



**California/Nevada Section
Bimonthly Update
January 7, 2010
Twenty-Fourth Edition**

- * ASABE CA/NV Meeting - February 10, 2010 in Tulare, CA
- * **Improving Energy Efficiency in Drip Irrigation Seminar by Stuart Styles - February 10, 2010**
- * E-Week - February 14-20, 2010
- * ASABE at Ag Connect Expo - January 13-15, 2010 in Florida
- * 1-2-3-4-5 Member Highlight - Jeremy L'Heureux, John Deere Waterloo Works, PV&V Engineer
- * **New Biofuels Equipment Gives College an Edge (from news.engineering.ucdavis.edu)**

- * ASABE CA/NV Meeting - February 10, 2010 in Tulare, CA



Mark your calendars now for our annual meeting in February in conjunction with the Tulare Farm Show/World Ag Expo (www.worldagexpo.com). If you are interested in becoming an officer of the Section, please contact Past Chair Victor Duraj at vduraj@ucdavis.edu. The meeting announcement and RSVP form will be sent out soon.

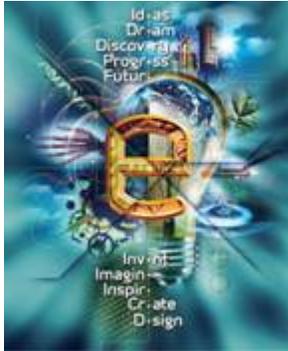
A draft version of the CA/NV Section By-Laws will be posted for your consideration by January 9th for approval at the meeting.

- * **Improving Energy Efficiency in Drip Irrigation Seminar by Stuart Styles - February 10, 2010**

Stuart Styles will be teaching a seminar on Improving Energy Efficiency in Drip Irrigation on February 10th from 9am to noon at the Edison AgTAC Center. This seminar will focus on drip irrigation design, operation, the effect on the overall energy use, and specific improvements that can be made to lower the on-farm energy requirements. Attendees will learn about distribution uniformity, pump efficiency, irrigation scheduling, and utilizing time-of-use schedules.

To register for the seminar or find out what other seminars are available, go to <https://www.sce.com/ECR/EnergyCenterClassSchedule.aspx?ORG=AGTAC,OTHER>.

*** E-Week – February 14-20, 2010**



Visit <http://www.eweek.org/GetInvolved/GetInvolved.aspx> and/or contact Carolyn Jones at carolyn.jones@ca.usda.gov if you would like materials for a National Engineers' Week presentation. You could bring a student to work for a day, do a presentation in a grade school class, display E-Week posters in your workplace, participate in a career fair, wear Society logo apparel, or participate in existing E-Week activities. If you do participate in any of the above listed activities, please let us know about it for an upcoming CA/NV Update. We'd like to hear about it!

*** ASABE at Ag Connect Expo – January 13-15, 2010 in Florida**



As a key sponsor of Ag Connect Expo, ASABE will be an integral participant in the new global trade show debuting January 13-15, 2010 in Orlando, Florida at the Orange County Convention Center. ASABE's annual AE50 "innovation" awards will be announced at the event, and the AE50 award-winning products will be spotlighted at the show. ASABE will also hold its annual Agricultural Equipment Technology Conference (AETC) in conjunction with Ag Connect Expo. AETC takes places January 10-13.

"ASABE, its AE50 awards, and Ag Connect Expo are all about cutting-edge innovation for productivity in agriculture," said Charlie O'Brien, vice president of agricultural services for the Association of Equipment Manufacturers (AEM). "Ag Connect Expo is a great context in which to recognize the product engineers who are making such significant contributions to dynamic efficiencies and to the future of agriculture around the world." AEM, show owner and producer, is pleased to have a long history of cooperation with ASABE and with ASABE's support of the show. "Ag Connect Expo will provide access to the latest innovations, products, services, and technology in agriculture, and ASABE's emphasis on innovation and excellence echoes the show's focus," O'Brien added.

For more information on attending Ag Connect Expo 2010, go online to www.agconnect.com.

