Dear CS alumni, friends, and colleagues:

I am pleased to share with you that enrollments in our programs at all levels continue to grow. In particular, we now have over 500 undergraduate majors, the highest number in years. The department is also now in the process of reapplying for ABET accreditation. We were previously ABET accredited, but in 2009 the faculty voted not to seek renewal for various reasons. Prof. Emeritus Tom Costello is leading the reapplication effort.

I am delighted to tell you that the department graduated a total of 16 Ph.D. students in 2014, the highest number since the department began its doctoral degree program. The first issue of the department magazine, after over a year’s effort led by Prof. Yu Cao, is now in print. This magazine offers a comprehensive description of the department and will be used to help bring more visibility to the department and recruit new talent—students, faculty, and staff.

It was bittersweet when Prof. Jim Canning accepted his appointment to Dean of the Honors College, because he is now no longer a CS faculty member. Since then, two more important members of the department have made transitions: Prof. Georges Grinstein retired in December 2014, and System Manager Ken Kleiner took a new position in the university’s IT department in November 2014.

During their tenures, Georges graduated a large number of doctoral students and Ken kept our systems and networks running as smoothly as possible. Georges is now working on a startup company and Ken on network security. We wish them both success in their new endeavors.

I am pleased to report that Tuyen Nguyen was promoted to Ken’s position as the Systems and Network Manager in January 2015. We are currently searching to fill the position of Assistant Systems and Network Manager, and Prof. Benyuan Liu is chairing the search committee.

The department is also searching to fill two new tenure-track positions in the strategic areas of cyber security and data sciences (including visualization and cloud computing). Prof. Guanling Chen is chairing that search committee. We are also searching to fill two non-tenure-track lecturer positions. Prof. Haim Levkowitz is chairing that search committee.

This newsletter also includes other news items on faculty research activities and student and alumni achievements. I am sure you will enjoy reading them as much as I did. I am eager to hear from you about your achievements, thoughts, concerns, and suggestions on how to strengthen the UMass Lowell Computer Science Department for our students. I believe that a strong department will, in turn, help our alumni and make them feel proud of being graduates of our programs. If you would like to offer financial support to the department or to a specific program in the department, please specify that on your donation form.

Yours sincerely,

Jie Wang, PhD
Chair and Professor
wang@cs.uml.edu
978-934-3649
**Faculty Highlights**

**Yu Cao** is serving as Tutorial Co-Chair for the 2015 IEEE International Conference on Healthcare Informatics and as Workshop Co-Chair for the IEEE International Symposium on Multimedia.

**Yu Cao** and **Tingjian Ge** (co-PIs) and ECE Prof. Yan Luo (PI) have been awarded a $500K NSF grant entitled *FLowell: Accelerating Data-Driven Scientific Research at the Univ. of Mass. Lowell* to support research on cyberinfrastructures for large scale and distributed algorithms and systems, the core of data-intensive scientific research.

**Xinwen Fu** and **Benyuan Liu**, along with Ph.D. student Qinggang Yue, participated in a three-day interview by the science and education channel of China Central Television (CCTV) in December 2014. The interview will make into a 25-minute program on mobile security and privacy to be aired in April 2015. For more information, see ccf.cs.uml.edu/?q=node/111.

**Xinwen Fu** (PI) and **Kate Saenko** (co-PI) have been awarded a $250K NSF grant for an REU site called *HCISec: Enhancing Undergraduate Research in Modern Human Computer Interaction Security and Privacy*.

**Tingjian Ge** served as Program Chair of the Eighth Annual New England Database Day (NEDB Day), held on January 30, 2015, at Cambridge, MA.

**Jesse Heines** and his Music Dept. colleagues Gena Greher and Alex Ruthmann (now at NYU) conducted their 8th and final NSF-funded workshop on interdisciplinary teaching at the UMass Lowell Inn & Conference Center in January 2015. 178 educators (123 from higher education and 55 from K-12) have attended these workshops over the four years of the grant.


Data mining research on online dating conducted by **Benyuan Liu** and **Cindy Chen** with Ph.D. student Peng Xia has been reported in *MIT Technology Review* and *The Conversation*. See goo.gl/XSD3b9 and goo.gl/Txzfmk.

**Kate Saenko** has also received a $185K NSF EAGER award for her project *Quantifying and Reducing Data Bias in Object Detection Using Physics-based Image Synthesis*.

