



**California/Nevada
Section
Bimonthly Update
November, 2017
Sixty Seventh Edition**

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❖ **2018 ASABE CA/NV Section Meeting – Feb 14th (Wednesday) 2018**

The annual ASABE CA/NV Section Meeting is scheduled on February 14th 2018 at 5 PM. Please plan on attending the meeting.

❖ **2018 ASABE CA/NV Engineer of the Year Award - Nominations Needed**

Do you know someone who has made amazing contributions to Agricultural Engineering? Someone who has done something to help the public welfare and/or humankind for the better? You should nominate them? Nominations are now open for Engineer of the year ASABE CA/NV Section award. For more information please contact [Balaji Seth](#). Forward all nominations to Awards Chair, [Nick Simonian](#).

❖ **2018 ASABE CA/NV Section Officer Positions - Nominations Needed**

Do you have a desire to get more involved with ASABE? Do you have ideas for Agricultural Engineering Activities? Do you like sharing about the ASABE? If you answered yes to any of the questions, NOW is the time to become an ASABE officer! For 2018, Vice Chair and Industry/Student Liaison positions are open. E-mail [Balaji Seth](#) or Call (559) 321-6826.

❖ **Cal Poly San Luis Obispo Update**

The Agricultural Engineering Society at Cal Poly San Luis Obispo closed out the previous school year with a bang, and kept busy over summer! Below are some of the club's recent highlights.

Cal Poly Students take second at AgBot Challenge 2017

A team of students from the BioResource and Agricultural Engineering Department, Cal Poly was awarded Second Place and \$15,000 at the AgBot challenge June 23-25, in Rockville, Indiana. The team created an autonomous tractor that could move through a field and plant up to four rows of corn seeds with seeding rate, seeds variety, and fertilizer remote controlled. The team, consisting of BRAE majors Ryan Vyenielo, Charlie Ross, Dillon Beatty, Caleb Fink, Austin Della, Nate McCarthy and Matthew Valentine, was one of seven teams to compete in this national seeding competition. Dr. Bo Liu from the BRAE department advised the students and provided technical guidance. Dr. Peter Livingston, the BRAE department head, strongly supported the team and provided a tractor for the competition. The team was also funded by the IRA, Cal Poly.

Tractor Pull

October and November mark the end of the Cal Poly Tractor Pull season. Nearly every weekend the team is hauling their two pull tractors all across California and Nevada to compete. Below is a picture of our newest pull tractor at the tail end of its first season next to some of our tractor pull members. They collected unused goods from the students and faculty of Cal Poly to donate to those who have suffered from the terrible fires up north.



Great Pumpkin Weigh-Off

During the fall season San Luis Obispo County collects entries for the Great Pumpkin Weigh-Off competition held during a Down Town farmers market. Our club volunteers to help set up the area, assist with moving and weighing the pumpkins, and clean up the venue after the champion pumpkin is crowned. We had a great club turnout this year and helped lift some large pumpkins on to the scale for the local community entries. First prize went to a 408 lb pumpkin from a local 4-H middle-schooler.



BAE Day

A few times throughout the year, Cal Poly hosts the Building an Engineer (BAE) Day, where several engineering departments participate in educating elementary students on engineering basics. AES and the Cal Poly Tractor Pull team are always happy to be a part of this. The students get to pull a sled to calculate how much horsepower they can develop, in the pictures below you can see our club volunteers and some of the children they helped with throughout the day.



Catering Opportunities

If there's one thing we know, it's that food brings people together. The picture below is of our BBQ crew providing food for our Club Charter night event for the Cal Poly College of AG. Every week, AES also hosts a Thursday barbeque to bring students great burgers and a nice break between classes.



❖ California State University, Fresno Update:

36th Annual Agribusiness Management Conference, Institute of Food and Agriculture

36th Annual Agribusiness Management Conference is scheduled on Nov 9 2017 at Double Tree Hotel and Conference Center in Fresno, California. This year's conference covers topics like U. S. Economy amid global transitions, global investment themes for agriculture, future of automation in Central California agriculture, political capital of currency, and a luncheon speech by CDFA Secretary Karen Ross 'The view from Sacramento – into the next decade'. Register for the event [here](#). Please contact [Michelle Serrano](#) for more information (559 278 4405).

Plant Science Students' Visit to Salinas, CA

Fresno State's Plant Science department in collaboration with Center for Irrigation Technology (CIT) hosted a two day field visit to Salinas County for vegetable crop production students. This visit was led by Plant Science faculty Dr. Dave Goorahoo and co-organized by CIT staffs Tim Jacobsen and Pappu Kumar Yadav. The students visited Head Start Nursery in Gilroy as their first site where they got an opportunity to see how different varieties of vegetable crops are grown in green house and how they are shipped in bulk to various parts of the United States. Founded in 1979 by Steve Costa, today it has expanded over 700,000 square feet.



