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IOWA STATE UNIVERSITY  
Department of Agricultural and Biosystems Engineering

## ABE Alumni E-News | Winter Edition | January 31, 2017

### ABE Annual Report available online



### ABE faculty and staff featured in new STORIES magazine issue on 'High Technology'



[Facilities, faculty and staff bring Ag and Biosystems Engineering to #1](#) (featuring Dr. Steve Mickelson, Dr. Brian Steward, Dr. Michelle Soupir, and Dr. Manure);  
[Birds-eye view of agriculture](#) (featuring Dr. Matt Darr and Ryan Bergman);  
[Creating new worlds to study plant life](#) (featuring Dr. Lie Tang);  
[Conservation rising to new heights](#) (featuring AST senior, Rachel Lenz and AST adviser, Jenny Macken);  
[Welding industry tech to student opportunities](#) (featuring Dr. David Grewell and Jake Behrens);  
[Monitoring animal health](#) (featuring Dr. Hongwei Xin and Dr. Lie Tang);  
[Soil to space](#) (featuring Dr. Amy Kaleita)

### CALS Medallion

Dean of the College of Agriculture and Life Sciences Dean Wendy Wintersteen and CALS administration presented the Department of Agricultural and Biosystems Engineering with a medallion to commemorate the department's achievement of becoming the #1 undergraduate program in the nation (according to U.S. News and World Report). The college also pledged a scholarship fund to use towards undergraduate studies.



### Video: Flume installation

The basement of the biorenewables complex is home to cutting-edge equipment, including a brand new hydraulic flume in the Buss Hydrology Lab. Researchers



can program flow at various rates to simulate anything from sheet flow on a parking lot to high flow conditions in a stream.

“The flume brings unique control to the study of water flow we are not able to achieve in the field,” says associate professor Michelle Soupir. “There are many ongoing discussions with faculty across campus about using the flume for research projects. We are also planning laboratory exercises for some of the upper level ABE environmental courses. I expect that we will also have graduate students work on the flume extensively for research projects,” says Soupir.

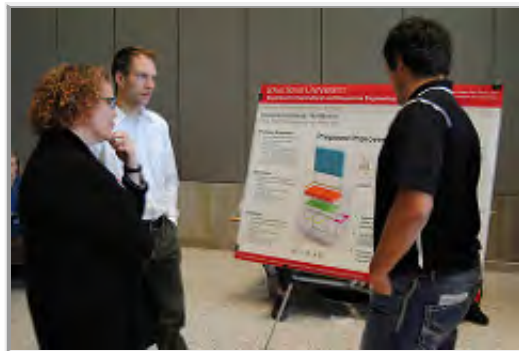
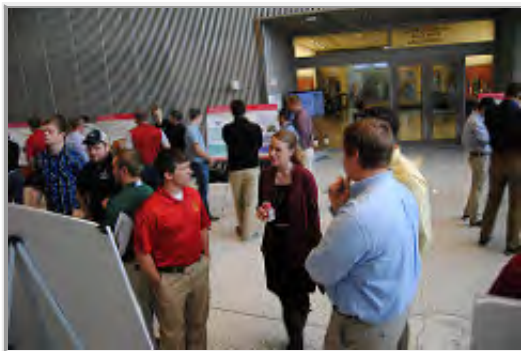


Video edited by Jared Calvert

### **Class Highlights: TSM 116 - Windmill Lab**



## Senior Capstone - Poster presentations



## Making an impact - ABE research and extension highlights

COI: **Daniel Andersen**

Award Amount: \$50,000

Title: Higher-value chemicals with "drop-in" biofuels from animal manure

COI: **Carl Bern**

Award Amount: \$35,180

Title: Malawi Nyaika post harvest

PI: **Shweta Chopra**

COI: **Charlie Hurburgh**

COI: **Gretchen Mosher**

Award Amount: \$40,000

Title: Facilitating information transfer in bulk grain to food or feed supply chains

COI: **Matt Darr**

Award Amount: \$400,000

Title: Field test verification of crop sensor innovations, phase 4

PI: **Adina Howe**

Award Amount: \$22,467

Title: A short course in computational, statistical analyses, and interpretation of microbial metagenome data

## Historic bench installation



## Class Highlights: TSM/ABE 325 - Biorenewable Systems, Guest lecture by Bill Northey



### ABE Alumni in the news

- [ISU Research Farms utilize conservation practices for science, stewardship](#)
- [ABE alum creates ISU startup factory company to take on the mitigation of N and P](#)
- [Engineering students, staff, faculty and alumni honored during WiSE banquet](#)

### More ABE news

- To apply data-driven science to crop science, it is necessary to capture large amounts of data about how crop plants grow. ISU researchers including Lie Tang, agricultural and biosystems engineering, are developing [PhenoNet, an integrated network of autonomous plant-measuring robots](#) for field-based studies of genotype and environment interactions.

### E-News schedule

ABE Alumni E-News is published on a quarterly basis. The next issue will be published April 30, 2017. If you have news items or event dates to include, please send them to Dana Woolley by April 14.

## Connect with us



ABE @ ISU is distributed by the Department of Agricultural and Biosystems Engineering.

If you have questions or news items to suggest, please contact Dana Woolley at [dwoolley@iastate.edu](mailto:dwoolley@iastate.edu).  
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