

Awards and Honors

Dr. Ratnesh Kumar, electrical engineering, has been elevated to the grade of Senior Member of the Institute of Electrical and Electronics Engineers.

Dr. Kozo Saito, mechanical engineering, has been notified of his election to the grade of Fellow of the American Society of Mechanical Engineers. Dr. Saito was cited for doing much "to further our knowledge of material flammability, flame spread, structure of laminar diffusion flames, scale modeling and lean manufacturing" and "revolutionizing paint particle capturing and removal technology."

Journal Publications

Dr. Stephen Gedney, electrical engineering, published the paper "Perfectly Matched Layer Media for an Unconditionally Stable Three-Dimensional ADI-FDTD Method," (with G. Liu) in the *IEEE Microwave and Guided Wave Letters*, vol. 10, pp. 261-263, July 2000. Dr. Gedney also published "Full-Wave CAD Based Design of a Finite Ground CPW Directional Filter," (with L. Hamilton, P. Petre, and D. Yap) in the *International Journal of RF and Microwave Computer-Aided Engineering*, Vol. 10, No. 5, pp. 308-318, September 2000.

Dr. Steven Rankin, chemical and materials engineering, published the paper "Dynamic Monte Carlo Simulation of Gelation with Extensive Cyclization" (with co-authors L. Kasehagen, A. McCormick, and C. Macosko) in *Macromolecule*, volume 33, pages 7639-7648.

Books and Other Publications

Dr. Stephen Gedney, electrical engineering, published the chapter "Perfectly Matched Layer Absorbing Boundary Conditions," (with A. Taflove) in *Computational Electrodynamics: The Finite-Difference Time-*

Domain Method, 2nd Edition, Allen Taflove, Ed., Artech House, Boston, 2000. Dr. Gedney also published the chapter "Explicit Time-Domain Solutions of Maxwell's Equations Using Non-Orthogonal and Unstructured Grids," (with Faiza Lansing) in the same book.

Presentations

Dr. Stephen Gedney, electrical engineering, presented the paper "An Efficient FDTD Implementation of the PML with CFS in General Media," (with J. A. Roden) at the *2000 IEEE International Symposium on Antennas and Propagation*, Salt Lake City, UT., vol. 3, pp. 1362-1365, July 2000. At this same conference, he also presented the paper "CPW-Stripline transitions on silicon over the 0-20 GHz range," (with C. Trent, T. Weller, P. Petre, and T. Hussain), vol. 4, pp. 2004-2007, July 2000.

Dr. Gedney also presented the invited paper "Application of the High-Order Nyström Scheme for the Integral Equation Solution of Electromagnetic Interaction Problems," at the *2000 IEEE International Symposium on Electromagnetic Compatibility*, Washington, D.C., August 2000.

Dr. Greg Wasilkowski, computer science, gave the talk "Algorithms and Complexity for Continuous Problems" at the Dagstuhl Seminar, October 25-29, Dagstuhl, Germany. Dr. Wasilkowski was also one of the seminar's co-organizers.

Research Funding

Dr. Ken Calvert, computer science, has been notified that his proposal, "Collaborative Research in Internet Topology Models - A Foundation for Large-Scale Simulations" has been funded by the National Science Foundation Information Technology Research (NSF ITR). The project is funded for 36 months and is a collaborative effort with Professor Ellen Zegura (PI) of Georgia Tech. The project extends work previous work completed on Internet topology models.

The ITR process was very competitive with more than 1400 proposals submitted and only 62 large (>\$500K) and 142 small (<\$500K) proposals

funded. Dr. Calvert's proposal is categorized in the "small" category. He has the distinction of having the only ITR proposal funded in the Commonwealth of Kentucky.

Dr. D. Manivann, Computer Science, has received an NSF CAREER award for his proposal "Design and Implementation of Fault-Tolerant Distributed Computing Systems". The project will run 9/1/2000 to 8/31/2004 and is funded in the amount of \$220,000.

Professional Activities

Dr. Stephen Gedney, electrical engineering, was a Session Chair for a technical session entitled *Beamforming*, at the International IEEE Symposium on Antennas and Propagation, Salt Lake City, Utah, July 16-21, 2000.

Workshop Development and Presentation

Dr. Forbes Lewis, computer science, is the organizer of a series of graduate school workshops designed to provide minority students with a realistic picture of graduate study in computer science and engineering. His most recent workshop was held at Hampton University in Hampton, Virginia in conjunction with the Symposium on Computing at Minority Institutions, which was hosted by the Association of Departments of Computer/Information Sciences and Engineering at Minority Institutions (ADMI). More than 35 undergraduate minority students attended. Dr. Lewis and his Coalition to Diversify Computing (CDC) colleagues discussed a wide array of topics associated with graduate school.

