It's almost 2015 and as we count down the last few weeks, days, hours, and minutes of 2014, we are thankful for the support of our alumni and friends and of all of our graduates, faculty and staff. Here's to the happiest of holidays for you and yours.

Thank you for taking a few minutes to catch up with us for this brief year-end newsletter. In this issue, we are excited to tell you about a new scholarship open to graduate students to study energy and the environment from Iberdrola USA, which is open only to UMaine and the University of Rochester. See two new videos about new research being done by our faculty and students with NASA to cushion reentry and to detect air leaks in space and learn about student research to reduce HIV in Africa.

The annual College of Engineering print magazine is coming out a little late this year, so be on the look out for it in your mailbox! Let us know if your address has changed and/or if you would like to be added to the magazine mailing list. This year, we focused on senior projects and many of you who wrote in will see your capstones from the past recounted along with those of current students. Herb Crosby, retired professor of Mechanical Engineering Technology, and decades of senior projects of his students are also featured. Herb shared a unique video of the vintage Lombard 'Nina' from 1912, seen below.

We welcome hearing from you anytime. Please keep in touch and take a moment to let us know how you are doing in your career these days.

Get in touch with us through Facebook, LinkedIn, our website for alumni submissions, or just pick up the phone and give me a call or send me an email.

Best regards,
Dana N. Humphrey, Ph.D., P.E.
Attention Grad Students -
Full Scholarships Available to Study
Energy & the Environment

The Iberdrola USA Foundation, along with Fundación Iberdrola, is accepting scholarship applications for master's studies in energy and/or the environment at the University of Maine and University of Rochester for the 2015-2016 academic year, according to a press release.

The Iberdrola Scholarship Program is open to graduate students who plan to pursue studies in renewable energy, environmental protection, climate change or energy efficiency.

Global energy leader Iberdrola S.A. established the scholarship program in 2010. The grants cover tuition, health and accident insurance, and a $25,200 annual stipend for other expenses.

For more information or to apply, visit the Iberdrola Foundation scholarship website. Candidates should submit an application to one of the two universities before applying for the scholarship. The deadline to apply is 8 a.m. Feb. 13, 2015.

"Iberdrola and Iberdrola USA are very proud to support this next generation of renewable energy leaders," said Bob Kump, chief corporate officer for Iberdrola USA. For more information about Iberdrola USA and this opportunity, go online to: fundacioniberdrola.org

Banquet - Friday, March 13
EXPO - Saturday, March 14
University of Southern Maine
Costello Field House
Register at engineeringme.com
Contact David Early, 2015 EXPO Chair, at dearly@usm.maine.edu

Professional Science Masters Program

Consider furthering your education and career with the Professional Science Masters program in Engineering and Business.

The Professional Science Masters (PSM) in Engineering and Business is intended for professionals who have a B.S. in engineering or engineering technology who want to advance into management positions. The degree combines advanced engineering and business courses with applied field experience. The applied field experience integrates the new skills learned by the student with their needs and the needs of their employer.

Six tracks are currently offered with more in development:

2. Aeronautical Engineering
3. Computer Engineering
4. Wireless Engineering
5. Electrical Engineering
6. Surveying Engineering
Vintage Lombard 'Nina'

Here is one of the best Lombard movies we have seen of a vintage steam log hauler operating over 100 years ago. This is the Lombard 'Nina' hauling hardwood logs to the Paris Manufacturing Company sawmill in Crystal, New Hampshire. Clarence G. Morton filmed this incredible movie in 1912.

For more information, contact: Herb Crosby

Student Experience: Amber Smith

When Amber Smith of Ipswich, Mass. signed up for her senior capstone design project, she knew she would be helping her resume, but she didn't know she would be helping others, as well.

A person is 60 percent less likely to contract HIV if they have been circumcised, according to a current clinical study being conducted. The World Health Organization along with other organizations is working to come up with a plan to circumcise men in Africa.

