



UPDATE

*A Newsletter of the University of Wisconsin-Madison
Biological Systems Engineering Department*

Spring 2004

Vol. 6, No.3

The Chair's Chips

In 2004 we will be celebrating 100 years since the Department of Agricultural Engineering was established at the University of Wisconsin-Madison. The department has a rich history of teaching, research, extension and many other important activities and events. The department has had the same home since 1906, when the building on Henry Mall was constructed. In 1907, ASAE (American Society of Agricultural Engineers) had its first organizational meeting in this building.

The centennial celebration will consist of several events, starting with a reception during the International ASAE Meeting August 1-4, 2004, in Ottawa, Canada. This reception is scheduled for August 3, Thursday, 8 p.m. Those attending the meeting should check the meeting program for location.

More on-campus centennial activities are being planned for Friday, September 10, 2004. Please mark your calendars and plan to attend. More details will be mailed later to all alumni and friends.

In the April 2004 issue of RESOURCE (ASAE's monthly magazine), the cover article described the work of Dr. Aicardo Roa-Espinosa (MS Agr. Engr., 1985 and PhD Agr. Engr., 1989). He is applying his doctoral research on polymers used to reduce erosion due to wind to helicopter landing and takeoff in dry, arid soils.



He is collaborating with the U. S. Marine Corps in developing an applications system. Currently, he is a visiting professor in BSE and is employed by the Dane County Land Conservation Office.

On July 1, 2004, Patrick Walsh will become the new department chair of BSE. A description of Pat's experiences and background are provided on page five of the newsletter. Those attending the ASAE Meeting in Ottawa will have an opportunity to meet Pat at the UW-Madison reception.

This will be my last column for the newsletter. I have been chair for five years and I have enjoyed the challenges that serving as department chair brings. I plan to return full-time to my extension and research position in the department as the agricultural machinery specialist. I wish Pat much success during his time as chair.

Please keep us informed of any news that you may have, especially changes in your position. There is a form at the back of this newsletter for you to use.

Sincerely,

Ronald T. Schuler

BSE Department Chair

THANK YOU

To our contributors

November 3, 2003 through May 4, 2004

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Loren and Carol Ulness
Oscar Ulness

—Student Activities—

Wisconsin ASAE Section Student Awards:

During the March 17, 2004, awards program, Josiah (Si) Akin, Senior in Agricultural Engineering, received the outstanding undergraduate student award. Anthony (Tony) Vandermuss, pursuing a masters degree in Natural Resources and Environment, received the outstanding graduate student award.



Si Akin, winner of the Outstanding Undergraduate Student Award.

Si, currently serving as vice-president of the student club, is one of the quarter scale tractor team leaders and served on the CALS Student Council. He is also a member of the UW Cycling Team.



Tony Vandermuss receives the Outstanding Graduate Student Award.

Tony has been active in the student club, serving as one of the authors of the Association of Equipment Manufacturers (AEM) report which describes the student club's activities. As a result, the club received first place in the group competition. He was also involved in intramural flag football and soccer.

BSE Picture in "Create the Future"

CREATE THE FUTURE is the major University of Wisconsin-Madison Campaign to generate \$1.5 billion. In the Spring 2004 issue of On Wisconsin, a CREATE THE FUTURE advertisement appeared on page 10 with a picture taken in the Agricultural Engineering Building. The picture was taken in room 217 with a student working at a drafting table with a view out of the semi-circular window. This room now serves as our student computer room. The picture was taken sometime in the 1960s, 70s or 80s. Can anyone identify the student in the picture? We do not know who it is.



Student Activities

BSE Students on Dean's List

Machinery Systems

Graham Adsit, East Troy, WI
Josiah Akin, Long Valley, NJ
Daniel Hoffman, Sun Prairie, WI
Joshua Kappelman, Francis Creek, WI
Eric Rego, Verona, WI
Bryan Yanke, Green Bay, WI

Natural Resources and Environment

Lisa Buchli, Chippewa Falls, WI
Stephanie Eberley, Boxborough, MA
Amy Kuhn, Verona, WI
Adam Paul, Hartland, WI

Food and Bioprocess Engineering

Sean Coleman, Madison, WI
Julie Graham, Racine, WI

Structural Systems

Matthew Deschane, Johnson Creek, WI
Aaron Wepner, Eldorado, WI

Students Attend ASAE Section Meeting

During the past several months our students have been involved in activities ranging from tours to student awareness and recruitment. Fourteen students attended the December 3, 2003, Wisconsin ASAE section in Milwaukee which included a tour of the Lakefront Brewery. The speaker for the program was Aicardo Espinosa-Roa, PHD Agr. Engr., 1988, who spoke about polymers used to mitigate the airborne dust created during landing and takeoff of helicopters in dry sandy conditions. The biodegradable polymer clumped small particles together, thus improving visibility and reducing equipment wear and maintenance requirements.

