



Department of
Biological & Agricultural
Engineering

FALL 2023 NEWSLETTER



The aftermath of the "Pie a Teacher" fundraiser at the annual BAE crawfish boil (p. 10).

LETTER FROM THE CHAIR

Department Chair Update

I hope that this newsletter finds you well and enjoying (slightly) cooler temperatures.

A lot has happened during the past year, and many of our updates are detailed in the pages of this newsletter. Highlights include 63 students earning their BS degrees in biological engineering. Our enrollments remain strong, with 336 students currently enrolled in our BS program and 20 enrolled in our graduate programs.

Three of our faculty were on sabbatical during the past year—Chandra Theegala spent last fall at the Agricultural Research Service (ARS) in California, where he established new collaborations regarding research in pyrolysis and product development from almond by-products. Dorin Boldor extended his work on the physico-chemical properties of biofuels through collaboration with faculty at Mendel University at Brno in the Czech Republic, and Cristina Sabliov focused on nano-delivery systems for agricultural applications with collaborators at Mendel University.

We had some faculty changes. Although we are sorry that Liz Martin left BAE, we are thrilled that she has continued her illustrious research career just down the road at Tulane University. Dr. Martin is now an adjunct professor in our department and is continuing to collaborate with our faculty on breast cancer research. We also have two additions to the faculty—Qi Cai has joined the department from the Mechanical Engineering department at the University of Texas-Dallas, where she was conducting postdoctoral research, and Bruno Rego has come to us from Yale University, where he was doing postdoctoral research in the Biomedical Engineering department. Both are tenure-track assistant professors doing cutting-edge research in biomedical engineering. To learn more about these stellar scholars, please read their columns in the newsletter. We also had one important title change, as Philip Jung was promoted to associate professor with tenure!

In terms of alumni relations and development, the BAE Advisory Council is actively engaging alumni and raising funds for departmental needs, including our distinguished lecture series and capstone senior design, among other things. In 2022, \$20,363 in gifts were received, with \$8,480 going to academic program support, \$7,575 in discretionary funds, and \$4,208 in scholarships. In 2023, 14 students received a total of \$11,925 in scholarships from our scholarship endowments. We are especially proud of faculty, staff, alumni, and friends of BAE who contributed during LSU's Giving Day. We raised approximately \$9,000 during Giving Day 2022 and 2023 and completed the challenge match set forth by Dr. Gloria Nye for the John and Gloria Nye Capstone Senior Design Fund. This effort has enabled us to increase the amount of departmental funding for senior design projects to \$1,200 per project and to have extra funds for projects if necessary.

In closing, one of the things I love about BAE is its dynamic nature. I am proud to be a member of the BE and BAE Nation because of the way that we value people and the collaborative process, which in turn drives high-quality research, teaching, extension, and design at the broad intersection between biology and engineering. I hope that each of you will read on for details. In the meantime, please take care and stay in touch (my email address is mlima1@lsu.edu)



All my best,

A handwritten signature in black ink, appearing to read 'ML', written over a white background.

Marybeth Lima
Chair and Cliff & Nancy Spanier
Alumni Professor

DEPARTMENT HIGHLIGHTS

Two New Faculty Members Joined BAE in August 2023

Dr. Qi Cai recently joined the Department of Biological and Agricultural Engineering at LSU as an assistant professor. Her research interests mainly focus on developing effective approaches for treating brain cancers and neurological disorders and developing biomimetics disease models for personalized drug discovery and delivery. Before joining LSU, Dr. Cai was a postdoctoral research associate at the University of Texas at Dallas. During this time, she focused on pioneering novel materials and technologies for blood-brain barrier modulation to facilitate drug delivery into the central nervous system. Dr. Cai earned a PhD in Chemistry from the Center of BioNano Interactions at University College Dublin (Ireland). Her doctoral work centered on developing a microfluidic platform for nanoparticle synthesis and reaction kinetics profiling. She also studied how the physicochemical properties of the nanoparticles will influence their biological behaviors in vitro and in vivo. Dr. Cai is the recipient of multiple awards, including the International Brain Barriers Society Poster Award, Keystone Symposia Scholarship, Baxter Young Investigator Award, etc. She is also a member of the Biomedical Engineering Society, the International Brain Barriers Society, and the American Chemical Society. For more information, please visit her website <https://www.cailaboratory.com>.

