



UPDATE

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

Summer 2005

Vol. 8, No. 2

—The Chair's Chips

Many people view summers on campus as times that faculty and staff sit back and relax. With fewer undergraduates around and no courses to teach, some might believe that the pace slows to a crawl. How wrong they would be to think that! For BSE this summer, the winds of change blew strong. Let me highlight some of the important developments affecting BSE and our profession.

First, the department is recruiting for a new bioproduct/bioenergy engineer faculty position. This new position will build upon our historically strong machinery program to expand its reach into research to assist the country to develop new technologies and methods to use agricultural materials as fuels and feedstocks for American industry. There is great potential in this area of research to help the US become more energy self-sufficient with less environmental impact. Some of our faculty are already working in this expanding field but the addition of new skills will help us meet our need to keep our courses and research on the cutting edge. Professor Kevin Shinnars chairs the search and screen committee for this position.

Our movement into the bioprocessing arena mirrors the national recognition of the expanding nature of our engineering field. In fact, our national association, the American Society of Agricultural Engineers (ASAE), just changed its name to the American Society of Agricultural and Biological Engineers (ASABE). The name change clarifies the Society's leadership position in setting national and international standards for undergraduate curricula in university departments of agricultural and biological engineering. As we helped lead the first agricultural revolution in the US one hundred years ago, our profession is poised to lead the coming revolution to turn the US into a more bio-based economy. These are exciting developments for our department and the country as a whole.

BSE is now in a key position to help the ASABE in its mission to promote our profession. Aaron Flouro, one of our own undergraduates, was just elected as International

Pre-professional President of ASABE at its annual meeting in Florida.

We congratulate Aaron on this accomplishment and look for great achievements during his leadership tenure with ASABE.



This summer was also marked with the retirement of long-time professor Jim Converse. Over his tenure, Jim did just about everything possible to help this department, including an eight-year stint as department chair. His research into small scale waste management systems has helped set the siting standards for at least twenty seven states. I will personally miss his advice and counsel and true regard for meeting the needs of our students. We wish him well in retirement and hope to send him off in style on September 9 here in Madison.

On a sad note, long-time friend and supporter of the department, college and university, Gail Janssen, passed away this summer. Gail spent his life promoting agricultural engineering, including being president of ASAE, and helping the university provide high quality educational experiences for our students. He will be sorely missed.

This only scratches the surface of what was an exciting summer at BSE. With the students returning soon, we are ready for another, high energy year in a fast changing field. We appreciate your support as we work to strengthen our programs and bring them into the future.

Sincerely,

Patrick Walsh

BSE Department Chair

Thank You

A special 'Thank You' to the following for their contributions to Biological Systems Engineering Funds at the University of Wisconsin Foundation from 5/15/2005 through 8/10/05.

Dean Elton Aberle
Paul W. and Diane M. Baenen
Loren O. and Linda Berge
Brian J. Bischel
Warren I. Bohn
Theodore J. and Dona B Brevik
Norma A. Brooks
Sandra J. Brown
Barbara E. and Peter J. Buechel
Frederick H. and Lois Buelow
James D. and Nancy A. Campbell
Richard H. and Peggy A. Daluge
Ronald E. and Sheila K. Danielson
Michael P. Frozena
Ivan J. and Jeanette Gruetzmacher
Jerry P. and Nancy A. Hayes
Lawrence and Aurelia Heller
Donald L. and Emily J. Henderson
Leland E. and Karen L. Jensen
Richard G. Johnson
Keller Inc.
Judith A. and Dennis Kickland
Kiwanis Club of Kaukauna
Lee L. Knispel
Russell L. and Edna L. Luckow
Matthew H. and Julie B. McDaniel
Al and Dorothy Mengarilli
Jeffrey R. Norem
Barbara L. Pawlak
Ann M. Pendleton
Robert E. and Sharon R. Peterson
Stephen A. Rohleder
Rakesh K. Singh
Gerald M. and Shirley Smith
Richard J. Straub
Roger C. and Sandra J. Struckmann
James H. and Barbara Thomsen
Donna VanDeLoo
Gregory Weber
Jodi J. Wickman
David C. and Caroline Willis
Joseph J. and Edna H. Zadra