Tractor Team

The Quarter Scale Tractor team is working feverishly, preparing their newly designed tractor for the International ASAE Competition, June 3-6 in the Quad Cities. Their written report is complete; now they need to complete the fabrication of their tractor. Sophomore and junior students on the 'X' team have made modifications to the 2003 tractor and will compete in their event at the same time. Alumni and friends are invited to attend the pulling preparation and competition which takes place at the Quad City Downs.

Campus Activities

On March 27, 2004, members of the students club participated in the Competitive Edge which is a program for incoming CALS students for fall, 2004. The event, sponsored by the Association of Women in Agriculture and Alpha Gamma Rho fraternity, serves as an organizational fair for these prospective students.

On April 3, 2004, the BSE students and faculty collaborated with students and faculty from Life Sciences Communications (formerly Agricultural Journalism) to develop a competition event called "Write It, Do It" for the Wisconsin Science Olympiad on the UW-Madison campus. The event involved two-person teams representing high schools from around the state. One team member wrote directions on how to construct an object which was provided. Using the written directions, the second team member constructed the object without seeing the object.

Trips and Tours

On April 2-4, 2004, eight students participated in the ASAE Midwest Rally at the University of Illinois at Champaign-Urbana. Students from Indiana, Iowa, Illinois and Kentucky participated in this weekend event. Last year the UW students served as hosts to the first Midwest ASAE rally.

The student club scheduled four educational tours during January and March. On January 16, the students toured Boumatic and Nine Springs Wastewater Treatment Plant. Boumatic manufactures dairy equipment including robotic milkers, milk coolers and milking parlor equipment. The treatment plant serves the Madison area.

On March 26, 2004, the students visited Crave Brothers Farm and Cheese Factory and Briess Malting Facility. The Crave Brothers operate a dairy farm near Waterloo, WI and recently constructed a cheese plant to process the milk from their dairy herd. Their specialty cheese is marketed in many area grocery stores. The Briess facility, also located in Waterloo, produces malt for many of the breweries in the Midwest including many micro-breweries.

Student Activities



Senior Design Project

This year the Senior design courses were changed so that the students completed their projects in one semester instead of two semesters. Three groups of students completed the following projects:

- Vinegar Decolorization System, Julie Graham and Amanda Hoerth
- UW Arboretum Stormwater management: Redesign of Detention Pond Four, Lisa Buckli, Adam Paul and Adam Petersen
- Quarter Scale Tractor Design, Graham Adsit, Josiah Akin and Nathan Ryan.

Faculty and Staff News

Focus on Option

(This is the first of a series of articles which describe our undergraduate option.)

Food & Bioprocess Engineering Undergraduate Program

Food engineering is an interdisciplinary field that applies the basic sciences, mathematics, and engineering to develop technology and implement processes for converting agricultural products into convenient, shelf-stable, healthy, safe and delicious foods and beverages. Here at the University of Wisconsin-Madison, we are training students for this field with the Food and Bioprocess Engineering undergraduate program option offered within the Department of Biological Systems Engineering (BSE) in partnership with the Department of Food Science. It is designed to capture the essential features of both a food science and engineering education with courses in mathematics, physics, general chemistry, organic chemistry, biochemistry, biology, engineering and food science.

In addition, most food engineering undergraduate students gain valuable hands-on experience by participating in the many co-op and internship positions offered by the food industry or in undergraduate research opportunities available within the laboratories of the Food Engineering facility.

As a final test of their readiness, the students are required to complete a capstone design project and pass the Fundamentals of Engineering Exam.

Our Food and Bioprocess Engineering graduates are professional engineers with a strong food science background who are ready to tackle the issues involved in the delivery of a high-quality, inexpensive and safe food supply.

A committee of BSE and Food Science faculty with teaching responsibilities in this area has been formed to facilitate communication among the faculty with interest or teaching responsibilities in the Food and Bioprocess Engineering undergraduate and graduate programs. The committee has been making recommendations for updating and improving both the undergraduate curriculum for the Food and Bioprocess Engineering option in BSE and the graduate Food Engineering option in Food Science.

