Newsletter - February 2010

George Sakellaris's Company to Build Renewable Energy Fueled Facility

Former graduate and 2007 recipient of the Edward T. Bryand Distinguished Engineering Award, George Sakellaris (BSEE '69) is CEO of Ameresco, Inc. which has been selected by the Department of Energy (DOE) to design and implement the nation's largest energy efficiency project in the federal government's history. The $795 million project will be located at the Department of Energy's Savannah River Site (SRS) in Aiken, South Carolina and will feature the construction of a large biomass cogeneration facility and two smaller biomass heating facilities (full story).

The facility will result in cleaner and more efficient use of energy by switching from fossil fuels to bio mass fuels like waste woods from forests. The project will greatly reduce particulate matter, sulfur dioxide and carbon dioxide emissions, leading to cleaner air for the community.

Headquartered in Framingham, Massachusetts, Ameresco is the largest independent energy services provider in North America that delivers long-term customer value and environmental sustainability through alternative energy solutions, energy efficiency and innovative facility renewal strategies. The company has more than 650 employees in 50 regional offices throughout North America, and it has constructed more than $4 billion in energy projects throughout the world.

At ground breaking ceremony in September, 2009, US Secretary of Energy, Steven Chu (speaker), and George Sakellaris (3rd from left).

President of Bangor Hydro Electric Inducted into Francis Crowe Society

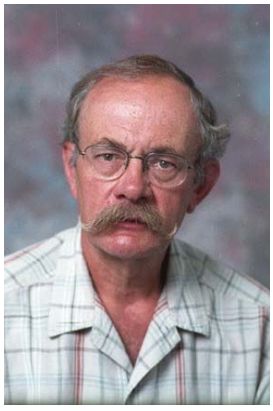
Gerry Chasse was inducted into the Francis Crowe Society as a Distinguished Engineer in December 2009. Mr. Chasse is the President of Bangor Hydro Electric Company, an Emera Company. He joined Bangor Hydro in 1990 after graduating with a B.S. in Electrical Engineering from the University of Maine. As an electrical engineer in the substation engineering department he was responsible for power system planning and the design, procurement, and construction of numerous substation projects. In 1994 he moved to the Electrical Operations group and assumed responsibility for the operations and maintenance of the Company's two 345 kV bulk power facilities including the Chester Static Var Compensator, and the transmission and distribution system protection devices.

In 2002, Gerry was promoted to the position of Manager of Engineering and became a member of the company's senior management team. In this capacity, he was responsible for all engineering activities associated with the Bangor Hydro's power system. In the fall of 2005 he became the Project Manager for the engineering and construction of the Northeast Reliability Interconnect, a 150-mile, international 345 kV transmission project that was built in partnership with the New Brunswick Power Transmission Corporation. The project, running from Orrington, Maine to the Pt. Lepreau Nuclear Power Station in New Brunswick was completed at the end of 2007, at a total cost of $145M.

In early 2009, he was promoted to the Executive Vice President of Operation, which included responsibility for all operations at the Company including engineering, planning, field operations, IT, and transmission development. He was promoted to his current position, President of Bangor Hydro, in January 2010.

Gerry currently serves on the advisory boards for the College of Engineering and the School of Business at the University. He is a licensed professional engineer. He is a native of Winslow, Maine and lives in Hampden with his wife and two children.

ECE Professor Named IEEE Fellow



Recognizing the achievements of its members is an important part of the mission of the Institute of Electrical and Electronics Engineers (IEEE). Each year, following a rigorous evaluation procedure, the IEEE Fellow Committee recommends a select group of recipients for one of the Institute's most prestigious honors, elevation to IEEE Fellow. The ECE Department is pleased to announce that John Vetelino has been named IEEE Fellow by the Board of Directors of the IEEE. The Board conferred this honor on Dr. Vetelino for his contributions to acoustic wave properties of piezoelectric crystals and their application in sensors. To become an IEEE Fellow, the nominee

must have accomplishments that have contributed importantly to the advancement or applications of engineering, science and technology, bringing the realization of significant value to society. Dr. Vetelino will be formally recognized in October 2010 as an IEEE Fellow at the IEEE Ultrasonics Symposium in San Diego, California.

