

engineers

College of Engineering
April 2001

Awards and Honors

Dr. O. J. Hahn, mechanical engineering, has received the Dedicated Service Award from the American Society of Mechanical Engineers. The award recognizes "dedicated voluntary service to the Society marked by outstanding performance, demonstrated effective leadership, prolonged and committed service, devotion, enthusiasm, and faithfulness."



Dr. Sue Nokes, biosystems and agricultural engineering, was a finalist for the Sarah Bennett Holmes Award. Sponsored by the UK Women's Forum, the Holmes Award recognizes women working at UK who promote the growth and well-being of other women at UK and across the Commonwealth.

Dr. Nokes was nominated for this award by Bio/Ag students Angela Green and Julia Parakkat, who wrote in their nomination "While she never ceases to encourage each and every student (both male and female) to not be discouraged and look toward the big picture, she has developed a special status among the ever increasing female portion of our department. She has become more than an advisor to many of us. She has become more than an instructor, and more than a project supervisor; she has become a friend as well. Dr. Nokes offers a kind heart, an open ear."

Journal Publications

Dr. Keith Whites, electrical engineering, published the paper "Computation of static effective permittivity for a multiphase lattice of cylinders," (with F. Wu) in *Electromagnetics*, vol. 21, no. 2, pp. 97-114, 2001.

Presentations

Dr. Doug Kalika, chemical engineering, presented the invited lecture "Phase Behavior and Morphology of Crystallizable Polymer Blends" as part of the University of Maryland (College Park) Chemical Engineering Seminar Series, March 13.

Dr. Vijay P. Singh, electrical engineering, " Chemical Processing Issues in the Manufacture of Thin Film CdTe-CdS Heterojunction Solar Cells", Invited Talk, IUPAC, International Symposium on Green Chemistry, University of Delhi, January 10-13, 2001, Delhi, India.

Research Funding

Dr. Ratnesh Kumar, electrical engineering, is the recipient of a grant from DoD-EPSCoR for his proposal "Research on ARL's Intelligent Control Architecture". The contract is funded in the amount of \$232,979 and will run for 3 years (April 2001-March 2004).

Dr. Keith Whites, electrical engineering, is the recipient of a contract for his proposal, "Electromagnetic Control of Lightweight Solar Sails (NASA STTR)," Energy Science Laboratories, Inc., San Diego, CA. (NASA STTR subcontract from "Carbon Sails for Gossamer Spacecraft Attitude Control," Dr. Timothy R. Knowles, PI.) The contract period is 12/01/00-9/30/01 and is in the amount of \$39,691.

Professional Activities

Dr. Subodh Das, Center for Aluminum Technology, has been elected to the Board of Directors of TMS, The Metal, Minerals and Materials Society for the term February 2001 through February 2004.

Dr. Donn Hancher, civil engineering, has been elected to a three-year term on the Board of Directors of the American Road and Transportation Builders Association. He recently completed service as President of the Education and Research Division of the organization.

Kimberly Hall, Center for Aluminum Technology, is a Certified Professional Secretary (CPS), an international certification achieved through International Association of Administrative Professionals (IAAP). Those wishing to become a CPS must successfully pass an intensive exam lasting approximately six hours and administered twice a year.

Kim is President-elect of the Bluegrass Chapter of IAAP. Her term of office begins in June 2001. The Blue Grass Chapter meets monthly and features speakers and focuses on professional development. Its next meeting will take place on April 24th, Administrative Professionals Day. The meeting will take place at McConnell Springs from 6-8 pm. There will be a tour of McConnell Springs, along with dinner. Reed Polk, special assistant to the chancellor of the UK medical center, is the guest speaker. The cost for the evening of activities is \$10 per person.

For more information on becoming a Certified Professional Secretary, the Bluegrass Chapter of IAAP, or their April 24 meeting, contact Kim at 514-4958 or < kshall1@engr.uky.edu>. For more information on IAAP visit their website at www.iaap-hq.org.

Student News and Activities

Natalie Aronson, chemical engineering junior, was awarded first prize in the 2000-2001 Oswald Research and Creativity Program (Physical and Engineering Sciences Division) for her paper, "Calorimetric Characterization of Reactive PA 4,6 / PA 6I Nylon Blends Prepared by Melt Mixing and Solution Precipitation". The \$350 award will be presented at the UK Honors and Recognition Program on April 16th. Her project was completed in the laboratory of Professor Doug Kalika.

Aleck Leedy, mining engineering master's candidate, received the Best Paper Award in the SME (Society of Mining Engineers) Student Paper Contest - Graduate Division - for his paper "An On-Line Method for Detecting Electrical Deterioration of Mining Equipment" at its annual meeting in Denver, Colorado, February, 2001.

Mike Rogers, computer science doctoral student, has been named a recipient of the Upsilon Pi Epsilon-Microsoft Scholarship for 2000-2001. Mike is president of the UK Chapter of UPE.

ASAE Student Branch Participates in ASAE Southeastern Rally

Submitted by Timothy Greis

The ASAE student branch traveled to Auburn University to participate in the 2001 ASAE Southeastern Rally. Two van loads of undergraduates and graduate students made the eight and a half hour trip to Alabama on Thursday, March 22 and returned that Saturday. The three-day event included such fun activities as a Junkyard Wars challenge, a GPS assisted scavenger hunt, and a full day of tours and demonstrations.

