

# Alumni Update

Name: \_\_\_\_\_

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

Home Address: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Position: \_\_\_\_\_

Employer: \_\_\_\_\_

News to share: \_\_\_\_\_

Please return to: **Biological Systems Engineering Alumni Newsletter**  
460 Henry Mall, Madison, WI 53706  
or e-mail information to:  
BSE@facstaff.wisc.edu

## **BIOLOGICAL SYSTEMS ENGINEERING UPDATE**

460 Henry Mall  
Madison, WI 53706

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# UPDATE

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

Winter 2002

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## The Chair's Chips

As we approach the conclusion of the fall semester and the 2002 calendar year, we reflect on accomplishments during the semester and we plan for 2003. The students have been very active with club activities this fall such as homecoming, intramural sports, the quarter scale tractor and a lawnmower clinic. Numerous changes have occurred in the faculty and staff during 2002.

In 2002, Gary Bubenzer and Dick Koegel retired from BSE, each serving more than thirty years, while Anita Thompson, Natural Resources and Environment, joined the faculty as an assistant professor. Patrick Walsh returns in December to BSE after serving as Extension Program Leader in Community, Natural Resources and Economic Development. The BSE faculty numbers remain the same over the past 10 to 15 years, but the number of academic staff has increased significantly going from four to 24. Along with that, the number of graduate students on funded support has increased to 26. Much of this is due to the success of BSE faculty receiving grants and gifts. Most of the academic staff are employed on specific projects and have as their highest degrees ranging from a Bachelor's to a Doctorate. Some have primary investigator status, which allows them to direct their own program.

During 2002, two of our alumni received prestigious recognition from UW-Madison colleges. Larry Johnson, BS Agr '69, BSME '69 and MS Agr. Engr. '70, received an Honorary Recognition Award from the College of Agricultural and Life Sciences and Bob Pofahl BS Agr. Engr. '71 and MS Agr Engr '74, received the Distinguished Service Award from the College of Engineering.



Two new programs in the College of Engineering are Biomedical Engineering and Computer Engineering, which are being reviewed for accreditation for the first time this year. Many of the students in Biomedical Engineering have medical school as their ultimate goal. With the high level of interest in this program, a 3.8 grade point average is required to enter the program.

For 2003, early reports for state budget planning indicate we will need to plan for a budget reduction of five percent in state support. This could change as the Wisconsin economy changes occur during the next six months. Currently, only twenty percent of the UW-Madison budget comes from state appropriated sources. The remainder comes from tuition, gifts and grants. For BSE, the state appropriations including tuition make up is about sixty percent of the BSE budget.

In 2003, we will have a Cooperative State Research, Education, and Extension Service (CSREES) review that includes a four-day visit by a national team who will evaluate the department research, teaching and extension program. This team will consist of faculty from other universities, a CSREES representative and a UW-Graduate School representative.

Alumni are encouraged to share any noteworthy changes in their careers on the form, which can be found on the last page of this newsletter. Also please send any change of address information.

The BSE faculty and staff wish everyone a *Happy Holiday Season!*

Sincerely,  
**Ronald T. Schuler**  
BSE Department Chair

# THANK YOU

to our contributors  
August 17, 2002 -  
November 16, 2002

Contributors to the departmental funds established in the UW-Foundation include:

David R. Bohnhoff

Dennis M. Catterson

Deere and Company

Michael P. Frozema

James C. Guhl

Donald L. Henderson

John Deere Ottumwa Works

Daniel M. Krause

Gary W. Krutz

J. Kent Mitchell

Daniel L. Pederson

Dale L. Petrick

Douglas J. Reinemann

Ronald T. Schuler

White Clover Dairy, Inc.

**THANK YOU**

## THOMPSON JOINS BSE FACULTY

On October 3, 2002, Dr. Anita Thompson joined the BSE faculty as an Assistant Professor in the Natural Resource and Environment area. Dr. Thompson completed her doctorate degree in December, 2001 from the Department of Biosystems and Agricultural Engineering at the University of Minnesota. Her dissertation was titled, "Shear Stress Partitioning for Vegetation and Erosion Control Blankets." Since receiving her doctorate degree, Anita has held a post doctorate position in the Soil, Water and Climate Department at the University of Minnesota where she investigated fate and transport of antibiotics in manure-applied fields.



