



## Francis Crowe Society Distinguished Inductees



### Orono Ceremony

Kenneth W. Bach, shown here with his wife, Gweneth, (BSEE '63, MSEE '65) was selected as the Francis Crowe Distinguished Inductee for 2007.

Ken entered the University of Maine College of Technology Electrical Engineering program in September 1959 as one of the last veterans of the Korean War after serving with the US Air Force Security Service as a communications and crypto-logic specialist. He received his BSEE in 1963 and MSEE degree in 1965 specializing in microwave measurements at cryogenic temperatures.

Ken has made significant contributions to communications technology and security including projects in communications intelligence and the control of electromagnetic interference and design of equipment and systems for aircraft such as the Boeing 747, F15 and F4E. He has held many positions in

engineering and management including Assistant Manager of Tibbetts Industries, Camden, ME; Manager of Interference Control Laboratory with Sprague Electric Company, North Adams, MA; Manager Advanced Systems with Electro-Metrics Corporation, Amsterdam, NY; Manager and Vice President of Gaithersburg (MD) Plant of Watkins-Johnson Company, Palo Alto, CA; and finally, in 1990, the President & CEO of Electro-Metrics Corporation, Johnstown, NY a position he still holds. In 1997, he purchased all stock of Electro-Metrics from its parent corporation Hayes International and continues to guide this company in its contribution to communications and national security.

Ken has served in many professional and management societies. As a student, he was a member and the chair of the Institute of Radio Engineers (IRE) and the American Institute of Electrical Engineers (AIEE), which later merged to form the IEEE. He participated in the AIEE student paper contests and received the first-place awards for the Region 1 (New England) paper two consecutive years in 1962 and 1963. He has also been a member of the American Management Association (AMA), the IEEE, the Security Affairs Support Association (SASA), and the Association for Computing Machinery (ACM). He has served on committees and boards of many organizations including the Visiting Committee of the University of Maine ECE Department. He was also the founding President of the USAF Security Service Alumni Association's National Capital Chapter for the Washington, DC area.

Ken and his wife of 53 years Gweneth Lillian Leighton Bach live in Amsterdam, NY. They plan to retire in the “Down-East” area of Maine in the near future. Their daughter, the Reverend Gayle Elizabeth Bach-Watson, her husband and two daughters live in Mt. Airy, MD. Their son Kevin Randall Bach, his wife and son live in Surry, Maine.

### Portland Ceremony



In addition to the ceremony in Orono, two former alumni were inducted into the Francis Crowe Society during the College of Engineering reception on May 24, 2007 in Portland, Maine. The two inductees in this ceremony were Murthy Ayyagari and Diane Ayyagari, pictured above with Dean Dana Humphrey on the right and ECE Chair Mohamad Musavi on the left.

Murthy Ayyagari earned a B.S. in EE from the Indian Institute of Technology and an MS in EE from the University of Maine. He also holds a MBA from Northeastern University specializing in finance.

Over the last 30 years, Murthy has been involved in the design, development and subsequent product introduction of high frequency systems for military and commercial applications. Currently, Murthy is EVP and GM of Newlans, a start up developing very high speed wireless systems at 60 GHz. At Narad Networks, Murthy served as Vice President of Engineering and led the all product development and design of the products that enable cable companies to deliver services at 100 Mbps on coaxial cable with cable legacy services. Prior to joining Narad Networks, Murthy co-founded and was vice-president of Microwave Device Technology (MDT),

a leading supplier of custom microwave and millimeter-wave semiconductors and components. He currently serves on MDT's board of directors. Prior to MDT, Murthy held a variety of technical and business management positions at M/A-COM leading the company to a dominant position in microwave semiconductor products. Murthy has published several technical papers and holds several patents.

Diane (Racine) Ayyagari was raised in Kittery, Maine and attended the University of Maine in Orono where she earned a B.S. and M.S. in Electrical Engineering in 1974 and 1976. Her degrees were focused on semiconductors.

From 1976 to 1978, she worked at GTE Sylvania in Salem, MA as a Thin Film Development Engineer working on developing a light emitting thin film for digital displays.

In 1978, Diane joined Analog Devices in their Semiconductor Wafer Fabrication facility in Wilmington, MA as a Thin Film Process engineer. Over the last 29 years, she has had various roles as Engineering Group Leader and Process Development Engineer in various Wafer Fab areas such as Thin Film, Epitaxy and Diffusion. Diane successfully improved the laser trimmable sputtered Thin Film Resistor, aluminum copper metal interconnect step coverage and MEM's polysilicon accelerometer. She also developed the first P-type epitaxy for the Complimentary Bipolar and RF processes. Her most recent accomplishment was the unit process development of a Graded Silicon-Germanium Selective Epitaxy process which is the base of high speed heterojunction NPN bipolar transistors (HBT's) with an  $f_T$  of 50 GHz.