Building the Information Highway

Think for a moment about Interstate 95 and how it stretches from the Maine-New Hampshire border to Aroostook County in (more or less) a straight line. It facilitates the passage of goods, services and people in an efficient manner. It connects communities that never before were connected. Most Mainers probably take the interstate for granted, but imagine if it never existed. The state would be significantly disadvantaged compared with other states that have highway infrastructure. Now apply that same concept to another type of highway - the information highway. The longer Maine (especially its most rural parts) goes without widespread, high-speed Internet infrastructure, the further behind the state falls.

Thanks to a grant from the U.S. Department of Commerce, a Maine-based public-private consortium will receive more than $25 million in federal stimulus money to install 1,100 miles of fiber-optic Internet cable in rural Maine. In short the award helps put Maine back in the game.

ECE Professor Bruce Segee who helped develop what has been called the Three Ring Binder proposal says, “Maine’s problem is not getting high-speed internet service to small businesses and homes but in connecting broadband infrastructure from community to community.” The Three Ring Binder concept would create three fiber-optic rings, one in northern Maine, one from midcoast to Down East and one in western Maine, encompassing 1,100 miles. Those rings would be a shared resource open to all qualified Internet providers (full story).

Awards and Recognition

Faculty and Staff

Ali Abedi has been appointed to the Board of Governors of IEEE Region-1 for a two-year term 2010-11 as Technical Chapters Coordinator.

ECE Graduate Students Receives Best Student Paper Award

Yang Lin, a graduate student pursuing her Ph.D. in Electrical and Computer Engineering was awarded Best Student Paper at the16th IEEE International Conference on Electronics Circuits and Systems (ICECS) 2009, held in Tunisia, December 13-16, 2009. Yang's paper, "A 312 GHz Fourth-Harmonic Voltage-Controlled Oscillator (VCO) Designed Using 130nm SiGe BiCMOS Technology," is published in the 16th IEEE ICECS Proceedings.

Yang Lin (center) receiving Best Paper Award at the ICECS 2009 Conference in Tunisia.

Rendezvous With a Comet

Dr. Ali Abedi hosted a WiSe-Net (Wireless Sensor Network) lab tour for 6th graders as part of his NASA iMeK (I Mentor K-12) grant. After completing classroom comet research, engineering and teamwork activities and the lab tour, sixth grade students from Bangor Christian School participated in a life-like simulation, "Rendezvous with a Comet," at the Challenger Learning Center in Bangor.

During the simulation, students faced obstacles and challenges similar to those faced by astronauts living in the International Space Station. The students were given the opportunity to experience the many different career fields available through the NASA program. The skills gained from this experience broadened the collaborative work already being done in the classroom and allowed students a view into the work completed at NASA.

Gifts/Donations

We sincerely appreciate the support of our alumni and corporate supporters. During this challenging economic time, your support of our scholarship programs means a lot to our young and hardworking students.

Dale and Julia Flanders, $1,000 cash and $10,000 pledge, Nov. 23
Kepware, $5,500, Jan. 13
Carleton & Iris Brown, $1,500 Jan. 20
Larry Kazmerski $1,000 to the J. Vetelino Excellence Fund, Jan. 26

Publications

Peer Reviewed Journals

Y. Lin and **D.E. Kotecki**, "312 GHz Fourth-Harmonic Voltage-Controlled Oscillator (VCO) Designed Using 130nm SiGe BiCMOS technology," in Proc. IEEE International Conference on Electronics, Circuits and Systems, (ICECS '09), pp. 747-750, Dec. 2009 (**Best Student Paper Award**).

P. Gu, J. Wang, **Y. Zhu** and H. Jiang, "A Novel Weighted-Graph-Based Grouping Algorithm for Metadata Prefetching," IEEE Transactions on Computer (Vol. 59, No. 1), pp. 1-15, January 2010.

Grants Received

Since December 2009, the ECE faculty has received $302,425 in grants.

Other

Since December the faculty have submitted proposals for a total of about $9,949,878.

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