



Biological Systems Engineering

UNIVERSITY OF WISCONSIN-MADISON

BSE NEWSLETTER

BSE FAST FACTS

As of this fall semester, total enrollment in Biological Systems Engineering is 189 students, with the following breakdown in specializations:

Specialization	Students
Food & Bioprocessing	40
Machinery Systems	46
Structural Systems	12
Natural Resources	36
Undeclared	55

There are also currently 36 graduate students in the department.

The Biological Systems Engineering Department would like to extend a warm welcome back to all of our students, and an extra special welcome to our nine freshmen students, as well as the 28 new students who transferred in from different departments!



Read about the 2016 Quarter Scale Tractor Team on page 3.



In this issue

- Student Update **P.2**
- Faculty Update **P.6**
- Funding Update **P. 10**

NEWS FROM THE DEPARTMENT CHAIR - DOUG REINEMANN



Welcome to our Fall 2016 BSE newsletter. You will see in other parts of the newsletter, our faculty, staff and students continue their great work and that undergraduate enrollment continues to increase. In order to keep pace with our students and our peer departments, we are starting a fundraising effort as part of the UW-Madison "All Ways Forward" campaign to update BSE facilities to accommodate the changing teaching and research needs of the department.

The BSE shop, labs and staff that maintain and operate them provide a vital and valuable contribution to both the teaching and research mission. An upgrade of our facilities was highlighted as a critical program need by our external review committee. Our students and alumni have made it clear that the hands-on aspect of our program is a unique claim to fame. We need to expand our teaching facilities so that we can continue to provide this experience for 4 times more undergraduates since our lab building was built in 1980.

I am very happy to announce that we have hired Kody Habeck to manage our shop and lab facilities. Kody received both a BS and MS from BSE and after working at Kuhn for 7 years came back to the department. He has been very busy the past few months re-organizing our space and equipment as the first step in revitalizing our facilities. A generous endowment from alumni provides for two student workers in the shop to round out Kody's team and contributing to department operations and the student workers educational experience. The lower lab looks better every time I walk through.

Our primary focus is to improve facilities and equipment to ensure the safety of students working in our shop and labs. Our near term goal is to update our lab and shop facilities to provide state-of-the-art CAD/CAM capabilities for our students. Our medium term goal is to improve this instructional space to keep pace with our peer departments in offering a top quality educational experience for our growing undergraduate student population. Our long term goal is to improve research lab space to meet the needs of the next generation of faculty. All of this so we can continue to Attract the

Continued on page 5.

WISCONSIN STUDENT CHAPTER

Update by President Connor Moore

The UW-Madison ASABE Student Chapter had an exciting 2016 spring semester.

Our biggest event of the year was the Midwest Regional Rally hosted right here at UW-Madison. Six different student chapters including Ohio State, Oklahoma State, ISU, Purdue, and Nebraska joined together for a weekend that included industry tours, ASABE meetings, and a variety of social events. Our highlighted tours were Frito-Lay in Beloit, Kuhn North America in Brodhead, and a variety of environmental based tours around the Madison Area. All attending students also had the opportunity to tour the BSE facilities here at Madison and talk about potential graduate programs here on campus.

This year, our club has received some great success and recognition nationally. We received second place overall for the AEM chapter of the year award. We also submitted a video for a contest involving ROPS (Roll Over Protection Structure) and received the second place award. Congratulations to everyone for the great accomplishments!

Throughout the spring semester the UW-Madison ASABE Student Chapter had a few social events. These events included attending a Brewers game in Milwaukee, touring Milwaukee Brewing Company, a game night, and bowling. We have several industry tours and social activities planned for the coming semesters. Stay tuned for updates!



In just a few short weeks, we will be conducting our biggest fundraiser of the year- lawnmower clinic. Every year, we bring in mowers from the greater Madison area and winterize them; change sparkplugs, sharpen blades, change the oil, and give them a thorough power washing. It is a great opportunity for students to work with their hands in a way that helps the community and raises money for us. If you are interested in having your mower worked on, contact Parker Williams at pjwilliams3@wisc.edu.

