Mechanical Engineering partment Newsletter

University of New Hampshire, Durham NH

September 2015

FEATURED

Welcome New Department

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Nuts and Bolts Fundraising:

Please consider giving a tax deductible donation to the ME General Fund.

To donate, visit the CEPS homepage at https://giving. unh.edu/cepsme and select the Donate tab located on the far right menu bar to select an ME fund. THANK YOU!

A Word From the Chair

The academic year already feels in full swing! It seems like I say this every year, but our department continues to grow. We are excited to welcome to campus our first cohort of students for the BS in Ocean Engineering program and the ME program has its largest incoming first year class in history, 145! This brings our undergraduate population to over 530 students! This has allowed us to hire additional lecturers and professors whom you will meet in this issue. Also, there are highlights from various summer adventures of our students and faculty.

I have always felt a bit odd after all of these years still being on an academic calendar where there are such things as summer, winter and spring breaks. Of course as faculty members, these times allow us the opportunity to focus on our research and graduate students, which reinvigorates us in our technical focus area. Regardless of your current vocation, I hope that you are going into the fall with new, fond summer memories and refreshed after some well-deserved vacations.

Enjoy this issue of our newsletter and keep in touch!

Brad Kinsey

Professor and Chair, Mechanical Engineering Department

Awards & News

(Right) Eden Suoth (Sophmore) and Paige Balcom (Senior) returned from the Global Grand Challenges Summit in China. The CEPS office sponsored them to attend the conference run by the National Academy of Engineering and their UK and Chinese counterparts. It was an inspiring conference and they connected with a lot of outstanding students from around the world!





(Left) ME graduate and undergraduate students hiked Welch Dickie this summer.

(Left) Prof. Korkolis edited a Special Issue of the ASME Journal of Manufacturing Science and Engineering (IMSE) on "Forming and Joining of Lightweight and Multi-Material Systems", along with Prof. Jingjing Li (Univ. Hawaii – Manoa), Dr. Blair Carlson (GM Research & Development) and Dr. Edmund Chu (Alcoa Technical Center).

Also, starting in July 2015, Prof. Korkolis will serve a 3 year term as one of the Associate Editors of IMSE.

Announcement: There will be no CEPs tent at Homecoming this year. As such the ME department will not be at Homecoming. We apologize for missing this annual event and we hope to see everyone next year!

Volume II. Issue III

WELCOME TO THE ME DEPARTMENT

John Hughes Clarke, Professor

John received his degrees in Geology and Oceanography from Oxford, Southampton and Dalhousie. His primary fascination is with marine sediment transport, particularly in deep water. His original exposure to swath sonar systems was in 1984 looking at the record of the 1929 turbidity current. Since that time he has increasingly focused on the information content available from those systems. Since 1991, he was part of, and for the last nine years the chair of, the Ocean Mapping Group at the University of New Brunswick in Canada. John joined the departments of Mechanical Engineering, Earth Sciences, and the Center for Coastal and Ocean Mapping in Fall 2015.





Ivaylo Nedyalkov, Lecturer

Ivo received his Ph.D. in Mechanical Engineering at the University of New Hampshire, 2015, an M.S. in Applied Mechanics at the Chalmers University of Technology in Sweden, 2013 and a B.S. in Industrial Engineering, Technical at the University of Sofia, Bulgaria, 2007. Ivo's Research areas are Applied fluid dynamics (computational and experimental), Hydrofoils and wingtip devices, Optical flow measurements, and Cavitation. Ivo joined the faculty of the Mechanical Engineering department this year after completing his Ph.D. under the supervision of Prof. Wosnik. At UNH, Ivo worked on the design of components and overhaul of the high speed water tunnel (HiCaT), developed a code for automating airfoil/hydrofoil simulations using OpenFOAM, and studied bi-directional hydrofoils for tidal turbines.

Larry Zagar, Lecturer

Larry received his Mechanical Engineering degrees at Louisiana State University, culminating with a Ph.D. in 1986. After graduating, he briefly held the position of Assistant Professor at the University of Hartford. Subsequently, he held various applied research roles for Goss International, lastly as Director of Research. Larry's research topics while at Goss included machinery vibration, mechanics of thin substrates, mechanics of rolling contact, electromechanical system simulation, and thermo-mechanical system interaction. Larry joined UNH for the 2015-2016 academic year and is happy to return to an academic role. He will assist with teaching the senior lab in the fall and teach introductory engineering classes during the spring.