### **ECE Graduate Student Wins 2nd Place in Poster Contest**

Alma Delic-Ibukic, Ph.D. candidate in Electrical Engineering, won 2nd place for her poster entitled, "Digital Background Calibration of Gain Errors in Parallel Delta Sigma ADC." Alma's poster was submitted under the physics and math sciences category at the "2007 Graduate Research Exposition" at the University of Maine on April 23.



## Two UM Engineering Alumni Attend Harvard Business School

Matthew Rodrigue (left) and Prashanth Chandrasekar (right) are attending Harvard University.

Matt (B.S. '04) graduated with a double major in Computer Engineering and Electrical Engineering and a minor in Business Administration and Math. After graduating from UMaine, he worked at Woodard & Curran from 2004-06, as a team leader and controls engineer. In August 2006 Matt began his MBA at Harvard Business School. Throughout the school year, he



has been doing some consulting on the side for CERC, a venture started by UMaine graduate William Sulinski, as well as some work for Woodard & Curran. This summer he will be working in corporate strategy for NewPage Corporation in Dayton, Ohio. NewPage is a privately held paper company, owned by the turnaround/private equity firm, Cerberus.

In July 2006, Matt married Carissa Capuano, a graduate of Bowdoin College who is currently pursuing a joint Law/Master of Public Health degree from Boston University. Carissa and Matt live in Brighton, MA and visit Maine often, especially to ski.

Matt is about to begin his second term on UMaine's Board of Visitors. He also volunteers for Tau Beta Pi (the engineering honor society) and Sigma Phi Epsilon (his undergraduate fraternity), of which Prashanth is also a member.

Prashanth (B.S.'02) graduated with a major in Computer Engineering and a minor in Math. After graduating from UMaine in 2002, he attended Cornell University where he completed a Masters degree in Engineering Management. Prashanth then moved to New York City where he worked for Capgemini (formerly Cap Gemini Ernst & Young), a management consulting firm for about three years. In March 2006, Prashanth married Geeta Seth who attended Cornell University with him.

Matt and Prashanth are proud to represent UMaine at Harvard Business School and have proclaimed it the "Year of the Black Bear"!

## **Congratulations to the 2007 Graduating Class!**

This May we had 20 graduating from which 15 have accepted employment and 3 are going on to graduate schools. The average salary for these graduates is more than \$58,000, ranging from \$45,000 to \$86,000.



Left to Right: Jason Beaulieu, Greg Flewelling, Charles Jones, Lucas DeLong, Jason Mishou, Cristina Greszler, Priyanth Chandrasekar, Kiva Hermansen, Ray Whitney, Giang Nguyen, Robert Strauss, Regine Ngollo, Yannick Miaffo, Jing Ling, Brian Dupuis, Abiye Fisseha.  
(Absent from photo: Taoufiq Bellamine, Andrew Roy, Winfield Swanton and Vitaly Tkachuk)

The graduating students were inducted into the Francis Crowe Society on May 12 at a college ceremony that was also attended by family members, distinguished inductees, and faculty. After the ceremony, more than 80 students, family and friends gathered in the hallway connecting Barrows Hall and the new Engineering and Science Research Building for a luncheon. The picture below shows a part of the gathering.