ASAE News

During a Board of Directors Meeting of ASAE on July 21, 2005, the final step was taken to change the name of the American Society of Agricultural Engineers to the American Society of Agricultural and Biological Engineers. Earlier this year ASAE members were asked to vote for or against the proposed name change. An overwhelming number of the members supported the name change.

The increased emphasis on biological engineering continues with the society name change. All of the original agricultural engineering departments have changed their names to include some aspect of biology. Examples of terms used as current department names include biosystems, biological systems, bioresource, bioscience, biological and environmental, and biological.



*The Society for engineering
in agricultural, food, and
biological systems*

In other society news, ASAE will celebrate its centennial in 2007. The celebration will be kicked off at the 2006 International ASABE Meeting in Portland, OR and continue through the 2007 ASABE International Meeting in Minneapolis, MN and be completed at the end of the 2007 calendar year.

ASAE was founded in the Agricultural Engineering Building at the University of Wisconsin-Madison, the current department home.



ASAE has identified the Agricultural Engineering Building as a Historic Landmark, which has been recorded on this plaque, mounted in the front entrance to the building on Henry Mall.

Student News

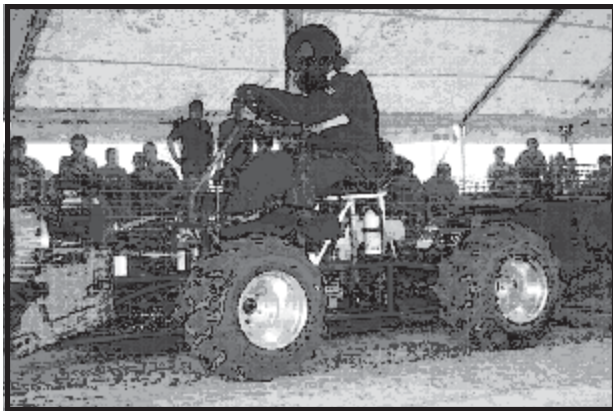
Tractor Team Places eleventh in the 2005 ASABE Quarter Scale Tractor Competition

In a field of twenty-six teams, our Quarter Scale Tractor Team placed eleventh overall. The 2005 tractor was a hybrid, four-wheel-drive design where an engine mounted generator produced electrical power for two motors, one for the front axle and one for the rear axle. The team placed extremely well in all categories except for the design portion of the competition.

They placed third in team presentation which was presented by Eric Fox, Bryan Yanke, and Naomi Uhlenhake. The team placed fifth in the written design report. In the tractor pull competition which consisted of four pulls at tractor weights of 1000, 1250, 1500, and 1750 pounds, the team placed ninth. Tractor operators were Nate Dudenhoeffer, Eric Fox, Chris Tamm, and Bryan Yanke. The hybrid tractor performed extremely well in the pull event.

The most challenging event for the team was the tractor design where the team placed twentieth in serviceability, nineteenth in manufacturing, twentieth in safety, and seventeenth in ergonomics. Due to the weight constraints and the weight of generator and two electric motors, team members found it difficult to add features to meet criteria in the design elements.

The Wisconsin team did place first in team web design which did not contribute to the overall score. Richard Wipperfurth was the lead on the X team for younger students which used the 2004 tractor in competition. X team results have not been made available at this time.



Eric Fox driving for UW-Madison in the Quarter Scale Tractor Pull

UW-Madison Student Elected International ASABE Pre-Professional President

University of Wisconsin-Madison Student, Aaron Flouro, was recently elected as International Pre-Professional President of ASABE (American Society of Agricultural and Biological Engineering) at the International Meeting, held in Tampa, FL on July 17-20, 2005.



