# February 2000

## ECE Grad ('85) creates 500 jobs in Orono

Heather Blease, a 1985 graduate of our Department, created a company called EnvisioNet in 1995 with two employees. Her company now has over 1100 employees in three locations, and she is announcing an expansion of 500 full-time jobs in the Orono area. The company offers 24-hour technical support and call center services for about 20 Internet and e-commerce companies. Read the full article. (reprinted with permission from the Bangor Daily News.)

## Computer Engineering versus Computer Science

One of the most frequently asked questions we receive from potential first year students is "what is the difference between Computer Engineering and Computer Science?" I decided to ask a few of our faculty. Bruce Segee says, "Computer engineers are interested in comput**ers**. Computer scientists are interested in comput**ing**." Computer engineers are interested in computers as a part of a system that interacts with the outside world. Computer scientists are interested in the algorithms, software complexity, and the methods that transcend a particular computer platform. A CS would design a database system. A CE would use the database system as part of a factory-wide control system. A CS would design a fast efficient algorithm for solving differential equations. A CE would use the algorithm to design a control system for an aircraft. The CE would **build** a computer. The CS would **use** the computer. A CE knows particular hardware and writes software to interact with it. A CS writes software that can be adapted to many platforms. Finally, according to the November Prism (publication of the ASEE - American Society of Engineering Educators, page 14), the average starting salaries for computer engineers are $40,000 versus $36,000 for computer scientists. I think this is a fair comparison. Let me know if you disagree.

## RealVideo on ECE careers

The Institute of Electrical and Electronics Engineers has given us permission to stream two educational videos to help introduce students to Electrical and Computer Engineering. Click on the links below.

Getting Ready focuses on advice from professionals. Students have the opportunity to learn from those further ahead on the career path. Issues include the importance of co-op work experience and selecting electives to broaden non-engineering skills. Also covered are: deciding on whether to pursue an advanced degree, honing written and oral communication skills, working on teams, finding the

right mentor and issues regarding diversity.

[What's Out There](#) is an overview of job opportunities focusing on what engineers and computer professionals actually do. Positions include: research, teaching, design, manufacturing, testing and evaluation, maintenance and service.

## NSF REU Program now accepting applications
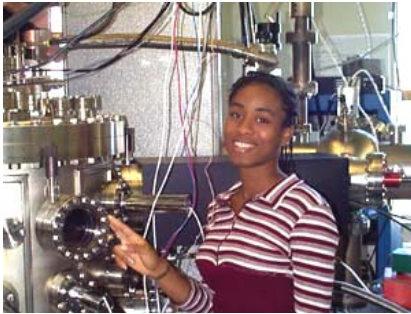
We are now accepting applications for UM's National Science Foundation Research Experience for Undergraduates program. This opportunity is available to all students entering their junior or senior year at a US university in September, 2000. This is a great way for students to become involved in state-of-the-art research and help determine if a graduate degree is of interest to them. For more information see the ECE Department's [NSF REU web site](#).

## Texas Instruments funds Communications Lab

Last year, Texas Instruments Incorporated, a global semiconductor company, gave the Department of Electrical and Computer Engineering $50,000 for new student scholarships and equipment in its communications lab. The gift established the TI Scholarship Project. This year, two new scholarships have been announced. Joshua Griffin, a first year student from Old Town, Maine, has received a four-year scholarship and Alma Delic'-Ibukic', a junior from Orono, Maine, is now receiving junior year support and will receive a senior-year scholarship. See the [Press Release](#) for more information. Visit the [Comm Lab](#) to see what kind of work motivates TI to invest in Maine.

## Alumni Profile - All about the man called "Captain Morgan"

This month, we'd like to profile [Linden McClure,](#) BSEE '89, BSCEN '90. Currently, Linden works on next generation IA-64 microprocessor system development at Hewlett Packard's Technical Computing Division in Fort Collins, Colorado and is an adjunct professor in the Department of Electrical and Computer Engineering at the University of Colorado at Boulder. He teaches a senior-level and graduate-level course in Embedded System Design. I encourage you to visit his [colorful web site](#) where, it should be noted, the University of Maine and the state of Maine figure prominently. Thanks, Linden! (And hey, who the heck is Captain Morgan?)

If you have a story you'd like to relate, please <ins>send it to me</ins>. Too many students and potential students have no idea what engineers actually do! Help us inform them.

## And finally ...

Last month, I asked how you would respond to: "To the optimist, the glass is half full. To the pessimist, the glass is half empty. To the engineer, the glass is ... " Here are some imaginative responses I received:

"The glass must be leaking" - David A. Brooks '65, Associate Dean for Research, College of Geosciences, Texas A&M University

"The liquid is split between two glasses, for reliability." Dean Denis, Bangor Hydro-Electric

"The glass is 50% underutilized. Or over designed..." Randy Philbrook '94, Quantum Bridge, Inc./Senior Hardware Design Engineer

"To the engineer, the glass is ... twice as big as it needs to be - or - To the engineer, the glass is ... hey, who's been drinking my drink! - or - To the engineer, the glass is ... so, did they ever figure out if glass was really a supercooled liquid that flows, or did that whole idea fall apart? Cause my dad has this old barn, and the windows in there..." Anders Green '94, Elliott Technologies/Senior Software Engineer

"... halfway to another glass." - Scott Peabody '79, AT&T Wireless Services/Director, Fixed Wireless Network Operations

## Publications, proposals, etc.

**PROPOSALS SUBMITTED**
Hummels, " Underwater Range Data Communications," Naval Undersea Warfare Center, $24,965, Feb. 1.

Kotecki, "Electrical Characterization of Microelectronic Materials, Devices, and Circuits," NSF-EPSCoR, $425,455, Feb. 17.

**PROFESSIONAL ACTIVITY**
Musavi reviewed a paper for the IEEE Transactions on Neural Networks, Feb. 9.

Irons attended and chaired an IEEE Standards Committee Meeting on ADC's, Salt Lake City, Utah, Feb. 10-11.

Musavi, Ressom & Domnisoru submitted two letters of intent in collaboration with Trefoil, Corp. on two projects to the Maine Technical Institute, "DNA Base Calling Software for Sequencing Machines," and "Integrated Neural Networks and Fuzzy Logic Control Software," February 11.