Four years ago the National Research Council reported that only 2.9 percent of engineering and computer science doctorates were awarded to Hispanics, 2.2 percent to African-Americans, and 0.4 percent to Native Americans. The goal of the CDC, a partner of the Education, Outreach and Training Partnership for Advanced Computational Infrastructure, is to increase those numbers. Dr. Lewis is at the forefront of activities to achieve this goal.

Student News and Activities

The UK chapter of AIChE has been selected as an Outstanding AIChE Chapter for 1999-2000. The award is presented annually to those Student Chapters that show an exceptional level of participation, enthusiasm, program quality, professionalism, and involvement in the university and community. The award will be officially presented at the AIChE Annual Student Conference in Los Angeles in November.

The 2000 edition of the **College of Engineering Career Fair** was held on October 4 in the Student Center Ballroom. The event is sponsored by the UK Society of Women Engineers. Representatives from 85 companies from across the country attended. Of these 85 companies, approximately 30 percent participated in Career Fair for the first time. Nearly 600 COE students attended Career Fair. The SWE annual Evening with Industry which is exclusively for graduating seniors, was held the evening prior to Career Fair, October 3. Student and company participation in this event was at an all time high just as it was for Career Fair.

Arthon Suttigarn and Min Wang, civil engineering graduate students, received Best Student Research Poster Awards at the American Water Works Association regional meeting held in Nashville, Tennessee on October 2, 2000. The students presented results of drinking water research conducted under the direction of **Dr. Gail Brion**, Department of Civil Engineering. Pictures is Mr. Bernie Maloy of Camp Dresser & McGee taking information from our award winning

Miscellaneous

Drs. Tony Baxter, Ken Calvert and Jurek Jaromczyk, computer science, as part of the CS Department's outreach program participated in the Rogers Scholars and Robinson Scholars programs. The three met with the high school students participating in these programs and gave presentations on program, the UK CS program, computer networking and fast encoding algorithms.

The **Kentucky Transportation Center** (KTC) was asked to participate along with the Federal Highway Administration (FHWA) to establish a working relationship between the state of Kentucky and the Russian state of Perm. This work is part of an ongoing effort to share technology with Russia. During the second week of October, KTC hosted five top ranking transportation officials from Perm. KTC's Section Managers gave brief presentations to the Russian visitors on the different types of research being conducted at the Center. The Russians made two presentations discussing problems their Highway Administration faces particularly in the area of bridges.

Events

The **University of Kentucky Student Programming Contest** was held on Friday September 29, 2000 in the computer labs of the W. T. Young Library. A total of 30 students competed in the upper and lower divisions of the contest demonstrating their problem solving and programming skills. Computer Science Industrial Partner Procter and Gamble, sponsored the event.

Members of the Computer Science Industrial Partners Program met for breakfast on October 4 prior to the SWE Career Fair. The meeting was held in the recently dedicated James F. Hardyman Building. Those attending enjoyed a tour of the Laboratory for Advanced Networking.

The **Engineering Alumni Association** hosted its annual Outreach Event on October 3rd. This year's event, targeting the Bluegrass region, was held at the University of Kentucky W.T. Young Library. A capacity crowd of more than 150 was treated to Dr. Lee T. Todd, Jr.'s enlightening presentation, "Central Kentucky's Transformation to a High Technology Center".

Dr. Todd received his BS degree in electrical engineering from UK in 1968. He earned his MSEE and Ph.D. degrees from the Massachusetts Institute of Technology in 1970 and 1973 respectively. A former electrical engineering faculty member at UK, Dr. Todd is Vice President of the Lotus Corporation, and President and Chief Executive Officer of DataBeam. A subsidiary of Lotus/IBM, DataBeam, headquartered in Lexington, is the world's leading

provider of real-time collaboration and distance learning software and developers platforms.

The Engineering Alumni Association's goal for outreach events is to provide information on the UK College of Engineering and the engineering profession to alumni, prospective students, and others. Similar events have been held in Ashland and Paducah, Kentucky. Local alumni, engineers, business leaders, school counselors, students and Engineering faculty attended.

The University of Kentucky's **Laboratory for Advanced Networking**, located in the James F. Hardyman Building, officially opened October 9 with a special convocation that featured leading innovators in the Internet and computer-network technology. Among the speakers was Vinton Cerf, senior vice president for Internet architecture for Worldcom. Cerf was one of the visionaries who, in the early 1970s, helped design the early structure of the Internet. More than 200 faculty, staff, students and other visitors attended.

The goal of the Laboratory for Advanced Networking is to provide leadership in the rapidly changing field of computer networks. In particular, the Laboratory is actively engaged in both forward looking research projects and designing the networks of tomorrow, as well as applied research projects that tackle problems facing current network designers. The Lab also facilitates interaction and collaboration with our colleagues in industry, working together as we develop and explore the highly networked world that will define the next millennium.