**Holly Yanco** has received two recent grants to support her research: a $51K Google Research Award for *Improving Disaster Response with Project Tango, Google Glass, and Robots*, and a $280K NIST Award for *Development of Standard Test Methods for Response Robots with an Emphasis on Training*.

And on a musical note, **David Adams** and **Jesse Heines** were featured in a university news story about their singing in a barbershop quartet. See goo.gl/1yJidL.
Professor Xinwen Fu highlighted as a “Rising Researcher”

Xinwen Fu was featured as a UMass Lowell “rising researcher” in a recent university web post describing his work with doctoral candidate Yinjie Chen on G-Searcher, “an indoor surveillance robot designed to help policing efforts in locating hackers and potential terrorists hiding in buildings.” See Chen explain and demonstrate the robot at youtu.be/GoAUbEJD10o.

For the full post, please see http://www.uml.edu/Rising/profiles/Xinwen-Fu.aspx.

Professor Kate Saenko hosts 50/50 Lecture by Dean Brodley of Northeastern University

Carla Brodley, Dean of Computer and Information Science at Northeastern University, visited UMass Lowell on March 12, 2015. Her visit was organized by Kate Saenko as part of the 50/50 Lecture Series program, which aims to increase participation and advancement of women in Science, Technology, Engineering and Math (STEM).

Dr. Brodley presented her research on applying machine learning to medical imaging for diagnosis and treatment of multiple sclerosis, epilepsy, and lung diseases, as well as geography: generating maps of global land cover.

The second part of the lecture was devoted to Dr. Brodley’s career path. She was an English major as an undergraduate at McGill University, and then worked as an actuary after graduation. She went to graduate school at UMass Amherst, where she "fell in love" with Machine Learning. She then became a Computer Science Professor at Purdue University, and Department Chair at Tufts University. Dr. Brodley now serves as Dean of Computer and Information Science at Northeastern University. On top of all that, she is raising a family of three boys!

Dean Brodley spent the entire day at UMass Lowell, speaking with faculty and students, discussing research and sharing insights, advice, and anecdotes to inspire emerging STEM professionals.

Fighting Back from Bone Cancer by Undergraduate Bri Gainley

In 2011, I was diagnosed with a rare form of bone cancer called osteosarcoma. Months of chemo and surgery later, I was finally ready to return to school and normal life. However, just three years later, I started feeling pain and swelling in my leg, just next to the spot where the tumor initially had grown. At the urging of my boyfriend and friends, I hesitantly went to the ER one night and got scans of my now very swollen leg. Confirming what I already suspected, my cancer had returned.

After a few months of chemo and hard conversations with my oncologist and surgeon, I made the hard decision of amputating my leg above the knee. This not only gave me the best chance of completely curing my cancer, but also of having a better leg to use for hiking, rock climbing, and the other activities I enjoy.

Getting the prosthetic I’d need for these activities would be difficult, however. Even with insurance, the amazingly high-tech legs cost thousands of dollars. I set up an account on GoFundMe, a crowdfunding website that lets users set up a donation page for anything ranging from personal illnesses to community projects. I was hoping to raise a few dollars from friends and family to help offset the cost of not only my new leg, but my rent and bills for a few months while I was in treatment, as well. My expectations were blown out of the water. I raised over $10,000 in less than a month! Thank you to my amazingly supportive and generous community of friends, family, and even strangers.

The incredible donations I received have enabled me to get one of the best prosthetic legs on the market right now. Next week I will be starting my training on it, and, as I continue to heal from my surgery and treatments, I will be getting back on my own new two feet thanks to the amazingly generous community of loving people that I’m surrounded by. I can’t wait to be back to my new normal life by the summer.

Editor’s Note: To contribute to Bri’s GoFundMe campaign, please go to www.gofundme.com/briandryan.
UMass Lowell CS Alumni Teaching at Northeastern

Three of our graduates are anchoring the undergraduate program at Northeastern University.

Jose Annuziato is a Lecturer and teaches theory, database systems, and Web development. Nat Tuck is also a Lecturer and also teaches theory, Foundations in CS and MapReduce (the heart of Hadoop), and the introductory CS course in a dialect of Scheme.

Martin Schedlbauer is a Clinical Professor and Director of the Northeastern Information Science program. He also teaches graduate and undergraduate courses in information science, data analytics, Web development, database systems, human-computer interaction, project management, software quality assurance, and empirical research.