Dr. Bruno V. Rego also joined the Department of Biological and Agricultural Engineering as an assistant professor. He was previously a postdoctoral associate at Yale University and holds BS and MSE/PhD degrees in biomedical engineering from the Georgia Institute of Technology and the University of Texas at Austin, respectively. His doctoral research, funded by both a National Science Foundation Graduate Research Fellowship and an American Heart Association Predoctoral Fellowship, focused on the remodeling of heart valve tissues in response to myocardial infarction and pregnancy. Dr. Rego's recent work includes predictive modeling of vascular maturation, uncertainty quantification of inverse modeling-based estimates of arterial wall properties, and the development and validation of machine-learning models to predict aortic dissection and aneurysm progression. He has published 21 peer-reviewed articles and four book chapters, and his work has been presented at scientific conferences more than 50 times. Dr. Rego's research has been highlighted on journal covers four times and has also been featured by 11 popular media outlets, including *ScienceDaily*, *EurekAlert*, *News Medical*, and *Becker's Hospital Review*. He is a member of the IMAG Committee on Credible Practice of Modeling & Simulation in Healthcare, as well as the ASME-BED Solid Mechanics Technical Committee and serves as a reviewer for 10 archival journals. For more information, please visit his website: <https://faculty.lsu.edu/cel/people.php>.



BAE Faculty Earned a Number of Recognitions in 2022



Dorin Boldor received an LSU Alumni Professorship; this university-wide professorship recognizing excellence in instruction results in a permanent \$6,200 pay increase and an annual academic support budget of \$2,500 per year.



Cristina Sabliov was named a Fellow of the International Union of Food Science and Technology for career-long accomplishments in food engineering and science. Dr. Sabliov also won a 2022 Fulbright Scholar Award at the Transylvania University of Brasov, Romania.



Philip Jung received a Rising Star Faculty Award from the LSU Alumni Association; this award comes with a \$5,000 cash prize. Dr. Jung also received a certificate of recognition and appreciation for serving as a peer reviewer for American Chemical Society publications.



Sathivel Subramaniam (teaching appointment in BAE) received the Doyle Chambers Research Award from the LSU AgCenter; this prestigious award goes to a faculty member who during their career at the Louisiana Agricultural Experiment Station has made the most meritorious contributions to agriculture.



Marybeth Lima received a certificate from LSU's Center for Community Engagement, Learning and Leadership, for the highest service-learning course evaluations in the College of Engineering for spring 2022.



Nick Totaro won the Crystal Apple Award from the area non-profit group Volunteers in Public Schools; this is the highest honor given by the organization for a volunteer with at least 10 years of service to enhancing public school education.

STUDENT HIGHLIGHTS

Undergraduate Student Highlights

We congratulate the 42 BE graduates in Spring 2023 and five BE graduates in Summer 2023. Combined with the 16 Fall 2022 BE graduates, we reached 63 graduates in BE for the academic year. The graduating class transitioned into typical pathways of medical school, dental school, graduate school, and industry. We've seen a growing interest in clinical specialist careers and orthotics and prosthetics programs as well.

