. He will attend Caltech to pursue a Ph.D. in space engineering. There, he will study fundamental fluid and combustion problems as well as novel microscale propulsion systems in collaborative research with NASA JPL. Conor hopes to pursue a career with NASA and contribute to future space exploration missions.

Record Fellow No. 2

Christopher M. Matthews



Chris graduated summa cum laude with a B.S. in electrical engineering from the University of Arkansas, where he was President of his TBTI and IEEE chapters. He spent the final year of his undergraduate career taking part

in research on growth and fabrication of III-nitride solar cells. He was awarded a state undergraduate research fellowship by the Arkansas Department of Higher Education for this project. Chris began working as a research intern at Sandia National Laboratories the summer before his senior year. He presented his work on gallium nitride diodes at the 2016 Conference on Wide-bandgap Power Devices and Applications. He was awarded a TBTI Scholarship for 2016-17. Chris will pursue his doctorate in electrical engineering at the Georgia Institute of Technology. Upon earning his Ph.D., he intends to work at a national laboratory and eventually become a faculty member at a major university.

Record Fellow No. 3

Catherine M. Meis



Catherine graduated summa cum laude from Iowa State University with a B.S. in materials engineering, and a minor in biomedical engineering, and as a member of the honors program. She took part in research throughout

her undergraduate career and studied topics including microfluidics, electromechanical actuators, polymeric drug delivery, and hydrogels for biomaterials. She interned in corporate R&D at Medtronic for the last two summers. Catherine was named as a 2015 Goldwater Scholar. At ISU, she was secretary of Material Advantage and a project officer for Iowa Alpha, coordinating and supervising outreach events for middle and high school students, as well as participating in recruitment and initiation. She has been a two-year teaching assistant for materials engineering courses. Catherine will pursue her Ph.D. in materials science and engineering at Stanford University, where she plans to study soft materials for biomedical applications.

Record Fellow No. 4

Alekos J. Michael



Alekos is a class of 2017 graduate at the United States Air Force Academy, majoring in astronautical engineering and spent most of his time working on USAFA's cadet built satellites. He has been studying the integration of

humans and autonomous systems in space. Alekos has been involved in multiple research projects, including one at MIT in which he investigated the semi-autonomous synchronized position hold engage and reorient experimental satellites on board the International Space Station. Alekos is an active member of his university's STEM and astronomy outreach clubs and was his TBTI Chapter Secretary and then President. Upon graduation, he plans to continue studying aerospace engineering while pursuing a master's degree at Stanford University. He will serve as a pilot in the U.S. Air Force and pursue his dream of becoming a test pilot to demonstrate the incredible effects achievable by creating hybrid human-robotic systems.

Tau Beta Pi Fellow No. 816

Andrew S. Morgan



Andrew graduated summa cum laude from Youngstown State University with a dual-degree B.E. and B.S. in electrical engineering and computer science. Much of his time was spent volunteering at various commu-

nity events and taking part in over a dozen student-led organizations. He is the Ohio Lambda Chapter webmaster and holds leadership roles in five student organizations. Andrew published three papers and filed a provisional patent. In the summer of 2016, he attended Auburn University for a research experience for undergraduates on smart UAVs. While conducting research in additive manufacturing and computer vision, he found his interests lying in closed-loop robotic systems with computer vision feedback. Andrew will attend Yale University to pursue a Ph.D. in robotics. After grad school, he intends to work in academia as a researcher and professor in robotics.

Centennial Fellow No. 32

Lagnajit Pattanaik



Lagnajit graduated summa cum laude from The Ohio State University with a B.S. in chemical engineering and a minor in biochemistry. He served as TBTI Chapter President and helped secure the 2019 TBTI Conven-

tion for Columbus. As an undergraduate, Lagnajit investigated eco-friendly catalysts for biomass conversion strategies, which helped him discover his passion for alternative energy and earned him a Goldwater Scholarship. He completed two internships with Owens Corning where he helped develop a novel, high R-value insulation. Lagnajit was also involved in extracurricular activities such as Wonders of our World, a STEM organization that visits underprivileged area elementary and middle schools to perform science experiments. Through this, he worked as a peer tutor in math and chemistry. Lagnajit enjoys playing drums and watching reruns of SpongeBob. He is going to MIT to pursue a Ph.D. in chemical engineering.

Tau Beta Pi Fellow No. 817

Benjamin Pesante



Benjamin graduated summa cum laude from The Catholic University of America with a B.S. in biomedical engineering and a minor in Spanish for healthcare. He played four seasons of men's varsity soccer. Benjamin served as TBI

Chapter President and on the student athlete advisory committee. His research interests lie in biomechanics and rehabilitation medicine. Benjamin spent two summers interning in the functional and applied biomechanics laboratory at the NIH. He conducted research in rehabilitation therapy for patients with myotonic dystrophy using sensor technology. At CUA, Benjamin conducted biomechanical research into facilitating rehabilitation assessment for clinicians and therapists using a variety of sensors that quantify motion. He studied in Chile in a healthcare program to enhance his knowledge of medicine. He has twice volunteered on mission trips to the Dominican Republic. Benjamin plans to pursue an M.S. in biomedical engineering followed by a medical degree.