The highlight of the trip was our visit to the Caterpillar Company's forestry equipment testing facility. We were all amazed by the efficiency and expediency at which the highly trained CAT technicians could operate the equipment. They boasted that a two-man team of operators, one on a Skidster, and the other on a felling machine, could clear seven hundred acres of timber in ten days. Other great opportunities included tours of such facilities as a hydroelectric power plant, the Schlumberger water meter manufacturing plant, a Walmart Distribution Center, a sawmill, and a Caterpillar manufacturing plant.

Our UK envoy was split into two teams and went to work in ASAE's version of Junkyard Wars. Our objective was to build a vehicle that would start with a switch, travel a distance of 7.21m, and stop. We were also asked to predict the time of travel. After taking parts from a copying machine and printer, combined with a shopping cart, insulation board, Styrofoam, and lots of glue, tape, and zip ties, we were able to successfully finish third with one of the teams. The other team had difficulty with cold batteries not providing enough power; however, it was from their loss that the other team knew to warm the batteries before running the UK ASAE Junk Yard Mobile.

From my perspective I thought the trip was worthwhile to all those in attendance. It was a great opportunity for students in Biosystems and Agricultural Engineering to be exposed to job opportunities available after graduation and we were able to

meet other students from our discipline. One of our students, Jason Ward, was elected to the Vice President position for the Southeast Region. Next year's Rally will be held at North Carolina A&T.

CS Programming Team Receives Honorable Mention

The Department of Computer Science Programming Team recently competed in the World Finals of the 25th Annual ACM International Collegiate Programming Contest sponsored by IBM, March 7-11 in Vancouver, Canada. Team members included Charles Andrew Martin, Neil Moore, Leonid Poutievski and Bill Wyatt (reserve). Dr. Jerzy Jaromczyk once again serves as team Coach.

The team participated in the Java Challenge Contest, and submitted one of only 16 correct solutions (out of the total of about 60 submitted). The main competition was held on Saturday morning where competing teams were coding solutions to nine different problems ranging from toy-problems to problems in the area of networking.

The CS Team received an Honorable Mention and demonstrated that it is among the world's best when it comes to programming skills and talents.

For a picture of the UKCS team in action, visit the following web site:

<http://acm.baylor.edu/past/icpc2001/finals/Tour/northam/team60.htm>

Miscellaneous

The Department of Computer Science held its 5th Industry Day, March 23. The annual event brings together industry representatives with CS faculty and students. In addition to a department update by Dr. Mirek Truszczynski, those attending were also treated to laboratory tours, technical

talks and a student project poster session. At the end of the day, CS students had the opportunity to talk about employment opportunities with the industry representatives.

Representatives from the following companies attended. Members of the CS Industrial Partners Program are indicated.

AeroTek

ArchVision (Partner)

Belcan (Partner)

Blackboard, Inc.

Cypress Semiconductor

IBM (Partner)

Lexmark (Partner)

Perot Systems (Partner)

Quantum International

Science Applications International Corp. (SAIC) (Partner)

CarEEr Seminar

A new seminar series has been introduced in the Department of Electrical Engineering this year to provide students interested in the power specialization the opportunity to hear engineers and managers from industry. Speakers have discussed the broad spectrum of technical challenges and associated job opportunities available in the power area. Freshmen through graduate students are welcome to attend these seminars.



Mr. Tim Mosher, Kentucky President of American Electric Power, was the most recent CarEer Seminar speaker, March 26, 2001. His presentation, "Engineering the Twenty-First Century at American Electric Power", highlighted the changes and challenges in the electric utility sector brought about by acquisition, deregulation, and introduction of new technology. Mr. Mosher concluded that these changes are creating additional technical career opportunities.

Past seminar speakers have included representatives from Mesa Associates and the Tennessee Valley Authority. Future speakers

from General Electric Power Systems and Globe Motors have tentatively been scheduled.

Those interested in the CarEEr Seminar series, students, faculty, staff or visitors, should contact Dr. Jim Cathey <cathey@engy.uky.edu> to have their names placed on the power program e-mail list. Once registered, you will receive e-mail notices concerning the seminars as well as other information of interest.

Events

The first meeting of the Department of Electrical Engineering Advisory Board will be held Thursday, April 19 from 8 am - 4 pm in the President's Room of the Hilary J. Boone Faculty Center.

The Engineering Hall of Distinction induction ceremony will be held Friday, April 20, at 2:30 pm in the auditorium of the William T. Young Library. A reception will immediately follow the ceremony in the Library's National Alumni Association Gallery. RSVP to Brenda McMurry at 7-1622. This year's recipients include:



James R. Boyd, BSEE '69, Senior Vice President and Group Operating Officer, Ashland Inc.



James B. Day, BSME '62, MSME '69, Vice President, Belcan Corporation and former Director of Propulsion, Wright-Patterson Air Force Base.



Earnest O. Robbins II, BSCE '69, Major General and The Civil Engineer, United States Air Force.



William R. Sims, BSCE '58, Founder and Principal, Windemere Teams, Inc. and retired Senior Vice President, Walt Disney Imagineering.



James L. Wyatt, BSMET '46, MSMET '47, Founder and Retired President, Ambassador Industries, Inc. and former Vice President for Development, Max Factor Company.

The UK Painting Technology Consortium is hosting the Second Annual Painting Technology Workshop (PTW2001), June 4 and 5 at Embassy Suites here in Lexington. For more information, visit the PTW2001 web site at <http://www.engr.uky.edu/ptw2001> or contact Dr. Kozo Saito, Director, Painting Technology Consortium, 7-1685 or saito@engr.uky.edu.