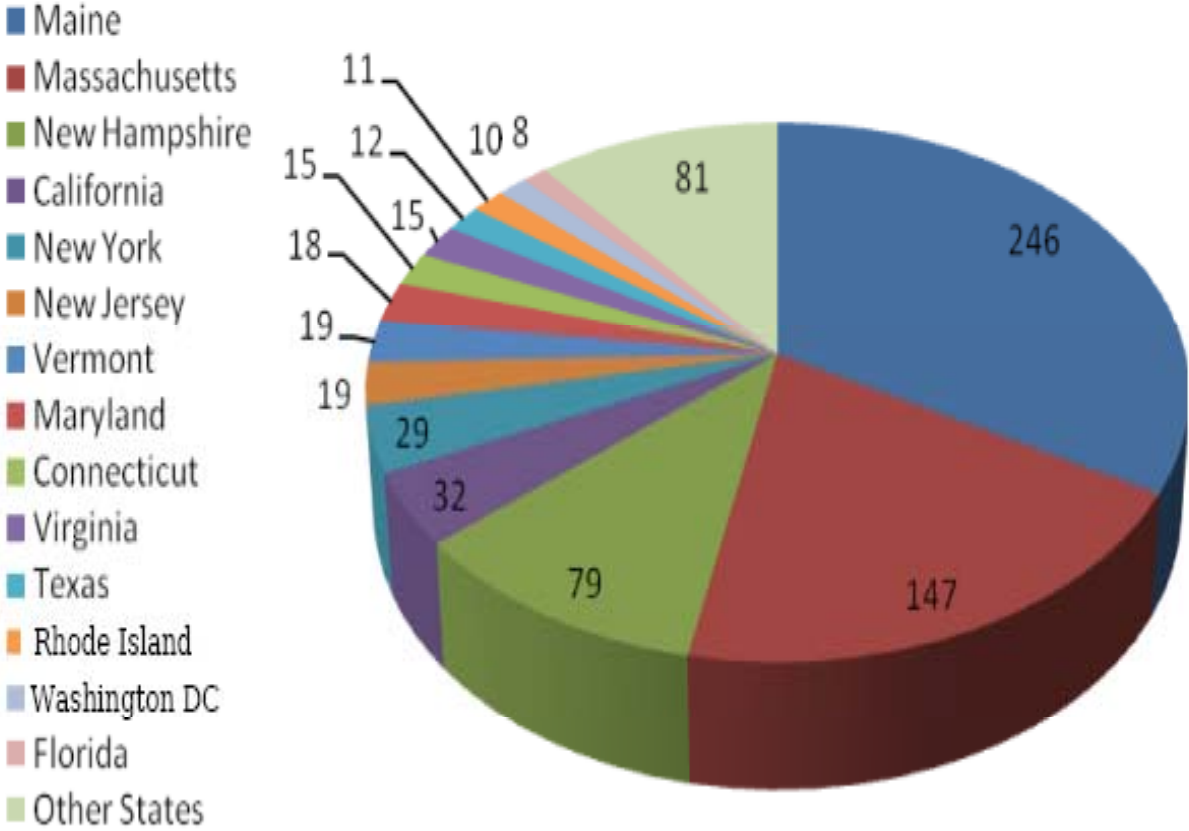
## One Out of Every Four ECE Alumni Becomes a Leader!

The University of Maine Electrical and Computer Engineering (ECE) Department has graduated about 2500 students in its history of more than 100 years. The following tables and charts provide useful information on our alumni who are alive to date (1500) and their work related information is available (600). The data shows that out of every 4 alumni, one has obtained a leading position, ranging from senior engineer to president/owner.

Leading Positions	Number of alumni
Founders/Owners	9
President/Co-Founder/CEO	20
Vice-presidents	18
Engineering Managers	50
Senior Engineers	68

Top Employers	
National Semiconductor Corporation	Bangor Hydro-Electric Company
Central Maine Power Company, Inc.	Boeing Company
International Business Machines	Cisco System, Inc
General Electric Company	Federal Aviation Administration
Raytheon Company, Inc.	Maine Community College System
Portsmouth Naval Shipyard	Massachusetts institute of Technology
AT&T	Newpage Corporation
Bath Iron Works Corporation	Northrop Grumman Corporation
International Paper Company, Inc.	Public Service Company of N.H
Lockheed Martin Corporation	Eastman Kodak Company, Inc
Mitre Corporation	General-Pacific Corporation
Naval Undersea Warfare Center	GTE Corporation
Analog Devices, Inc	Harriman Associates
Enterasys Networks	Hewlett-Packard Company, Inc.
Fairchild Semiconductor	IDEXX Laboratories, Inc.
	Maine Public Service Company