Forge Fellow No. 6

Caelin Kiem-Toan Tran



Caelin graduated from Stanford University as a Terman Scholar with a B.S. in chemical engineering. While serving as California Gamma President, he improved chapter visibility on campus, expanded peer men-

torship, grew the teaching awards program, co-led the annual engineering showcase of student and corporate engineering projects, and co-hosted the distinguished speaker series. As a student, he served on the search committee to choose the next Stanford School of Engineering dean, researched electrochemical fuel synthesis, and interned at Siemens, Genentech, and Tesla. Caelin will pursue an M.S. in computer science at Stanford with a focus in artificial intelligence. His long-term goal is to deploy clean energy technologies on a global scale to combat climate change and accelerate the development of green industry practices. In the future, he hopes to start his own company to help enterprises develop modern solutions to energy challenges.

Record Fellow No. 5

Taylor M. Rothermel



Taylor graduated summa cum laude with a B.S. in bio-engineering with a concentration in biomaterials from Clemson University. She served as South Carolina Alpha Corresponding Secretary, director of interna-

tional projects for the local chapter of the Foundation for International Medical Relief of Children, and a teaching assistant for the general engineering department. Taylor has been involved in the research of tissue engineered heart valves and was awarded the Barry W. Sauer Bioengineering Undergraduate Researcher Award. Additionally, she has participated in the summer research internship program at Nanyang Technological University in Singapore as well as the summer scholars program at the Wake Forest Institute for Regenerative Medicine. She will pursue her Ph.D. in biomedical engineering from the University of Minnesota with a focus on cardiovascular engineering. Taylor's ambition is to be a professor at a research university.

Zimmerman Fellow No. 6

Mikayla G. Walters



Mikayla graduated summa cum laude from the University of South Alabama with a B.S. in chemical engineering and minors in chemistry and Spanish. She served as TBI Chapter Recording Secretary and sophomore scholar-

ship committee chair, Phi Sigma Iota honor society's secretary, and was active in Mortar Board, Omega Chi Epsilon, and the university honors program. Mikayla was involved in undergraduate research as a South Alabama undergraduate research fellow. She also completed an internship with Olin Chlor Alkali Products and Vinyls in McIntosh, AL. Mikayla received a Benjamin A. Gilman Scholarship and Phi Kappa Phi Study Abroad Grant to complete a research internship at the Pontifical Catholic University of Chile this summer. She plans to pursue an M.S. in chemical engineering at the University of South Alabama, continuing her undergraduate research in the field of heterogeneous catalysis for the water-gas shift reaction for fuel cell applications.

Dodson Fellow No. 4

Kevin M. Tenny



Kevin graduated with highest distinction from the University of Kansas (KU) with a B.S. in chemical engineering and certificates in global awareness, research, and service learning. He served as Kansas Alpha Vice President.

While an undergraduate, Kevin co-founded two educational-based start-ups, interned with a private investment firm, and served as a student senator. He has performed research at KU, Iowa State University, University of South Carolina, and MIT. In 2016, he was a Goldwater and Buick Achievers Scholar and received the top Tortoise Young Entrepreneurs Award for students in Kansas and Missouri. For the past three years, Kevin has taught introductory level math courses at KU and is a member of the Alpha Tau Omega leadership development fraternity. He will pursue a Ph.D. in chemical engineering at MIT. Kevin plans to investigate energy storage devices and their ability to complement renewable options.

Nagel Fellow No. 20

Charles Tai-chieh Wan



Charles will graduate summa cum laude from Cornell University with a B.S. in chemical engineering. His research on the lithium-oxygen electrochemical battery as a high energy density, "beyond Li-ion" platform led

to a first-author paper in the journal Science Advances. Charles spent a summer as an Amgen Scholar at UC Berkeley and interned at ExxonMobil, filing a patent memorandum with the latter. His undergraduate research received a 2016 Goldwater Scholarship. At Cornell, Charles has been a member of the nationals-winning ChemE Car team since freshman year and is a senior captain. On the New York Delta professional development team, he mentors students and assists them in identifying potential career opportunities. In addition to holding leadership roles in AIChE, he served as a teaching assistant for three core ChemE classes. Charles will pursue a Ph.D. in chemical engineering at MIT as an NSF graduate research fellow, with the goal of becoming a professor.

Richard R. Yang



Richard graduated from the University of Wyoming (UW) with dual B.S. degrees in computer science and computer engineering. He was an active member of Wyoming Alpha and was Treasurer in 2016-17. Additionally, he was

president of the UW IEEE student chapter. Richard had two years of research experience at UW artificial intelligence laboratory. His projects focus on visualizing learned features in deep neural networks and applying machine learning to robots. He attended two NSF REU summer internships at the Univ. of Southern California and Oakland University, and his first-author research paper was published in 2015. His senior design group was among the eight national finalists to participate in the 2016 NASA RASC-AL Robo-Ops Rover Competition. Richard was recognized as the student engineer of the year in 2017 by the Wyoming Engineering Society. He will begin his graduate study in computer science at Stanford University and plans to continue research in machine learning.