Pre-Professional President Aaron Flouro and ASAE President Jerry Wille

Aaron proved his dedication to this organization by serving as the 2004-05 International Pre-Professional Secretary of ASABE. In this position, Aaron was responsible for coordinating the Undergraduate Project Poster Competition held at the International Meeting.

Aaron is a graduate of Flambeau High School, class of 2001. He is currently a 5th year senior at the University of Wisconsin-Madison majoring in Biological Systems Engineering with a Structural Systems option and plans to graduate in May 2006.

Matt McDonald Places Second in the National ASABE AGCO Student Design Competition

Matt McDonald, a May, 2005 BSE graduate, entered his senior design project, Quick-Attach Grapple System, in the National ASABE AGCO Student Design Competition during the spring semester. Based on his written report, Matt was one of the top three entries in the competition which allowed him to provide an oral presentation at the ASABE International Meeting in Tampa, FL on July 17-20. Based on the results of the oral and written reports, Matt placed second and was provided a plaque and \$1000.

Matt designed a system that enables the grapple portion of a grapple-type log skidder to be removed quickly and easily,

(Continued on Page 4...)

-Student News- - Faculty News-

(...Continued from Page 3)



Matt McDonald took second place at the ASABE AGCO Design Competition. He was awarded a plaque and \$1000.

making the cable and winch system of the grapple skidder much easier and safer to use. The design was developed to fit the Prentice 490 dual-function grapple skidder manufactured by Blount, Inc. The design can be easily modified to fit other grapple skidders. The proposed design is a very cost-effective method to increase the versatility of grapple skidders because it only requires alteration of the upper arch of the dual-grapple system.

The ASABE AGCO Design Competition was developed to encourage undergraduate students to participate in the basic design of an engineering project useful to agriculture and related areas. It also

provides an arena of professionalism in which students can experience peer recognition of a well conceived and executed design project. The awards were presented at the Annual Awards Luncheon during the ASABE meeting.

Wisconsin Student Club Wins AEM Trophy

Our Student Club was awarded the Association of Equipment Manufacturers trophy for engineering clubs with fewer than 33 paid members. This is the third year in a row our students won this trophy.

The purpose of this competition is to recognize the student engineering and student mechanization branches with the most outstanding record of activities and achievements for the year. The judging criteria include membership, committees, meetings, attendance, programs, special activities of the members, inspection trips, publications, social functions, and appearance of the submitted report. The report was prepared by Naomi Uhlenhake, senior from Salem, WI, and Richard Wipperfurth, junior from Lodi, WI.



Tony Vandermuss holding AEM Trophy

Straub Appointed Interim Associate Dean/Executive Director

Richard Straub has been appointed Interim Associate Dean/Executive Director of the Agriculture Research Station by CALS Dean Elton Aberle. Dick has been serving as the Director of the UW-Madison Agricultural Research Station and is a Professor in the BSE Department. He fills a position vacated by the retirement of Margaret Dentine. Since Dean Aberle plans to retire on August 31, 2005, he made the appointment as interim.



Richard Straub will serve as Interim Associate Dean/Executive Director of the Agriculture Research Station.

As Interim Associate Dean/Executive Director, he is responsible for the day-to-day administration of the Wisconsin Agricultural Experiment Station on behalf of the Dean and Director. These responsibilities include Hatch, McIntire-Stennis, and Section 1433 Animal Health Funds received from the USDA annual internal competitive grant process for awarding these funds for multi-state research, and from integrated extension/research projects. Dick is responsible for many other research administrative activities at the college level.

Dick joined the BSE faculty in 1979 as an assistant professor and served as department chair from 1996-1999. In 1999, he was appointed director of the Agricultural Research Stations by Dean Aberle. As director Dick was responsible for the operation of the research station network located throughout Wisconsin.