For her undergraduate studies, Anita received her BS degree in Civil Engineering at the University of Minnesota. Her MS degree was from the Department of Biosystems and Agricultural Engineering at the University of Minnesota.

Her responsibilities include teaching and research in the natural resources and environment area. She plans to conduct research on the fundamentals of erosion mechanics, channel stabilization, and address the impacts of agriculture and urbanization on sediment transport and the hydrologic and water quality response of watersheds.

We welcome Dr. Anita Thompson to BSE! ❄️



## GRAVE HONORED AT NATIONAL FFA CONVENTION

Karl Crave, a UW-Madison sophomore in the BSE structural systems option, was among four Wisconsin FFA members to receive the ten National Agri-Entrepreneurship Awards presented during the National FFA Convention in Louisville, KY. Crave earned this award for his creation and work with Crave Painting and Repair LLC, a business

specializing in painting buildings for farmers and rural property owners. Recognized for having realized the value of finding the "best mix" based on the equipment he owns and the number of employees available, Crave has been able to continually learn first hand about the business he established 2 ½ years ago. This venture though successful may be passed on to Crave's brother as Karl considers entering the landscaping industry or returning to his family's dairy farm and cheese processing facility in Waterloo, WI.

Congratulations on your accomplishments Karl! ❄️



## BSE FUNDS



BSE has fifteen funds in the UW-Foundation, and many of them are scholarships established by Alumni and emeritus faculty. Nearly all these funds are fully endowed. Please consider contributing to one of these funds before the end of the year. The faculty, staff and students greatly appreciate the support of alumni, emeritus faculty and friends.

- ◆ Ham Bruhn Biological Systems Engineering Scholarship
- ◆ Hjalmar D. and Janet Bruhn Wisconsin Distinguished Fellowship
- ◆ Gale Edwin and Janice Faye Janssen Biological Systems Engineering Scholarship
- ◆ Dick and Grace Stith Scholarship
- ◆ Biological Systems Engineering
- ◆ Martin E. and Kathleen M. Burkhardt
- ◆ Lynndon A. and Norma A. Brooks Scholarship
- ◆ Alfred and Edna Krenz Biological Systems Engineering
- ◆ Sixties Decade Computer Lab Equipment
- ◆ White Clover Dairy Research
- ◆ Robert Meyer Scholarship
- ◆ Forage Research
- ◆ Rural Energy Issues
- ◆ BSE Student Activities
- ◆ Ervin W. Schroeder Scholarship



### 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) \_\_\_\_\_  
Cardholder's 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



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.

**Martin Burkhardt**, BS Agr '60, BSME '61 and MS Agr. Engr. '64, completed his three-year term on the Wisconsin Agricultural and Life Sciences Alumni Association (WALSAA) Board of Directors. Martin is retired from Mutual of Wausau Insurance.

**Alan Koepke**, BS Agr '63, continues to serve on the WALSAA Board of Directors. His term expires in 2003. Alan farms with his brothers near Oconomowoc, WI.

**Jared (Jed) M. Cohen**, BS Constr. Ad., '92, reports that he has been living in Boston where he has been working for Intel Corp. as a Contracts and Materials Contractor for the past two years. He is in the process of moving back to Pittsburgh with the hope of working for a small developer/general contractor.

**Don Henderson**, BS Agr '59, BSME '64 and MS Agr. Engr. '65, officially retired from Deere and Company after a 35-year career with the company. Don began his career in Product Engineering at the John Deere Waterloo Tractor Works. His numerous positions with Deere Waterloo, IA included manager of Component Marketing, manager of Reliability, and manager of four-wheel drive tractor engineering. He became manager of engineering at the Horicon Works in 1986 and general manager of the Lawn and Garden Division in Raleigh, NC in 1993. In 1996, Don became general manager of Motores John Deere in Torreon, Mexico. In his final position with Deere, Don assumed responsibility for leading the development of an Order Fulfillment Process for John Deere Power Systems. Don and his wife, Emily, have returned to Wisconsin and reside in Elkhorn.