During the Spring 2023 commencement ceremony, BE graduates stood out in several university-wide, undergraduate distinction programs, earning:

Ten out of 78 total Distinguished Communicator Awards:

Julie Armand	Faculty Advisor Todd Monroe
Guadalupe Covarrubias	Faculty Advisor Nick Totaro
Miller Dickerson	Faculty Advisor Adam Melvin (Chemical Engineering faculty)
Zoe Elam	Faculty Advisor Nick Totaro
Parker Hannan	Faculty Advisor Nick Totaro
Chloe Heitmeier	Faculty Advisor Nick Totaro
Lauren Hynson	Faculty Advisor Marybeth Lima
Mallory Matthews	Faculty Advisor Nick Totaro
Andre Mira	Faculty Advisor Liz Martin
Tasnia Monir	Faculty Advisor Nick Totaro

More information about these students and the Distinguished Communicator Program are included here:

<https://www.lsu.edu/academicaffairs/cxc/news/2023/distinguished-communicators-may-2023.php>

Five out of 54 total Distinguished Researchers were BE graduates

Allie Brooks	Faculty Advisors Dorin Boldor and Bailey Houghtaling (Food Science)
Parker Hannan	Faculty Advisor Yongchan Kwon
Chloe Heitmeier	Faculty Advisor Yongchan Kwon
Kenny Nguyen	Faculty Advisor Philip Jung
Elizabeth Reich	Faculty Advisor Todd Monroe

For more information about the Distinguished Undergraduate Researcher program, see

<https://www.lsu.edu/discover/students/distinguished-undergraduate-research-program.php>.

In addition to graduation distinctions, several students earned significant awards through the LSU Ogden Honors College. Alyson Goree (faculty advisor Philip Jung) and Elizabeth Reich (faculty advisor Todd Monroe) graduated with thesis honors, and Chloe Heitmeier (faculty advisor Yongchan Kwon) and Lauren Hynson (faculty advisor Marybeth Lima) graduated with College Honors.



Yongchan Kwon, Marybeth Lima, Lauren Hynson, Chloe Heitmeier, Allison Goree, and Philip Jung at the Spring 2023 Honors Graduation.

Curriculum-wise, the faculty voted to integrate professionalism and ethics topics into the senior design course sequence. As a result, BE 3290 (Professionalism) was combined with BE 4290 (Senior Design I) and BE 4292 (Senior Design II) to create two three-credit-hour courses: BE 4390 (Senior Design I) and BE 4392 (Senior Design II). BE 4390/4392 will be offered for the first time in Fall 2023.

For the third year in a row, LSU hosted a career event specifically for biotechnology companies. The Virtual Biotech Networking event was held on September 28. Any alumni who would like to connect or connect talent acquisition representatives, please reach out to Nick Totaro, ntotar1@lsu.edu, directly. Companies do not have to be biomedical, just have a focus on or for biotechnology fields. Other career fairs are the general Career Expo, Construction Management Career Fair, and Agricultural Career Fair.

Graduate Student Highlights

The Donald W. Clayton PhD Graduate Assistantship is a prestigious, lucrative three-year funding package offered to competitive graduate students in the College of Engineering. BAE is lucky to have three of our graduate students who received this outstanding recognition: Claire Lanclos (advised by Yongchan Kwon), Lane Yutzy (advised by Philip Jung), and Cassidy Porche (advised by Yongchan Kwon).

Caroline Copeland (PhD candidate) was a finalist in the university-wide, three-minute thesis pitch competition during the spring of 2023. Caroline graduated with her PhD in Biological Engineering in the spring (Yongchan Kwon was her major advisor) and is now doing post-doctoral work at Stanford University in the Chemical Engineering department, where she is continuing her research on cell-free systems.