I am looking forward to a jam-packed year of activities!

Connor Moore,
ASABE President 2016

ASABE OFFICERS OF 2016

President — Connor Moore

Vice President — Corrine Waschow

Secretary — Laura Kramer

Treasurer — Grace Skarlupka

Fundraising— Tanner Wears, Parker Williams

CALS — Emily Shultz

Social Chair — Connor Udelhoven

AEM Report — Ryan Baumgartner

Public Relations/Webmaster- Josiah Zanghi

STUDENT AWARDS

3



Left: Josh Harmon, ASABE Graduate Student of the year.



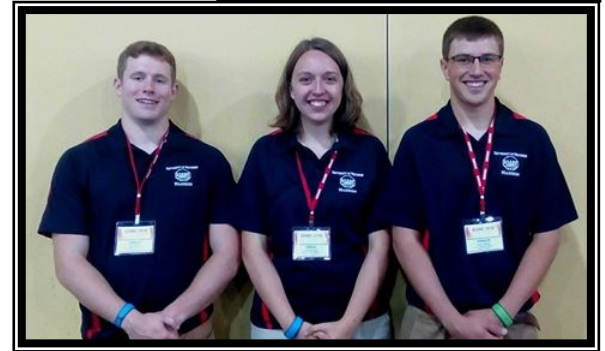
Right: Jennifer Sanford, ASABE Undergraduate Student of the year.

Right: Sarah Fuller, Amanda Smith, and Abby Cook. Best Poster Runner's Up at River edge Student Research Symposium.



Left: The UW-Madison ASABE Pre-professionals placed second in the 2016 Association of Equipment Manufacturers (AEM) Trophy Competition.

Right: Ryan Baumgartner, Grace Skarlupka, Parker Williams and Tanner Wears placed second in the first annual Tractor Seatbelt & ROPS Usage ASABE Student Branch Video Contest .



QUARTER SCALE TRACTOR TEAM

Update by Joshua Harmon

The Badger Pulling Tractor Team had a great year in Peoria this summer at the ASABE International 1/4 Scale Tractor Competition. For those who are not familiar with this competition, it is a student design-driven contest in which teams must build a pulling tractor that can compete in three tractor pulls, a maneuverability course, and a durability course. This year, the Badger Pullers built a four-wheel drive tractor with full suspension. Although the competition came to an early close for the Badgers when their transfer case broke during their first pull, the team still had some impressive finishes in the other events. Overall, the team placed 22nd, but placed 9th in Written Design, 11th in Team Presentation, 17th in Design Judging, 23rd in Pulls, 16th in Durability and 20th in Maneuverability.



This year's team has already started on design work for next year, and is welcoming more members. Interested students should contact the team captain, Parker Williams at pjwilliams3@wisc.edu or stop by the Ag Engineering Lab for Tractor Team meetings at 6PM on Tuesdays and Thursdays.

Regards,
Josh Harmon

CALS DEPARTMENTAL SCHOLARSHIPS 2015-2016

4

Don S. Montgomery Scholarship

Nathan Dhuey, Junior, Natural Resources
Zachary Schmitz, Junior, Machinery Systems

Ervin W. Schroeder Biological Systems Engineering Scholarship

Jenna Walsh, Senior, Natural Resources

Gail Edwin and Janice Faye Janssen Biological Systems Engineering Fund

Amanda Beistle, Senior, Food and Bioprocess

Ham Bruhn Biological Systems Engineering Scholarship

Angela Brandl, Sophomore,
Food & Bioprocesses
Jared Bruckner, Junior, Machinery Systems
Daniel Coleman, Sophomore, General
Tiffany Marshall, Senior, Natural Resources
Hannah Pinter, Senior, Food and Bioprocess