## BSE ADVISORY COMMITTEE

The BSE Advisory Committee met on November 8, 2002 at the UW Foundation where faculty shared the status of extension, research and teaching in BSE. The last time the committee met was in 1998.

During the interim, we had focus group meetings seeking input for three of our undergraduate option areas during separate meetings. In September, 1999, members of the advisory committee, students and other alumni with an interest in Natural Resources and Environment met to review that option area. In March, 2001, the machinery systems focus group met and in November, 2001, the Food and Bioprocess group met. Based on these focus group discussions, changes were made in the undergraduate program.

The BSE faculty greatly appreciate the time taken by the members of the Advisory Committee to attend the meeting. Future meetings will be held annually. ❄️



### BSE Advisory Committee Members:

- George Cicci, Gehl Company, West Bend, WI
- Charles DeNardo, Wisconsin Electric Power Co., Milw., WI
- Al Geisthardt, Plyco Corp., Elkhart Lake, WI
- Gail Janssen, Retired F&M Bank, Kaukauna, WI
- David Jelinski, Dept. of Ag, Trade & Consumer Protection (DATCP), Madison, WI
- Kevin Kirsch, WDNR, Madison, WI
- Robert J. Loehr, Deere & Co. Lawn & Garden Care Div., Horicon, WI
- Dennis A. Lonergan, Technical Director Strategic Technology Development, General Mills, Minneapolis, MN
- Jerry Marra, Oscar Mayer Foods Corp., Madison, WI
- Scott Mueller, USDA – NRCS, Richland Center, WI
- William Nelson, Bou-Matic, Madison, WI
- Gene Nimmer, USDA –NRCS, Beaver Dam., WI
- Robert Pofahl, P.E., Resource Engineering Associates, Middleton, WI
- Jason G. Skagen, Frito-Lay, Beloit, WI
- Michael Stelzle, AGCO, DeKalb, IL
- Gregory Williams, Larson Engineering of WI, Appleton, WI

## DEGREE NAME CHANGE

In 1995, we changed the name of the department from Agricultural Engineering to Biological Systems Engineering. This was done to reflect the department's broader activities in teaching, research, and extension. At that time, the names of degrees were never changed.

During 2001, a request was made to change the name of the majors for the Bachelor's, Master's and Ph. D. degrees from Agricultural Engineering to Biological Systems Engineering. At the same time, a request was made to have the option area listed on the student's university transcript. The option areas are Machinery Systems, Natural Resources and Environment, Food and Bioprocess, and Structural Systems.

On November 21, 2002, the University Academic Planning Council approved the requests. Students currently enrolled in the graduate and undergraduate programs will be able to choose one of the two degree names, Agricultural Engineering or Biological Systems Engineering. Students enrolling after the approval, starting their programs in 2003, will be receiving a degree in Biological Systems Engineering upon completion of their graduation requirements. ❄️



## BUILDING ADDITION UPDATE



*Agricultural Engineering Building at 460 Henry Mall.*

Our building addition was 17<sup>th</sup> on a list of 20 approved by the Board of Regents during their August, 2002 meeting. The next step is the Department of Facilities Development (DFD) at the state government level. Early in 2003, we will find out their decision on the construction of our building project, which could potentially be constructed as early as the 2003-05 biennium. This building addition is considered Phase II of the construction completed in 1981 when the plans had one additional floor.

Currently the plans are to add two floors to the 1981 construction on the laboratory, the east end of the laboratory. The current construction is capable of supporting two additional floors, but the university planners and architect believe that it will be less costly to remove the 1981 construction and start with a new first floor. They feel the 1981 construction is outdated in many ways.



*Agricultural Engineering Laboratory at 540 Elm Drive - current building in white box & addition above the left end.*

The new construction is designed to have all campus department facilities at one location at the corner of Observatory Drive and Elm Drive. The department faculty and staff would vacate the building on Henry Mall. The plans have the Department of Life Sciences Communications (LSC) (formerly Agricultural Journalism) located immediately south of our Henry Mall building, moving into our vacated building. Biochemistry is then planning an addition that will be located at the LSC location.