William M. Shepherd, CAPT USN ret., Affiliate Professor

Capt. Shepherd studied Aerospace Engineering at the U.S Naval Academy, and has Master's and Engineer's degrees in Mechanical and Ocean Engineering from MIT. He has received many military and civilian awards. He has been designated an "Honorary Naval Aviator" by the Chief of Naval Operations, and has also recieved NA-SA's prestigious "Steve Thorne" aviation award. In 2009, NASA's International Space Station Team, which Capt. Shepherd led on the ground and in space, was awarded the Collier Trophy, which recognizes the Nation's greatest achievements in aviation and astronautics. Capt. Shepherd recently joined the Mechanical Engineering department as an affiliate professor. He is the Vice President at Wilcox Industries in Newington NH and is currently serving on the Mechanical Engineering Industrial Advisory Board.

COMPANY HIGHLIGHT





It all started with the craziest mustache Jud (left) had ever seen. He was visiting UNH, trying to decide if UNH was the right college for him. During a brief meeting with Professor Ken Baldwin (right), he was in shock that anyone could grow a mustache like that... but learned that a degree in mechanical engineering would provide him with the knowledge and skills he would need going forward.



Jud DeCew graduated with his B.S.M.E. from the UNH Mechanical Engineering Department in 1999. After a brief stint at the Portsmouth Naval Shipyard, he came back to UNH for his graduate studies, eventually earning his Ph.D in Ocean Engineering.

During his time at UNH, Jud worked with a great team of professors and others on a variety of projects. These research efforts included coastal and open ocean aquaculture, alternative energy, environmental monitoring, and marine mammal entanglement and impact mitigation technologies.

In 2010, HALO Maritime Defense Systems approached UNH looking for assistance in optimizing their floating marine barrier. Together, UNH helped HALO pass a series of stringent US Navy tests. In 2013, Jud left UNH and began to work at HALO as their Director of Engineering. HALO has since doubled in size and expanded their products to include the world's first fully automatic marine gate.

UNH has a strong presence at HALO, with three of HALO's R&D team graduating from UNH: 2015 M.S.M.E. Eric Rines, 2013 graduate Sean McCann and 2009 graduate Mike Osienski.

Jud is, and will be forever thankful of his time at UNH including learning the proper way to drink coffee (black, with a side of chocolate), that Turkey is a great place to visit, and to tread carefully if you make fun of anything hockey related.



ME graduates Eric Rines '15 (right) and Sean McCann '13 (left) taking a break on HALO's new automated gate presently deployed in Norfolk,VA.



Above: Jud and his children, Oliver, Rowan, and Phoebe.

CAREER & PROFESSIONAL DEVELOPMENT

Upcoming Events:

Resume Review Day (Employers include Portsmouth Naval Shipyard, SIG SAUER, Thermofisher Scientific, Wright-Pierce, Triumvirate Environmental) Tuesday, 09/22/2015 - 11:00am to 2:00pm Location: Granite State Room <u>View full information</u>

BAE Information Session (Engineering Leadership Development Program and Operations Leadership Development Program) Wednesday, 09/30/2015 - 4:45pm Location: Kingsbury Hall N101

Graduate & Professional School Fair

Thursday, 10/01/2015 - 12:00pm to 2:30pm Event Information: Graduate & Professional School Fair Location: Granite State Room <u>View full information</u>

Career Bootcamp

Friday, 10/02/2015 - 10:00am to 3:00pm Event Information: Career Bootcamp Location: MUB <u>View full information</u>

UNH Career & Internship Fair Wednesday, 10/07/2015 - 12:00pm to 4:00pm Event Information: Career & Internship Fair Location: Whittemore Center Arena View full information

PATHWAYS Mentoring Program

This program is hosted by the UNH Career Center in coordination with the Alumni Association. UNH Pathways brings alumni and undergraduates together for professional growth. Alumni provide valuable insight on navigating through the post-college world. Students build career networks and develop skills to become better professionals and leaders.

