Professor Linda M. Abriola, dean emerita of the School of Engineering, has been named a University Professor, the highest academic honor conferred at Tufts. It is a distinction currently held by just four other Tufts faculty members. Abriola is the first woman and the first engineer to receive the appointment.

Abriola, who was dean of the school from 2003 until she stepped down this past summer, was one of the first to develop a mathematical model that describes the migration of organic liquid contaminants in the subsurface—or, more simply, how organic chemical pollutants travel within and contaminate our groundwater resources.

She is particularly known for her work on the characterization and remediation of underground aquifers contaminated by chlorinated solvents, a family of chemicals used as degreasers.

“My past 12 years as dean of the School of Engineering have been the most rewarding and productive of my academic career.”

Continued on page 3
Dear CEE Alumni and Friends,

I invite you to read highlights about the accomplishments and activities of our department’s students, faculty, and staff during the past year.

In June, we welcomed Jack Germaine (Sc.D., MIT) as a Research Professor in the Geosystems Engineering program. Jack’s research and teaching activities will be conducted in the newly renovated Advanced Geomaterials Laboratory in the basement of Anderson Hall. We also were pleased to welcome alumnus Jim Limbrunner, E96, E98, E08, who returns to department as a Professor of the Practice, while maintaining his role as Director of Applied Research at HydroLogics, Inc. I am also pleased to announce that Dr. Laurie Baise was promoted to the rank of full professor in May. In staff updates, Laura Sacco was promoted to Department Administrator, and Katherine Lamberti has joined the main office as staff assistant.

Construction of the Science and Engineering Center (SEC) began last spring with enabling work, which has now progressed to installation of concrete footings and basement walls. The new building is scheduled for completion in early 2017, and will support interdisciplinary research across the School of Arts and Sciences and the School of Engineering. Associate Professor Chris Swan has led several classes on tours of the construction site (see page 6). We have also just completed renovation of the geotechnical teaching laboratory and relocated computer-aided design (CAD) laboratory.

At the annual Alumni and Student Awards dinner in May, Chris Swan received the Faculty Member of the Year award from the Tufts ASCE student chapter, and we recognized the achievements of our continuing and graduating students. In addition, Bill Edgerton received the Outstanding Service Award, and Pete Cheever received the Outstanding Achievement Award. We are grateful for the continued alumni support, which allows us to provide our students with scholarships and awards to conduct independent research and recognize their achievements.

In the coming year, we will initiate searches for new faculty members in Environmental Health and Environmental and Water Resources Engineering, and renovate the main CEE office and permanent CAD laboratory. I wish you all the best, and hope to see you at our Alumni and Student Awards Dinner on Saturday, May 14, 2016.

With warm regards,

Kurt

Notables...

In recognition of her service and excellence in teaching the Trustee Academic Affairs committee approved the appointment of Laurie Baise to Professor of Civil and Environmental Engineering.

Laura Sacco was promoted to CEE department administrator. Congratulations, Laura!

In a recent issue of Earth Magazine, Professor Rich Vogel talked about the misleading term “100-year flood” that means an area has a 1% chance of high-magnitude flooding in any given year.

Professor Shafiqul Islam discussed the agreement between Egypt, Ethiopia, and Sudan regarding the controversial Ethiopian hydroelectric dam in the Christian Science Monitor.

Civil and Structural Engineer magazine reported on Associate Professor Babak Moaveni and collaborator Andreas Stavridis at the University of Buffalo testing an earthquake-damaged building in El Centro, Calif. The team used 50 tons of force to bring the building to the brink of collapse.

After the Nepal earthquake in April 2015, the International Business Times interviewed Assistant Professor Daniele Lantagne about the possibility of post-quake cholera outbreak given her expertise in researching the illness in Haiti following the 2010 quake.

Congratulations to Laura Sacco who was promoted to department administrator.

The 2015 CEE Softball Team, 9–2.
and in dry cleaning that are known carcinogens and harmful to ecological health.

The president and provost recommend faculty for University Professorships, which are approved by the Board of Trustees. The designation is an honor reserved for faculty of unusual scholarly eminence who are also exemplary citizens of the Tufts community.

“This appointment honors Linda Abriola for her work as a transformative leader of the School of Engineering and the university, as well as her outstanding reputation as a researcher in the field of groundwater remediation,” said Provost David Harris.

An event celebrating Abriola’s appointment was held on April 9, 2015.

“I am deeply honored to receive this distinguished professorship,” Abriola said. “My past 12 years as dean of the School of Engineering have been the most rewarding and productive of my academic career. It has been both a joy and a privilege to be a part of this wonderful community, and I look forward to continuing my relationship with the university in this new capacity.”