The committee considers input from industry, outside reviews, students and other faculty as they refine this option. Another priority of the committee is increasing visibility in order to recruit students into the program.

Biological Systems Engineering UPDATE

460 Henry Mall, Madison, WI 53706

For more information, please call (608) 262-3310
or visit our website at <http://bse.wisc.edu>.

Faculty and Staff News

Fiskes Earn Award

Ken (BS, Agr Engr., 1950) and Darlene Fiske of Woodstock, IL, received the National Wildlife Refuge Association and the National Fish and Wildlife Foundation Award as the 2004 National Wildlife Refuge Volunteers of the Year. The award was presented on March 7, 2004 during the Advocacy and Media Workshop in Washington D. C.

The award was established to recognize the outstanding accomplishments of volunteers. Ken and Arlene volunteered thousands of hours to conservation efforts over the past 20 years. They worked to preserve and restore the habitat for waterbirds and migratory species in Hawaii and in Florida. Ken and Darlene developed and maintained an ongoing atmosphere of cooperation between local communities and the Refuge staff, while drawing public attention to important Refuge needs.



In 1993, Pat was appointed Assistant Dean and Director, Program Leader for Community Natural Resource and Economic Development in Cooperative Extension. He administered this statewide program with 58 county agents, 70 campus-based specialists and 15 area specialists. In 2002, Pat resigned this administrative position and moved back to the department full time.

He continues to serve as co-director of the Solid and Hazardous Waste Education Center which has programs in environmental policy, energy conservation and renewable energy. He serves as the Wisconsin contact person for the Extension Disaster Education Network, which deals with emergency management and homeland security with a particular emphasis on agricultural security issues. He is co-principal investigator on Wisconsin Focus on Energy conservation and renewable energy education program. Doug Reinemann and Pat plan to teach a new course on renewable energy.

Jim Converse Receives Award

ASAE presented the Distinguished Service Award to Jim Converse in appreciation for his years of dedication and service to the Onsite Wastewater Industry. The award was presented during the 10th National Symposium on Individual and Small Community Sewage Systems from March 21-24, 2004, in Sacramento, CA. Jim had a key role in organizing and scheduling the technical speakers for this conference.



Pat does have a very unique background when compared to other department faculty. He has a Bachelor of Science degree in electrical engineering from Purdue University, and a J.D. degree from the UW-Madison Law School. In addition, he has an engineering degree in Environmental Engineering and a Masters degree in Nuclear Engineering, both from the Massachusetts Institute of Technology (MIT).

Patrick Walsh New BSE Chair



Patrick Walsh will assume the duties of the BSE chair effective July 1, 2004. Pat started in extension as a solid waste specialist in 1983 and then joined the department faculty in 1986 as an assistant professor. From 1990 to 1993, Pat was co-director of the Waste Research and Education Center in the College of Engineering and from 1990 to 1995, he was co-

director of the UW-Extension Solid and Hazardous Waste Education Center.

After receiving his law degree and before joining extension, Pat was employed in several law positions. He spent time with a law firm and Wisconsin Department of Justice with the Environmental Protection Unit. He also served on the Solar Energy Research Institute and Wisconsin Radioactive Waste Review Board.

News from Alumni

Jared (Jed) M. Cohen (BS, Constr. Admin., 1992) indicated he started a new position on December 1, 2003, as a Subcontracts Administrator in Research and Academic Administration at Carnegie Mellon University in Pittsburgh, PA. Jed and his wife Debbie have a new daughter, Samantha, born September 30, 2003.

M. H. Panhwar (MS, Agr. Engr., 1953) reports from Pakistan where he specializes in ground water development, earth moving, agricultural machinery, water logging, and salinity drainage control. He has received numerous awards, the most recent being the "Lifetime Achievement Award in Agriculture and Engineering in 2003. His book "Ground Water in Hyderabad and Khairpur Division" is an enlargement of his two-credit paper while attending the University of Wisconsin-Madison.



Todd England receives Agricultural Engineering Young Engineer Award

At the recent Wisconsin Section of ASAE meeting, **Todd England** (BS, Agr. Engr., 1990 and MS, Agr. Engr., 1992) received the Agricultural Engineering Young Engineer Award. The purpose of the award is to honor a young Wisconsin Section member for outstanding contributions to the advancement of the Agricultural Engineering profession. The selection was based on the candidate's total

accomplishments as an engineer. Todd is a project engineer with J-Star Bodco Inc. in Fort Atkinson, WI.