Scholarships

The BAE department has a long-term legacy of supporting students with departmental scholarships. We are eternally grateful to the donors who established and contributed to these scholarships, which have helped to fund the educations of hundreds of BE students. This past spring, we awarded departmental scholarships to 15 students. The recipients are:

Scholarship

Harold T. Barr Memorial Scholarship:

Richard L. Bengtson Endowed Scholarship:

William H. and Barbara A. Brown Scholarship:

Albert P. Halluin Memorial Scholarship:

Mansel M. Mayeux Honorary Scholarship:

Wiley D. Poole Memorial Scholarship:

Carl H. and Christine F. Thomas Family Scholarship:

Recipients

Eva Counts

Khoa Doan
Carlie Dutile
Kenny Nguyen
Ricki Pierce

Madison Burdett
Raedan Stephens

Chloe Heitmeier
Brittany Ratliff

Janice-Imani Asong Fonebi
Weekeevian George

Stefano Dardano
Joennis Reyes

Olivia Hupperich
Lauren Hynson

BAE Advisory Council

The mission of the advisory council is to advise and counsel the chairperson and the faculty of the Department of Biological and Agricultural Engineering (BAE) on matters pertaining to academic quality and stature of the department. The Council will provide counsel on how the department and the college can improve relationships and meet the needs of students, industry, commerce, government, and the society through the best utilization of available resources. This includes actively supporting the department's development efforts in securing additional resources through individuals and industry.

If any alumni are interested in connecting with the BAE Advisory Council, please connect with Nick Totaro, ntotar1@lsu.edu, directly.

One of the things that the advisory council funds is the departmental speaker series. Members of the BAE community suggest speakers whom we invite to share their research, professional experiences, and wisdom with all constituencies of the department, including alumni.

In the 2022–23 school year, we had the following speakers share their expertise with the BAE community:

Dr. Jane Grande-Allen, the Isabel C. Cameron Professor of Bioengineering at Rice University, gave a presentation entitled, *Biophysically Faithful Biomaterial Platforms for Cardiovascular and Intestinal Mechanobiology*.

Dr. Elizabeth Lipke, the Mary and John H. Sanders Professor in the Department of Chemical Engineering at Auburn University, spoke on *Tissue-Engineered Cancer Models for Recapitulating the Tumor Microenvironment*.

Dr. Casim A. Sarkar, professor of biomedical engineering at the University of Minnesota, gave a lecture entitled, *Towards Predictable Engineering of Biomolecular Functions*.

LaHouse Updates

In the summer of 2023, LaHouse's name officially changed to LaHouse Research and Education Center, and its webpage underwent major changes to reflect the new vision and direction (https://www.lsuagcenter.com/topics/family_home/home/lahouse). The new site includes a virtual tour and detailed descriptions of exhibits and features. Additionally, the site has information on research and community outreach. New exhibits and displays were also created at LaHouse to better convey information.

All of these changes were launched at the center's 15th anniversary event on July 20. The occasion was an opportunity to reaffirm LaHouse's dedication to Louisiana with LaHouse collaborators, university administrators, and policymakers. Two days later, LaHouse hosted its first open house in four years for members of the public to explore the many features of the facility.

Additionally, Dr. Rubayet Bin Mostafiz was hired as an assistant professor of research at LaHouse, and two graduate students, Adilur Rahim and Ayat Al Assi, successfully defended their dissertations.

Link to LaHouse Newsletter:

<https://t.e2ma.net/webview/11356g/0a3becd2d3a226b229f30d334b9739b0>.

Design

Senior Design Final Presentations were held on May 5, 2023. We had 12 groups, with 60 students enrolled. The Biological and Agricultural Engineering department acknowledges and expresses gratitude for the continued technical and financial support of all our project sponsors and donors, particularly Dr. Gloria Nye, through the John and Gloria Nye Capstone Senior Design Fund. Here are the titles of the projects along with group members, advisors, and sponsors:

Project Title: **STICI – Stage-Top Incubator for Cell Imaging**
Members: Sydney Corbin, Kaitlyn Fontenot, Alyson Goree, Kaitlyn Odell, Luke Rhodes
Advisor: Dr. Philip Jung
Sponsor: Dr. Philip Jung

Project Title: **Audible Temperature Output Device (ATOD)**
Members: Caleb Duranceau, Amsey Eroh, Briton Griffiths, Niya Sheppard, Chase Sims
Advisor: Mr. Nick Totaro
Sponsor: Mr. Oliver Vicknair