James C. Converse Retired July 5

After thirty-five years on the department faculty Jim Converse retired effective July 5, 2005. During his time as a member of the faculty he had many different roles and responsibilities, including department chair from 1988 to 1996.

Jim was raised on a farm near Brainerd, MN. He completed his Bachelor's and Master's degrees at North Dakota State University, Fargo, ND in agricultural engineering.

(Continued on Page 5...)

Faculty News

(...Continued from Page 4)



Jim Converse served as Department chair from 1988-1996. Jim retired July 5, 2005.

He completed his doctorate at the University of Illinois just before arriving at the UW in 1970.

Since joining the faculty Jim has held a teaching/research/extension position in the department. His teaching responsibilities were related to animal housing, on-site waste management, and physical properties of agricultural materials. His extensive research program focused on handling and utilization of animal waste and treatment of domestic waste. His research in defining domestic

wastewater treatment techniques led to the development of the Wisconsin Mound On-Site Wastewater Disposal System.

While on the faculty, Jim served numerous leadership roles in the department, college and campus. He served on the Physical Sciences Executive committee, College of Engineering Executive committee, and the College of Agricultural and Life Sciences Academic Council and Chairs, scholarship, and curriculum committees.

In the department, Jim was a long-time chair of the undergraduate curriculum committee and serve as advisor to many students. He provided leadership in preparing for accreditation of our undergraduate engineering program on numerous occasions.

Jim's leadership went beyond the campus. He served as chair of the Wisconsin Section of ASAE and chair of numerous ASAE committees. He was chair of the ASAE Meetings Council which was responsible for planning numerous national and international meetings and symposia.

Jim received numerous awards including ASAE Fellow, Gunlogson ASAE Countryside Engineering award, ASAE Distinguished Service award, a lifetime achievement award from the National On-Site Wastewater Recycling Association.

Upon retirement, Jim and Margie plan to continue their residence in Madison near their four children. They will tend to their family farm near Brainerd, MN and do some traveling. In addition Jim plans to do some consulting work.

ASAE Educational Aids Awards

Each year, members of ASAE, now ASABE, sponsor an Educational Aids Competition, principally for extension and outreach materials developed by society members. There are eleven categories including written publications (five categories), films, extension methods, models, computer programs, and web pages. Awards are given in the form of blue ribbons.

This competition provides ASABE an opportunity to recognize authors who have done exceptional work in developing these materials.

David Kammel received a blue ribbon as a member of the team that developed a series of bulletins, Hoop Barns Series, published by the Midwest Plan Service (MWPS). These barns can be used for swine, cattle, sheep and horses.

Brian Holmes received a blue ribbon as a member of the team that developed the Farmstead Planning Handbook and CD. This handbook, also published by MWPS, was updated during the past year, provides guidelines for designing a farmstead plan that is environmentally sound, and meets the need of the farm owner/operator.

The *AgrAbility Quarterly*, published by the National AgrAbility Project, received a blue ribbon award as a newsletter. Project staff receiving this award are Leah Nell Adams, evaluation specialist; Mary Beck, rural health specialist; Mark Novak, outreach specialist; Cheryl Skjolaas, outreach specialist; and



Ron Schuler, professor, all members of the BSE department staff. AgrAbility is a USDA funded project that provides education and assistance to farmers and ranchers with disabilities. The national project provides support for 25 state/regional projects, one being AgrAbility of Wisconsin. Both projects are administered through the BSE department.

Professor Emeritus, Gary Bubenzer, was awarded a ASABE Presidential Distinguished Service Award during the meeting in Tampa. The award was for his role on the finance committee for developing and seeing through to implementation of a dues reviews process, thereby ensuring the ASABE dues structure and categories will be systematically reviewed on a regular basis. Gary served as ASABE Treasurer from 2001 to 2003.

Alumni News

BSE Alumnus and Friend, Gail Janssen, Passes Away

On June 2, 2005, Gail E. Janssen died while on a golf course in the Kaukauna, WI area. Gail was a special friend and very supportive of the BSE Department.