Gary and Barbara Krutz Scholarship Fund

Connor Moore, Senior, Food & Bioprocess

Lynndon and Norma Brooks Scholarship

Jacob Hrebik, Machinery Systems,
Mosinee, WI
Tabitha Davis, Junior, Natural Resources
Gabriel Lujan, Sophomore, Natural Resources
Lisa Walsh, Junior, Natural Resources
Laura Kramer, Junior, Food & Bioprocess

Orrin I. Berge Scholarship

Joseph Hovanec, Senior, Machinery Systems

Robert H. & Willa Meier Scholarship Fund

David Pintens, Sophomore, General Option
Grace Skarlupka, Sophomore,
Food and Bioprocess
Tanner Wears, Sophomore,
Food and Bioprocess

Roger W. Ambrose Scholarship

Tiffany Marshall, Senior, Natural Resources

Wisconsin Agricultural Engineer Scholarship

Joel Cryer, Senior, Natural Resources
Erin Daehn, Sophomore, Food & Bioprocess
Connor Moore, Senior, Food & Bioprocess
Eric Peissig, Junior, machinery Systems

Wisconsin Biological Systems Engineering Scholarship

Nichole Truby, Junior, Natural Resources

Dick J. & Grace B. Stith Scholarship Fund

Corinne Waschow, Senior, Food & Bioprocess

Russell J. Schuler Agribusiness Scholarship

Tanner Wears, Sophomore, Natural Resources

best, brightest and diverse student population to our undergraduate program.

We recognize support for these projects will not come from one source. The department is working with campus and the college as well as making this our development priority. Thanks to your generous contributions in the past, we have some seed funds available in our building account. We are starting our work on shop reorganization with these funds and hope to multiply this amount with fundraising efforts to achieve as many of our goals as possible. Following is a portfolio of projects we are asking alumni, friends and industrial stakeholders to consider.

*Computer Aided Design Creativity Center: The goal is to create a new state-of-the art CAD design center with work stations, easily re-configurable project work space, 3D printing capacity, and other 'clean' fabrication technology. This equipment will allow students to move seamlessly from concept to rapid prototypes. This facility would support our senior design capstone sequence as well as student project work in other courses.

*Computer aided manufacturing shop : A number of our courses incorporate a 'hands-on' component in which students design and build projects ranging from desk-top to landscape scales. Our shop facilities are outdated and have not kept pace with those available at our peer BSE departments around the country. This goal is to refit our shop facilities with state-of-the art computer aided manufacturing equipment to complement our computer aided design capacity. This would expand student experience with modern design, prototyping and manufacturing processes, as well as addressing safety issues related to student use of shop equipment.

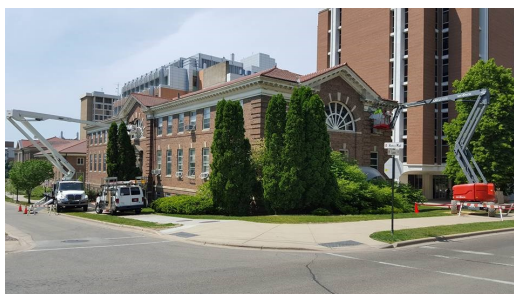
*Teaching lab development : Our lab courses have increased in size as our undergraduate enrollment has grown. Our core courses now have labs with 50 to 60 students. This goal is to create a larger teaching lab fitted with configurable work stations to accommodate the variety of lab courses offered in the department. This will allow us to continue to offer the kind of high-touch, hands-on experience that our students value.

Our wish list includes the 2nd floor addition to our lab that was originally planned in 1981 or a new building that would consolidate all departmental operations. The cost of these goals are, of course, much higher than the remodeling and renovations listed above. In our spring newsletter, I will discuss our goals for funding scholarships and support of BSE faculty and staff. If what I have outlined above is of interest to you, please consider a donation to the BSE Facilities fund (info on the back page) or drop me a line. I welcome your thoughts and ideas.

