Chair’s Corner

Welcome fellow Nebraska Section ASABE members to the Spring 2017 Edition of the Nebragrineer! First, I want to thank Maury Salz and the staff of CLAAS Omaha Inc, Todd Wyatt at UNMC and our speakers Maury Salz (CLASS Omaha Inc) and Risto Rautiainen (UNMC – CS-CASH) for providing the tour location and the content of the Fall 2016 meeting. We had a great turnout and I received positive feedback from many members. I invite you to read through this newsletter to brush-up on the latest happenings with both the Department of Biological Systems Engineering and your ASABE Nebraska Section. Inside you’ll find a brief preview of the upcoming Fall 2017 meeting, Department update from Department head Dr. Mark Riley, and updates from the Nebraska Section Officers. Santosh Pitla, your 2017 program chair, is currently planning the program agenda for the Fall 2017 section meeting. Our meeting is scheduled for October 20th so mark your calendars accordingly.

As a reminder, the ASABE international meeting is being held July 16-19 at the Spokane Convention Center in Spokane, WA. Early bird registration is open until June 9, 2017 and general registration is open from June 10 – June 28. Additional details including an agenda of activities and events can be found at http://www.asabemeetings.org/index.html.

Thanks to your contributions through voluntary dues, we have been able to continue supporting our student teams through 2017. Funds have primarily been used for competition supplies and travel and I’m proud that our section is able to provide this assistance to these current and future students; they’re the future of our ASABE family! So remember, when filling out your ASABE dues registration later this year, please consider a voluntary contribution. It is through your support that the Nebraska Section is able to help fund student activities in this way.

On behalf of the entire officer team, we thank you for taking the time to review this publication and look forward to seeing you at the fall Meeting. If you have any questions, comments, or suggestions on ways to improve our Section, please let us know.

Aaron M. Yoder
Nebraska Section Chair
Department Update
Hello from the Biological Systems Engineering Department at UNL. Our programs are doing very well and continue to grow. This past January, we welcomed three new faculty members: Dr. Tiffany Messer, Dr. Yeyin Shi, and Dr. Rebecca Wachs into tenure track assistant professor positions. We are nearing the end of our faculty hiring initiative with one search for an Irrigation / Water Resources Engineer to be located in Scottsbluff at the Panhandle Research and Extension Center. In total our department now includes 49 faculty (which is spread across 37 FTE), 24 staff (supported on state and sponsored projects), 3 postdoctoral scholars and about 460 total students. Note that the faculty numbers includes a few individuals who are fully in administrative roles. Since 2012 we have hired a total of 27 new faculty into the department. We also have greatly increased our diversity in backgrounds and heritage, now having eight female faculty in BSE. Our freshmen BSE class has about two thirds female students.

This past year, BSE faculty have been tremendously prolific in their grantsmanship. In the fall of 2016 our faculty submitted more grants for sponsored research than in the previous full year. And, most importantly, our faculty have been successful in gaining funding for new projects. A few examples of large projects that are led by our faculty and have either begun in the past few months or are about to start include:

Jeyam Subbiah (Principal Investigator), Jiajia Chen, Ashu Guru, Deepak Keshwani, Jennifer Keshwani, Rick Koelsch, and David Rosenaum and Eric Thompson (College of Business), “Immersive Educational Game Simulations to Enhance Understanding of Corn-Water-Ethanol-Beef System Nexus,” NSF

Yufeng Ge (Principal Investigator), “VisNIR-based multi-sensing penetrometer for in situ high resolution depth sensing”. USDA-AFRI

Joe Luck (Principal Investigator), Greg Kruger (WCREC), and Santosh Pitla, “Next-generation spray drift mitigation via field-deployable, real-time weather monitoring and novel spray nozzle control technologies,” USDA-AFRI

Christopher Neale (Principal Investigator), Yufeng Ge, Derek Heeren, Joe Luck, George Meyer, and Wayne Woldt, “Improving Variable Rate Irrigation Efficiency using a Real-time Soil Water Adaptive Control Model Informed by Sensors Deployed on Unmanned Aircraft Systems.” USDA- AFRI

Lameck Odhiambo (Principal Investigator), and Kristen Olson (Sociology), “Reconfiguring farmers behavior to reduce irrigation water use through water measurements and social norms interventions: a case study in the Republication River Basin” USDA-NIFA

Angela Pannier (Principal Investigator), “Understanding Molecular Factors that Regulate Initiation of Porcine Embryo Elongation,” USDA- NIFA

As these projects move forward we will be sharing stories and their successes.

BSE Faculty have garnered a number of awards and recognitions in the past few months. Joe Luck was named the AETC 2017 MVP award. Roger Hoy is a recipient of this year's Holling Family Senior Faculty Teaching Excellent Award from CASNR. Dr. Suat Irmak, Harold W. Eberhard Distinguished Professor, received the 2017 Best Paper Award for two technical papers by the Environmental & Water Resources Institute. Staff members Amber Patterson and Juliet Okuom were nominated for the IANR Outstanding Staff Awards. Angie Pannier received two awards in recognition for excellence in student advising: Darrell W. Nelson Excellence in Graduate Student Advising Award and the CASNR Fellow Award for exemplary contribution provided to scholarship in research for undergraduate students. Paul Jasa was recognized as the No-Till Legend at the National No-Till Conference. Mark Riley will be inducted as a Fellow in AIMBE (American Institute of Medical and Biological Engineers).