Abriola returns to the faculty to teach and conduct research. She is a principal investigator in Tufts’ Integrated Multiphase Environmental Systems Laboratory and an adjunct professor of chemical and biological engineering.

Read more about Abriola’s legacy and research at: [http://now.tufts.edu/articles/engineering-dean-named-university-professor](http://now.tufts.edu/articles/engineering-dean-named-university-professor)

## RESEARCH HIGHLIGHTS

### Lantagne/Yates Featured in JAIDS

In collaboration with researchers from the Centers for Disease Control, doctoral student Travis Y ates in Assistant Professor Daniele Lantagne’s lab was the first author on an article “The Impact of Water, Sanitation, and Hygiene Interventions on the Health and Well-Being of People Living With HIV: A Systematic Review” in the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) JAIDS supplement.

### Ramsburg Wins NSF Grant

Associate Professor Andrew Ramsburg and collaborators—Associate Professor Kartik Chandran and Postdoctoral Scientist Sandeep Sathyamoorthy of Columbia University—were awarded an NSF grant to understand pharmaceutical biotransformation within activated sludge treatments. Employing advanced microbial-ecological techniques, the team aims to identify the active fraction of bacteria responsible for pharmaceutical biotransformation and link this fraction to rates and pathways of pharmaceutical removal. Results may serve to elucidate approaches that promote microconstituent treatment while simultaneously meeting existing water quality objectives at water resource recovery facilities.

## QUICK HITS

The Association of Environmental Engineering and Science Professors (AEESP) has recognized Associate Professor Andrew Ramsburg with its 2014 Award for Outstanding Teaching in Environmental Engineering and Science, which recognizes his outstanding contributions to the teaching of environmental engineering, both at Tufts and in the larger community. Ramsburg was also selected by the editors of the Journal of Contaminant Hydrology to receive Elsevier’s Certificate of Excellence in Reviewing.

Professor Steven Chapra received the ASCE Environmental and Water Resources Institute’s 2015 Wesley W. Horner Award for his paper “Parsimonious Model for Assessing Nutrient Impacts on Periphyton-Dominated Streams.”

Professor Rich Vogel’s paper “A risk-based approach to flood management decisions in a nonstationary world” was selected for an Editors’ Choice Award by the Water Resources Research journal. The award will be presented at the American Geophysical Union meeting in December 2015.

Professor Elena Naumova began her role as Academic Dean for Faculty Development and Research at the Gerald J. and Dorothy Friedman School of Nutrition Science and Policy in January 2015.

Associate Professor John Durant was named a Fellow of the American Society of Civil Engineers (ASCE). ASCE Fellows are nominated and elected based on their contributions to civil engineering and have developed creative solutions that change lives around the world. It is a prestigious honor held by fewer than 4% of ASCE members.

Professor David Gute begins teaching the second part of his successful Massive Open Online Course (MOOC) through edX.org. The course “Sustainable Interventions”, co-taught with Dr. Jeff Griffiths at Tufts School of Medicine, and Carolyn Talmadge, GIS Specialist at Tisch Library, begins September 29.
Student Awards

Garcia Wins Grant for WaterSmart Innovations Conference

The Southern Nevada Water Authority (SNWA) and the Universities Council on Water Resources (UCOWR) named Margaret Garcia the recipient of a scholarship to attend the WaterSmart Innovations (WSI) Conference in Las Vegas this October. Garcia is an NSF IGERT | Water Diplomacy fellow interested in management of urban water infrastructure, processes for planning and decision making under uncertainty, climate change, urbanization, water utilities, and hydrological modeling.

Sylvia Wins Second Place for Poster at AEHS Conference on Soils, Sediments, Water, and Energy

Master’s student Danielle Sylvia won second place in a student poster competition for her research “Evaluation of Partitioning Electron Donors to Improve Chlorinated Solvent Source Zone Bioremediation” with advisor Research Assistant Professor Natalie Cápiro and Professor and Chair Kurt Pennell. She presented the research at the Association for Environmental Health and Sciences (AEHS) Foundation’s 2014 Annual International Conference on Soils, Sediments, Water, and Energy.

Read Wins $10K DOW Sustainability Challenge, Farmer Wins Honorable Mention

Laura Read, a doctoral student in the Water Diplomacy | IGERT program, won one of two top prizes for the DOW Sustainability Innovation Student Challenge Award (SISCA). Her proposal, based on research with Professor Richard Vogel, seeks to better prepare engineers to incorporate the effects of climate change and urbanization into the design of flood management solutions. Doctoral recipient Will Farmer, also an advisee of Rich Vogel, received an honorable mention for his proposal on sustainable water management in ungauged basins.