The program runs from September to April and is structured around monthly mentor and mentee meetings, and includes two on-campus meetings for the entire Pathways group.

Registration is closed for this academic year. But registration is now open for the next Academic Year. <u>Click here to apply.</u>

Lena Downes (Sophmore) and Siddharth Nigam (Senior) are particapating in the 2016 mentoring program.

What did you do over the summer?



Sital Khatiwada Senior

"I interned at NASA Goddard Space Flight Center."



Tamir Blum Senior

"I lived in Sendai, Japan, where I conducted space robotics research on the Google Lunar X-Prize team Hakuto rover alongside an international team."



Jacqueline McNally Junior

"I interned at Turbocam."



Simon Popecki Sophmore

"After studying in Germany this summer, I interned at Turbocam, working with electrochemical machining. I am now working part time at Turbocam."

🖌 See ME Website for full stories 🛛 🔓

OCEAN ENGINEERING HIGHLIGHTS



Jere A. Chase Oceaning Engineering Lab



Ocean Engineering barbeque held in early September to welcome the first class of B.S.O.E student. A great time was had by all!

Ocean Engineering News Update



The new and first B.S. Ocean Engineering class. Front row, left to right: Kathryn Trubac, DanaRose Brown, Ella Cedarholm, and Zachary Davonski.

Back row, left to right: Cullen Bryant, Adam Smyth, Aaron Chavira, Liam Novak, and D. Liam Cahill Photographed by: Brooks Payette



The UNH ROV team (Jarrett Linowes, Nathanial Cordova, Alex Sarasin, Shaun Hespelein, Sayward Allen, Jerry Rosati, Sathya Muthukkumar, Alex Dzengeleski, Jianqing Ye (Aaron), and Zhuo Xu (Loker) shared in the celebration of a successful year at the MATE International ROV Competition in St. John's, Newfoundland, Canada. Consisting of both collegiate and high school teams, there were a variety of innovative ROV designs capable of completing the real-life simulated mission tasks presented to each team. The competition (ROVs in **Extreme Environments: Science** and Industry in the Arctic)

consisted of three mission task tanks – the ice tank (consisting of a 3 cm sheet of ice covering the water below and a 75 cm x 75 cm hole to deploy the ROV), the offshore engineering basin (to simulate subsea pipeline inspection and repair), and the flume tank (to simulate offshore oilfield production and maintenance). With each tank simulating a unique environment and situation likely seen in industry today, the ability to compete resulted in a rewarding experience for the team, regardless of some setbacks, as the ROV responded well in each competition tank.

GRADUATE SPOTLIGHT



Measuring Mobile Morphology

with Meagan Wengrove

Meagan Wengrove graduated with a B.S. in Civil Engineering from UNH in May 2010. Meagan describes her research interest from her undergraduate to the present as 'moving downstream'. Her interests in water resources began with her summer undergraduate research fellowship (SURF) in the streams of Mayaguez, Puerto Rico (article published in Environmental Monitoring and Assessment). Moving a bit downstream, Meagan's masters work focused on boundary layers in the Great Bay Estuary of New Hampshire. Meagan earned a M.S. in Civil Engineering with Prof. Diane Foster in 2012 (articles were published in Geophysical Research Letters and Estuarine Coastal Shelf Science).

In the fall of 2012, Meagan received a Fulbright scholarship to the Netherlands to collaborate with coastal engineers at the Technical University of Delft. Her research topic landed her on the coast where she employed coastal remote sensing using radar and cameras to monitor the hydrodynamics and morphology of a Dutch mega-coastal-nourishment. Upon returning to UNH in the fall of 2013, Meagan began a Ph.D. in Ocean Engineering with Prof. Diane Foster. For her Ph.D., Meagan is researching the mechanisms for extreme change of small scale coastal morphology (i.e. the forcing mechanisms behind a ripple changing size or shape rapidly). This type of research is pertinent to inform small and large scale coastal models, especially as we are seeing more extreme coastal events (e.g. winter storms, hurricanes, tsunamis). Meagan is using two datasets to understand this physical change; one from an NSF funded large scale laboratory experiment at Oregon State University, and a second from a PADI funded field experiment at the Dutch Sand Engine mega-coastal-nourishment. Meagan just received a U.S. Department of Defense NDSEG Fellowship for 3 years of funding to complete her Ph.D.



