

December 2002 - Happy Holidays, Everyone!

Engineering in Medicine and Biology Society Career Award Presented to Willis Tompkins

The 2002 Engineering in Medicine and Biology Society Career Award was recently presented to Willis Tompkins (BS'63 and MS'65 from U Maine, PhD '73 from U Penn) "for a meritorious career in biomedical engineering education as exemplified by excellence in classroom teaching, promotion of design, hands-on experience in the learning process, and publication of textbooks." Dr Tompkins is currently Professor of Biomedical Engineering and Electrical and Computer Engineering at the University of Wisconsin-Madison, where he has been a member of the faculty since 1974. He previously served for five years as Chair of the ECE Department at UW. His teaching specialty is computers in medicine, an area where he developed two courses. One of these two courses, has evolved and been taught for 29 consecutive years. He has received several teaching awards, including the UW Chancellor's Award for Excellence in Teaching. His research interests include development of microprocessor-based medical instrumentation, on-line biomedical computing, and real-time computer processing of electro-cardiograms.



Dr. Tompkins has published more than 240 journal papers, book chapters, and conference articles. He has served as research advisor for more than 90 MS and PhD graduates. He has published four textbooks: 1) Biomedical Digital Signal Processing, Prentice Hall, 1993, 2) Design of Microcomputer-Based Medical Instrumentation, Prentice Hall, 1981 (with J.G. Webster); 3) Interfacing Sensors to the IBM PC, Prentice Hall, 1988 (with J.G. Webster); and 4) Electronic Devices for Rehabilitation, Chapman Hall, 1985 (with J.G. Webster, A.M. Cook, and G. C. Vanderheiden).

Dr. Tompkins is a Fellow of the IEEE and a Founding Fellow of the AIMBE. He is a past President of the IEEE EMBS and is also a member of the IEEE Computer Society, the Association for the Advancement of Medical Instrumentation, the Biomedical Engineering Society, and the American Society for Engineering Education. He is a registered Professional Engineer in the state of Wisconsin.

Francis Crowe Ceremony Awards



This year, the **Dean's Excellence Award** was given to **Prof. Mauricio Pereira da Cunha**. Since arriving in January of 2001, Dr. Pereira da Cunha has accomplished a lot. This includes publishing six transactions papers, contributing an invited book chapter, and making nine conference presentations. He also has received seven grants, including an NSF Career proposal, and has three grants pending. He has developed two courses thus far and student evaluations are favorable for both. It should be noted that enrollment in ECE 466, a lab-based course that required extensive effort to rejuvenate, doubled this fall. He is also active in advising both undergraduate and graduate students in research projects. In the area of service, he has reviewed papers, provided consulting, served on conference organizing committees, chaired conference sessions, and has served on NSF review panels.

In addition, **Dean Smith** was inducted into the **Crowe Society** as a **Distinguished Member**. Dean is a Maine native who grew up in the small town of Monson near Moosehead Lake. He graduated valedictorian of Foxcroft Academy in Dover-Foxcroft before entering the University of Maine in the Fall of 1986 where he majored in Electrical Engineering and played basketball. Mr. Smith graduated at the top of his EE class in three and a half years, was a three-time Academic All-American, and ultimately was recognized by the NCAA as the recipient of the Walter Byers Fellowship, given to the top male student athlete in the **country!**



Dean obtained his Masters Degree in Electrical Engineering at UMaine, working with Dr. John Vetelino on semiconducting metal oxide chemical microsensors at the Laboratory for Surface Science and Technology (LASST). His paper "Stability, Sensitivity and Selectivity of Tungsten Trioxide Films for Sensing Applications" was chosen as an outstanding paper at the Fourth International Conference on Chemical Sensing, Tokyo, Japan in September 1992.

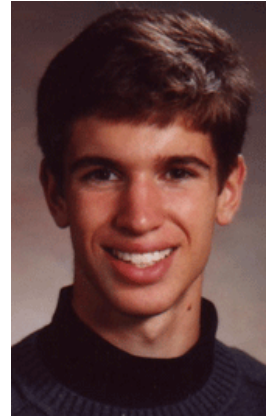
In June of 1998, Mr. Smith began work for Sensor Research and Development Corporation, a company spawned from the research at LASST. Currently, Dean is the Director of Systems Engineering where he is responsible for the management, coordination, research, and development of sensors and sensor-related systems – particularly for chemical warfare agent detection. His major programs include the development of a hand-held chemical agent detector for the Office of Naval Research, and the development of a next-generation system to evaluate the chemical protective performance of fabrics and materials for the Navy. He is also responsible for the design, development, implementation, and execution of off-site live-chemical-agent testing.

Dean is currently pursuing Ph.D. in Electrical Engineering at the University of Maine, focusing on sensor technology. He is a member of the IEEE, Eta Kappa Nu Electrical

Engineering Honor Society, Tau Beta Pi National Engineering Honor Society, Phi Kappa Phi Honor Society, Acoustical Society of America, and the National Defense Industrial Association.

