

The Norman B. Stetson Scholarship Fund



Dean Dana Humphrey (l) and Norman Stetson (r)

With a generous gift from Norman Stetson, the Norman B. Stetson Scholarship Fund was established in the University of Maine Foundation in 2010 for the benefit of Electrical and Computer Engineering students. Norm is a native of Freeport, Maine and received his B.S. in Electrical Engineering in 1962.

Norm and his partners founded Inframetrics, a company that produced innovative thermal imaging systems including infrared cameras. The partners sold the company to FLIR Systems, Inc. for whom Norman serves as Chief Scientist.

Inframetrics was founded in 1975, originally providing infrared imaging systems used in conducting energy audits. Later it was expanded to focus on other applications and markets for thermal imaging technology, such as stabilized thermal imaging cameras for law enforcement

aircraft, radiometry devices for use in monitoring industrial systems, and thermal imaging systems for use in ground-based security and search and rescue.

Today FLIR is one of the world leaders in the design, manufacture, and marketing of sensor systems that enhance perception and awareness for a wide variety of users in the commercial, industrial, and government markets, internationally as well as domestically. Norm invented much of the technology in the latest FLIR infrared military rifle scope and continues to improve its quality and lower its weight. He is currently doing experiments to lower the motor noise.

Norm is well read about UMaine research. He enjoys receiving UMaine Today and the College of Engineering magazine and email newsletters. He uses his ham radio to keep track of the weather in Maine. He still owns a home in Freeport and goes up 3-4 times a year but in the winter prefers to remain at home in Lexington, Massachusetts. He and his wife enjoy the company of their cat.

He considers his experience at Maine, particularly the curriculum, a great value. He said his own lifetime giving is insignificant compared to the value of his degree in real dollars today.

UMaine Constructs High-Powered Supercomputer



Photo/ Jason P. Smith

Bruce Segee oversees UMaine's supercomputer project

A cluster of 700 computers hums away inside a classroom building at UMaine. The computers are capable of cranking out trillions of computations per second, whizzing through complex calculations leagues faster than the average desktop computer.

Individually, the computers aren't all that different from the ones sold in electronics store. But these computers are tied together, functioning as a single, souped-up unit of processing power called a supercomputer.

While it's housed at UMaine, the supercomputer's capabilities extend far beyond the university or even researchers in general. Business can also access the machine, sending their computing jobs to UMaine for a quick turnaround and thereby freeing up their in-house computers.

For now, this supercomputing scenario exists in concept only. It's one piece of a broader vision for expanding Maine's cyberinfrastructure, aiding not only existing Maine businesses but ideally providing a competitive advantage to attract new ones, as well as helping train more information technology professionals in the state. Led by the University of Maine System, the initiative, known as CIDER (Cyberinfrastructure Investment for Development, Economic Growth and

Research) was recently awarded \$250,000 by the Maine Technology Institute to purchase the supercomputer's foundational machines.

Complex computing is only half the equation. The project's backers also see the supercomputer performing as a cloud resource, or a central hub where companies' applications and data could live, completely separate from the physical computing hardware in their offices. "It doesn't have to be the next rocket engine," say Bruce Segee, Henry R. and Grace V. Butler Professor of Electrical and Computer Engineering and the project's director. "We're talking about a computer's server, e-mail, word processor. Employees could work from anywhere, without being tethered to a clunky desktop, using a simple Web browser to access the information housed in Orono." ([full story](#)).

Graduate Student Receives Chase Distinguished Research Assistantship Award

Yang Lin, a graduate student pursuing her Ph.D. in Electrical and Computer Engineering was awarded a Chase Distinguished Research Assistantship (CDRA) for the 2011-12 academic year.

Ms. Lin has been a graduate student in the ECE Department since September 2007. She received her M.S. degree in August 2010 and is working towards completion of her PhD degree. She has been a teaching assistant and research assistant for the ECE Department since 2007 and received a Summer Research Internship at IBM in 2008. Her work to date has resulted in three conference publications and the submission of one journal paper (currently under review). These publications describe innovations in circuit design leading to the realization of THz signal generation. They have been well received by the microelectronics community. Her paper titled: "312GHz Fourthharmonic Voltagecontrolled Oscillator (VCO) Designed using 130nm SiGe BiCMOS Technology," was presented at the IEEE International Conference on Electronics, Circuits and Systems, in December 2009 and received the Best Student Paper Award at the conference.



Publications

Peer Reviewed Publications

Y. Hua, **Y. Zhu**, H. Jiang, D. Feng, and L. Tian, "Supporting Scalable and Adaptive Metadata Management in Ultralarge-Scale File Systems, IEEE Transactions on Parallel and Distributed Systems, Vol. 22, No. 4, pp. 580-593, April 2011. Peer Reviewed Conference Proceedings

A. Razi, K. Yasami, **A. Abedi**, "On Minimum Number of Wireless Sensors Required for Reliable Binary Source Estimation," IEEE WCNC'11, Cancun, Mexico, pp. 623-628, March 2011.

F. Afghah, A. Razi, **A. Abedi**, "Throughput Optimization in Relay Networks Using Markovian Game Theory," IEEE WCNC'11, Cancun, Mexico, pp. 1903-1908, March 2011.

Gifts/Donations

We sincerely appreciate all of the support from our alumni and corporate supporters. Your support of our scholarship programs means a lot to our young and hardworking students.

Industry

Bangor Hydro Electric has pledged \$100,000 over the next 5 years with the first installment of \$20,000 in January 2011. This is for establishing the Bangor Hydro Power System Laboratory for the benefit of electrical and computer engineering and electrical engineering technology students.

National Semiconductor \$18,000 (scholarships, \$5,000 allocated to Microdesign fund).

Kepware, 11,500 (scholarships)

Other

Sensor Research & Development donated 17 cabinets, 4 boxes of cables/wires, miscellaneous power supplies, breadboards, meters and cables to be shared by ECE and EET departments for lab use. Feb. 18.

Norman Stetson, \$1,000
Robert Stewart, \$500 to Allison Whitney Fund
Judith Whitney, \$500 to Allison Whitney Fund
Waine P. Whittier, \$500
Christine Palmer, \$400 to Gladys and Lloyd Palmer Fund
Gregory Chamberland, \$250
Timothy R. Osborne, \$250
Robert Field, \$150
Peter and Kathy Priest, \$100
Miroslav Juric, \$50
Dr. Joseph and Elaine Siegel, \$25

Other

Since February the faculty have submitted 4 proposals for a total of about \$1,820,000.