

January 2000

## **Fairchild Announces Eight (Count 'em!) UM Scholarships!!**

Fairchild Semiconductor has just announced the availability of [eight scholarship awards](#) to UM students. Two sophomore awards, two junior awards, and two senior awards will be given to meritorious students interested in microelectronics and will cover **full in-state tuition and fees!** Two first-year \$1000 awards will be made to current high school seniors. Interest is indicated by demonstrating commitment to or showing evidence of co-op assignments with Fairchild Semiconductor in South Portland for at least two academic terms (semester or summer). This is a great deal! Top students can earn a tuition-free education and participate in co-op assignments paying between \$13.50 and \$18.00 per hour. An [information meeting](#) is scheduled for February 19 at Fairchild to provide details for interested high school seniors.



**Current and future students, please note the [application date](#) for all ECE scholarships is **MARCH 1**. To apply, fill in the appropriate on-line form (high school senior or current student) on our [scholarship page](#).**

## **UM Grads exceed national average on Fundamentals of Engineering Exam.**

I don't think we trumpet this one loud enough. The Fundamentals of Engineering Exam is a national engineering test that students take on their way to professional accreditation. The FE exam tests on typical undergraduate topics in a variety of engineering disciplines (not just ECE). For the past few years, the national percentage average of students passing the test has been in the mid-70's. At UM, the percentage of students passing the test has been in the low 90's! Where do you want to invest four years of your life - at a school where the average number passing the FE exam is 75% or 90%? You might be interested in learning more [facts about the UM College of Engineering](#).

## Demand for ECE's "off the scale"

As I write this, our Career Fair is being held. Patty Counihan, Director of the UM [Career Center](#), told me that, compared to most majors, the demand for ECE's is "off the scale". Many students already have offers coming off their co-op or summer job experiences. The timing of any recruiting visit can be severely affected by events beyond the recruiter's or student's control - weather, a particularly difficult exam, whatever. If you come to campus and feel like you have not "connected", I would like to offer the possibility of arranging first interviews with students by video-conference, ip video-conference (e.g. NetMeeting), or telephone conference. Let me know if you're interested.

As shown by the spate of activity we've had in offering scholarships recently, many companies are realizing that recruiting success is much better with students who have co-op'ed with them previously. A combination of **co-op** and **scholarship** offers can be unbeatable. We are trying very hard to increase our enrollment numbers to increase the total pool of available students. By offering scholarship and coop opportunities, companies can help us attract top-notch high school students into ECE.

## Next Castle Student selected

Ten years ago, Roger Castle, UMaine '21, endowed a professorship in the UMaine ECE Department. Some of the responsibilities of that professorship are to devote special attention to one Electrical Engineering student who stands out because of demonstrated qualities of loyalty, steadfastness, a unique problem solving ability, the potential to become inspired and the potential to inspire others. (Other qualities that may contribute include a good Maine humor and a dedication to fishing.) The award does not bring scholarship money and is not necessarily given to top scholars in the Department. It does, however, bring privileges and special mentoring by the Castle Professor. It brings nominal support for funding personal electronic projects and work study income throughout the rest of the student's undergraduate career. This year, the selected Castle Student is Jeremy Ferris. Jeremy will be working with [Dr. Fred Irons, Castle Professor Emeritus](#). Congratulations, Jeremy!

## Alumni Profile

From time to time, we'd like to highlight profiles of ECE alumni/ae. It's amazing what happens to students after they leave our hallowed halls. We hope these profiles will give current and future students a "sense of the possibilities", and will provide an excuse for former classmates to "connect" and maybe reminisce a little. This month, we'd like to profile [Alan Hallberg '93](#). Alan's travels have taken him from Alaska to Oregon to Japan. He has worked with Tektronix and Intel, and has picked up a patent along the way.

If you have a story you'd like to relate, please [send it to me](#). Too many students and potential students have no idea what we engineers actually do! Help us inform them.

### **Annual Newsletter Note**

This year, the Dean's office will begin issuing a College-wide newsletter twice a year, once in February, and once in the Fall. We've decided to compile our annual ECE newsletter in August and distribute it by US Post at that time. Increasingly, we want to use the web to provide more current information than is possible in an annual newsletter format, but we recognize that many of you look forward to the print version as well. We haven't forgotten. If you hear of non-connected colleagues who are wondering what happened to the newsletter, please encourage them to look at this web page and subscribe to the email list. Thanks!

### **And finally ...**

To the optimist, the glass is half full. To the pessimist, the glass is half empty. To the engineer, the glass is ... twice as big as it needs to be.

### **Publications, proposals, etc.**

#### **GRANTS RECEIVED**

Segee (15%), Bushway, R. (15%) and Frankel, D. (70%), "An Organophosphate Pesticide Sensor," USDA, \$49,704, December 30, 1999.

Vetelino (25%), Lad (50%), Soluki (10%), Tripp (15%), "Development of a Nitric Oxide Monitor for Early Detection of Pathogenic Exposure," (Year 2) \$749,984, January 1, 2000.

#### **PROPOSALS SUBMITTED**

Musavi (70%), Resson (15%) and Van Beneden (15%), "A Neuro-Fuzzy DNA Sequencing Software," NIH, \$572,840, Jan. 27.

#### **PUBLICATIONS**

Musavi, M.T., G. Smith and J. Li, "A Multi-Resolution RBF Network for Modeling Paper Optical Properties," Proceedings of ANNIE'99, St. Louis Missouri, November 7-10, 1999.

D.E. Kotecki and W.H. Ma, U.S. Patent 6,002,575 "Adherent Separator for Self-Defining Discontinuous Film," issued on Dec. 14, 1999.

P.C. Van Buskirk, J.A. Fair and D.E. Kotecki, U.S. Patent 6,010,748, "Method of Delivering Source Reagent Vapor Mixtures for Chemical Vapor Deposition Using Interiorly Partitioned Injector," issued on Jan. 4, 2000.

H.L. Ho, D.E. Kotecki and C.J. Radens, U.S. Patent 6,015,985, "Deep Trench with Enhanced Sidewall Surface Area," issued on Jan 18, 2000.

### **PROFESSIONAL ACTIVITY**

Irons reviewed two submitted papers for the IEEE Transactions on Instrumentation and Measurements

Musavi reviewed a paper for the IEEE International Symposium on Circuit and Systems (ISCAS 2000)

D.E. Kotecki reviewed a paper for the Journal of Vacuum Science and Technology A

Eason visited and collaborated with Prof Kawaguchi on Steganography at the Kyushu Institute of Technology, Japan.

David Kotecki, Bruce Segee and John Vetelino recently reviewed several abstracts for the International Chemical Sensors Meeting to be held in Basel Switzerland in July 2000.