Dean’s Corner

Today, the CSTM Newsletter is distributed to alumni, friends, faculty, students, and staff. Requests for copies, changes of address, and other communication can be sent to the following:

College of Science, Technology, and Health
University of Southern Maine
P. O. Box 9300
Portland, ME 04104

E-mail: csth@usm.maine.edu
Web: www.usm.maine.edu/csth

Lori Arsenault, editor

Contributions by: Andrew Anderson, Wayne Cowart, David Early, Gail Fletcher, Brian Hodgkin, Deb Johnson, Lisa Moore, David Briggs, Matthew Glatz, Erika Lichter, Bruce MacLeod, Daniel Martinez, William McCullough, Krista Meinersmann, Jim Smith, Doug Thompson, USM Public Affairs

We welcome contributions by our alumni for potential publication.

This has been an extraordinary year at the University of Southern Maine for many reasons, including the formation of the new College of Science, Technology, and Health (CSTM). The reorganization effort that has been ongoing over the past two years reconfigured eight schools and colleges into five units. In addition to CSTM, the administrative structure includes the College of Arts, Humanities, and Social Sciences (CAHS), the College of Management and Human Services (CMHS), Lewiston-Auburn College (LAC), and the School of Law (SOL). CSTM was formed by bringing together the College of Nursing and Health Professions, the School of Applied Science, Engineering, and Technology, and science and mathematics departments from the College of Arts and Sciences. The changes have been some of the most significant since two universities were merged in 1970 to form what was then called the University of Maine at Portland-Gorham.

The new college has 15 academic units focused on STEM (science, technology, engineering, and mathematics), nursing, and health professions. It is also the home of two research units: the Maine Center for Toxicology and Environmental Health, and the Special Programs for Information and Innovation. The college offers over 40 different academic programs under the direction of approximately 120 faculty and 60 staff. While each of the programs in the college has its own unique aspects, they all share a common underlying foundation in science. While science underlies all the programs, I am often reminded of the unique “art” associated with how each of the disciplines practice and use the knowledge gained in their respective programs.

One of the exciting prospects of forming a new college is the opportunity it presents for collaboration among departments, and the development of new and innovative programs. A key goal of the college reorganization has been “…building a forward-looking, agile, and dynamic 21st-century university…” This past year has seen many ideas emerge for meeting that goal. Those efforts will continue in the coming year as the new college continues to refine its structure and discover new areas of cross-discipline collaboration.

While there are many activities that go on in our college, there are a few items worth highlighting. This coming year we will welcome our first undergraduate students in the Pioneers Honor Scholarship program and graduate students in the new Doctor of Nursing Practice (DNP)

The Pioneers is a scholarship program designed to attract high-performing STEM students by offering a four-year full-tuition scholarship along with a laptop computer, a summer pre-college program, an ongoing learning community, and internship and undergraduate research experiences. This is an exciting program that is the first in the state to offer such a package to students interested in STEM. We are keenly aware of the need to foster a K-20 STEM “pipeline” to encourage students to pursue such degrees and remain within the state. It is part of an ongoing strategy to foster STEM education at USM.

The DNP is a program that has been several years in development and received formal approval to begin in the fall of 2011. The USM program is the only one of its kind in northern New England. The program was developed to meet the demand for this credential and, in anticipation, the DNP will soon be the required credential for all advanced practice nurses. The DNP focuses on the leadership and management skills needed as a part of operating in today’s complex healthcare systems.

In addition to academic degree programs, CSTM will also be noted for a significant amount of the research being conducted at USM. There is a substantial amount of research being done by faculty, graduate students, and undergraduate students in the individual academic departments of the college as well as in the Maine Center for Toxicology and Environmental Health, and the Special Programs for Information and Innovation units.

Going forward, we will strive to highlight the teaching, research, and service activities of our faculty, staff, and students. You will see some of the varied activities highlighted throughout this publication as we welcome the new College of Science, Technology, and Health.

Andrew L. Anderson, Dean of CSTM, can be reached at csthdean@usm.maine.edu.
Welcome New Personnel to the College of Science, Technology, and Health in 2010/2011

SCHOOL OF NURSING

**Nancy Baugh** joined the nursing faculty from Richmond, VA where she worked as a Nurse Practitioner in the Department of General Surgery, Virginia Commonwealth University Health System. She recently completed the requirements for her Ph.D. from Virginia Commonwealth University. She brings with her prior nursing education experience having served as faculty and four years as the Assistant Dean at Bon Secours Memorial School of Nursing. Nancy teaches both undergraduate and graduate students. Her expertise is in the area of obesity and bariatric surgery.

**Carol Fackler** joined the nursing faculty from Clinton, CT where she worked on the faculty at Fairfield University. She recently completed her Ph.D. at Yale with a focus on Health Policy. Her dissertation was entitled “Hospital Nurses’ Lived Experience of Power”. Carol is teaching across all programs and is developing a new course for the Doctor of Nursing Practice program that focuses on informatics. She supports her partner Hope’s organization, Wind over Wings, a nonprofit raptor rehabilitation and education program. The raptors live in an aviary behind their home.

**Marcia Goldenberg** joined the nursing faculty after working as a public health nurse in the city of Portland for over 10 years. She previously taught as a part-time faculty member and developed an EYE course with a biology faculty member that focuses on HIV/AIDS. The course was based on her clinical experience as a public health nurse where she served on a multidisciplinary team providing primary care to individuals with HIV/AIDS. Since joining the faculty, Marcia, has been developing her expertise in pediatric nursing and community based psychiatric mental health nursing.

DEPARTMENT OF APPLIED MEDICAL SCIENCES

**Alison Green-Parsons**, a native New Yorker who moved to Maine in 2005, has a B.A. in psychobiology from Southampton College of Long Island University. She has worked as a SAS programmer/analyst in health care for many years, for such companies as Health Dialog in Maine, Emblem Health, NY and Manpower Demonstration Research Corp. She is currently seated at Maine CDC epidemiology department in Augusta. Alison’s hobbies include African dance, crochet and poi.

**Sara Huston**, is an Assistant Research Professor in the Department of Applied Medical Sciences. Through a cooperative

Continued on page 4
On March 28, a capacity crowd of over sixty-five K-12 students and adults experienced some of the unexpected properties of nanomaterials at NanoDays 2011 at the Southworth Planetarium on the USM Portland campus. The event was presented by the professional staff, students, and volunteers of USMs Science Education Partnership Award (SEPA) project “Micro- and Nano-space Explorations of Health and Disease” which is directed by S. Monroe Duboise, Associate Professor of Applied Medical Sciences, and is funded for five years by the National Center for Research Resources (NCRR), a division of the National Institutes of Health (NIH). This local NanoDays event was part of a nationwide festival of educational programs about nanoscale science and engineering. NanoDays, organized by the Nanoscale Informal Science Education Network (NISE Net) and funded by the National Science Foundation, is the nation’s largest public outreach effort in nanoscale informal science education and involves science museums, research centers, and universities from Puerto Rico to Alaska.

A range of exciting NanoDays programs demonstrate the special and unexpected properties found at the nanoscale, showcasing nanomaterials, such as water-resistant sand and fabrics, ferrofluid, models of buckyballs (fullerene), comparisons of gravity and cohesion and more. The NanoDays events at the Southworth Planetarium were organized by SEPA coordinator Gail Fletcher assisted by staff and students of the USM Virology Laboratory and the USM Electron Microscopy Core Facility. Laboratory professional staff members Karen Moulton and Jennifer Jamison were joined by Applied Medical Sciences graduate students Jeff Gaynor, Kinya Gikonyo, and Miyad Movassaghi, together with undergraduate laboratory assistants Elizabeth Conley and Casey Hudson and USM community volunteers Tyler Kidder (Assistant Director for Sustainable Programs, USM Facilities Management) and Gerald Pound, a student in environmental science. Guided by this SEPA team, K-12 students and adults were able to explore the miniscule world of atoms, molecules, and nanoscale forces through hands-on activities.