The plans for the addition has 24,000 assigned square feet for offices, classrooms and additional laboratories. The new laboratories will include water quality, food engineering, bio-sensors and instrumentation, bio-processing and GIS and precision agriculture. We are anxiously awaiting the decision of the state DFD. ❄️





## STUDENT ENROLLMENT

This fall sixty-four students are enrolled in the undergraduate program. This is about the same as last year but down a bit from previous years. Our goal is to have 100 to 120 students in the program.

Recruiting students has been challenging with greater restrictions on entrance into UW-Madison. BSE faculty have devoted some of their efforts to on-campus recruiting. This fall there are 1300 pre-engineering students on campus. These students are primarily first and second year students completing their entrance requirements into engineering programs. In BSE, a student must have a 2.35 grade point average in a designated group of math and science classes. Many of these pre-engineering students are undecided with regard to the engineering field they want to pursue.

To reach the undecided students, BSE faculty participate in two Engineering Professional Development Department courses. Students in Introduction to Engineering design and fabricate projects provided by faculty in the College of Engineering and other UW-Madison department staff. For the past several years, BSE faculty have been responsible for two sections. Examples of completed projects include a turf tester to evaluate golf course turf, a grass mower for greenhouse trays, a plot pesticide sprayer and a calf feeding system.

In addition, BSE faculty provide a lecture on two pre-engineering classes on our undergraduate program. In one class, the students have an opportunity to visit our laboratory facilities. Our undergraduate students enjoy participating in the lectures and tours. Finally, a one-credit course titled, "Introduction to Biological System Engineering" is offered to the pre-engineering students.\*

## FALL ACTIVITIES



Getting into the homecoming spirit, ASAE and Sigma Alpha members show their "Farmer Power."

During the fall semester, members of the ASAE student club were active in many events including homecoming, monthly meetings, and the lawn mower clinic.

The ASAE student club teamed with Sigma Alpha for the student competition during homecoming week, October 13-19. Sigma Alpha is a professional agricultural sorority that promotes scholarship, leadership, service and fellowship among its members. This duo placed third in the overall student competition.

Following the 2002 UW-Madison Homecoming theme of BADGER POWER, the team entered the homecoming parade on October 18 with a float titled, FARMER POWER. They earned second place honors with their float, as well as placing second in volleyball competition. Other homecoming activities they participated in included the Charity Ball and the Charity Run. In addition, four ASAE student members were nominated for homecoming court and three were invited for first interviews.\*



Team members huddle forming strategy.



The ASAE student club also participated in co-recreational intramural flag football this fall, where they won the division title. During the playoffs; however, they came up short losing the championship game in overtime.



Outside speakers such as Jerry Marra, Oscar Mayer Foods, enhance meetings.

On November 14-16, the ASAE Pre-Professionals held their annual Lawn Mower Clinic fundraiser to support club activities. They serviced ninety-eight lawn mowers and snowblowers. Proceeds are used for general operational costs, trips and tours, and ASAE international and statewide functions.



Rich Burrack works to remove a blade.



With the students' efforts, the ag engineering lab was filled with nearly 100 clean, serviced lawn mowers and snowblowers.



The students have held three meetings so far this semester. The September meeting was the student/faculty mixer with over forty students attending. During the October meeting, four students described their summer engineering work experiences. Jill Grodecki, a senior in natural resources, worked for the UW-Agricultural Research Stations and Amy Kuhn, a sophomore in natural resources, worked in a research laboratory at Pennsylvania State University. Julie Graham and Karen Mandl, students in food and bioprocess engineering,

**Biological Systems Engineering UPDATE**  
460 Henry Mall, Madison, WI 53706

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or visit our website at <http://bse.wisc.edu>

worked at Nestle and General Mills respectively. For the November meeting, Dr. Anita Thompson, our newest addition to the faculty, described her background and her plans for teaching and research in the department.

The ASAE Quarter Scale Tractor Team is busy developing plans for the 2003 model tractor. It will be a four-wheel drive tractor with potentially a very revolutionary power conversion system. The students need to design the tractor, prepare a written report and provide an oral presentation. Along with those activities, they participate in two pulling events, the most exciting part of the competition.\*