Group Photo taken at Sand Engine in the Netherlands.



Taking a break from fastening cables during an experiment in the Great Bay, New Hampshire.

FACULTY SPOTLIGHT

Changing the Tides at UNH with Professor Foster



Professor Diane Foster's research expertise is environmental fluid dynamics as it pertains to our oceans. Her research is both fundamental and applied in nature and is primarily focused on unsteady boundary layers that have movable boundaries. She and her students have developed expertise in coastal bottom boundary layers, sediment transport, ocean turbulence, and benthic fluxes. Beyond the fundamental science questions involving unsteady momentum dynamics over rough and movable boundaries, this research is critical considering more than 50% of the US population lives within a coastal watershed and the threats we face from sea level rise and increased storm frequency and intensity.

Research in our nearshore and coastal ocean is complicated by the fundamental scaling laws involving the forces provided by waves and tides to individual sediment grains. Consequently, the research performed by Professor Foster and her students must generally be performed at, or near, full scale. This means that they travel to large scale laboratory facilities and the ocean, estuarine, and riverine environments in many global locations. In the past several years, her research teams have performed research in the Netherlands, Oregon, North Carolina, and our own Great Bay Estuary in New Hampshire.



Meagan Wengrove and Prof. Foster with a acoustic Doppler velocimeter. Their work on viscous sublayer in tidal boundary layers was recently published in the prestigious Geophysical Research Letters publication.



Prof. Foster (right) with graduate student Meagan Wengrove, former student Dr. Sylvia Rodriguez-Abudo (currently an assistant professor at the University of Puerto Rico), and Dr. Donya Frank (currently at the Naval Research Laboratory).

Professor Foster's expertise is in making detailed turbulence observations over boundaries that can evolve over periods of seconds. These observations require high temporal and spatial resolution of the velocity and sediment field. One of her recent projects involves examining the evolution of the seafloor to sometimes catastrophic tsunamis. Professor Foster states that "the shear stress and large change in pressure provided by the passing tsunami can temporarily reconfigure the seafloor in a way that may significantly compromise marine structures and may not be revealed by post-tsunami surveys". This finding was reached by deploying a submersible particle image velocimetry system with high resolution acoustic Doppler profilers and subsurface pressure sensors. Professor Foster points out that lessons learned from this study extend beyond tsunamis and include storm waves often experienced during hurricanes. Sitting at the intersection of oceanography and engineering, Prof. Foster has recieved funding from the National Science Foundation (NSF) and United States Sea Grant.

UNDERGRADUATE SPOTLIGHT



Shawn Swist

My name is Shawn Swist and I am a junior interested in fluid dynamics, thermodynamics, and control systems. I am a member of DIY Engineering and Students Without Borders. Outside of schoolwork I enjoy playing soccer and hiking with the outing club. Throughout the summer I was working on the Underwater Remotely Operated Vehicle (ROV).

The goals of the ROV are to be easily maneuverable while implementing feedback controls for pitch and depth. A former graduate student, Firat Eren, advisee of Prof. May-Win Thein designed a light sensor array that will be attached to the ROV. The array uses a light source to determine the relative position of the ROV. Implementing these controls into the ROV are the first steps towards making the system autonomous, a future goal for the program.

After I complete my undergraduate degree I plan on going to graduate school for aerospace engineering. As a lifelong space enthusiast I want to one day be a part of the space program.