Project Title: **Design of Disposable Circumcision Clamps in Clinical Settings**
Members: Mia Casabat, Gracie Hufft, Remy Lavie, Gannon Matlock, Ava Momenzadeh
Advisors: Dr. Carlos Astete, Dr. Marybeth Lima
Sponsor: Dr. Christopher Roth (*LSU Health Sciences Center*)

Project Title: **A Problem as Big as LaHouse: Improving Drainage at LaHouse by Remodeling its Irrigation System**
Members: Zoe Elam, Lauren Hynson, Zachary Kaupp, Mariam Oweineh, Jake Schexnaydre
Advisor: Dr. Carol Friedland
Sponsor: Dr. Carol Friedland

Project Title: **3D-Printed Microfluidic Device for the Isolation of High-Quality Sperm for Endangered Species**
Members: Julie Armand, Anna Guidry, Evan Nguyen, Elizabeth Reich, Janusz Wojcik
Advisor: Dr. Todd Monroe
Sponsor: Dr. Todd Monroe

Project Title: **Lap Shear Test Machine for Testing Biomaterial Adhesive Properties**
Members: Carley Bajon, Jacob Carignan, Victoria Fuentes, Gabriel Medina, Meredith Mareno
Advisor: Dr. Philip Jung
Sponsor: Dr. Philip Jung

Project Title: **Nonstandard Smart PPE for Risk Mitigation**
Members: Davis Bove, Andrew Cihon, Samuel Latino, Corren Norman, Han Wang
Advisor: Mr. Nick Totaro
Sponsors: Mr. Nick Totaro, Dr. Todd Monroe

Project Title: **Semi-Automated System for Fast Soybean Imaging**
Members: Kirby Byland, Ashtyn French, Julius Pallotta, Noah Roussel, Wyatt Wittliff
Advisor: Dr. Kevin Hoffseth
Sponsor: Dr. Kevin Hoffseth

Project Title: **Semi-Automation of Bone-Polishing Machine**
Members: Alexandra Basse, Miller Dickerson, Mallory Matthews, Stephen Mauer, Kenny Nguyen
Advisor: Dr. Kevin Hoffseth
Sponsor: Dr. Kevin Hoffseth

Project Title: **Heart Rate Monitor for Fish Embryos**
Members: Guadalupe Covarrubias, Kemleh Faical, Janice-Imani Fonebi, Brittany Ratliff, Emogene Stringer
Advisor: Dr. Todd Monroe
Sponsor: Dr. Ben Dubansky, Dr. Todd Monroe

Project Title: **Cell-Free Protein Synthesis Microdevice**
Members: Hannah Elkholy, Parker Hannan, Chloe Heitmeier, Tasnia Monir, Anna Morgan
Advisor: Dr. Yongchan Kwon
Sponsors: Dr. Yongchan Kwon, Dr. Todd Monroe

Project Title: **Fabrication of a Device for Slicing Uniform Increments of Breast Cancer Cells**
Members: Allie Brooks, Andrew Hardee, Larsen Jennings, Aryana Manoo, Andre Mira
Advisor: Dr. Chandra Theegala
Sponsor: Dr. Matthew Burow, Dr. Elizabeth Martin

BIOLOGICAL ENGINEERING STUDENT ORGANIZATION UPDATES

Our Mission

The Biological Engineering Student Organization (BESO) is a professional networking organization with a strong sense of community that aims to forge connections through catered meetings, workshops, and events between its members and the local community representing biological or agricultural engineering. LSU students of all classifications meet throughout the semester to listen to experienced guest speakers, discuss potential career paths, and learn ways to build the credibility and confidence to advance themselves professionally.