A snapshot of our year!



New students are welcomed to the department!



460 Henry Mall got a "facelift" during some exterior renovation.



Congratulations to undergrad Parker Williams (second from the right) on being elected 2nd Vice President to the IPC!

BSE FACULTY & ALUMNI

HONORS

FACULTY UPDATE



Rebecca Larson– Contributor to the 2016 ASABE Superior Paper Award Winner in the Natural Resources and Environmental Systems category.



John Shutske , recipient of the 2016 Award for Excellence from the University of Wisconsin Colleges and University of Wisconsin-Extension.



Professor Dave Bohnhoff, the 1026 ASABE Career Achievement Award winner.

-A word from the Student Services and graduate Coordinator, Betsy Wood -

I joined the Biological Systems Engineering Department in October, 2015 to handle student services duties. I had several years of experience doing this work in the College of Engineering. I began meeting with potential transfer students right away, and any new pre-BSE students were assigned to me for advising. By the end of my first fall semester, I had 8 advisees. By the end of the Spring 2016 term, that number would increase to 22 advisees. After summer SOAR finished, I had a total of 39, and as of this writing, there are 60 students on my list out of 190 in the department. I haven't kept all of them; some have already met the ABE criteria and have been reassigned to faculty.

During the past year, I have noticed some trends among the new students we see. Undergraduates are finding their way to BSE sooner in their time on campus. I have been fostering connections with advising staff in COE, CCAS, and TAOS to increase BSE awareness among freshmen. The Natural Resources and Environmental Engineering specialization is the most popular among incoming students, with Food and Bioprocess Engineering also showing increased interest. We still have plenty of Machinery Systems students, but they are mostly seniors and fifth year students who will be graduating in the next year or two.

Who are all these BSE students? We have 59 women and 131 men. Four are student-athletes from Crew, Football, Swimming and Wrestling. Our students come from all over Wisconsin, plus from seven other states as far away as Hawaii and Maryland, and eleven foreign countries. They are involved with ASABE and many other student organizations—from theater to rock climbing!

We are very proud of our current student population, and are excited for the future additions to the BSE Department!

FACULTY HIGHLIGHT

BSE WELCOMES JOHN SHUTSKE BACK TO THE DEPARTMENT

7



Hello BSE Department!

I wanted to take this opportunity to introduce myself as the newest “returning” faculty member to the Biological Systems Engineering Department. My name is John Shutske, and on July 1, I came back to the BSE faculty after spending the last eight years working in the College of Agricultural and Life Sciences and UW-Extension administration.

I moved my family from the Twin Cities in Minnesota in 2008 to become the Associate Dean for Extension here at UW. In this role, I was also the Program Director in Cooperative Extension’s Agriculture and Natural Resources program area. BSE became my home department after I received tenure here back in May of 2008. A couple years ago, I also served for 10 months as an interim Provost for UW-Extension (February – December 2014) while the institution searched for a new Chancellor and a permanent Provost. I returned to CALS in early 2015, and then stepped back to my faculty position on July 1, 2016 where I will be a Professor and Extension Specialist.

In these recent administrative roles, I learned so much about CALS, UW-Madison, the whole UW-System, and the challenges we face in higher education. I also got to work directly for five different Deans (CALS and Extension) and I appreciate all of the support and direction they provided over the last eight years. I also am grateful to have been able to work very closely with departmental colleague and Senior Associate Dean, Dr. Richard Straub who has become a trusted and supportive friend and mentor.