With this statistic in mind, Smith, a mechanical engineering student at the University of Maine, and two other students - Grant Aylward and Sam Davidson - are working to create a disposable circumcision device that destroys after use. The current tool is made of chrome-plated brass, and the new device would be plastic and less expensive to produce.

"You're working with patients that have HIV or potentially could have it, and you don't want to spread it to either the surgeons or to other patients that you're working with," said Smith.

"The PSM degree was the perfect option for my graduate studies. As an engineering manager it is important to stay current with technology and to understand business. The PSM offered both and all the courses were on-line so I was able to continue to work full-time and complete my degree," said Hilary Henry '94, G '13PSM

For Additional Information about the Professional Science Masters Degree in Engineering and Business, contact:

Dana N. Humphrey, Ph.D., P.E.
Dean of Engineering
College of Engineering
207.581.2217
danah@maine.edu

Cushioning Reentry

UMaine Engineering students and faculty from working with members of NASA are developing materials and structures to create a Hypersonic Inflatable Aerodynamic Decelerator (HIAD) to be used on spacecrafts for reentry into a planet's atmosphere. For more information, contact: Bill Davids

Detecting Air Leaks in Space
Over the past two summers, Smith worked through internships at Stryker Orthopaedics, a company specializing in joint replacements. Working to help people gain their life back became a goal after Smith witnessed and experienced all the injuries of her teammates on the UMaine Women's basketball team. For more about Amber's project, go [online](#).

**Dec 2014 Francis Crowe Inductees**

(L-R) Diane Woodworth, John Brosnan IV, Ryan Bernier, Steven Ford, Major Jeffery Shirland, Captain Sean Christensen, Captain Keith Gauthier, Alex Friess, Cathy Dunn, Angel Hildreth, Carrie Enos, Amy Luce, Jennifer Isherwood

On Dec. 11th, the College of Engineering inducted 13 new members into the Francis Crowe Society. [Click here](#) to access the program for further information on each member. Three students were inducted as graduate members, including John Brosnan IV, Ryan Bernier, and Steven Ford.

The purpose of the Francis Crowe Society is to recognize UMaine engineering graduates as they accomplish the formidable goal of completing their engineering degrees and to recognize others who have made considerable engineering contributions and honored the profession. For more information, please go online to: [engineering.umaine.edu/fcs](http://engineering.umaine.edu/fcs)

UMaine computer and electronic engineering students and faculty are designing and testing a wireless leak detection system for the International Space Station (ISS) that could lead to increased safety on the ISS and for other space activities by helping astronauts and scientists quickly isolate and repair damage that affects pressurized environments. The technology also could be used on Earth in the event of gas and oil leaks at industrial plants. For more information, contact: [Ali Abedi](mailto:Ali.Abedi@maine.edu)

**Give to UMaine Engineering**

Thank you to all who have extended a warm welcome and helping hand to me over the last several months. These are exciting times for the College of Engineering (COE) and it’s been wonderful to travel with Dean Humphrey to learn of your experiences and share good news about the University of Maine and the College of Engineering.

Over the course of the last several months, we have traveled from Maine to Texas visiting companies, alumni and friends of the College – people of all ages and from diverse backgrounds and careers. Some of our friends are now retired, while others are in the early stages of their careers. What is constant among all whom we’ve visited are the positive experiences, gratitude toward faculty and staff, and a great sense of pride to be an UMaine Engineering graduate and/or supporter.

Thank you all for your service and support of the College of Engineering. Should you wish to make a year-end gift to the College, please do so by clicking the "Give Now" button on the College of Engineering website. Your generosity is deeply appreciated and will immediately be put to good use.

Please contact me personally at diane.woodworth@maine.edu or my colleague Pat Cummings at pat.cummings@maine.edu or call either of us at 800-671-7085 if you wish to become more involved or invest in the College of Engineering.

Many thanks for your tireless support. I wish you all a happy holiday season and a wonderful new year.
Warm regards,

Diane
Development Officer
College of Engineering
Honorary Engineer - December 2014