ECE Student elected President of UM Student Government

For the first time in memory, an ECE student has been elected to head the UMaine Student Government. **President Matthew Rodrigue (ECE)** and Vice-President Matthew Gagnon (Political Science) were elected to the top leadership positions. Matt is also the student trustee on the University of Maine's System Board of Trustees. Congratulations (again), Matt!



Tidbits ...

ECE [online graduate classes](#) are scheduled to **begin again in January**. Please note that it is very important that you register early to ensure the classes will "make".

The [Microelectronics Scholarship Consortium](#) will hold its annual information meetings for high school students on **January 18th and 25th**. The first meeting will be in South Portland, and the second meeting will be held in Orono. The primary contact for questions is Prof. Dave Kotecki. (kotecki@eece.maine.edu).

The IEEE Student Chapter gave me **one last chance to make a complete fool of myself** at the [Christmas Party this year](#). I don't think I disappointed them with my heart-wrenching rendition of "B-B-B-Bad to the Bone"! While the karaoke singing was of questionable quality (with the exception of Janice Duy - we could tell, even with the sub-par sound system, this lady has a beautiful voice), everyone had a great time.

Andy Sheaff, System Administrator and half-time Lecturer in Computer Engineering, has been working with Lego robotics learning systems for the last few years. It's easy to get hooked on Legos, and we were very proud of Andy when, one day, he showed us a pendulum clock he had built - entirely of Legos, with no electrical components. But I think even Andy was surprised when the [University Public Relations office picked up on the story](#), and Channel 5 TV News showed up at the doorstep. This is, after all, the **domain of mechanical engineers**. We ECE's are not supposed to know anything about gears, pulleys, and mechanical systems. It just goes to show that good engineers don't restrict themselves to one discipline. **Way to go, Andy!**

And finally ... (really!)

I mentioned in an earlier newsletter that I will be starting a new adventure in January. I will assume the position of Provost and Chief Academic Officer at National Technological University, currently based in Fort Collins, Colorado. During the next few months, however, all NTU academic functions will move to Minneapolis, Minnesota. NTU is a wholly owned and fully accredited university belonging to Sylvan Learning Systems. They offer a range of distance education-based master's degree programs in partnership with more than 50 of the nation's top-ranked university programs in engineering, information technology and management. Most NTU students are working technical professionals employed by over 200 corporations and government entities. (For more information, visit www.ntu.edu). A [detailed announcement](#) of the purchase and NTU changes was released recently.

I have been at the University of Maine since 1991, and this is my fourth year as ECE Chair. I must say that I really intended to retire at UMaine. I had no intention of leaving the best college of engineering value in New England. I define "best value" considering the cost of tuition, quality of the learning experience, technical resources, and the resulting career or graduate school opportunities. However, the NTU opportunity just seemed like too much fun to pass up. It's a move in a direction I never anticipated, but I eagerly look forward to the challenge. Professor Don Hummels has been named Interim ECE Chair while a search is conducted to determine a permanent replacement. I wish all of you the best, and I look forward to crossing paths with you again.

Publications, proposals, etc.

UNIVERSITY/COLLEGE/DEPARTMENT SERVICE

- J. Patton attended Executive Committee Meeting, November 26.
- J. Field and M. Da Cunha attended ECE Chair Search Committee meeting, Nov 27.

INDUSTRY VISITS: DATE INDUSTRY SCHOOL

H. Resson, M. Driss, K. Shannak	12/2/02	International Paper, Bucksport
D. Kotecki	12/4/-2	Fairchild, Portland

PROPOSALS SUBMITTED

- D. Frankel (30%), J. Vetelino (25%), C. Tripp (25%), and L. Perkins (20%), "Organophosphate Pesticide Microsensor System," USDA, \$300,000, November 27.
- D. Hummels, "Marine Mammal Passive Acoustic Detection," Naval Undersea Warfare Center Division (Newport), \$23,866, December 3.

PRESENTATIONS

- F. Yang, D.E. Kotecki, G. Bernhardt, and M. Call, "Electrical and Structural Characterization of HfO₂ MIM Capacitors," Materials Research Society Fall Meeting, Boston, MA, December 3, 2002.

PROFESSIONAL ACTIVITY

- J. Vetelino attended a USDA meeting on the Development of a Roadmap for Nanoscale Engineering and Science in Agriculture and Food Products, Washington, DC, November 18-19, 2002.
- M. Da Cunha was nominated as a senior member of IEEE at the last panel meeting on November 16 in Itasca, Illinois.
- D. Kotecki attended Materials Research Society meeting in Boston, MA, December 1-4.

UPDATE

- J. Vetelino is meeting with representatives of the Bangor community (Chief of Police, Fire Department, airport security and EPA) regarding the integration of sensors into the Bangor community as a result of the GK-12 Sensors! grant..