A typical crop grown in green house at Head Start Nursery

The students then had an opportunity to visit one of the lettuce farms of Tanimura & Antle (T&A) Lettuce Productions in Salinas. Founded in 1982, today Tanimura and Antle farms in more than 30,000 acres of farm in North America, Europe and Asia. The students had an opportunity to see lettuce harvest in one of their farms.



Lettuce Farm owned by T&A Lettuce Productions, Salinas, CA

Enza Zaden Seed processing plant was the next site of visit for the students. The students were exposed to the actual facility where seeds are processed.



Students at Enza Zaden Seed Processing Plant, Salinas, CA



Fresno State's Plant Science Students (Vegetable Crop Production Class), Faculty (Dr. Dave Goorahoo) and CIT Staffs (Tim Jacobsen and Pappu Kumar Yadav)

Plant Science Students' Visit to Water & Energy Technology(WET) Incubator at Fresno State

Plant science students visited Water and Energy Technology (WET) Incubator housed at International Center for Water Technology, Fresno State. Plant Science faculty Dr. Dave Goorahoo and CIT staff Tim Jacobsen demonstrated a program that analyzes pumping costs as well as introduces various methods of lowering such costs. This particular program also introduces methods to reduce required system pressures, increase pumping plant efficiency as well as improve pumping plant management.



Dr. Dave Goorahoo explaining students about Pump Performance Curve at WET center, Fresno State

UC Davis Professor David Slaughter Invited Talk in Jordan Agricultural Research Center

Dr. David Slaughter, Professor of Biological and Agricultural Engineering program at University of California, Davis had the unique honor to present an inaugural lecture on Smart Farm technology for future of agriculture at the Jordan Agricultural Research Center Seminar Series in California State University, Fresno on Oct 23 2017.

Center for Irrigation Technology – Director Open Position

The Center for Irrigation Technology (CIT) is one of three research centers in the California Agricultural Technology Institute (CATI) in the Jordan College of Agricultural Sciences and Technology at California State University, Fresno. The Director/Researcher serves in a full-time, twelve-month management position. Under the general supervision of the Dean of the Jordan College of Agricultural Sciences and Technology (Jordan College), the director will work closely with faculty within the Department of Plant Science and the Department of Industrial Technology in fulfilling the mission of the Center for Irrigation Technology (CIT). The successful candidate is expected to provide research leadership to the Center for Irrigation Technology.

❖UC Davis Update

Dr. Zhongli Pan, a Research Engineer at the Healthy Processed Foods Research Unit, Western Regional Research Center of USDA-ARS and Adjunct Professor in the Department of Biological and Agricultural Engineering, UC Davis, and his research team recently received the 2017 Federal Laboratory Consortium (West) Tech Transfer Award and USDA-ARS Technology Transfer Award of Pacific West Area. The awards recognize successful transfer and high impact of innovative infrared processing technologies that significantly improved energy and processing efficiencies, quality, healthfulness and safety of foods. The new heating technologies have been used for walnut drying and producing fruits and vegetables-based healthy snacks. The research team members include Dr. Tara McHugh and Mr. Don Olson of the USDA ARS and Drs. Chandrasekar Venkitasamy, Ragab Gebreil and Hamed El Mashad of UC Davis.

New Faculty Join UC Davis BAE

The UC Davis Department of Biological and Agricultural Engineering welcomed four new faculty members this summer with expertise in irrigation and water management engineering, agricultural safety and health engineering, and engineering design and communication. Another position in mechanization engineering is in recruitment and anticipated to be filled soon.



Andre Daccache

Assistant Professor

Irrigation and Water Management Engineering

Department of Biological and Agricultural Engineering



Farzaneh Khorsandi Kouhanestani

Assistant Cooperative Extension Specialist

Agricultural Safety and Health Engineering

Department of Biological and Agricultural Engineering



Isaya Kisekka

Assistant Professor

Irrigation and Water Management Engineering

Departments of Land, Air and Water Resources and Biological and Agricultural Engineering



Jennifer Mullin

Lecturer with Potential Security of Employment

Engineering Design and Communication/Instructional Innovation

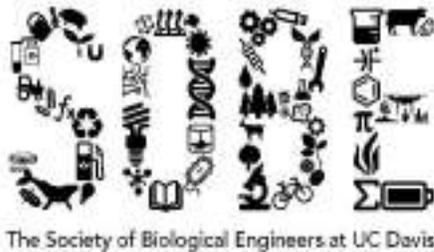
Department of Biological and Agricultural Engineering