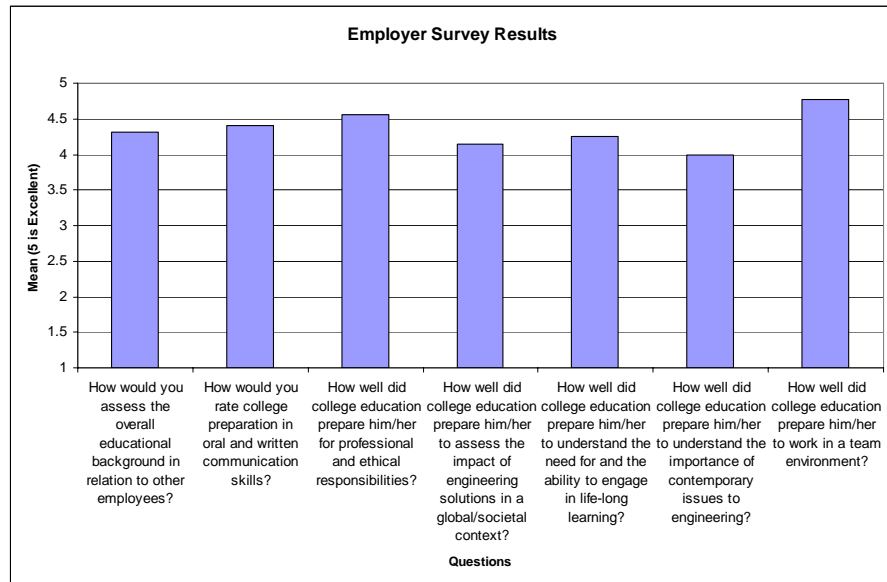
**States where Alumni are working**





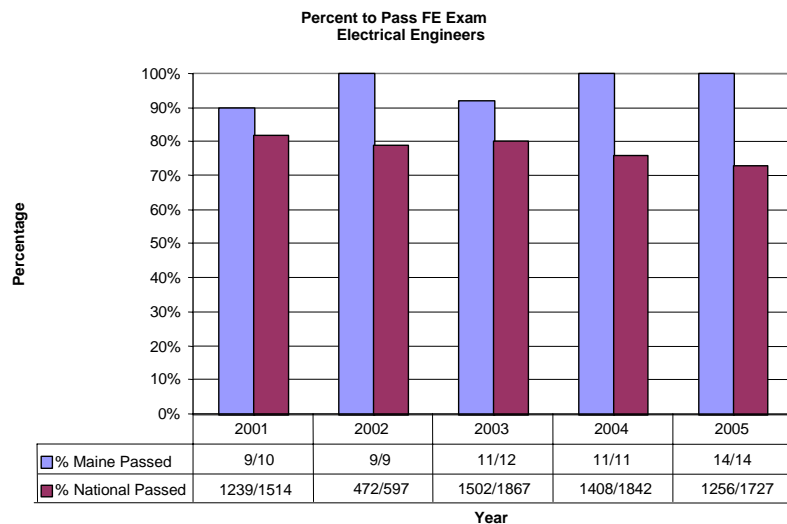
## Employers Evaluation of Our Graduates

Each year the Electrical and Computer Engineering Department surveys the employers of its graduate to get feedback on their performance. The following chart provides information from those who responded. Note that these employers have judged our graduates' performance as "very good" to "excellent" in all categories, as indicated in the chart below.



## Fundamentals of Engineering Examination

Fundamentals of Engineering Examination is a national examination that is required for obtaining a Professional Engineering license and is normally taken by senior engineering students. Although not mandatory, we recommend our students to take this examination. In the last 5 year, 95% of our students (blue) who took this examination passed it compared to 75% nationally (red), as shown in the chart below.



## Upcoming Alumni Event

A reception for engineering alumni and emeriti faculty is to be held as part of reunion weekend. The reception will be from 2:00-3:00 p.m., Saturday, June 2, 2007, in the lobby of the Engineering and Science Research Building. The reception will be followed by tours of engineering facilities. More than 500 UMaine alumni are signed up to come to reunion weekend. Many of these are engineering alumni who plan on attending the engineering reception. This reception will be the only event specifically for engineers. This will be a great way for you to catch up with some of your former classmates and visit with current and emeriti faculty. Light refreshments will be served.

I hope you are able to join us. Please RSVP to Doreen Vaillancourt (581-2216 or [doreen.vaillancourt@umit.maine.edu](mailto:doreen.vaillancourt@umit.maine.edu)).

## Gifts/Donations

The following people and organizations provided gifts/donations to the ECE Dept and Al Whitney funds during March-May 2007:

Kenneth and Gweneth Bach, \$1,500 with match from Electro-Metrics  
William Lambert, \$10,000 for William Lambert Scholarship  
Chet and Pauline Rock \$1,000  
Richard Van Steenburgh, \$1,000  
John & Leah Vetelino, \$500  
Analog Devices \$25,000  
Murthy and Diane Ayyagari, \$3,492  
66 various donors, \$6,015  
Hewlett Packard (Larry Martin) donation of 7 (12) monitors, \$5,358  
Gerald Palmer, \$1,500  
Gregory Dean, \$750  
Knud and Sue Hermansen, \$500  
Fred and Sally Irons, \$500  
IBM Matching Gifts, \$500  
Maine Community Foundation for Bangor Hydro 2007 co-ops, \$8,000,

## Grants Received

V. Caccese (25%) PI, **A. Abedi** (25%), **M. da Cunha** (10%), Z Jin (10%), W. Davids (10%), M. Peterson (10%) and S. Vel (10%), "Development of a Lunar Outpost Wireless Monitoring and Analysis System (LOWMAS) for the Lunar Outpost Research and Educational Demonstrator," NASA, \$240,000, April 20.

**M. DaCunha** (50% (PI) and R. Lad (50%) (Co-PI), "High Temperature Microwave Acoustic Technology for Aerospace Vehicle Health Management," AFOSR/DEPSCoR, \$749,486, April 30.

**D. Hummels**, “eLoran/GPS User Receiver Development,” Federal Aviation Administration, \$150,000, March 28. (Matched by an MTI award to CrossRate Technologies, \$150,000).

**D. Kotecki**, IBM Faculty Award, \$28,000, March 29.

**D. Kotecki** received a MOSIS Educational Grant for \$7,375, March 29.

## **Other**

Since April the faculty have submitted two proposals for a total of about \$415,000.