NISE Net in their promotional literature states that: Many scientists and engineers believe that advances in nanotechnology have the potential to bolster the U.S. economy through innovations providing clean, secure, affordable energy, techniques to clean up hazardous chemicals in the environment, and medical devices and drugs to detect and treat diseases more effectively and with fewer side effects. Despite this promise, the public knows little about research and development being carried out today by 25 departments and agencies of the federal government.

New Personnel in the College of Science, Technology, and Health

agreement with the Maine Center for Disease Control and Prevention, she serves as Lead Chronic Disease Epidemiologist and works with chronic disease-related public health programs to provide them with the epidemiologic and surveillance information needed for public health action. She also currently serves on the Executive Board of the Council of State and Territorial Epidemiologists (CSTE), the Editorial Board of the journal Preventing Chronic Disease, and the Surveillance and Epidemiology Workgroup to the Advisory Council to the Director of CDC. Sara received her B.A. from Hampshire College in Amherst, MA and her Ph.D. in epidemiology from the University of Pittsburgh Graduate School of Public Health. She began her career in applied chronic disease epidemiology as an Epidemic Intelligence Service (EIS) Officer with the federal Centers for Disease Control and Prevention (CDC) and was assigned to the North Carolina Division of Public Health from 1995-1997. For the next 13 years, Sara served as the Cardiovascular Epidemiologist for the N.C. Division of Public Health until she and her husband moved to Maine in August 2010. Sara is an avid bicyclist who also enjoys hiking, camping, canoeing, cross-country skiing, knitting for family and friends, and most anything to do with enjoying the outdoors or creating beautiful things out of fiber.

Nisha Kini, came to USM after 12 months of clinical and research experience at Government Hospital, a private hospital and pharmaceutical communications company in Mumbai, India. In addition to English, she speaks Hindi, Marathi, Konkani, Bengali, and some French. She earned a Bachelor of Medicine and Surgery from Mahatma Gandhi Mission’s Medical College and Hospital in New Mumbai, and is currently working on her Masters in Public Health (Epidemiology) at the University of Massachusetts Amherst, researching the influence of acculturation on stress and anxiety in pregnant Hispanic women.

Robyn C. Reynolds, received her Bachelor of Art degree from the University of Maine-Orono in 1999 and Tufts University School of Medicine MPH in 2006. She worked in ophthalmic epidemiology and genetics from 2006 – 2010, before starting as a Research Analyst at USM in December 2010. She currently assists epidemiology staff with processing, analyzing and publication of statistical data on subject matter relevant to public health programs at the Maine Center for Disease Control. Robyn’s interests and hobbies include yoga, running, skiing, hiking and traveling.
government and by universities and corporations in their own communities.

In addition to the activity stations of NanoDays provided by NISE, USM electron microscopist Jennifer Jamison and Applied Medical Sciences graduate student Jeff Gaynor provided a live demonstration of the capabilities of the portable Hitachi TM-1000 scanning electron microscope that was acquired in 2010 through supplemental funding to SEPA at USM to enhance existing science education outreach activities into middle school and high school classrooms. This microscope is capable of magnifications up to 10,000 and images of bacteria, diatoms, ticks, and other biological structures were dramatically projected on the Planetarium dome as the workings of the scanning electron microscope were explained.

NanoDays™ is based on work supported by the NSF under Award Numbers ESI-05322536 and 0940143. The Science Education Partnership Award program at USM funded by grant number R25RR024280 from the National Center for Research Resources, a division of the National Institutes of Health and NCRR supplemental grant funding (3R25RR024280-02S1) through the American Recovery and Reinvestment Act.

Douglas Thompson, chair of the Department of Applied Medical Sciences, can be reached at dougt@usm.maine.edu.

Finn Teach, recently graduated from USM’s Muskie School of Public Service with a Masters Degree in Public Policy and Management. Before working for USM, he held two part time jobs (at a film festival and project management company) in Portland while attending graduate school. Finn is also a graduate of Colby College and a lifelong Mainer. In his spare time Finn enjoys being civically engaged in his community, and is an active volunteer with the League of Young Voters and the Maine Alliance for Sustainable Transportation. Finn brings a unique skill set to his Epidemiology office in Augusta, where he is the only full-time non-Epidemiologist.

DEPARTMENT OF PSYCHOLOGY

Jennifer Wieselquist, received her B.S. in Psychology, with a minor in Biology, from the College of William and Mary and her Ph.D. in Social Psychology, with a minor in Quantitative Methods, from the University of North Carolina, Chapel Hill. At Chapel Hill, she worked with Dr. Caryl Rusbult, well known for her investment model of commitment processes. Wieselquist’s own research program on interpersonal trust and forgiveness in close relationships extends Dr. Rusbult’s model in new directions. This semester, USM students had the opportunity to explore this research area in her seminar on Close Relationships. This year Wieselquist also taught Statistics in Psychology, Experimental Methodology with Lab and General Psychology I. One of her Experimental Methodology students noted, “Professor Wieselquist is an excellent educator. Her enthusiasm and expertise in her field makes her class a very valuable experience for anyone interested in psychology.” In September 2011, she will begin her second year as a Psychology Lecturer. Wieselquist commutes to USM from Newmarket, NH. She enjoys long distance running, participating in triathlons, and spending her limited free time with her family and friends.

Jennifer Wieselquist
One Student’s Story: Caryn Chipman

How did you become interested in computer science?

I was a New Media major at Orono, and it required some programming courses to see what that technology made possible. I realized it came naturally to me, and I became sort of a tutor for others in the major. The more I did, the more I realized that I just loved it. I had never considered computer science at all until this slight exposure to some programming prompted an interest in it. I decided to look into it.

How did you find your way to the computer science program at USM?

My husband Tracy and I had decided to move to southern Maine from the Bangor area, and as I had been in school at Orono for almost three years, it was natural to consider transferring to another U Maine system college. I started looking over the degree programs at USM and the computer science program in particular. I read the descriptions of the required courses and kept seeing “programming”, and I thought USM was where I wanted to be.

We decided to move less than two months before the fall semester. I had been taking courses at Orono that summer, and was enrolled for fall courses there. We actually moved less than a week before my first semester started. It was a last minute decision, and a crazy three weeks getting moved and starting school.

Did you have any trouble getting enrolled for courses?

Not particularly. There were seats available in a couple of the introductory courses I needed, and I was able to register for a couple of Core courses that I needed. The first semester was a little rough, but I made it to an orientation, and Professor Welty of the Computer Science Department was there and helped me. I had a number of courses from Orono, so although I was beginning in Computer Science, I was eligible to take some higher level courses in other majors.

Have you found your studies in the computer science program stimulating?

I would have to say I spent my first few years at Orono exploring my options and interests. I had three different majors. The Computer Science degree program is the first one that has challenged me, constantly. I thrive on it and love it. It keeps me going. I never feel bored with it. Before when I was trying different programs, I would become bored with one, and then look at another, and that’s why I changed programs so often. Since coming to computer science I haven’t even once thought about going anywhere else.

What do you find to be the most difficult challenges of pursuing your education?

I would say financing my education. All the research into what scholarships are available, and filling out the forms, and writing the essays, and getting references take a lot of time.

Maintaining the required course load along with a job is a difficult balance. On top of that, I have a lot of family obligations that consume time as well. Financing my education and managing my time well have been my biggest challenges, but it will all be worth it.

There are a lot of different areas Computer Science, operating systems, web applications, and so forth. Is there any one that appeals to you more than others? Have you thought about your future career?

Unfortunately, even though I am close to graduating, I have not been able to pinpoint one area over others. Most recently I have been leaning towards computer forensics and computer security. I’ve been more exposed to security issues through the ethics course and our meeting with Admiral Leigher a few weeks ago. It’s fascinating and seems challenging, which sparks my interest.

