

March 2005

The Prestigious Rejendra and Neera Singh Scholarship



The Rajendra and Neera Singh Engineering Scholarship was established on the occasion of the University of Maine Foundation's 70th anniversary in June of 2004. Rejendra "Raj" Singh received his M.S. from the Department of Electrical and Computer Engineering in 1977. A former faculty member of both Kansas State University and City College of New York, and a member of numerous electrical engineering societies, Raj has actively contributed to the academic and professional development of the wireless telecommunications industry. In 2003, he received the University of Maine College of Engineering's highest award for alumni, the

Edward N. Bryant Award. The Singh Scholarship is named for Raj and his wife, Neera. As a couple, the Singhs have worked together closely to establish a number of successful companies and other business ventures. Today, the Singhs live in Alexandria, Virginia with their two sons. The University of Maine Department of Electrical and Computer Engineering is extraordinarily grateful to the Singhs' for their generous scholarship.

The first recipient of the Singh Scholarship is Jon Janelle, a first-year student in the Department of Electrical and Computer Engineering.

Jon attended Waterville High School, where he established an excellent academic record and participated in a variety of extra curricular activities. Prior to receiving the Singh Scholarship, Jon received an American Legion Scholarship and a prestigious Mitchell Scholarship. All of Jon's scholarship awards took into account his academic promise, financial need and history of community service. As a Singh scholar, Jon will not need to take out extensive loans and will graduate free of debt.

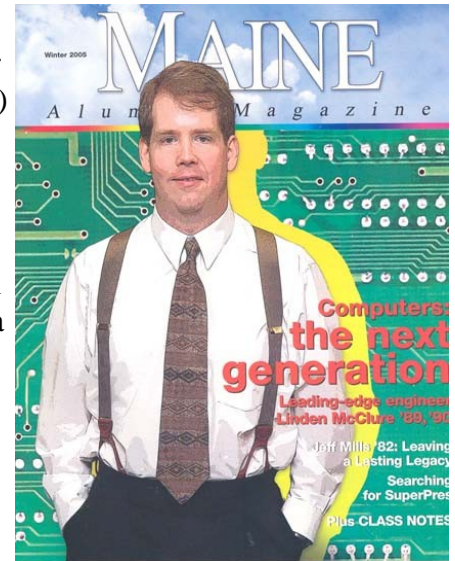


Scholarships remain an absolutely essential means of recruiting top students to the University of Maine ECE Department. By eliminating the need to borrow money to pay for the cost of education, scholarships also serve as an important retention tool. Financial hardship is among the top reasons why many University of Maine students are unable to complete their degrees within four years.

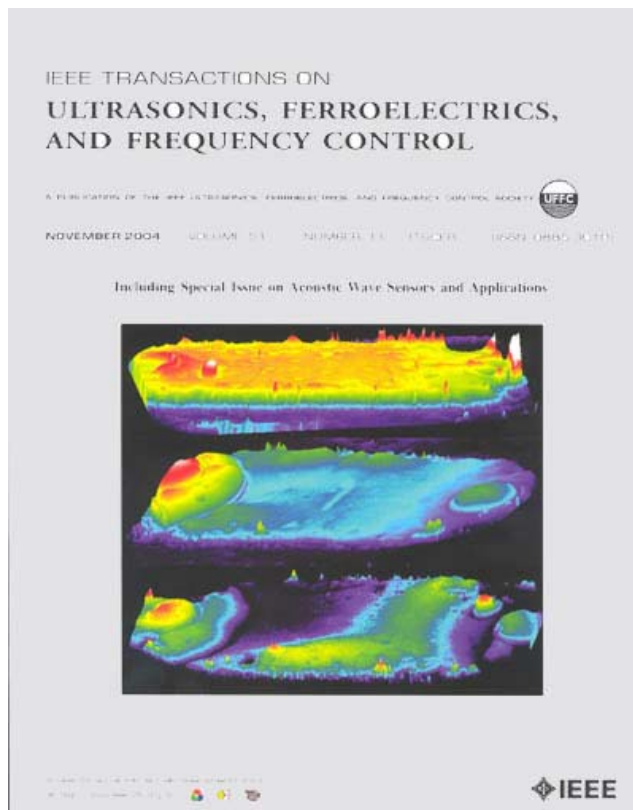
If you are interested in establishing a scholarship to benefit our undergraduate students, please contact [Mohamad Musavi](#). You can make a tremendous difference to our students!

Linden McClure on Maine Alumni Magazine

Linden McClure ('89, '90) who was featured in our last Newsletter (http://www.eece.maine.edu/ecenews/old_news/november04.html) and received the Spirit of Maine Achievement Award for outstanding career achievement from the University of Maine Alumni Association on October 22, 2004 was featured on the cover page of Maine Alumni Magazine. Dr. McClure designs technical workstation computers at Hewlett-Packard. He is also an adjunct professor at the University of Colorado where he teaches a course in embedded design.