*** 1-2-3-4-5 Member Highlight – Jeremy L'Heureux, John Deere Waterloo Works, PV&V Engineer**

Jeremy L'Heureux works for John Deere Waterloo Works located in Waterloo, Iowa. For the past three years he has been engaged in a remote assignment in the San Joaquin Valley in central California. He received a B.S. in Agricultural Engineering in 2000 with emphasis in Machine Design from the University of Nebraska at Lincoln (UNL) and is pursuing a Masters of Business Administration through the Tippie MBA Program at the University of Iowa. Prior to graduating, Jeremy was a three year student employee at the Nebraska Tractor Test Laboratory. Jeremy has worked primarily in the Product Validation and Verification group which is responsible for testing everything from individual components up to full vehicle systems. His favorite part of the job is getting hands on with a problem and finding a way to solve it for the benefit of the customer.

One - piece of advice I'd give new graduates:

1 - Use every opportunity to learn from your peers, regardless of their job title.

Two - things I learned on the job that I didn't learn in college:

1 - Sometimes real world engineering is more project management and communication than math or science.

2 - Having the right people is more important than the best test equipment or the biggest budget.

Three - concepts I learned in college that I use regularly:

1 - Always take more data than necessary; it's easy to throw it away, but hard to create it after the fact.

2 - A successful outcome is usually only a result of thorough and detailed preparation.

3 - The simplest solutions are usually the best ones.

Four - favorite technical aspects of my job:

1 - Finding the limitations of a piece of equipment through documented conditions, i.e. break stuff

2 - Solving a difficult challenge in a team environment.

3 - Using data acquisition to fully document a real world situation.

4 - Getting my hands dirty to improve a product. Nothing beats firsthand experience.

Five - places I've been or things I've seen in my career:

1 - Driving a 500 horsepower, 55,000 lb 4WD tractor leaping 8 inches in the air from front to back.

2 - Air seeding barley at 40% side slope sliding laterally down the hill faster than moving forward.

3 - A tractor horizontally pulling 106% of its weight on a flat concrete surface at Nebraska Tractor Test Laboratory.

4 - ASABE conferences in Louisville, Las Vegas, Orlando, Ottawa, and Reno.

5 - San Joaquin Valley - one of the most productive agricultural areas on earth and one of the best places to learn about production agriculture.

* **New Biofuels Equipment Gives College an Edge** (from news.engineering.ucdavis.edu)

Posted on: December 14, 2009

The Department of Chemical Engineering and Materials Science has added two pilot scale fermentors to its biofuels research program, thanks to an equipment grant from Chevron Technology Ventures. A 40- and a 140-liter unit, for a total cost of approximately \$400,000, will add new capabilities to the recently established Biological Process Research and Development Facility.

Small laboratory scale fermentors (2 - 5 liters in volume) are common in many academic research and teaching laboratories. But because of the high cost and required space and utilities, it is rare for a university research program to have access to pilot scale systems with such advanced monitoring and control systems. Pilot scale equipment is essential to obtain data that are more realistic and relevant to what is expected at a large, commercial scale.

The pilot scale equipment will benefit research and teaching in the College of Engineering in several ways, explains Associate Dean Karen McDonald, the principle investigator for the grant, with co-PIs David Block, Robert Powell and Jean VanderGheynst. "This equipment will help us develop more efficient processes for converting cellulosic biomass into liquid transportation fuels," McDonald said. "We are looking for efficient and cost-effective ways to produce the enzymes that convert cellulose in plant cell walls into sugars that can be used to produce ethanol and other more complex liquid transportation fuels. Right now that is one of the key barriers to making biofuels a commercial reality."

The new equipment also will be used by both graduate and undergraduate students, as well as faculty and post-doctoral scholars doing biofuels-related research. The opportunity for undergraduates in the biochemical engineering major to get training using this equipment will give them an advantage in getting jobs in the biotechnology, biofuels, industrial enzyme, pharmaceutical and food/beverage industries where this type of equipment is commonly used. "Companies are quite eager to hire our students, particularly those students with fermentor and/or bioreactor operating experience," McDonald said.

- Bimonthly Update contributors: Carolyn M. Jones, Victor Duraj, Jeremy L'Heureux, and news.engineering.ucdavis.edu.
- For previous editions of the Update, please visit www.asabecanv.org.
- If you have questions, comments, ideas for Update items, or would like to get involved in the leadership group, please contact Carolyn at (707) 252-4189x114 or carolyn.jones@ca.usda.gov.