Spring 2023 Meetings and Events

BESO started the Spring 2023 semester with a social on January 25 with food sponsored by the BAE Advisory Board. Students heard from BAE researchers Dr. Jorge Belgodere and Dr. Carol Friedland, who shared their research interests and specialties. Our second meeting on February 16 hosted guest speakers Bekah Kennedy, admissions coordinator from Via College of Osteopathic Medicine (VCOM), and Zoe Martin, BE alumna and O&P resident. On March 28, we were joined by Brayden Blanchard, PhD candidate and research coordinator for the LSU AgCenter Sugar Research Station, and Adam Wise, BE alumnus and research and development specialist and field engineer at AST. There was a special meeting on April 26 to host Dr. Joey Wippold, senior microfluidic engineer for the US Department of Defense, who talked to students about the field of microfluidics and some of his current research projects.

BESO members enjoy many events and socials outside of meetings as well! Several members joined us for a Game Night Social on March 6 to play video games, board games, and more to destress during midterms. Two giveback nights at Andy's Frozen Custard and Fat Boy's Pizza allowed students, teachers, and alumni to enjoy tasty treats while donating to BESO. BESO members also participated in Geaux Big, LSU's largest single-day service event. The semester finished off with a finals study night where BESO offered free coffee and donuts to studying students.



Mailander Scholarship Fundraiser

Every other spring semester, BESO hosts a fundraiser with the help of the LSU Foundation to raise money for the Mailander Scholarship. This year, BESO was able to raise more than \$2,500 to fund the scholarship, which is awarded to BE freshmen who exemplify the qualities Dr. Mailander instilled in his students—scholarship, vision, and self-discovery. Thank you to all those who donated!

Spring 2023 Crawfish Boil

On April 20, BESO hosted the annual BAE crawfish boil for the second time since the COVID-19 pandemic. Admission was free for all BAE students, faculty, and staff, as well as active BESO members. Alumni and others were able to purchase their tickets online. The addition of the “Pie a Teacher” fundraiser made the crawfish boil a huge hit! For only \$5, people were able to throw two whipped cream pies at the BESO executive board and, more importantly, their favorite BAE professors and instructors, such as Mr. Sumit Libi, Dr. Marybeth Lima, Dr. Todd Monroe, Dr. Chandra Theegala, and Mr. Nick Totaro. We hope to continue this fun fundraiser in the future. With 350 pounds of crawfish, more than 100 attendees, and more than 300 whipped cream pies, the crawfish boil was a huge success!



Fall 2023 Events

The 40th annual Sweet Potato and Rice Sale occurred the week and a half leading up to Thanksgiving. Together with Southside Produce, BESO brought the people of Baton Rouge a taste of Be-auregard sweet potatoes and popcorn-flavored rice. Thank you for visiting us on the corner of Highland and S. Stadium Dr. to get produce and support BESO!

Future meeting and event dates will be announced on our social media. Please be sure to follow us on Instagram and Twitter at @BESO_LSU or by joining our Facebook Group “Biological Engineering Student Organization (BESO).”



BESO Officers 2023

President

Corinne Martin

Treasurer

Dalton Arcement

Fundraising**Co-Chairs**

Brennan Comeaux

Olivia Hupperich

Vice President

Madison Lee

Social Chair

Shea Lee

Secretary

Amerika Embers

Outreach Chair

Isaac Ponder

Fundraising**Sub-Chairs**

Anna Johnson

Maximilien Caffery

Faculty Advisor

Nick Totaro

RESEARCH HIGHLIGHTS

The department conducts research in many topic areas at the intersection of biology and engineering. To give readers a sense of the type of research going on currently, we have included all the peer-reviewed journal articles produced by BAE faculty during 2022. Graduate students are bolded and undergraduate students are italicized.