Da Cunha's Researchers in the National News

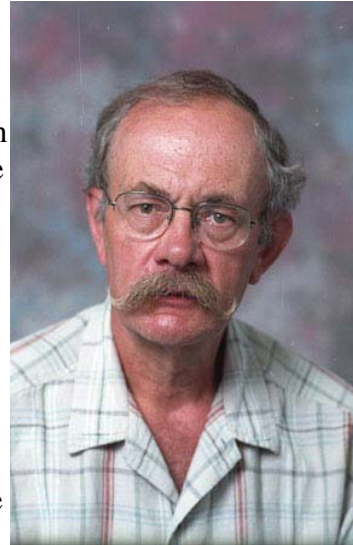


The November 2004 issue of IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control featured the work of UMaine Engineering researchers on its cover page. The image produced by Erik Berkenpas, Shivashanker Bitla, Paul Millard, and Mauricio da Cunha was selected nationally. The title of their paper is: "Pure Shear Horizontal SAW Biosensor on Langasite." From the 25 scientific papers published in this special issue two belonged to UMaine Engineering. The other paper is "A Lateral Field Excited Liquid Acoustic Wave Sensor," by Y. Hu, L.A. French, Jr., K. Radecsky, M. P. da Cunha, P. Millard and J.F. Vetelino

Faculty Awards

Trustee Professorship - John Vetelino

John Vetelino was selected as a recipient of the University of Maine System Trustee Professorship for the Spring 2005 semester. During his 35 years at the University of Maine, Dr. Vetelino has continued to demonstrate how our University can transform the lives of hundreds of undergraduate and graduate students and create new and exciting opportunities for Maine citizens. Students, professional colleagues, and alumni consistently laud Dr. Vetelino's unique combination of intelligence, business acumen, loyalty, enthusiasm, compassion, and energy.



Dr. Vetelino is the recipient of more than 100 grants and awards totaling approximately \$20 million. He has also received more than 22 NSF science education grants that have allowed him to involve undergraduates in his state-of-the-art research programs.

The Trustee Professorship will help Dr. Vetelino devote additional time to exploring sensors capable of operating at the nanoscale level. As a founding member of the University of Maine's [Laboratory for Surface Science and Technology \(LASST\)](#), Dr. Vetelino has an extensive research record in the sensor science and engineering area.

Dean's Excellent Award - Eric Beenfeldt

Eric Beenfeldt received the 2004 Dean's Excellent Award. Eric is a truly dedicated faculty member and has greatly impacted the department in many different ways.

Eric has a wide range of responsibilities. For many years he taught both the Department's first year courses, ECE 101 and ECE 171, as well as the final capstone design course sequence, ECE 401, ECE 402 and ECE 403. His accomplishments in the first year courses are reflected in several ASEE national conference presentations. Our first year courses are still taught using the materials that Eric developed. In place of first year courses, Eric now teaches our sophomore circuits courses, ECE 210 and ECE 211. He has primary responsibility for our lab course ECE 214 and continues to be responsible for the capstone design course sequence.

In addition to his teaching responsibilities, Eric gives presentations during department tours, stocks parts, maintains equipment, and serves as the Barrows Hall safety coordinator. He recruits, coordinates and supervises many student assistants for the ECE Department. He chooses capable students and assigns them appropriately.

His levelheaded nature, cooperative spirit, and common sense make him a major asset to the Department.

Over the years, Eric has contributed significantly to the work of many faculty members by acquiring, developing, constructing, and maintaining much of the hardware and other equipment upon which our research so heavily depends.

Other Events



1865 THE UNIVERSITY OF
MAINE
We're growing engineering talent in Maine!

Engineering and Science Scholarships

Microelectronics Consortium:

- Analog Devices
- Fairchild Semiconductor
- National Semiconductor
- Texas Instruments
- Tundra

www.eece.maine.edu/micro

Maine Engineering Week - This year the Maine Engineering Expo was at the USM campus in Gorham, Maine on February 26. The Electrical and Computer Engineering Department had a great display showing the ins and outs of a computer, robots and several other very interesting projects by students.

Microelectronics Open House - Two open houses were scheduled for Microelectronics Scholarships on February 12th in Orono and February 19th at National Semiconductor in South Portland. Representatives from Analog Devices, Fairchild Semiconductor, National Semiconductor, and Tundra participated. More than 75 prospective students and their parents became familiar with the microelectronics industry and the education opportunities that are offered at UMaine Engineering programs.

A Final Note ...

Around this time of the year, your generous support makes our spring warmer and brighter. Our fundraising letters for this year were mailed to you in mid-February. I want to apologize for the poor quality of the letters due to a problem in the printing shop. We didn't realize this until we received some returned envelopes. We greatly appreciate and thank all who have already mailed their support and hope to hear from the rest. If you have misplaced or lost the donation form, please make your check payable to the Electrical and Computer Engineering Department and send to:

Dept. of Electrical and Computer Engineering
University of Maine
5708 Barrows Hall
Orono, ME 04469-5708

Grants Received

D. E. Kotecki received a MOSIS Educational Grant for IC fabrication, \$17,648, December.

Publications

W. Slade, H. Resson, M. Musavi and R. Miller, "Inversion of Ocean Color Observations Using Particle Swarm Optimization," IEEE Transactions on Geoscience and Remote Sensing, Vol. 42, No. 9, pp. 1915-1923, September 2004.

Y. Hu, L.A. French, Jr., K. Radecsky, M.P. da Cunha, P. Millard and J.F. Vetlino, "A Lateral Field Excited Liquid Acoustic Wave Sensor," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 51, No. 11, pp. 1373-1380, November 2004.

E. Berkenpas, S. Bitla, P. Millard, and M.P. da Cunha, "Purer Shear Horizontal SAW Biosensor on Langasite," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 51, No. 11, pp. 1404-1411, November 2004.

Other

Since December the faculty has submitted 3 proposals for a total of about \$146,000.