Kazuhisa Koda (MS, Constr. Admin.) is currently employed by the Ministry of Agriculture, Forestry and Fisheries of Japan. He lives in Yamaguchi, Japan.

Douglas Noot (BS, Constr. Admin., 1992) reports he is a Real Estate Consultant for Stark Reality in Madison, WI.

Scott Mueller (BS, Agr. Engr. 1987) started his new position as the Assistant State Conservation Engineer for the Wisconsin Natural Resources and Conservation service (NRCS) on November 3, 2003. His prior position was as an Area Engineer in southwest Wisconsin for the past three years and as a Field Engineer for eight years in Richland Center and Dodgeville. His new duties include PL-556 dam rehabilitation, interagency coordination and field office support.

In Memoriam

Evelyn Dokken

Evelyn Dokken, 89, died December 19, 2003, in Madison. Evelyn was born in Knox, ND, and earned a Bachelor's degree from the University of North Dakota and a Master's degree from the University of Wisconsin-Madison. She started her employment in Agricultural Engineering in 1946 working in Agricultural Safety with Professor Randall Swanson. She was a member of our staff for 39 years. She was a very active member of Bethel Lutheran Church in Madison.

Benjamin F. Detroy

Ben Detroy, age 80, died on January 14, 2004, in Madison after a lengthy illness. Ben was employed by the USDA throughout his professional career. He received his Bachelor's degree in Agricultural Engineering from the University of Illinois and his Masters degree in Agricultural Engineering from the University of Wisconsin-Madison. He started his USDA career as an engineer with the Cotton Ginning Research Laboratory in Stoneville, MS, followed by some time as a test engineer with International Harvester. Later he returned to the USDA as a research engineer working with honeybees and honey-processing equipment. As a result of his research, heating equipment to retard crystallization was developed. He had an office in the Agricultural Engineering Department while conducting his research in Madison. Ben was very active in the Masons and Shriners.



Alumni Update

Thank you for continuing to send your business cards and information updates. We appreciate hearing from you!

If you haven't kept in touch, please send us your business card and/or complete the form at the end of this newsletter.



Opportunities to Support BSE Scholarships and Activities

As the calendar year draws to a close, we encourage our alumni and friends to consider support for one of the funds listed below. Please note, contributing to one of the departmental funds below will also be counted as part of the UW-Madison campaign, "Creat the Future: The Wisconsin Campaign."

- ◆ BSE Undergraduate Research Fund
- ◆ BSE Undergraduate Student Activities Fund
- ◆ Lynndon and Norma Brooks Scholarship
- ◆ Ham Bruhn BSE Scholarship
- ◆ Ham and Janet Bruhn Fellowship Fund
- ◆ Ervin W. Schroeder Scholarship Fund
- ◆ Dick and Grace Stith Scholarship
- ◆ Quarter Scale Tractor Team
- ◆ Orrin I. Berge Scholarship
- ◆ Wisconsin BSE Student Scholarship
- ◆ BSE General Fund
- ◆ BSE Student Activities Fund
- ◆ Biological Systems Facilities Fund
- ◆ Sixties Decade Computer Lab Equipment Fund

Biological Systems Engineering Campaign

I/we wish to join other students, alumni, industry and friends in enhancing the teaching, research and outreach programs in the Department of Biological Systems Engineering by contributing as indicated below to the Campaign.

_____ \$250 _____ \$500 _____ \$1,000 _____ \$5,000 _____ \$10,000 _____ Other

- I/we wish to pledge \$_____ each year for _____ years beginning in _____ (year). Please remind me of the annual amount I have pledged in _____(month).
- I/we wish to make a single gift at this time. Enclosed is my/our contribution of \$_____.
- Please charge my gift of \$_____ to my: Master Card Visa American Express
 Card Number _____ - _____ - _____ - _____ Expiration Date _____
 Cardholder's name (please print) _____
 Signature _____ Date _____
- I/we wish to designate this gift: _____
- Where the need is greatest in the Department, for facility enhancements, for faculty/research support, for student support, other _____

Name: _____

Address: _____

Please make your gift payable to **UW-Foundation-BSE Campaign**.
 University of Wisconsin Foundation, 1848 University Avenue, P.O. Box 8860, Madison, WI 53708-8860

Alumni Update

Name: _____

Degree and Date(s): BS () MS () PhD ()

Home Address: _____

E-mail Address: _____

Phone Number: _____ Fax Number: _____

Position: _____

Employer: _____

News to share: _____

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