Jose Annuziato, Nat Tuck, and Martin Schedlbauer at Northeastern University

Data Science and Big Data Analytics at EMC

by Beibei Yang, Ph.D., '12

I have been working at EMC Education Services for three years as a Technical Education Consultant and have created three courses on Data Science: a 1-hour course on “Data Science and Big Data Analytics for CxOs,” a 1-day course on “Data Science and Big Data Analytics for Business Transformation,” and a full 5-day course on “Data Science and Big Data Analytics.”

These courses are all part of EMC’s “open” curriculum, focusing on concepts and principles of technologies rather than features and functions of specific products. They constitute the Data Science track of the EMC Proven Professional certification.

I have also coauthored Data Science and Big Data Analytics, published by Wiley in January 2015. It formally introduces the Data Analytics Lifecycle and covers the breadth of activities, methods, and open source tools that data scientists use. The content focuses on technology concepts and principles that can be applied to any industry and environment.

I am currently working on a new specialist-level course entitled “Advanced Methods in Data Science and Big Data Analytics.” This course will cover many existing topics related to data science, such as Hadoop, Spark, Statistics, Natural Language Processing, Social Network Analysis, and Data Visualization.

But most of all, my husband Andrew Dufilie and I are proud to announce the birth of our son, Leonardo.

How *Not* To Celebrate Lowell’s Snowiest Winter in History!

When Martin Schedlbauer isn’t teaching at Northeastern, he likes to play hockey. Unfortunately, Martin got tripped up at a game at BU and went feet first into the boards, fracturing his fibula and tibia. Surgery and five screws were required to repair the damage. Ouch!

And Martin’s not the only casualty among our alumni this snowy winter. Gute Fernandes suffered a tibia plateau fracture at Killington when he spotted a beautiful white mound of snow at the side of the trail and thought it would be fun to “dash through it and make an explosion of white powder.” Unfortunately, the mound turned out to be super-packed snow, with “a density close to solid ice. It felt like hitting a bowling ball,” Gute reported. He ended up requiring screws to repair the damage, too. Ouch again!

Martin Schedlbauer and Gute Fernandes *NOT* enjoying their winter activities!
LinkedIn Updates and Connections

**Sahar Akbari**, BS ’05. Senior Software Developer at Five Star Quality Care.

**Damon Berry**, MS ’08. Senior software engineer on the personalization team at TripAdvisor, Newton, MA. Lives in Holliston, MA, with his wife and their two boys, Porter (3) and Foster (5).

**Dana Boisvert**, BS ’94. Software developer/analyst at MIT Lincoln Laboratory.

**Bob Czarnecki**, BS ’89, MS ’95 (BU). Advisory Software Engineer at Constant Contact in Waltham, MA.

**Laurie Wood Fernald**, BS ’90, MS ’94. Global Program Manager at RSA Security.

**Cynthia Geary**, BS ’83. Working in the semiconductor business writing application software. Started at Varian Associates in Gloucester, MA, and currently at Axcelis Technologies in Beverly, MA.

**Adrien Grise**, BS ’95, MS ’03. Project Manager for Soldier for Life - Transition Assistance Program (SFLTAP) at Fort Knox, KY.

**Ahmed Hafeez**, BS ’94. CTO, Camp Systems International, Merrimack, NH.

**Arthur Hamlin**, BS ’86. Senior SW Engineer. HP Storage Division.


**Tom Hillson**, BS ’94, MS ’99 (BU). Data Architect at Eastern Bank in Lynn, MA.

**Curran Kelleher**, PhD ’14. Drove cross-country in January, started as a software engineer at Alpine Data Labs, a Big Data Analytics startup in San Francisco, in February. Building out Open Source data visualization projects that are a continuation of my dissertation.

**Hou Peng**, MS ’14. Software engineer at UFA, Inc. in Burlington, MA. “Keep on rockin’ in the free world!”

**Daniel Picariello**, BS ’10. DOD contractor working overseas supporting the U2 program. Maintain and operate the ground processing systems for the SYERS sensor which are part of the Air Force Distributed Common Ground System.

**Georgette Pincin**, BS in IT ’14. MEAN stack engineer and independent UX consultant.

**Brian Rivard**, BS ’85, MS ’93. CTO, Semcasting, Inc., North Andover, MA. Living in Galveston, TX.

**Paul Senatillaka**, BS ’12. Traveled the world for a little over a year after graduation. Now a Senior Developer at Fruition Partners working on a SaaS solution in the IT Service Management space.