Sadly this past year we lost a dear colleague, Dr. Darrell Watts, who was a long time faculty...
member in BSE. Darrell passed away on January 10, 2017. Darrell received the Distinguished Service Award from UNL in 1988, honorary professor from the University of Concepcion in Chile in 1997, USDA group honor award for excellence, MSEA project in 1997, ASAE Nebraska Section, Engineer of the Year in 1997, research team award from UNL in 1998 and was inducted into the Biological Systems Engineering Hall of Fame in 2009. His family including his wonderful wife, Lois, and their friends shared stories with us at a memorial service this past January on East Campus. Dean Eisenhauer and David Jones organized the event and led the heartwarming discussion.

We are in the midst of major renovations to laboratories in the basement along with updates to facilities in Splinter Laboratories. Our Larsen Tractor Test and Power Museum also continues to evolve. If you have not visited the museum recently, I encourage you to visit.

Exciting times in Biological Systems Engineering at UNL. Stop by and say hello when you have the chance. Go Big Red!

Best regards,

Mark Riley
Department Head
Biological Systems Engineering
University of Nebraska-Lincoln
mriley3@unl.edu

**NE Section Fall Meeting**

The 2017 ASABE Nebraska Section Fall Meeting is scheduled for Friday, October 20th at Nebraska Innovation Campus (NIC), Lincoln, Nebraska. The program will begin with a tour of Midwest Hops Producers LLC, in Plattsmouth, Nebraska at 1:00 PM. The tour of the hop yard will be provided by Annette and Bruce Wiles (owners of the company), and will focus on the large scale hops production status in Nebraska. Following the Hop Yard tour, we will meet at the Nebraska Tractor Test Laboratory (NTTL) on east campus for another tour.

After the NTTL tour, we will have dinner and the section business meeting and hear from an invited speaker at the newly constructed Nebraska Innovation Campus (NIC). We'll have more updates and details in the fall newsletter regarding the section meeting activities. Please mark Friday, October 20th on your calendar and plan to join us for this exciting annual event.

Santosh K. Pitla
Program Chair

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**ASABE Event Calendar**

**ASABE Annual International Meeting**
- **Dates:** July 16th – 19th, 2017
- **Location:** Spokane, Washington

**Nebraska Section Meeting**
- **Date:** October 20th, 2017
- **Location:** Lincoln, Nebraska

**Agricultural Equipment Technology Conference**
- **Dates:** Late Jan – Early Feb, 2017
- **Location:** Louisville, Kentucky

Please visit [http://www.asabe.org/meetings-events.aspx](http://www.asabe.org/meetings-events.aspx) for more information on these and other sponsored events.
2016 Section Award Recipients
The Nebraska Section of ASABE proudly honored four outstanding individuals at the 2016 Section meeting that was held on October 7, 2016 at the CLAAS North American Headquarter, Omaha, NE.

Mr. Timothy Haakenstad, P.E., Senior Water Resources Engineer, EA Engineering, Science and Technology, Lincoln, NE, was presented with the 2016 award for Outstanding Contributions to Nebraska Agriculture award.

Dr. Amy Schmidt, Asst. Professor, Biological Systems Engineering at the University of Nebraska-Lincoln was recognized as the 2016 Engineer of the year.

Mrs. Anna Siebe (majoring in Mechanized System Management) received the 2016 Outstanding Student Recognition Award.

Mr. Caleb Lindhorst (majoring in Agricultural Engineering) received the Inspire Award. This award is periodically given to recognize uncompromising personal commitment for excellence and achievement.

Nebraska Section Awards
Three section awards will be presented again at this year’s Fall Meeting: the “Engineer of the Year,” “Outstanding Contributions to Nebraska Agriculture,” and a “Student Recognition” award. These awards are presented each year and the deadline for nominations for the 2017 awards is September 15, 2017.

The “Engineer of the Year” award is given to an ASABE member of the Nebraska Section to recognize outstanding achievement of an individual during the past year or as a culmination of efforts over previous years.

The award for “Outstanding Contributions to Nebraska Agriculture” is given to an individual who has had a profound effect on the development of agriculture in the state of Nebraska. The recipient of this award need not be an ASABE member and the award recognizes an individual who has influenced many facets of Nebraska agriculture including production, business, education, industry, politics and the environment.

To nominate an individual for these two awards, please send the following information to Bryan Woodbury (bryan.woodbury@ars.usda.gov) or Joe D. Luck (jluck2@unl.edu) by September 15, 2017:

• Name and contact information of nominee
• Name and contact information of nominator
• Brief summary of accomplishments that merit the nominee’s consideration for the award.