I may end up as a teacher some day. I started off as an education major, and often find myself in a tutoring role. I keep thinking I would love to teach on a college level. I don’t have any idea what that entails. I’m still up in the air. It’s a little scary that I haven’t fixed on a specific area, but I’m having a great time.

I know you have been a tutor for us. Has that influenced your interest in teaching?

Yes, I like doing it. The students seem to be drawn to me and I to them. It just works out.

Teaching at the college level would at most places require minimally a master’s degree. Have you considered graduate study? Our faculty regards your work highly, and would surely recommend you.

I will definitely be going for a masters, and maybe even a doctoral degree. I would like to find a way for some financial assistance with that. I have to think about the financial aspect. There will probably be a break between my bachelor’s degree and any further education.

It would be ideal if I could find work with a company that was willing to help pay for more education.

Women are underrepresented in engineering disciplines such as computer science. Why do you suppose that is so?

I can’t speak for all women, but for me it was a lack of belief that I could succeed in fields of mathematics or science. I don’t know if it’s the old stereotype or exactly what contributes to a lack of confidence, but I know I had very little confidence in my abilities. Once I decided to go back to school, it boosted my confidence.
The Onward program at Orono hands down provided me with more self-confidence than I had in my life. Until I had that self-confidence I never would have considered computer science or anything that technical. I would have regarded them as masculine fields, but now they are not so intimidating.

Tell me more about the Onward program.

It’s geared towards non-traditional students who have been out of school for a while or like myself had a GED. My mother-in-law had gone through it, and she recommended it. They helped me every step of the way, from the application process to picking out courses. They had some Onward orientation classes, group outings and family building activities. It gave me a safe haven for my first few semesters. There were some conventional, college age students in it, but it was mostly for older, non-traditional students. It was exactly what I needed.

What ideas do you have to encourage more women to pursue studies in technical fields?

I think that if we target women and go after them for scientific disciplines, that might be a little intimidating. A boost to a woman’s self-confidence is the best thing any one could give. I’m sure men deal with self-confidence issues, but with most women I know, it’s worse. We take everything personally and as a reflection of ourselves. To get more women involved in technical fields would be to heighten their awareness of their own abilities and to help them believe in themselves, which means to help them see that they can compete and do the same course load as anyone else out there.

Women need to know that they are just as capable as everybody else. I think if we can let our women know this as they become young adults, right through elementary, middle, and high school, and treat them the same as the guys, they are going to have the same aspirations as the boys. I think it takes a long line right from the beginning.

When I was a freshman in high school, I wanted to be an architect. I was immersing myself in math and CAD courses, areas that all of my female counselors told me was a man’s world. One even told me that my plan to go to college in an architecture program was out of my league. A lot of people contributed to squashing those dreams for me, which didn’t help with my confidence. It’s taken time and boosting for me to realize that what I heard in my past was not going to affect my future.

What would you say to a woman who is interested in computer science, but hesitant?

I would tell any woman out there that if what most people considered to be an outdated high school dropout can do it successfully, then anyone can do it.

At 17 years old I dropped out of high school and didn’t think I could succeed along the education path that I had imagined for myself as a child. When I was a kid I wanted to do well in school and be the first one in my family to go to college and get a degree. By the time I was 25, I was really unhappy with the way things were going for me. After talking to my mother-in-law I decided on a new path.

Now I’m in a field that is exciting and I’m excelling in it. I feel great about it and believe any woman can do it.

David Briggs, can be reached at briggs@usm.maine.edu.

---

**Cyber Security Expert Returns to USM**

In March, students from the departments of computer science and engineering, along with ROTC and political science students, joined a roundtable with Admiral William E. Leigher, a 1980 political science graduate of USM. An Appleton, Maine native, Admiral Leigher is one of the nation’s foremost military experts on cyber-security. He came to USM to meet with students, alumni, faculty, staff, and the region’s business leaders, and was the featured speaker at the March monthly USM Corporate Partner’s Breakfast, discussing “Cyber Threats and National Security. The admiral was also the featured guest at a USM Alumni Association/Sigma Nu Fraternity reception.

Leigher received a Master in National Security and Strategic Studies in 1994 from Naval War College, and is currently Deputy Commander, U.S. Fleet Cyber Command / U.S. 10th Fleet. During his long naval career, Leigher completed two deployments which included combat action during Operations Desert Storm, Desert Shield and Southern Watch. He wears the Defense Superior Service Medal, the Legion of Merit, the Meritorious Service Medal (three awards), the Navy Commendation Medal (three awards), the Navy Achievement Medal (two awards) and various unit and campaign medals.

Robert Boothe, chair of the Department of Computer Science, can be reached at boothe@usm.maine.edu.
York resident Brian Hartsock and fellow graduate student David Roberge of Portland joined Professor Bruce MacLeod’s computer science software development team in January 2010.

Hartsock, originally from Rome, Maine, has lived in Maine all his life. He is currently half-way through the masters program in computer science at USM and will be graduating next May. He earned his undergraduate degree at USM in May of 2010. Roberge is originally from Auburn. He earned his undergraduate degree at USM in the Fall of 2009, and expects to complete his Masters this December.

Hartsock explained, “I took a class with Professor Bruce MacLeod one semester and he was impressed with my work. He then came to me in December of 2009 and introduced me to the Mobile Technology Community Health (MoTeCH) and International Development Research Center (IDRC) projects that he was working on.” Hartsock was interested and eager to start working on a real world project, figuring that working on a project of this caliber would provide invaluable experience. He agreed to become part of the development team and then began to work in the master’s program. He started working on the IDRC project in January of 2010.

Roberge said that he met with MacLeod shortly after receiving his undergraduate degree. MacLeod explained what the project involved, and Roberge considered it a good opportunity. “I think it’s great that we communicate with people from Nigeria and, for a while, Tanzania. The collaborative effort has been a learning experience, and has been very rewarding. Our project is to build a health and demographic system (HDS) to pilot in Cross River, Nigeria. We are piloting the system to help improve the health system in Nigeria.”

According to Hartsock, “We are working on the OpenHDS, which is an open source web-enabled health and demographics system. These systems are primarily concerned with monitoring the general population in a study area. They record and maintain information about individuals in a fixed geographical region such as new relationships, births, deaths, migrations, residencies, and the households in which they belong. Collecting this type of information is a large effort and is helpful for many health studies. HDS systems can help clarify the causes and consequences of mortality and illness in developing countries. They’re helpful in health interventions since the effectiveness of health services are determined by household social and behavioral factors. The OpenHDS is currently being field tested at the Ifakara Health Institute in Tanzania and the Cross River State in Nigeria.”

Hartsock added, “It has definitely been an eye opening experience for me. One of the developers from Nigeria came to USM last summer, and it was great to finally meet someone with whom we have been communicating for so long. This type of work has introduced me to many new things outside of the computer science realm. This project has definitely strengthened my abilities as a software developer.”

Three master’s level students worked on the original software development project: Matt Blanchette, Brent Atkinson and Frank Brooks, while MacLeod provided the technical leadership. The MoTeCH system is now in operation in two impoverished districts in the Upper East region of Ghana, with a national trial in the works. MacLeod’s team expects to continue to update and improve the software to maintain their current well-placed strategic position.

MacLeod’s team uses the OpenXData mobile application in both the MoTeCH project and the OpenHDS project, and there has been considerable synergy between all three of these projects. OpenXData is an open source application that focuses on the problem of collecting data using low cost mobile phones. It includes a visual designer that allows forms to be created without programming and it has the capability of supporting multimedia input including image, voice, and GPS coordinates.

The OpenHDS solves a problem that MacLeod previously worked on as part of his activities in Ghana and in developing the HRS2 software. Many research sites around the world use the HRS2, but advances in web technologies and mobile data collection have made the system that MacLeod created 15 years ago less effective. These sites and the INDEPTH network (an international network of 31 field sites in 17 countries) have encouraged him to revisit this problem in light of the new opportunities.