Graduate Fellowship Established in Honor of Professor William J. Chancellor



In recognition of the outstanding contributions he made to the field of biological and agricultural engineering and his deep regard for and commitment to his students, an endowed graduate fellowship was established in the Department of Biological and Agricultural Engineering at UC Davis in honor of the late Professor William J. Chancellor. The William and Nongkarn Chancellor Fellowship was made possible by generous donations from his wife Nongkarn, the Chancellor family, and many of his former students. The fellowship was announced at the memorial symposium for Prof. Chancellor held at UC Davis on 21 July 2017. The fellowship supports graduate students in the department and honors the legacy of this brilliant scholar, teacher, and mentor. Information about donating to the fellowship fund is at <https://give.ucdavis.edu/ABAE/150232>.

UC Davis Society of Biological Engineers hosts new student welcome



The Society of Biological Engineers (SOBE) at UC Davis hosted a new student welcome and barbeque on 20 October 2017. SOBE, an undergraduate professional society, was joined by the BAE department's Graduate Student Association (GSA) and the ASABE Student Branch in welcoming new students to campus and providing a welcome between-class interlude to all.

SOBE is also currently organizing guest speakers to come to campus to discuss their careers and potential internship opportunities. SOBE has also fielded an intramural ultimate frisbee team for the fall quarter.



UC Davis Chancellor honors BAE faculty



Prof. Tina Jeoh in the Department of Biological and Agricultural Engineering at UC Davis was selected as a 2016-17 UC Davis Chancellor's Fellow. The award, presented by the Chancellor of the University for support of teaching, research and service activities, honors the outstanding achievements of early career faculty. BAE Prof. Kurt Kornbluth received the Chancellor's International Engagement Achievement award in recognition of his outstanding international teaching, research and service efforts



addressing carbon neutrality and climate change issues. Prof. Kornbluth leads the campus Big Idea Carbon Neutrality Leadership Initiative. College of Engineering Dean Jennifer Curtis recognized both at the College Awards Celebration on 9 October 2017.

BAE Prof receives prestigious China Friendship Award



Dr. Pan (left) receiving China Friendship Award from Vice Premier Ma Kai

Dr. Zhongli Pan, Adjunct Professor of Biological and Agricultural Engineering Research Engineer at Western Regional Research Center of USDA-ARS, received the China Friendship Award, the highest honor that the Chinese government gives foreign experts who have made outstanding contributions to China's economic and social progress. He was recognized for his outstanding leadership and contributions toward international collaboration in research and education in food and agriculture. This year, 50 experts from 21 countries received the award. The award was presented to Dr. Pan (at left in the photo) by Vice Premier Ma Kai on 29 September 2017 at the Great Hall in Beijing.

UC Davis Chancellor's Club gets an inside look at SmartFarm



Left to right: Cooperative Extension Specialist Bruce Lampinen, Dean of the College of Agricultural and Environmental Sciences Helene Dillard, Victor Dillard, SmartFarm Director Prof. David Slaughter, UC Davis Alumnus Yoshinori Himmel.

The UC Davis Chancellor's Club had an Insider's Tour of the campus Big Idea SmartFarm initiative on 7 October 2017 at the Joe A. Heidrick Western Center for Agricultural Equipment. Led by BAE Prof. David Slaughter and administered for campus through the College of Agricultural and Environmental Sciences, SmartFarm encompasses a vision of new innovative smart machines, smart sensing of the environment, smart plants and smart farming methods with the aim of achieving global food security and significantly advancing the environmental, economic and social sustainability of the food production system. Prof. Slaughter was accompanied by Specialist Bruce Lampinen of the Plant Sciences department, Prof. Maja Makagon of the Animal Science department, and BAE students and staff Thuy Nguyen, Vivian Vuong and Leland Neilson in highlighting some of the advanced concepts being developed through SmartFarm.

BAE department engages community by taking part in local High School shop program

The UC Davis BAE department has been engaging the local community by taking part in Rocklin High School's weekend shop program, which takes place one Saturday per month. High School students at Rocklin High School get the opportunity to dream big and bring those dreams to life through the program made possible by the efforts of Rocklin High ROP Engineering teacher, UC Davis lecturer, and UCD alumnus, Dan Frank as well as the support of countless other supporters and volunteers.