Anowar H. Khan, Sophia P. Zhou, Margaret Moe, Braulio A. Ortega Quesada, Khashayar R. Bajgiran, *Haley R. Lassiter*, James A. Dorman, Elizabeth C. Martin, John A. Pojman, and Adam T. Melvin. Generation of 3D Spheroids Using a Thiol–Acrylate Hydrogel Scaffold to Study Endocrine Response in ER+ Breast Cancer. *ACS Biomater. Sci. Eng.* 2022, 8, 9, 3977–3985.

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Bonser, C. A. R., Astete, C. E., Sabliov, C. M., & Davis, J. A. (2022). Life History of Chrysodeixis includens (Lepidoptera: Noctuidae) on Positively Charged Zein Nanoparticles [Article]. Environmental Entomology, 51(4), 763-771. https://doi.org/10.1093/ee/nvac042

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Crockett, J., Haydell, P., Hynson, L., Joseph, K., Lima, M., Sunchu, T. and S. Vallery. 2022. Beyond the Deliverable: A holistic assessment of the engineering community-university partnerships of the LSU Community Playground Project. *International Journal for Service-Learning in Engineering, Humanitarian Engineering, and Social Entrepreneurship*. 17(2): 33-55. DOI <https://doi.org/10.24908/ijsle.v17i2.15687>.

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Your generosity has enabled us to expand support for our undergraduate and graduate students and to enhance our efforts to bring engineering to life! Giving Day 2024 will be held on March 27. This year, we will be asking supporters to match a challenge gift of \$10,000 made by siblings Dan Thomas, Jill Davis, and Mike Thomas to the Thomas Family Scholarship. The Thomas family has had an enduring legacy in BAE, with alumni spanning at least three generations and with father-son BAE Unit Heads, Carl and Dan Thomas. Meeting this challenge gift will enable us to award at least one additional Thomas Family Scholarship to a deserving BE student each year in perpetuity. Stay tuned for more details!

LOUISIANA ASABE NEWS



The Louisiana section of the American Society for Agricultural and Biological Engineers (ASABE) held its fall meeting at LaHouse on December 8, 2023. During this meeting, the state section presented its Engineer of the Year award to Dr. Stacia Conger, adjunct assistant professor in the LSU BAE department. The award citation is presented below:

Dr. Stacia L. Davis Conger grew up in the hills of West Virginia until the age of 12, when her parents moved to the suburbs of Pittsburgh, Pennsylvania. She received her BS in 2005 from the University of Pittsburgh in civil and environmental engineering. During those years, Dr. Conger interned at CDM Smith, Allegheny Energy, and Rhea Engineers. While at CDM Smith, she worked on the engineering side of Allegheny County Sanitation's combined sewer overflow problem to address the EPA's consent decree. She re-wrote training manuals on transmission line routing and environmental permitting while working at Allegheny Energy. She helped to process data on engineering subcontracts addressing the need for environmental remediation at military sites. These experiences, combined with promises of sunshine-filled travel and working outdoors, helped to shift her path toward graduate school in Agricultural and Biological Engineering at the University of Florida. While there, Dr. Conger earned both her ME (2008) and PhD (2014) by fully evaluating the conservation potential and adoptability of smart irrigation technologies for Florida landscapes. Since 2014, she has held the position of assistant professor of irrigation engineering at the LSU AgCenter's Red River Research Station in Bossier City, Louisiana. Her current responsibilities include state-wide extension (80%) and research (20%) related to irrigation scheduling and technological advancements in agriculture, landscape, and horticultural applications. She is involved in multiple organizations, including the Irrigation Association and American Society of Agricultural and Biological Engineers at both the state and national levels.



“From day one, the BE department taught me to go through the design process “with” the community rather than “for” the community. From this eye-opening experience, I knew that I only wanted to work in a setting that encouraged community-based design.

Alexandra Williams Fincher,
Assistive Technology Professional (ATP) at Numotion, Baton Rouge
Bachelor of Science in Biological Engineering (BE) at LSU
Master of Engineering (M.Eng.) in Biomedical Engineering at Texas A&M University

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