The grant from the IDRC allows MacLeod and his student associates to build an extensible, web-based application that supports input from mobile devices and is capable of managing a rich set of individual health data. The $435k two-year project provides support for some of MacLeod’s time, grad students
Hartsock and Roberge, and a Nigerian computer scientist, Ime Asangasi. In addition, there are sufficient resources for computers, travel, and conferences.

In the first year of the project, the USM team developed a solid prototype and they look forward to adapting the prototype for a fully functioning system for the Cross River field station in Nigeria this year. MacLeod traveled to Nigeria twice over his sabbatical period and met with donors, faculty from the University of Calabar, and Nigerian Health ministers. In addition, he traveled to Pune, India for the INDEPTH annual conference.

All three projects together have resulted in approximately $900k in funding to USM over a two year period. The projects are positioning the Computer Science Department at the University of Southern Maine as a place where challenging and innovative health information projects can be successfully developed. On a more basic level, the grants provide faculty and students interesting and worthwhile problems that can only be solved by exercising all the skills that are part of high level training in computer science. Sabbatical release time is pivotal to successful collaboration in projects like this, allowing enough time for travel, development, and active participation and collaboration in workshops and conferences.

Professor MacLeod has used his sabbatical research to improve his courses. During the fall 2010, his Advanced Object Oriented Design course was completely overhauled with new, up-to-date information about enterprise level technologies and design. For the spring 2011 semester, he changed the book for the Object Oriented Design course because the new text had a more comprehensive approach to solving many of the issues and complications his team had experienced first hand in the projects. MacLeod proposed a new graduate level course on software architectures to the department and he expects to teach this course in the next academic year. Finally, he is conducting two distinct independent studies with graduate students that use health information systems problems and technologies to motivate and focus intellectual effort.

MacLeod acknowledges the support of the University for providing the sabbatical opportunity, course release time and research space that help set the stage for this work.

Find more information about these projects at:

- MoTeCH - Columbia University Mailman School of Public Health site: http://www.mailman.columbia.edu/academic-departments/population-family-health/research-service/mobile-technology-community-health
- OpenXData (www.openxdata.org)
- OpenHDS (http://openhds.rcg.usm.maine.edu/wiki/display/openhds/Home)

Bruce MacLeod can be reached at macleod@usm.maine.edu
Student Team Wins GE’s US Lean Challenge

A University of Southern Maine team of six industrial technology and mechanical engineering students has been named the winner of GE’s nationwide student competition, the “US Lean Challenge 2010.” Representatives from GE made the announcement at a ceremony held earlier this year on USM’s Gorham campus.

“US Lean Challenge” partnered student teams across the country with local GE Industrial Solutions’ businesses. The GE businesses provided students with business overviews, GE-developed Lean Manufacturing training, and on-site Lean coaching. Student teams spent 12 weeks applying recently acquired Lean Manufacturing principles and tools to a pre-determined project. At GE’s Auburn plant, the USM team was asked to apply Lean techniques to the manufacturing of an industrial circuit breaker. All teams presented their final project to a panel of GE Industrial Solutions’ leaders as they competed for a grand prize of $500 per student on the winning team.

A total of seven student teams across the country were selected to work on projects at GE facilities in Mebane, NC; Salisbury, NC; Morristown, TN; Selmer, TN; Mankato, MN; West Burlington, IA; and Auburn, ME.

The customer-centric principles of Lean Manufacturing (often referred to as “Lean”) are rooted in waste elimination. Through the elimination of waste, total costs and cycle times decline, while quality and customer satisfaction improve.

Working under the guidance of GE’s Barry Fuller, Quality Process Engineer and the Auburn plant’s Lean Leader, the students utilized Lean’s “single piece flow” method. By utilizing single piece flow, a plant is able to work on one product at a time, thereby reducing the space needed to manufacture the product as well as reducing inventory, improving cycle times, and improving quality – all elements contribute to improved customer satisfaction.

“We were very impressed with the energy and enthusiasm of these students,” said GE’s Fuller. “They worked extremely hard during the 12 weeks on a technically challenging project.”

“To get this type of hands-on, real-world experience in a manufacturing plant is just invaluable,” said John Condon, a junior mechanical engineering major from Sumner. “We had a lot of help from a lot of people,” said Condon, “both here in the plant and back on campus.”

Other members of the USM team, all of whom participated in the final presentation to GE, included: Brian Beach, a junior industrial technology major from Augusta; Joel Gulstrom, a senior mechanical engineering major from Limington; Jeffrey Laughtan, a junior industrial technology major from West Paris; Jason Richardson, a junior industrial technology major from Mechanic Falls; and Harrison Sheldon, a junior industrial technology major from Cumberland. Two of the six team members transferred to USM from Central Maine Community College, while a third transferred to USM from Southern Maine Community College.

“This is a perfect example of what we mean by giving students opportunities to make connections between what they learn on campus and the careers they are interested in pursuing,” said USM President Selma Botman. “Congratulations to these students for taking full advantage of this opportunity and a special thanks to GE and to our faculty and staff for making it possible. We look forward to continuing this partnership with GE.”


Mark Jacobs, Wind Tunnel Research

Mark Jacobs, undergraduate student in mechanical engineering, presented his summer 2010 research project at the 2011 Thinking Matters event. The purpose of his research, was to compare the operation, efficiency, and modeling of three types of wind turbines, horizontal, shrouded, and vertical. Jacobs performed the tests using a Pitsco Wind Tunnel, and associated measuring instruments. He did his modeling using both SolidWorks and Comsol fluid simulation software, and produced data and animations from his simulations. Designs were provided by three large reputable wind turbine manufacturers.
In celebration of Earth Day, members of the Department of Environmental Science Student Group decided to dedicate their morning getting dirty in the woods. Partnering with the Portland Water District (PWD) at their Sebago lake ecology center, the goal was to clear trails through the center’s woodlands.

Meeting at 9 o’clock, Lynne Richard, PWD’s Environmental Educator led a tour of the center’s current trails, noting suggested areas of development. One area had the beginnings of secondary succession, overgrowing with small vines and pine trees. Another area was a valley between two hills, where delineation was needed to minimize impacts of the surrounding area.

Throughout the morning, the group used hand tools to trim branches, remove obstacles and improve the trail, making it more attractive for potential visitors.

The trails are open to the public 7 days a week, and it’s a great opportunity to spend a few hours in the woods. The ecology center is open during the week, with PWD employees (some USM graduates) available to educate visitors on how the PWD works, and its aim at conserving woodlands around the Sebago lake watershed, and show them the source of the water they use every day.

Posted below is a link from WMTW’s news report on the group’s work. The photos provided are from the first area’s secondary succession removal and trail delineation.


Robert Sanford, chair of the Department of Environmental Science can be reached at rsanford@usm.maine.edu.

An excerpt from Jacobs’ presentation explains, “A wind turbine converts the energy of wind into kinetic energy. If the mechanical energy is used directly by machinery, such as pumping water, cutting lumber or grinding stones, the machine is called a windmill. If the mechanical energy is instead converted to electricity, the machine is called a wind generator, wind turbine, wind power unit (WPU), wind energy converter (WEC), or aerogenerator. Wind turbines in locations with constantly high wind speeds bring the best return on investment. With a wind resource assessment it is possible to estimate the amount of energy the wind turbine will produce.”

Jacobs’ work adds to the important knowledge base of alternative energy, and was done under the mentoring of Professor James Masi, with additional support from the Eastern Alliance for Science and Technology (EAST). Thinking Matters is a one-day, once-a-year event held in the spring, which highlights the research projects going on all year long in departments all across campus.

Mariusz Jankowski, chair of the Department of Engineering, can be reached at mjankowski@usm.maine.edu.