Frank, who graduated UC Davis with a BS in Plant Sciences program and a minor in Agricultural



Students learning sheet metal layout by making dog tags



Biological Systems Technology (ABT), also holds an MS in Industrial Technology from CSU Fresno, and teaching credentials from UC Davis where he has nearly completed a second Masters in Educational Leadership. His passion for creating manifested itself during undergrad when he joined the BAE shop as a student intern, working there for three years alongside BAE lecturer, Jim Rumsey, former shop manager, James Mehlschau, and

Dan Frank, Rocklin HS ROP Engineering teacher, UCD lecturer, alumnus, and former BAE dept. shop intern

current shop manager, Tom Bell. The idea, Frank says, is to challenge the kids to learn on their own, in a less structured environment, similar to what they will experience when they get out of school and into the work force. There they will no longer have anyone holding their

hands and they will be challenged to think for themselves. This is an opportunity for them to experience real world problem solving skills and develop some hands on skills in a fabrication shop, according to Frank.

The program has grown in its three years both in terms of capacity and attendance. It started with limited equipment, no welding machines, and a sign-up sheet that limited participation to 10 to 15 students. Today the shop boasts a plethora of resources including gas, TIG, and MIG welding setups, multiple CNC machines, drill presses, lathes, and a treasure trove of hand tools. And the program seems to only be expanding with the funding and support from a number of public and private sources including: the Gene Haas Foundation, the California Teachers Association, the National Educational Association, and Kennametal, which has provided support in terms of tens of thousands of dollars in financial scholarships for students, money for new equipment, and pledges to cover all the tools needed for shop project this year.

Attendance has also grown with 50 to 60 showing up on any given Saturday. Parents accompany students to work on projects and the event has turned into a celebration in creation with a BBQ frequently going on the side, and industry professionals as well as college undergrad and graduate students joining in. The program is limited to the students' imaginations. Students work on basic skills through mini projects like making dog tags to learn proper material layout and working with basic shop machinery and hand tools. Others go on to work with more complex machinery such as gas and TIG welders and component fabrication using CNC machines. And some students use the opportunity to bring their imaginations to life such as one student who went on to create a race car tow hook and another who built a medieval suit of armor. The program even boasts a robotics club.



(Left) Suit of armor made by Rocklin High student and (Right) student proudly displays her gas welding technique.

The BAE department became involved one day when Frank called up BAE shop manager, Tom Bell to enlist help getting welders into the Rocklin High shop. Bell helped get the ball rolling by finding welders to borrow. Since then, Bell and a group of BAE department undergrads and graduate students have continued to help by volunteering their time at each event to teach welding and work with the kids on different projects. Frank believes this experience is an important opportunity for kids to get a glimpse of what life will be like after High School while serving as a useful teaching and mentorship opportunity for the undergrads and graduate students.



(Top) BAE Shop Manager, Tom Bell and UCD Dean of Engineering, Jennifer Curtis (right) students gaining real world experience cleaning up at the end of the day.



Other articles and sites featuring Rocking HS weekend shop program:

- [Dan Frank's Instagram account \(Metal Shop Talk\)](#)
- [Rocklin & Roseville Today article: "Rocklin HS Students Become Entrepreneurs"](#)
- [Placer Herald article: "Rocklin High student gains work experience as intern"](#)
- [Sierra College STEM Academy: "MasterCam Training Inspires Teachers"](#)
- [CNC West Magazine, October issue: "A deeper look at thinking or pay it forward?"](#)

BAE Graduate Student Association (GSA) Updates

BAE GSA officers this year are Yamile Mennah Govela (President), Tyler Barzee (Vice President), Irving Rabasa (Treasurer), Lucia Felix (Secretary), Chang Chen, Ferisca Putri, Vivian Vuong (Social Chairs), Clay Swackhamer, and Hossein Edalati (Alumni Relations). The GSA kicked off the year by introducing themselves to the 16 new graduate students at the department's fall welcome luncheon. Since then the GSA has had several group outings and activities including: trip to Apple Hill for apple picking, hosting the Fall BAE Welcome BBQ along with SOBE, having some Halloween fun by going to the FEAR FARM, a local haunted house, and holding the second annual pumpkin carving competition, and celebrating Dia De Los Muertos by decorating sugar skulls. In addition to these activities, the GSA has held almost weekly Taco Tuesday's events and Happy Hours. The Happy Hour was a mixer event with Chemical Engineering and Material Science department, with a guest appearance from our glorious department Chair, Professor Bryan Jenkins.



❖ **Do You Feel A Calling?**

Do you have a desire to get more involved with ASABE? Do you have ideas for Agricultural Engineering Activities? Do you like sharing about the ASABE? If you answered yes to any of the questions, E-mail [Balaji Seth](mailto:Balaji.Seth) or Call (559) 321-6826.

- For previous editions of the Update, please visit www.asabecanv.org.
- If you have questions or comments, feel free to contact Balaji (559 321 6826 or balajis@csufresno.edu)
- If you have ideas for Update items or would like to get involved in the leadership team, please let us know!