Stephanie Gilooly

This summer, I worked with Professor White and graduate student Michael Allard studying the interactions between a fluid (e.g. air or water) and a dynamic boundary, as seen during erosion. For experimentally investigating this phenomena in a wind tunnel, we are studying a subset of erosion called ablation, which is erosion due to heat. The experiments entail molding bluff bodies (e.g. a sphere, cylinder, and flat plate) out of para-dichlorobenzene, the same material as mothballs, and placing them in a heated wind tunnel. Side- and plane-view images are recorded as the bluff body ablates over time to investigate the evolution of the projected area. Additionally, information about the fluid velocity is obtained using a non-invasive measurement

technique called particle image velocimetry. My goals for the summer are to design, using Solidworks and its simulation packages, the molds and a structure to suspend the bluff bodies without affecting the fluid flow; finalize the molding procedure for the bluff bodies; and perform the experiments described earlier. Assisting with this project gives me a unique opportunity to apply the concepts discussed in my undergraduate classes thus far in real world situations. I am currently applying to the Accelerated Master's Program to pursue a MS in Mechanical Engineering with a focus on fluid and thermal sciences. This summer, I am also looking forward to going camping, spending time with my friends and family, and going to a Red Sox vs. Yankees game.



UNDERGRADUATE SPOTLIGHT

Aleksandra Wojtowicz

My name is Aleks Wojtowicz and I am a senior in Mechanical Engineering at UNH. This summer I am working with Professor Kinsey, Professor Korkolis, Professor Knezevic and graduate student Timothy Roemer. My main focus of research is Continuous-Bending-under-Tension (CBT). The goal of CBT is to elongate material in a way such that the percentage strain is significantly greater than that of a tensile test. This is done by imposing a traversing bending moment on a sheet specimen undergoing tension which leads to a uniform, large strain across the entire gage length

of the speicmen. The material we use in our experiments is AL-6022-T4. One of the limitations of the tests is that it is not possible to measure the strain directly due to the moving rollers. Our solution was to put circle grid patterns on a specimen and run it under CBT until it fails. During the experiment, circles are stretched into ellipses.We are then able to take the photo of the specimen and upload it into a MATLAB code for analysis of the strain. I gained a lot of knowledge and experience working here and I thoroughly enjoyed it, too.





Eric Desjardins

My name is Eric Desjardins, and I am a senior in Mechanical Engineering. This summer I am working with Prof. Korkolis on designing and building a machine for testing the bending properties of tubes with very small diameters and wall thicknesses, called microtubes. These tubes are used for biomedical components, such as needles, and the question is how much they can deform before they fail. This knowledge will help manufacture better products. It is currently uncertain whether tubes with extremely thin walls (10-15 grains thick) will behave similarly to tubes on the macro scale. Once completed, the

machine will be used to discover the behavior of the microtubes under bending. During testing, Digital Image Correlation cameras will be used for strain mapping. Working on this project has given me an excellent opportunity to work on many aspects of mechanical engineering design, including controls, CAD, instrumentation, and machine design, as well as hands-on experience with machining. Once I graduate I'd like to find a design-related position in industry, focusing on controls. This summer I've been enjoying social time with friends and family, riding my mountain bike, and traveling.



spotlight



Norris Browne Mechanical Engineering, Class of 1955

A native of South Portland, Maine, Browne's class at UNH was the second class to enter and finish all four years in the then new Kingsbury Hall. He played a couple of years of football and lacrosse at UNH, giving them up to be a full-time student. He said he played with two birth defects: 1) he was small, and 2) he was slow. On campus, he was the President of the Inter-fraternity Council and was elected to Blue Key, a senior men's honorary society.

Upon graduation, Browne worked for a year in the Westinghouse Electric's Training Program. He then served three years in the US Navy's world famous "Seabees", part of the Civil Engineering Corps.

Released from the Navy in 1959, Browne then started his civilian career as a Field/Application Engineer with Ferguson Machine; a manufacturer of CAM actuated intermittent motion devices which were long recognized as the world's best.

In 1960, he and Sara-Lee Martyn, UNH class of '57 were married. Sara-Lee established the Commander O.J. Martyn Trust in honor of her father, who had a career in the US Navy, Civil Engineering Corps. This trust supports the UNH Engineers without Borders organization.

In 1968 Browne left Ferguson Machine to become an independent manufacturer representative. Many of the companies that he represented were his former Ferguson customers. These companies were family/or individually owned and were primarily involved in factory floor production machinery in the automated assembly and inspection disciplines.

Browne's working career took a few twists and turns, involving him in partnerships and mentoring. As his working career started to wind down and retirement loomed ahead, some new and/or challenging opportunities would always come up. However, this year at age 82 and running out of excuses, he finally and formally stopped working. Browne recall's: "It was a very interesting, rewarding and challenging career, and it all started at UNH."