Professors Travis Wagner and Daniel Martinez of the Department of Environmental Science have begun engaging a broad community in USM’s new Applied Energy Education Initiative. On March 21st, the Department hosted a meeting for interested community members to introduce the new initiative that stems from a National Science Foundation education grant from the “Transforming Undergraduate Education in STEM” program.

After introductory remarks from President Selma Botman and Dean Andrew Anderson, Department Chair Rob Sanford, Wagner, and Martinez presented the newly approved university minor and certificate in Applied Energy. The core of the education initiative is to provide both USM and continuing education students with tools in assessing and implementing energy efficiency and renewable energy strategies in Maine.

At the meeting, the Department of Environmental Science faculty facilitated break-out sessions with community members representing education, government, private, and not-for-profit sectors to get specific input on the skills on which the program should focus to prepare students for the green jobs sector, still in its infancy.

Daniel Martinez can be reached at daniel.m.martinez@maine.edu.
Ben Towne, World Class Athletic Trainer

University of Southern Maine faculty member Ben Towne has been awarded The Maine Campus Compact’s Donald Harward Award for Faculty Service-Learning Excellence. The Harward Award recognizes faculty who integrate community or public service into the curriculum and who work to institutionalize service-learning by making public service an integral part of their teaching.

The Harward Award is named for Donald W. Harward, founder of Maine Campus Compact and former board member of National and Maine Campus Compacts. The Maine Campus Compact is a coalition of 18 member campuses whose purpose is to catalyze and lead a movement to reinvigorate the public purposes and civic mission of higher education.

Towne has also been awarded the Outstanding Faculty Involvement Award by the USM Leadership Development Board and the Division of Student University Life. At the annual gala, his recognition included “As a lecturer for the Athletic Training Education Program, Towne strives to provide his students with more than just the basic requirements, and it is what he does outside his realm as Clinical Coordinator, which makes him truly deserving. A teacher, mentor and friend to all students in the major, he has an open door policy with no student ever turned away if he can help it. Towne brings passion, commitment, enthusiasm and pride to ATEP and to USM.”

Towne says that his role in the classroom is to continually challenge his students, even those who are doing really well. “You have to balance that with being there for them when they’ve had a tough day. You want to be student-friendly without diminishing the standards of the program.” He also says that he is surprised that so many of them are able to work 40 hours a week, study, balance courses, a load of 150 clinical hours per semester, and still be passionate about what they’re doing. “They’re really resilient and committed to their education,” he says. “The most memorable ones also have the desire to do more. They need 150 clinical hours, but they want 170. They want to gain as much experience as possible so they can land that job they want when they leave here.”

Towne’s work as USM faculty in the Athletic Training Education Program has included service learning since 2007. He and his students have partnered with the local non-profit organization Partners for Rural Health in the Dominican Republic, as well as the existing School of Nursing and Hispanic Studies program to provide an interdisciplinary service learning initiative to the Dominican Republic. He travels with athletic training, nursing, and Hispanic studies students twice a year to help provide care, alongside nursing and Spanish faculty to those less fortunate.

Towne has advocated both regionally and nationally for the inclusion of service learning into athletic training curricula. He has presented locally at the Maine Athletic Trainers’ Association, and also presented nationally, in 2008 and 2010, at the National Athletic Trainer’s Association (NATA) Annual Meeting and Clinical Symposia, in St. Louis and Philadelphia, respectively. His topics have included “Promoting Ethnic Diversity via Cultural Immersion,” and “International Service Learning in Athletic Training Education”.

Most recently, Towne had his editorial, “International Service Learning in Athletic Training: It’s About Time” published in the October 2010 edition of the Athletic Training Educator’s Journal. He also serves on the NATA’s International Council, as an advocate for the inclusion of service learning into the profession of athletic training itself.

“International service learning is not widely practiced yet in athletic training education and I truly hope that faculty and programs recognize the impact service learning courses can have on students, professionals, and the public they will ultimately be caring for,” says Towne.

Towne travels extensively, also serving as a volunteer ATC for the United States Bobsled and Skeleton teams for the past five years. He provides volunteer medical coverage on the World Cup Tour and the World Championships, and is credited with the athletes having “a very productive and healthy year.” Professor Towne traveled in February to work the 2011 World Championships in Konigsee, Germany, and has been invited to participate in next year’s world cup season which ends in Lake Placid, NY with the World Championships in February, 2012.

Benjamin Towne can be reached at btowne@usm.maine.edu.
Twice each year, the School of Nursing community engages in an important and uniquely intimate ceremony. The Nursing Convocation is a ceremony that celebrates the academic accomplishments and graduation beyond the usual University commencement exercises. In the spring, it is held on the afternoon of the University’s graduation.

This spring, School of Nursing Director Krista Meinersman first recognized Vi Palmacci, a long time supporter of the School of Nursing, teacher, preceptor and now a major funder of nursing scholarships. Each year, she provides the roses that the graduates receive as he or she crosses the stage.

The ceremony itself, called the “pinning ceremony” includes two important traditions, one from academia and one unique to nursing. The first is the hooding ceremony, which is an academic tradition to recognize scholarly achievement beyond the baccalaureate level. The color of the outer lining of the hood denotes the field of study represented by the degree, apricot for nursing, and the color of the inner lining of the hood denotes the institution granting the degree, for USM this is blue.

The second tradition is unique to nursing and is the awarding of the nursing pin. The nursing pin has served for over a century as a mark of distinction, of training and of excellence. A school pin has long been something that is worn with pride. The USM pin is a silver circle with blue lettering and displays the USM Logo in the center. The pin represents USM’s three campuses with the three pillars. The pillars’

flame shape suggests a torch which is commonly associated with education and knowledge. The flame shape also represents illumination, brilliance, and change.

A charming and significant gesture of this part of the ceremony is when family and friends are invited to participate by actually “pinning” their graduate. Those special people who stand with nursing students through their years of hard work and study, and into their careers for years to follow, are recognized in a special way for the important part they play in the education and continuing success of these graduating nurses.

Krista Meinersmann, director of the School of Nursing can be reached at kmeinersmann@usm.maine.edu.

The School of Nursing, the Department of Recreation and Leisure Studies, and the Department of Exercise, Health, and Sport Science are renowned for actively engaging with the community. Here are some examples of how these members of the College of Science, Technology, and Health are making a difference.

The Clifford School Partnership
Nursing students teach health care related topics and work with children who need special attention. Every nursing student mentors a Clifford student, one on one, weekly. Nursing students also work with the gym teacher, occupational and speech therapist, and the school nurse, and assist in putting together the yearly Health Fair.

The Casco Bay Fishing and Island Community Partnership
Working with the people living on the Casco Bay islands or with those working in the commercial fishing industry, Nursing students participate in one direct care activity per semester, for example, a flu shot clinic, a health screening clinic, or a health education program in an island elementary school. Students may also participate in fund raising activities to purchase supplies and equipment for screening clinics, gather health data from the area, or assist in the planning of bringing clinics to the island populations.

The Maine Medical Center Elderlife Program
Nursing students work to improve and maintain the health of Portland area seniors. The program focuses on maintaining the elderly patient’s independence, physical and cognitive functioning and spiritual well-being. Students may also be involved with the planning and execution of community-based health programs focusing on the elderly.

Sagamore Health Clinic
Since 1991, the School of Nursing and Sagamore Village have worked together to provide care for Sagamore Village’s roughly 500 low income residents. The Sagamore Health Resource Center provides primary care, public health and mental health services for the residents of Sagamore Village, and is managed by faculty from the School of Nursing in collaboration with the residents, Portland Housing Authority and Maine Medical Center. Students, in partnership with Sagamore residents, assess community needs and develop community-based interventions.

Continued on page 14
The University of Maine System Board of Trustees has given the University of Southern Maine approval to launch a Doctor of Nursing Practice (DNP) degree program. USM is accepting students for the fall 2011 semester.