Prior to coming to Wisconsin in 2008, I’d been a Pro-

fessor and Extension specialist for 17.5 years at the University of Minnesota in the Department of Bioproducts and Biosystems Engineering. While in Minnesota, my research, Extension, and teaching focused on agricultural and food system risk control. I worked on a range of activities that examined issues of workplace, equipment, and system design for safety; development of sensor and technology-based systems to reduce risk; education about occupational health hazards; homeland security; food system preparedness and response; and, biosecurity for livestock operations and food processing facilities. I worked with and advised students in engineering, agriculture, public health, nursing and veterinary medicine. I enjoy catalyzing and facilitating multi-disciplinary work and look forward to continuing that in this new role.

As I return to the department, I am excited to expand my past work and ongoing interests, leveraging and helping our agricultural and food industries to evaluate and deploy new innovations (sensors, Internet of things, mobile/smartphones, robotics, UAVs, and big data). The goal is to reduce human and environmental risk while improving profitability. I am very eager to engage with students – graduate and undergraduates, through classroom teaching and research. It is very exciting to step back into a role and offer some skills and relationships that I hope will compliment and support the work of Cheryl Skjolaas and Dr. Brian Luck in BSE.

I am a graduate from the Agricultural and Biological Engineering (ABE) Department at Purdue where I completed all of my degrees. I also spent a couple years after grad school in the insurance industry working in safety engineering and community education in Illinois, Washington, Nevada, and Oregon.

I am relatively settled in my new office located in the quiet, far southwest corner of room 125 of BSE. I will be traveling quite a bit in the coming months as I build and change my Cooperative Extension role, but feel free to stop in and say hello or introduce yourself (for those who I’ve not yet met) in the hallway. I am excited to re-join the department and have the opportunity to work with you as a new colleague!

John Shutske, Ph.D.
Professor & Extension Specialist
Biological Systems Engineering- UW-Madison

SUNDARAM GUNASKEARAN

By Sevie Kenyon for GROW Magazine

8

SUNDARAM GUNASEKARAN, a professor of biological systems engineering, was recently selected to serve as faculty director of CALS International Programs.

Gunasekaran—or Guna, as he is widely known—has made his mark as a food engineer. His research focuses on the rheology of food, especially cheese. More recently, he has focused on applying nanotechnology and other methodologies as tools for pathogen detection and processing validation in foods.

But it's his life experiences, along with his research prowess, that distinguish him as ideal for his new position. Guna's international experience is geographically diverse. He received his bachelor's degree in agricultural engineering from Tamil Nadu Agricultural University in Coimbatore, India, his master's degree in food process engineering from the Asian Institute of Technology in Bangkok, Thailand, and his Ph.D. in agricultural and biological engineering from the University of Illinois at Urbana-Champaign. He's been a visiting professor in South Korea, a Fulbright Fellow in Denmark, a USAID Farmer-to-Farmer consultant in Bangladesh and a mentor for a Syrian scientist under the Scholar Rescue Fund.

"I have also traveled widely and enjoy working with individuals and groups from different walks of life and interests," he says.

As leader of CALS International Programs, Guna will identify and pursue international activities consistent with the college's strategic goals. He will lead efforts to identify new resources for international activities and oversee the distribution of seed funding for new projects.

Why are international programs so important for CALS?

The world has become very interdependent, and so have the problems we face. Many of today's scientific challenges and practical problems can be solved not through isolated islands of intellectual pursuits, but rather by seeking out and incorporating ideas and approaches from different disciplines and across state and national boundaries.

Indeed, the scope of research and outreach performed by CALS faculty and staff extends far beyond the boundaries of the state and the nation. In a recent survey we found that more than 200 people in CALS have been working in about 80 countries around the world in various projects at one time or another. We are very engaged internationally.

International Programs can help elevate our international engagement from an "individual project" level to a more cohesive programmatic effort focusing on key areas of ex-

pertise in the college and implement a strategic framework for sustaining this activity in the long term.

What is your vision for CALS International Programs?

My vision is for CALS to become one of the leaders among the nation's land-grant colleges in international engagement, and for it to effect positive change in global agricultural, natural resource, energy, environmental and life science enterprises through research, education and outreach. We are a world-class institution, and CALS is among the very best land-grant colleges in the nation. Thus, it is very appropriate that we envision an international program of similar stature.