Browne is still active at UNH and has funded numerous ME senior projects. He also established the Mechanical Engineering Endowment Trust and was instrumental in growing the fund through his networking efforts with other UNH alumni. The trust provides funds for scholarships, senior projects, equipment and other programs and activities. Browne also served on the Mechanical Engineering Industrial Advisory board for many years.



Dale Delisle B.S.M.E. '02, Ph.D. '12

I have enrolled and been accepted into a second masters of science degree in systems engineering at WPI! I will be doing it part time over the course of three years. Dale was just promoted to Principal Engineer at MITRE Corporation.

Yong Zhao M.S. '12 (Right)

I graduated in May 2012 and started to work for a small product development company called Resolution Development Services located in Wilmington MA in August 2012. At Resolution Development, I designed various machine vision based turnkey inspection systems, life science automation systems and medical devices. After worked for Resolution for about two and half years I was lucky and found a new exciting job at SimpliSafe located in downtown Boston in May 2015. <u>SimpliSafe</u> is a great startup company making home security systems.





Nikolay Timoshchuk M.S. '09

I recently had a title change at Albany Engineered Composites Inc to Product Design Engineer.

Melissa N. Minuti '09 (Left)

I now work as an Operations Process Engineer for a wonderful water treatment company in Manchester, NH, Secondwind Water Systems. I also have been promoting a product called the Thrive Experience (melissaminuti.le-vel.com) and am about to be driving a new Cadillac that the company pays for! Lastly, my boyfriend and I are buying our first house, a two-family home in Manchester, NH, which is the first of hopefully many income properties! I'm very blessed, and so grateful for all the confidence, knowledge, and training I received at UNH which allows me to be where I am today!

Ryan Carney '08

I have been a guidance, navigation, and controls flight engineer for Boeing CST-100 spacecraft development program in Houston, TX for the past three years and celebrated my 6th year with Boeing. I graduated from the University of Florida with an aerospace M.S. in 2013, and started another astrophyics/aerospace M.S. at University of Southern California in 2014.

Kirk Novotny '94 (Right)

My son Benjamin, (left) and I (right) went on a campus tour and visited the ME department back in June.





James Peterson B.S.M.E. '86, BA Philosophy '06 (Left)

Below is a snipit of Jame's article written by Ken Johnson for the Green Alliance Blog.

"James Petersen, principle engineer and founder of Petersen Engineering in Portsmouth, New Hampshire, was named the 2015 Engineer of the Year by the Granite State Chapter of ASHRAE. In a recent release, the Granite State Chapter of ASHRAE said they are, "pleased to present their Engineer of the Year Award for 2015 to James Petersen with our thanks for his outstanding works.

We hope that others in our profession will see him as a role model for others to follow." In the nearly three decades he's worked in the industry, Petersen has forged a reputation as an engineer concerned with quality and sustainability for every project he's done. "I've been working away for 29 years trying to make buildings better," Petersen said. "And most of the time it is hard work and when you get a surprise recognition like this it feels pretty good.""

To read the full article please go to Green Alliance Blog

IN MEMORIAM

Professor William (Bill) Mosberg (1920-2015)

Career at UNH (1958-1997)

A stand up gentleman, professor and comedian.

William (Bill) Mosberg, University of New Hampshire Professor Emeritus of Mechanical Engineering, passed away after a brief illness of Friday, June 19, 2015 at Chatham Hills Subacute Care Center, Chatham, N.J. His daughter Laura and son-in-law Stephen were by his side.

Born in 1920, in a tiny apartment in the Bronx, New York, his parents were Jewish immigrants from Poland and Austria. He spent his youth and early adulthood in New York City and his heart always remained there.



After serving in WWII, he went to The Cooper Union to study Mechanical Engineering on the GI bill. There he met his wife of 28 years, Gloria, who he was with until her death in 1983.