Gail spent his early years on a farm in Oconto County, WI and was active in 4-H, participating in the tractor project of which he was very proud because he won state tractor driving operator's competition at the State Fair. After graduating from the Oconto High School, Gail attended the Farm and Industry Short Course at UW-Madison and decided to continue farming. When he had to quit farming due to health reasons, he decided to return to UW-Madison. He completed his BS degree in Agriculture in 1960 and a BS in Mechanical Engineering in 1962.

After completing his degrees, he was employed as a design engineer and later as an assistant chief engineer at Gehl Company. In 1968, Gail began his career with Badger Northland as Chief Engineer and Vice-President.

In 1971, he was named President and General Manager and served on the Board of Massey Ferguson. During the 1970s, Gail changed careers, going from engineering and management to banking and management. He became President and Chair of F & M Bancorporation, taking the bank from a single location in Kaukauna to a bank with 80 locations in three states.

Gail was very involved with ASAE, serving as the Treasurer and later as its President and serving on numerous ASAE committees. He was very supportive of the UW-Madison, serving on the College of Agricultural and Life Science (CALs) Board of Visitors, and as a chair of our campaign, 'Creating Solutions for

the 21st Century', which provided funds and in-kind gifts of nearly \$2.5 million. He served on our department advisory committee for a number of years.

Gail received numerous awards including Distinguished Service Award-Outstanding Alumnus during our department Centennial Celebration in Sept., 2004. In addition, he received Honorary Recognition from CALS and the College of Engineering's Distinguished Achievement Award.



Gail Janssen receiving the BSE Distinguished Service Award Outstanding Alumnus at 2004 Centennial, Ron Schuler presenting.

Gail is survived by Janice, his wife of 52 years, and two sons, Gary and Joel, and their families. He is further survived by his brother, Leon, who is a 1964 alumnus of the department.

Our sympathies go to Janice and family. We will certainly miss the wisdom, advice, and great support that Gail provided us for these many years.



Gail Janssen makes a special presentation at the BSE Centennial in 2004.

— Professor James Converse's Retirement —

Celebration: Biological Systems Engineering invites you to join friends and colleagues in honoring and celebrating the career of **Professor Jim Converse**.

Letters: If you want to share some experience with Jim, please feel free to prepare a letter addressed to Jim. Mail the letter to **Ron Schuler**, Biological Systems Engineering, 460 Henry Mall, Madison, WI 53706 by **September, 6, 2005**.

Gifts: If you want to make a contribution to the Biological Systems Engineering Department's Student Activities Fund to honor Jim and his successful career, please make payments to the **UW-Foundation**, 1848 University Ave., Madison, WI, 53726 and designate the BSE Student Activities Fund.

RECEPTION (RSVP not required):

Friday, September 9, 2005
3PM – 5 PM
B1 Ag Engineering Building
460 Henry Mall
Madison, WI
Limited Parking

BANQUET (RSVP REQUIRED):

Friday, September 9, 2005
Buffet Dinner, 6:30 PM – 9:30 PM
Friedrick Center
1950 Willow Drive
Madison, WI
Free Parking after 5:30 PM

LODGING: For those interested in obtaining lodging, the Friedrick Center has a limited number of rooms available on a first-come, first-served basis. The phone number is 608-263-4647.

Banquet RSVP due: August 29, 2005. COST \$25.00 per person.

Please complete, detach and return this portion of the registration form to Candy Pharo, BSE, 460 Henry Mall, Madison, WI 53706, (608)262-2250. **Make checks payable to Patrick Walsh.**

Jim Converse Retirement Banquet Registration Form:

Name: _____

Address: _____

City: _____ State: _____ ZIP: _____

Number attending: _____
Total Amount Due
@ \$25.00 per person = _____

Name(s) on Badges

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@wisc.edu**

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