The USM program will be the only one of its kind in northern New England at a time when the DNP is becoming an increasingly popular and sought after credential. According to the American Association of Colleges of Nursing, from 2008 to 2009, the number of students enrolled in DNP programs increased from 3,415 to 5,165. Currently, there are 120 programs in the nation that offer the practice doctorate in nursing, an increase of 103 such programs since 2006. Another 161 institutions are considering, or are in the actual planning stages, for development of a DNP program.

It is also anticipated that the DNP will be the required credential for all advanced practice nurses by 2015, according to a policy approved by the American Association of Colleges of Nursing. The DNP is practice-focused, and consequently provides nurses with the advanced leadership and management skills needed as a part of day-to-day operations in healthcare delivery, unlike a Ph.D. in nursing, which prepares one for careers in research.

Those holding this terminal degree will be qualified to respond to the pressing need for advanced and specialized nurse professionals. These include professionals involved in direct care of individual patients, management of care, administration of nursing systems and the development and implementation of health policy.

“USM has a central role to play in educating nurses for the 21st century,” said USM President Selma Botman. “Given the growth of DNP programs and the ever-increasing complexity of health care, the launch of this program is a natural fit with our mission of shaping the future of this region.”

USM, home to the state’s largest nursing program, has 441 students enrolled in undergraduate nursing programs this fall and 120 students enrolled in master’s nursing programs. The program is considered a national leader in offering different pathways to a nursing degree, among them a master’s degree program for those who earned an undergraduate degree in another discipline. USM Nursing also has been cited for its use of advanced simulation technology that helps prepares students for real-life, clinical experiences.

Krista Meinersmann, who joined USM last year as director and associate professor of nursing, has noted, “I have found the faculty, staff and students to be enthusiastic supporters of quality nursing education who are committed to providing quality health care. There’s a track record of innovation here that is exciting.”

Krista Meinersmann, director of the School of Nursing can be reached at kmeinersmann@usm.maine.edu.

---

Nursing and Health Professions Contribute to the Community  Continued from page 13

Parkside Partnership
Students have an opportunity to learn about the needs of Maine’s most densely populated, ethnically diverse and economically challenged community. Students help plan interventions for the Parkside community, such as HeadStart health screenings, and Night Light youth programs. Students also implement health oriented activities and interventions such as Matter of Balance.

Bayside Partnership
Students work with existing resources in order to work toward the empowerment of disadvantaged populations. In the past, students have been involved in projects that have included work with homeless teens, screening of older adults in public housing, home visiting of Hospice patients, working in the local soup kitchen, developing curricula for the National Youth Sports Program, collecting donations and providing Thanksgiving baskets to local families. Currently, students are developing a reading program for children and young adults living in low income housing and the family shelter, working with a group to expand the community gardening project at the Oxford Shelter, and working with teachers, nurse practitioners and coaches to develop a health fair at the high school.

International Nursing:
The USM Health Outreach Project
Students spend at least two weeks in the Dominican Republic working in teams of students and interpreters, working together with faculty and preceptor support in daily clinics, health education chats, and home and hospital visits. Students learn about the needs of this population and seek out donations of foods or medicines and supplies that have been identified as needed. Work is done with the Hispanic and immigrant population in Maine to forge ties with this partnership.

Greater Portland Older Adult Partnership
USM students collaborate with local health agencies and service organizations to assist low-income older adults in the Portland and Westbrook area. Students have participated in flu clinics, food drives and distribution, medication disposal programs, and much more. Students have also been trained as Matter of Balance coaches. Students learn about the role of home care nurses and the challenges faced by older adults managing illness at home.

Bonnie Farmer
As a long time advocate for older adults, Professor Farmer is actively engaged in research investigating the needs of daughters and sons caring for aging parents. Other aging-related research and scholarship include exercise and fall prevention, physical...
The purpose of the University of Southern Maine School of Nursing (USM) and Maine Medical Center (MMC) collaborative is to strengthen the link between clinical and classroom teaching and to increase capacity in the undergraduate nursing program. MMC is looking to ensure a workforce sufficient in both quantity and competence to meet the demands of a complex and increasingly technologic workplace. USM is looking to create a sustainable educational model which ensures quality of educational outcomes and has the potential to build a next generation of nurse educators. USM and MMC are also looking to develop a strong and ongoing partnership to provide opportunities for future endeavors, research, and scholarship.

In partnership we have created this vision:

Through academic and practice partnership, we develop innovative, high quality and sustainable models of nursing education and practice to meet the community’s need for nursing.

The work has been influenced by research in complexity science; state, regional and national initiatives on partnerships between practice and education; and the research from the Carnegie Foundation on the professions that promotes a new vision for nursing education.

The pilot project we developed is designed as a cohorted, teaching teams approach that provides focused laboratory, simulation and clinical experience tightly connected to one another and to classroom teaching. A team of teachers work together to develop each of four clinical semesters. The teaching team is composed of two clinical faculty provided by MMC and USM.

Krista Meinersmann, director of the School of Nursing can be reached at kmeinersmann@usm.maine.edu.

activity in later life and pedometer based interventions for older adults in the community.

Christopher Scott
Professor Scott’s research agenda focuses on the energy expenditure for strength, speed, and power related activities. In his 9 years at USM he has additionally published 16 articles in peer reviewed journals, mentored over 40 undergraduate research projects and has served on the University IRB, Research Council, College Peer Review, has been the co-director of Thinking Matters and is a former Chair of the Exercise, Health and Sport Science department.

David Harris
Professor Harris has been working with a team headed by Janet Blum, to investigate the impact of soda consumption and access to soda on the obesity risk of Maine high school students. He has also been working with the Nutrition Center of Maine to study food insecurity and the impact of the food environment on access to healthy food in Lewiston, Maine. Additionally, David has been working with Lois Hamel, to study the impact of a mobile blood pressure and blood glucose screening program designed to bring health screening services to rural Mainers.

Linda Samia
Professor Samia is the principal investigator for the Maine Savvy Caregiver Project (MSCP) and the MSCP-Enhanced. Samia is responsible for evaluating the translation of the MSCP, an evidence-based six-week psychoeducational training for caregivers of persons with dementia, designed to improve caregivers’ knowledge, skills, confidence and attitude, with a priority on rural reach.

Janis Childs
Professor Childs serves on, and was the original co-founder of, the Board of the International Association for Clinical Simulation and Learning. This ten year organization has become the leader in simulation in nursing education. Childs also works on a committee to define the standards of practice for simulation whose work will soon be completed and published internationally.

Carla Randall
Professor Randall is currently beginning data collection for a collaborative education project between USM-SON and MMC. She, working with Susan Yetter, has received IRB approval for a research project exploring the experience of undergraduate nursing students when using a recording assignment to enhance learning of therapeutic communication.

Continued on page 16
Science Building Gallery Stroll
Student gathers portraits of psychology’s pioneers

Mary Sohl ’09 became interested in psychology’s pioneers while taking History of Psychology with Professor Deb Johnson. The following semester, while serving as Johnson’s teaching assistant, Sohl suggested filling the bare white walls of the Psychology Department office with portraits of historical figures. A history buff, she had framing experience and a knack for spotting attractive, inexpensive frames at yard sales and auctions. With guidance from Johnson, Sohl assembled a group of portraits, including some obtainable only from archival sources.

To the historically educated eye, the arrangements of the portraits depict key (or imagined) developments in the field of psychology Darwin is located centrally, surrounded by the psychologists who fostered the study of adaptive mental and behavioral processes and those who made measurement of individual differences (e.g. intelligence) a cornerstone of the discipline. Gustav Fechner and Wilhelm Wundt, typically celebrated as founders of scientific (experimental) psychology, are portrayed directly in line with their physiology forebears, and directly followed by twentieth century experimental psychologists. The discerning viewer will notice a small unfamiliar portrait below Fechner and Wundt—this is E.G. Boring the “author” of a linear, celebratory and distorted account depicted in the gallery; an origin myth still found in many textbooks.