He earned his B.S.M.E. from Columbia University and his M.S.M.E. from Yale University. After working in industry for Bechtel and other companies, he arrived at UNH in 1958, and retired in 1997. He was Chairman of the Department of Mechanical Engineering, for three terms from 1972 to 1981. A devoted teacher who truly loved teaching, Bill was awarded the CEPS Outstanding Teacher Award in 1988. An early champion of bringing the union to the university, he served as the AAUP-UNH Chapter President from 1967-1968.



Bill was known for his sense of humor. He often joked that he went into teaching because it was easier to get new students than new jokes. If a student said "Professor, we heard that joke," he'd say, "don't you ever graduate."

A long-term resident of Durham, Lee, and Newmarket, Bill was living in Newmarket with his love of 30 years, Tory, at the time of his illness.

Bill will be long remembered for his kind heart and charm, his original wit and brilliant sense of humor, as well as his impact as a teacher, role model, scientist and communicator.

He leaves behind his companion Marion (Tory) Poulin, his daughter Laura and his son-in-law Stephen Cohen and their children Gillian and Bram of New Jersey, Tory's son Cliff Poulin and fiance Sarah Stinson.

Obituary written by: Laura Mosberg Published in Fosters From July 28 to July 31, 2015

IN MEMORIAM



Esther "Joyce" Cash (1936-2015)

Career at UNH (1973-1992) Witty, strong and a friend to all.

The world lost a generous and caring friend in the passing of Esther Joyce Cash on June 8, 2015 following a courageous battle with a lengthy illness.

Joyce was born in Machester April 16,1936 the daughter of the late Joseph P and Agnes (O'Malley) Bryson. She spent her childhood in Manchester, graduating from Manchester West in 1954 and later from Simmons College with the Class of 1958. Her happy summers were spent at Hampton Beach with family and friends at their summer cottage.

Joyce used her degree in library science and her love of literature as she worked as a librarian in St. Anselm College and Memorial High for a number of years before becoming an Adminstrative Assistant for the Mechanical Engineering Department at UNH in 1973. During her time at UNH she became mentor to countless students and staff and made many lasting relationships.

She shared 24 years of marrage with her beloved husband August Cash who predeceased her in 1997. She shared their happy moments together first in Hanover and then at their home in Hampton. Joyce enjoyed reading, her many dogs and the smell of the ocean. She had a warm heart and always had an open door at her home. She leaves behind many loving friends and family.

Obituary written by: Chris and Karen Robarge



Joyce and her late husband, Gus, established the Cash-Bryson Scholarship Fund in 1992 to express their affection and dedication to the College of Engineering and Physics Sciences (CEPS) and the Mechanical Engineering Department, as well as to honor their parents who had instilled the love of learning and the value of education in both of them. The Cash-Bryson Scholarship is awarded annually to either a junior or senior Mechanical Engineering student who is a resident of New Hampshire. Many ME students have benefited from this scholarship, and will continue to do so for many years to come.

OUTREACH



Michael Locke, (ME Sophmore) co-taught the VEX Robotics project at UNH Tech Camp this summer. He ran a one week long project that was held twice for students mostly in grades 8-10. His co-leader was Prof. Mary Rudis from Great Bay Community College. Abubaker Elkshiek (Senior) and Carolyn Przekaza (Class of '15) also co-taught the SolidWorks projects at Tech Camp.





Pictured to the Left is a classic visualization example of a ~400Hz standing pressure wave brought to you by fire out of a Ruben's tube, a simplistic yet gorgeous example of Fluid Dyamics. Grad students Drummond Biles and John Turner built this Ruben's Tube and used it for their Keeper's Camp demonstration.

CONNECTED

Stay

We would like to stay connected with our alumni and friends and would welcome your newletter contributions and suggestions.

Please send your news items, e.g. awards, promotions, personal updates, memories of UNH, and suggestions by email to: lauren.foxall@unh.edu

Newletter Coordinators: Lauren Foxall (designer/creator/editor), Tracey Harvey (editor/public relations), and Barbaros Celikkol (Chief) A special thank you to Michelle Mancini, Alyssa Bailey, and Sid Nigam for their help and advice.

If you would like to make a financial contribution to the ME Department please go to: https://giving.unh.edu/cepsme

Check out full length stories and pictures on the Mechanical Engineering website: http://unh.edu/mechanical-engineering/