The “Student Recognition” award recognizes ASABE student members who are actively involved in ASABE and other extracurricular activities, and demonstrate exemplary scholastic performance. Nominations may be submitted by students or their academic advisers by send the following information to Bryan Woodbury (bryan.woodbury@ars.usda.gov) or Joe D. Luck (jluck2@unl.edu) by September 15, 2017:

Name, contact information and ASABE membership number
• Cumulative GPA at the end of spring 2017 semester
• Involvement and impact in ASABE at the local, regional, and national levels (limit your response to 500 words)
• Involvement and impact in other (non-ASABE) activities (limit your response to 500 words)

Bryan Woodbury
Awards Chair
The 2017 ASABE Annual International Meeting will be held in Spokane, Washington from July 16th through the 19th. This year’s meeting will focus on the economic, political, and societal impacts facing industries.

Make plans to attend this exciting event now by visiting: http://www.asabemeetings.org

**Treasurer’s Report**

As of March 3rd, 2017, the account balance for the ASABE Nebraska Section is $5,031.79. The Section has received $1,336.50 for voluntary dues from ASABE. These funds have been used to support ASABE-sponsored student activities including the UNL Fountain Wars and Quarter Scale teams. We’ve also used funds to support student travel to regional and national ASABE meetings. Additionally, this year the Section supported Nebraska First Tech Challenge (FTC) robotics team. Please consider supporting student activities by contributing voluntary section dues when ASABE sends out membership invoices this fall.

Aaron Vancura
Secretary-Treasurer/Membership Chair

**Membership Update**

Currently, the Nebraska Section has a total of 210 members. There are 139 Full members, 28 graduate student and 43 undergraduate student members. The total membership has increased by 8, full membership increased by 5, graduate student membership decreased by 1 and undergraduate student membership increased by 4. Please continue to encourage students and your colleagues to join ASABE and to renew their membership. For more information on ASABE membership, visit: http://www.asabe.org/membership.aspx

Aaron Vancura
Secretary-Treasurer/Membership Chair

**MSYM Club Updates**

As the spring semester has reached the halfway point, the Mechanized Systems Management club has been busy. Before the start of the Spring Semester, the club held a joint bowling social with the ASABE club. As the semester has moved on, we have hosted recruiters from several different companies to present at our meetings. MSYM students also gave presentations at meetings about their summer internship experiences. Towards the end of February, the club made its first trip down to the National Farm Machinery show in Louisville, Kentucky. The members in attendance were able to see the cutting edge of agriculture technology and innovations. To cap off the trip, the club attended the tractor pull finals on Saturday night. One upcoming event is a tour of a local gun shop that a recent MSYM graduate works at. Once again, the MSYM and ASABE student branches will be collaborating in running our annual Lawnmower Clinic in April to act as a fundraiser for future club events. To conclude the school year, we will hold our annual Year-End Barbeque, again with the help of the ASABE student club. We have really enjoyed this school year’s increase in membership and look forward to the continued success of the club.

Jon Jahnke
MSYM Club President

**ASABE Student Branch Updates**

We are excited to announce that our 2016-2017 ASABE Student Branch is growing! Officers’ goals for the year included a push to increase student membership and involvement and provide unique learning opportunities and industry interactions. In pursuit of these goals, ASABE’s attended student recruitment events including, the Big Red Welcome, Rock the Block, and the East Campus
Welcome Fair. ASABE partnered with the MSYM Club to host a welcome back barbecue for students and faculty on the Chase Hall lawn at the beginning of the fall semester. We also welcome our new faculty advisor, Dr. Tiffany Messer, to the ASABE student branch staff!

This year’s chapter has worked to arrange several opportunities for members. ASABE attended the Nebraska ASABE Section Meeting hosted by CLAAS of America in Omaha, Nebraska, Speedway Motors Museum tour in Lincoln, Nebraska, and the Agricultural Equipment Technology Conference in Louisville, Kentucky, including the National Farm Machinery Show. During each of our general meetings we hosted industry professionals who give presentations about their work, path towards success, and potential opportunities. Contributors include individuals from the USDA, NRCS, JEO Consulting, UNL BSE graduate students, and CLAAS of America. ASABE hosted student social events which included wings, bowling, and swing dancing.

The ASABE student chapter will be sending several members to attend the Midwest Regional Rally this March in Ames, Iowa. There, students will have networking opportunities, industry tours, and Iowa State faculty presentations. In coordination with the Mechanized Systems Management Club, the chapter will be hosting the annual Lawnmower Clinic. ASABE and MSYM members will tune up your small engine in preparation for Spring. ASABE will again provide concessions during the annual high school electric vehicle Power Drive competition. Our ASABE student branch has a vast mixture of resources and opportunities available to our members. As president, I will continue to push towards growth and we will continue to furnish students with valuable and educational interactions with fellow students, faculty, and industry.

Anna Siebe
ASABE Student 2016-2017 Branch President