Nursing and Health Professions Contribute to the Community
Continued from page 15

Benjamin Towne
Professor Towne offers the only International Service Learning course for athletic training students in the nation, out of 330 accredited programs and has presented nationally on three occasions over the last three years. He also serves on the International Council for the National Athletic Training. Additionally, he serves as the athletic trainer for the United States Bobsled and Skeleton teams.

Karen Croteau
Professor Croteau has served on the Executive Committee of the Main Governor’s Council on Physical Activity since 1998. She is also currently conducting a research project at Maine Medical Center involving a pedometer-based physical activity program for nursing staff. Health fitness students teach group exercise classes, work at the fitness center, and help train athletic teams on the Gorham campus.

Margaret Fournier
Professor Fournier is a board member of VNA/Hospice Home Health in South Portland and has been involved in the AFUM Executive Committee and AFUM Bargaining Council. She is also a Buddy at the Cancer Resource Center in South Portland. She, along with Helen Peake-Godin, has recently submitted an abstract to present a paper on serving vulnerable populations at the American Public Health Assoc. Annual Meeting.

Susan Yetter
Professor Yetter is the president of the Maine Nurse Practitioner Association. She has been heavily involved in working with the Maine star Board of Nursing in educating the APRNs in Maine about the Consensus Model to standardize practice, education, licensure and education for all APRNs. Additionally, she is working with Carla Randall on a research project based on teaching students therapeutic communication. She also maintains a small practice through Mid Coast Hospital which provides mental health services to people 60 years and older.

Ashley Moore
Professor Moore is the treasurer for the American Association of Heart Failure Nurses, an organization dedicated to advancing nursing education, clinical practice and research to improve heart failure patient outcomes. She is also a member of the newly formed legislative committee for the Maine chapter of the American Nurses Association, and is a member of the Signature Project Committee for the Junior League of Portland which is a non-profit organization of women committed to promoting volunteerism.

Krista Meinersmann, director of the School of Nursing can be reached at kmeinersmann@usm.maine.edu.
Many other facets of psychology are portrayed including, but not limited to pioneers of psychoanalytic theory, founders of clinical psychology, and well-known behavioral, humanistic and developmental psychologists. Other portrait arrangements, set off from the ‘mainstream’ as they historically were, depict several first-generation women psychologists and important African American psychologists.

After many hours of hard work, assisted by a friend who is a professional framer, the portraits were ready. Sohl worked with Johnson to design appropriate arrangements of the forty-five portraits. One Saturday morning Sohl, along with Professor Scott Brown and others, hung the portraits in and around Room 506 in the Science Building. Sohl’s inspiration had become a reality and remains a rich resource for faculty and students alike to experience critical history, science and art integrated in an attractive and informative collection of portraits of psychology’s pioneers.

While a gallery stroll would more likely happen in downtown Portland, or the USM Art Gallery in Gorham, the lesser-known gallery on the fifth floor of the USM Science Building features elegantly framed portraits of forty-five pioneers of psychology, including well-known psychologists and those who deserve much more recognition.

Note: The gallery features one current member of the USM Psychology faculty; labeled only as “famous psychologist” – you will need to stop by to learn who it is.

Deborah Johnson can be reached at djohnson@usm.maine.edu.

Please help to Support Students in the College of Science, Technology, and Health by making a gift For general purpose or designated to scholarships

Please mail your check payable to University of Southern Maine, to: USM, Advancement and Donor Services, PO Box 9300, Portland, ME 04104.

On the memo line of your check, please write “CSTH General Purpose,” or “CSTH Scholarships.” Your gift will help give CSTH students the best education possible.

If you have any questions, or would like more information, please contact Lori Arsenaault at 207-780-5142 or larsenaault@usm.maine.edu.

Esther Lee-Samia

In March, the University of Southern Maine celebrated the accomplishments of Esther V. Lee-Samia of Springvale, administrative assistant in the Department of Linguistics, at the annual Classified Staff Breakfast.

At the breakfast, President Selma Botman presented the 20th annual Distinguished Classified Staff Award to Ms. Lee-Samia, recognized not only for her administrative skills, but also for becoming completely immersed in her position in the department.

Although Lee-Samia held a bachelor’s degree in English from Northeastern University when she began working at USM in 2004, she earned another B.A. in linguistics with a concentration in American Sign Language/English interpreting from USM. She earned national certification through the Registry of Interpreters for the Deaf months after her graduation — a difficult accreditation students are told to attempt after working in the field for two years. She is only the second student in the history of the program to receive certification so quickly. Her interpreting skills allow her to effectively work with Deaf faculty members, the Maine Deaf community, and Deaf visitors to campus.

Esther Lee-Samia is a highly respected leader who spearheads many student activities, such as the ASL Club and annual Deaf Film Festival, which under her guidance now receives local and national attention. Lee-Samia also volunteers for the Cash Coalition’s ASL Tax Day, Sanford Kiwanis fundraisers, and USM’s Royal Majesty Drag Show.

Wayne Cowart, chair of the Linguistics Department, can be reached at cowart@usm.maine.edu.
Therapeutic Recreation Undergrad Climbs Mountains for a Cause

In January, therapeutic recreation undergrad Kaitlyn Oddy appeared on the television show 207 to tell the story of her trip to Africa on the “3 Peaks 3 Weeks” fundraising challenge to raise money for key African issues: the environment, education and health. Kaitlyn was one of 11 women participating, and raised just over $7,000. Kaitlyn’s team raised a total of $92,000. In her interview, she describes the lasting impression of having climbed Mt. Kilimanjaro, Mt. Meru, and Mt. Kenya, and developing life long relationships for a worthy cause. Now as an alumnae of the programs, Kaitlyn has a continuing place in this exciting program. “3 Peaks 3 Weeks” is part of the Peaks Foundation (www.peaksfoundation.org).


On April 29th, senior students in the Management and Professional Development in Therapeutic Recreation course hosted the Department of Recreation and Leisure Studies’ third student-hosted professional conference for recreation therapists. Professor Nancy E. Richeson was the keynote speaker in the event, titled “Evidence-Based Practice: It’s Time!”

Other presenters were Hilary Spears, and Heidi Blodget, (RT and the Recovery Model: The Role of the CTR in Inpatient Mental Health and Substance Abuse); Katherine Kroll, and Emily Wark (Welcome Home: Veterans No Boundaries); Holly Bean (Hospital Elder Life Program: Acute Care for Elders and Simple Pleasures); and David B. Jones, Ryan Francis, Nancy E. Richeson, (Professional Issues in Maine: A Professional Organization, Licensure, and NTRC Update).

The seniors responsible for organizing this year’s conference were: Ashley Ferris, Danielle Hays, Kristina Liguori, Elizabeth Little, Jessica Mayo, Dylan Nadeau, Emily Wark, and Joanna Weathers. Over 50 recreational therapy practitioners from throughout New England were in attendance at the event which was held in Hannaford Lecture Hall on the USM Portland campus.

William T. McCullough, chair of the Department of Recreation and Leisure Studies, can be reached at wtmccull@usm.maine.edu.

Follow us on Facebook and Twitter. Links can be found at: www.usm.maine.edu/csth
Construction Management Technology

Construction Management Technology major Chris Streifel scored in the 99th percentile on the American Institute of Constructors (AIC), Associate Constructor — AC exam. Joseph Sapp, Certification Manager for the American Institute of Constructors and Constructor Certification Commission wrote that “Christopher had a great score; so far I have seen only 2 out of the 1,300 tested in that range.”

USM's graduating Construction Management students all took this professional exam on Saturday, April 2nd. Those taking the exam included Kristen Carbone, Rodney Collard, Steven Greeley, Valerie Paquin-Gould, Bill Ryall, Matt Simon, and Chris Streifel. As a whole they exceeded the national average and had an exemplary performance.