**Peter Sorrentino**, BS ’86, MS ’88. Science teacher in the Manchester, NH, School District.

**Pete St. Pierre**, BS ’89. Principal Product Manager for Oracle’s Internet of Things Cloud Service and President of the Internet Protocol for Smart Objects Alliance. Living in San Jose, CA, since 1990.

**Hengky Susanto**, MS ’04, PhD ’14. Post Doctoral Fellow at Hong Kong Univ. of Science and Technology. Current research area: data centric networking.

**Blake Skinner**, BS ’07, MS ’09. Senior iOS Developer at MIT.

**Matt Vaughan**, BS ’13. Doctoral student at Tufts University since September 2014. “I’m looking forward to a long career in CS research!”

**Chakreya Yeth**, BS ’13. Software developer at Towers Watson in Auburndale, MA. Been traveling the globe, visiting places like Anchorage AK, Phoenix AZ, Memphis TN, and internationally to Iceland.

Text Machine Lab News

Undergraduate R.A. William Boag and Ph.D. student Peter Potash of the Text Machine Lab for Natural Language Processing (directed by Prof. Anna Rumshisky) built a system which won 1st place on the “Topic-Based Message Polarity Classification” task at this year’s SemEval competition on Twitter sentiment analysis. They will present a paper on their work at SemEval-2015 this summer in Denver, CO.

Middle School Pathways in Computer Science Project

In September 2014, Prof. Fred Martin received a $1.2M NSF grant to support “Middle School Pathways in Computer Science,” a partnership between UMass Lowell, the Tri-City Technology Education Collaborative, Inc., and the Medford and Everett school districts to bring project-based, socially-relevant computing experiences to district middle school students. The project will support teachers in developing a middle school curriculum based on use of MIT App Inventor.
Several CS faculty were recognized for their research and creative work at a recent university symposium. The four of us pictured below were able to attend.


2014 Ph.D. Graduates


Edward Klein. The Visualization of Privacy Filters for Sharing Sensor-Based Health Data. Committee: J. Heines (advisor), G. Chen, B. Liu, L. Abdallah (School of Nursing). May 2014.


Kate Tsui. The Design of Telepresence Robots for People with Disabilities. Committee: H. Yanco (advisor), J. Drury (MITRE Corp.), D. Kontak (Crotched Mountain Rehabilitation Center), B. Scassellati (Yale Univ.). May 2014.

Nat Tuck. Implementation of Just In Time Value Spec-

NERVE Center News

Prof. Holly Yanco attended the 10th Annual ACM/IEEE International Conference on Human-Robot Interaction in Portland, OR, during the first week of March. At the conference, Momotaz Begum, a research scientist in the Robotics Lab, presented some of the lab’s research on the use of robots for ABA therapy for kids with ASD, work done in collaboration with the Crotched Mountain Rehabilitation Center and Prof. Richard Serna in the Psychology Department. Holly also chaired the conference’s steering committee meeting and attended an editorial board meeting for the Journal of Human-Robot Interaction. UMass Lowell alums Mark Micire (Ph.D. ’10, now a program manager at DARPA) and Kate Tsui (Ph.D. ’14, now a postdoc at Yale) also attended the conference.

The NERVE Center has started to test training methods for bomb squads that they’ve been developing in conjunction with the National Institute of Standards and Technology. To conduct this testing, first responders from around the area are bringing their robot systems to NERVE to try the training methods. Local robot companies, including QinetiQ and iRobot, are also participating in the testing.

Adam Norton, manager of the NERVE Center, and Prof. Holly Yanco are preparing to study the human-robot interaction (HRI) of the teams participating in the DARPA Robotics Challenge (DRC) Finals in Pomona, California, in June 2015. They traveled to the DRC Testbed Event in Charleston, South Carolina, in mid-March to see the course designs and learn about the rules for the DRC Finals. Their study of the HRI at the DRC Trials, which were held in December 2013, will be published in the Journal of Field Robotics in May.

The Robotics Club designed, built, and programmed an entry for the Trinity College Robot Firefighting Competition held on March 28-29.
Because of you, UMass Lowell students can achieve their dreams. Your contribution helps students acquire the knowledge and skills essential for their careers. Through your support, they graduate work ready, life ready, and world ready. Gifts to the Computer Science Department enable faculty and staff to enhance academic programming, keep equipment up-to-date, and fund research.

Yes, I would like to support UMass Lowell with a gift.

☐ $500  ☐ $250  ☐ $100  ☐ $50  ☐ Other

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