Beyond funding, are there other ways for alumni to assist in this effort?

Certainly, our alumni can be the spokespeople, our ambassadors. Especially our alumni who are internationally inclined, who have gone on a study abroad, or people from different countries who studied here and went back home—or even if they stayed here but still have strong connections back home. They identify with UW–Madison, and this is the institution they think of first when they think of collaborating, and so we become the first point of contact for them.

And when we go to another country, we look for someone who has been here, and they become our first point of contact—a resource center, so to speak, to help us navigate the local bureaucracy or culture. They become very valuable partners in this process. We have a number of examples of alumni we work with in engaging with different countries.



AGRABILITY CELEBRATES 25 YEARS

By Abigail Jensen

Since 1991, AgrAbility of Wisconsin has been promoting success in agriculture for farmers and their families living with a farm injury, disability, or limitation. AgrAbility of Wisconsin is a partnership between the University of Wisconsin Extension and Easter Seals Wisconsin. AgrAbility of Wisconsin has created a significant impact on Wisconsin agriculture by providing assistance to 2,500 farmers and farm families who have been able to continue farming or return to the farm worksite through AAW intervention. A strong partnership between Easter Seals and Extension has been key to making Wisconsin's project one of the most successful of its kind in the country.

To celebrate 25 years of serving Wisconsin's farmers and farm families, AgrAbility of Wisconsin hosted a celebration on September 29th at the Arlington Research Station in Arlington, Wis. The event featured speakers, including Secretary of Agriculture, Ben Brancel, Division of Vocational Rehabilitation Administrator, Delora Newton, Easter Seals Wisconsin Vice President, Paul Leverenz, and various assistive technology representatives including Action Trackchair and Propel Automation Sliding Doors. Attendees at the event also saw the history of AgrAbility of Wisconsin, technology available to farmers, and helped the Friends of AgrAbility of Wisconsin raise almost \$500 in a Silent Auction.

Thank you to all of the supporters, friends, clients and staff that have helped to make AgrAbility of Wisconsin the successful program it is today.

Abigail Jensen

Outreach Specialist, AgriAbility of Wisconsin



9



BSE GETS CONNECTED!



"LIKE" BSE ON
FACEBOOK

Find us on Facebook at UW-Madison Department of Biological Systems Engineering and stay updated on BSE activities, awards, presentations, and news stories!

[www.facebook.comUWMadisonBSE](http://www.facebook.com/UWMadisonBSE)



We want to feature YOU in the next BSE Update!

Email your alumni update to bse@wisc.edu

Or send it in to BSE Update 460 Henry Mall, Madison, WI 53706

Please include your degree(s), date(s), and any news to share!

ANITA THOMPSON

NAMED NELSON INSTITUTE PROFESSOR OF WATER RESOURCES

10

Biological systems engineering professor Anita Thompson has been named the Nelson Institute Professor of Water Resources.

Thompson joined the biological systems engineering department in 2002. She studies hydrologic and water quality impacts of land use and performance of storm water management practices in urban and agricultural watersheds. In 2015, she was named chair of the Nelson Institute's Water Resources Management program.

The Nelson Institute Professorship in Water Resources was established by John and Linda Nelson and supported generously by Sal and Judy Troia, Jeff Rudd and Jeanne Bissell, and several Water Resources Management (WRM) alumni. It was founded to guarantee the continued success and expansion of the Nelson Institute's WRM program, which celebrated its 50th anniversary in 2015. (eCALS, 2016).