The purpose of the exam is to identify practitioners possessing the highest standards of practice, proven skills and the prerequisite knowledge to manage the construction process. The purpose of The American Institute of Constructors (AIC) is to promote individual professionalism and excellence throughout the related fields of construction.

This eight hour comprehensive exam is administered by the Constructor Certification Commission. Students from all the leading schools of construction took this national exam. The exam tests the graduating students knowledge and ability in 10 specific areas of construction management including: Communication Skills, Engineering Concepts, Management Concepts, Materials, Methods, and Plan Reading; Bidding and Estimating; Budgeting, Costs, and Cost Control; Planning Scheduling and Control; Construction Safety; Surveying and Project Layout; and Project Administration.

David Early can be reached at dearly@usm.maine.edu.

Biological Sciences Update

Kay Roache-Johnson, Ph.D. candidate in Lisa Moore’s biology lab, presented research at a professional meeting (Ocean Sciences 2011 in San Juan, Puerto Rico) on February 24, 2011. Two biology undergraduates, Peter Jacobs and Abraham Lorrain, helped with the research and were co-authors with Kay and Lisa. The talk was titled Looking for Physiological Diversity Among Low Light-Adapted Prochlorococcus Isolates. The research is part of a NSF funded project.

Lisa Moore also accompanied two Maine Space Grant Consortium undergraduate fellows, Renee Sawyer and Jill Davenport, both biology students doing research in Prof. Moore’s lab, on a trip to NASA Ames Research Center, Stanford and UC Berkeley. The students visited with astrobiologist Lynn Rothschild at her lab at NASA Ames Research Center, and attended her lecture on Pushing the Envelope for Life: Environments for Life in the Universe at Stanford. They combined the trip with some research related to Jill Davenport’s project, in which the two USM students worked with a UC Berkeley colleague, astrophysicist and polar microbiologist, P. Buford Price, to run flow cytometry of melted polar ice looking for evidence of cyanobacteria. They were able to work out some methodology and correlate flow cytometric signatures between the two labs. They also had time to see the Pacific Ocean and redwood trees, as well as take a tour of Google Headquarters.

Lisa Moore can be reached at lmoore@usm.maine.edu.
## Recognition

This year, the College of Science, Technology, and Health recognized some outstanding students, graduates, faculty, and friends at the annual recognition events.

### SCHOLARSHIPS AND AWARDS

The following awards recognize the achievements of current students, through the support and generosity of our donors.

- **American Institute of Chemists Senior Undergraduate Award**
  - Melanie M. Miville

- **Boyne Foundation Nursing Scholarships**
  - Cathy J. Alexander, Sherene M. Bernier, Sarah M. Cosgrove, Nicole A. Garand, Irina G. Gottsova, Martha H. Harvey, Caitlin G. LaPorte, Laura R. Nusen, Lauren A. Wert, Tasha J. Zimowski, Kelly A. Cote, Nicholas J. Cyr, Jennifer Lee Sweeney

- **Brian C. Hodgkin Scholarship**
  - John N. Condon

- **Clifford A. Parsons Scholarship**
  - Joseph T. Pupecki

- **Community Health Services Scholarship**
  - Natasha M. Spline

- **CONHP Alumni Scholarship**
  - David R. Morin

- **Construction Management Association of America Scholarship**
  - Emily Mae Morris

- **Emily Baxter Neuwirth Award**
  - Naomi M. Chouinard

- **Dean Patricia A. Geary Memorial Nursing Scholarship**
  - Jane Gallaudet

- **Department of Exercise, Health, and Sport Science Scholarship**
  - Megan L. Kusche

- **Dr. Robert H. McRea, Jr. Memorial Nursing Scholarship**
  - Stephanie A. Cooke

- **Exercise, Health, and Sport Sciences Student Award**
  - Cristina A. Mountain

- **Governor’s Computer Science Scholarship sponsored by Wright Express, LLC**
  - Leela J. Higginbothom, Shanna A. Lovelace, Eric V. Rollins, Joshua D. Smith, Jeffrey A. Thompson

- **Hollis W. Moore Technology Award**
  - Jeridene C. Basko

- **Independent Order of Odd Fellows**
  - Angela L. Duxsey, Shanna A. Lovelace

- **Jack Eagleson Scholarship**
  - Caitlyn L. DellaTorre

- **James V. Masi Engineering Research Scholarship**
  - Samuel A. Harmon

- **Jesse Michael Garbarik Memorial Scholarship**
  - Drew J. Richards

- **John Ricci Fellowship at the Scripps Research Institute**
  - Jeremy Cunniff, Nicholas G. Mahoney

- **Katherine Cross Memorial Nursing Scholarship**
  - Julie R. Anderson

- **L. L. Bean Scholarship**
  - Miguel F. Barajas, Gordon W. S. Lane

- **Lawrence N. Cilley Technology Scholarship**
  - Gregory J. Hollands

- **Louis B. Woodward Scholarship**
  - Lauren P. Redmond

- **Mildred A. Roche/Alyce G. Greene Memorial Nursing Scholarship**
  - Cerise H. Humphrey

- **National Semiconductor Scholarship**
  - Kayla C. Artinyan (electrical engineering), John N. Condon (mechanical engineering), Patrick J. Seitz (mechanical engineering)

- **PolyEd Undergraduate Award**
  - Anthony A. Bullentini

- **Pratt and Whitney Scholarship**
  - Rachel A. Bukoveckas (mechanical engineering), Caitlyn L. DellaTorre (environmental safety and health)

- **Recreation and Leisure Studies Award**
  - Katelyn E. Nobert

- **Robert N. Miller Earth Science Award**
  - Kayla D. Kimball

- **Society of Manufacturing Engineers**
  - Jeffrey W. Vanidestine

- **Time Warner Cable of Maine Scholarship**
  - Jeffrey A. Thompson

- **Time Warner Cable of Maine “Women in Technology”**
  - Leela J. Higginbothom

- **Viola Palmacci Nursing Scholarship**
  - Lynn W. Nichols

- **William G. Hooper and Laura S. Hooper Scholarship**
  - Moira J. Rascati

- **Women’s Board of the Maine General Hospital Nursing Scholarship**
  - Stephanie A. Cooke, Jessica L. Cross, Sara C. Schrock

### OUTSTANDING STUDENT AWARDS

The following awards recognize the achievements of current students (undergraduate unless otherwise noted)

- **Applied Medical Sciences**
  - Naga D. Karri (graduate), Sandra S. Wise (doctoral)

- **Chemistry**
  - Donovan Lane (undergraduate senior), Nicholas G. Mahoney (undergraduate junior)

- **Computer Science**
  - Benjamin H. Gruba, Slawomir R. Bojarski (graduate)

- **Engineering**
  - Michael C. Schell

- **Environmental Science**
  - Sarah M. Hayes

- **Geosciences**
  - Sara E. Leedberg (senior)

- **Linguistics**
  - Kristen A. Hellewell (service award), Timothy C. H. Sturtevant (general award), Erin L. Sprinkle (ASL student award)

- **Maine Center for Toxicology and Environmental Health**
  - Catherine F. Wise (undergraduate), Amie L. Holmes (doctoral)

- **Mathematics and Statistics**
  - Diane M. Cormier

- **Physics**
  - Cody A. Goolsby, Trevor Sage

- **Psychology**
  - Andrew J. Reagan (academic achievement), Christine B. Peura (academic achievement and community service)

- **Technology**
  - Gregory P. Killmeyer

### OUTSTANDING ALUMNI AWARDS

The following awards recognize the achievements of current students

- **Applied Medical Sciences**
  - William D. Hastings ’99

- **Computer Science**
  - Christopher A. Mooney ’05

- **Environmental Science**
  - Jeremy J. Wherren ’97

- **Mathematics and Statistics**
  - Michael J. Dubois ’10

- **Technology**
  - Stephen G. Daniels ’90