CONTRIBUTORS TO BSE FROM OCTOBER 2015—SEPTEMBER

Nathaniel Altfeather	Jack Walters & Son Corp.	Dale Quam
American Society of Agriculture & Biological Engineering	Jelli's Market, LLC	John Ramsden
Andrea Bayless	John Deere World Headquarters	James Rauwerdink
Eliot Bergeland	Misty Johnson	Douglas Reinemann
Gerals Bizjak	Karl Klingelhofer	Philip Risser
Ryan Blasiak	Lee Knispel	Scott Sanford
David Bohnhoff	Timothy Koch	Schaefer Ventillation Equipment
Gary Bubenzer	Richard Koegel	David Schirer
Martin Burkhardt	MacDon Industries Lmted	Daryl Schroeder
Larry Chapman	James Meier	Ronald Schuler
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Calvin Cramer	Scott Mueller	Richard Straub
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Dale Dobberpuhl	Brandon Nigon	Patrick Walsh
Farmington All-Stars 4-H Club	Gene Nimmer	We Energies Foundation Inc.
Marshall Finner	John O'Connor	Gregory Weber
Joshua Gable	Xuejun Pan	Todd Wehler
Habitat for Humanity— Dane County	John Panuska	Shane Williams
Harvest Tech Inc.	Daniel Pederson	
Rick Hatlen	Ross Peebles	
Richard Holloway	James Peterson	
Brian Holmes	William Pick	
Brian Huenink		

THANK YOU, DONORS!

FUNDING UPDATE

PLEASE CONSIDER MAKING A CONTRIBUTION TO ONE OF THE BSE FUNDS LISTED BELOW:

Biological Systems Engineering Fund

Biological Systems Engineering Student Activities Fund

Biological Systems Engineering Student Scholarship Fund

Biological Systems Engineering Facilities Fund

We sincerely wish to thank our alumni and friends who have generously supported the College of Agricultural and Life Sciences Department of Biological Systems Engineering. Your gifts today are more important than ever as the University faces challenging budget constraints. Gifts made to the Department of Biological Systems Engineering help us with scholarship, facilities improvement, endowed professorship and graduate fellowships, and carry on our tradition as leaders and innovators in the Biological Systems Engineering field.

An invitation to join the prestigious Bascom Hill Society is extended to those who provide support of \$50,000 or more to the department or to a specific project or program of their choice. You can pledge your commitment over a 10-year period, provide for a gift in your will, or give a gift of annuities or appreciated stock. If you have specific questions about giving, please contact Barbara McCarthy at the UW Foundation (Phone: 608-265-5891; e-mail: barb.mccarthy@supportuw.org).

Department of Biological Systems Engineering Funds

Two options to make a gift:

1. Visit the BSE website at **bse.wisc.edu** and select “**Support BSE**” in the left column.
2. Make checks payable to University of Wisconsin Foundation and return this form to:

**University of Wisconsin Foundation
US Bank Lockbox
PO Box 78807
Milwaukee, WI 53278-0807**

I/we would like to join other alumni and friends in support of the Department of Biological Systems Engineering.

I/we wish to pledge \$ _____ over _____ years. Please remind me of my pledge in _____ (month).

I/we contribute \$ _____. (Contribution is enclosed.) My company will match this gift; company form enclosed.

I/we wish to have my contribution support _____ fund.

Name: _____ E-Mail: _____

Address: _____

City: _____ State: _____ Zip: _____

Please charge my gift of \$ _____ to my: MasterCard Visa American Express

Card number _____ Expiration date _____

Cardholder's name as it appears on credit card (please print): _____

Cardholder's Signature: _____ Date _____

Thank you for your support.²¹

All Ways Forward will help to shape and ensure UW-Madison's lasting impact. Gifts to this campaign will fund initiatives and programs that will keep UW-Madison the world-class institution it is today. To learn more or make a donation please visit www.allwaysforward.org.

The All Ways Forward campaign is the fourth comprehensive fundraising campaign in the history of the University of Wisconsin-Madison. With a goal of bringing in \$3.2 billion by the end of the decade, it is also the largest campaign in university history.



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Biological Systems
Engineering
UNIVERSITY OF WISCONSIN-MADISON