Halaseh Wins Second Place in Tufts Energy Conference

Master’s student Ayman Halaseh won second place in the Tufts Energy Conference for his presentation titled “Transformation in Energy and Water: An Example from Jordan.” This WSSS project is a collaboration among Ayman, the Stockholm Environment Institute, including Stephanie Galaitsis, and Brian Joyce, and CEE visiting scholar Annette Huber-Lee, as well as advisors Professor Rich Vogel and economics Professor Ujjayant Chakravorty.

Graduate Alumni Awards

Paul Kelley, E77, E’79, of Simpson, Gumpertz & Heger, Inc., left, was selected to receive the school’s 2015 Outstanding Career Achievement Award.

Katherine Woodward, right, received the School of Engineering’s Award for Commitment to the Practice of Engineering.

Associate Professor John Durant, right, receives the Outstanding Faculty Contribution to Graduate Education from the Graduate Student Council.

NEW FACES JACK GERMAINE & JIM LIMBRUNNER

John (Jack) Germaine joins Tufts as a Research Professor from his position as a Senior Research Associate and Senior Lecturer at MIT. He holds a S.M., and Sc.D., from MIT in geotechnical engineering. The primary goal of Germaine’s research is to characterize the physical and mechanical properties of geo-materials as a result of complex interactions between discrete particles. He seeks to understand these behaviors for a wide range of natural materials and over a broad stress range using state-of-the-art technology. He is chairman of ASTM international committee D18 on Soil and Rock, a member of the ASCE’s Boston Society of Civil Engineers, and the International Society of Soil Mechanics and Foundation Engineers. He is also a member of Chi Epsilon and Tau Beta Pi.

Jim Limbrunner, E’96, E’98, 08, returns to the department as a Professor of the Practice. He is currently a water resources systems analyst at HydroLogics, Inc., a consulting firm specializing in water supply systems management, hydropower systems management, and river basin water allocation planning. Limbrunner’s research has focused on developing systems formulations and optimization models for the management of nonpoint source pollution. Limbrunner is currently teaching courses related to water resource systems and integrated water resource management.
Congratulations to Our 2014–2015 Graduates

Undergraduate Awards
Michelle Stevens received the Howe Walker Award from BSCES/ASCE.
Ripley Swan received the William P. Morse Scholarship from BSCES/ASCE and was this year’s recipient of the Max O. Urbahn, F.A.I.A. Scholarship from the Society of American Military Engineers (SAME) New York City Post.
Annie Levine was this year’s recipient of the Michael E. Avtges Award from the SAME Boston Post.

Cataldo Awards
Alyssa Bonora
Connor Brown
Elaine Chestler
Annie Levine
Ruhui Zhao

Undergraduate Littleton Awards
Eimy Bonilla
Dennis Fee
Killian Madden
Santiago Ossa
Rachel Paterson
Michelle Stevens
Ripley Swan

Bachelor of Science in Civil Engineering
Adam Arias
James Brao
Hannah Foley
Andres Fuentes
Jonah Harris
Killian Madden
Seán Nostrand
Rachel Paterson
Divya Bhasin
Eimy Bonilla
Dennis Fee
Santiago Ossa Rodriguez

Graduate Awards
Caitlin Johnson was awarded the Jonathan Curtis Fellowship.
Nathan Davis was awarded the Kentaro Tsutsumi Fellowship.
Vahid Rashidian was awarded the William Edgerton Fellowship.
Jordan Weinstein received the Littleton Fellowship for continued graduate study.

Graduate Littleton Awards
Touhid Ahmed
Matthew Becker
Iman Behmanesh
Brent Boehlert
Laura Cortin
Anthony Kmetz
Anjuliee Mittelman

Master of Engineering
Georgi S. Chaykov
Marc N. Khederian
Achira Shah Pierce
Scott Benjamin Schreiber
Feng Wang

Master of Science
Parnian Baniahmad
Andrew R. Roland
Bradford Berry
Carolyn C. Talmadge
Laura Cortin
Brandon William Udethofen
Katherine Munson
Lurong Yang
Tianqi Qu
Alexandra J. Reiff

Doctoral Recipients
Eliyar Asgarieh
Dissertation: Nonlinear Identification of Civil Structures using Time and Frequency Domain Data Features
Advisor: Babak Moaveni

Matthew D. Becker
Dissertation: On the Influence of Co-constituents on Nanoparticle Transport in Heterogeneous Porous Media
Advisor: Linda Abriola

Iman Behmanesh
Dissertation: Vibration-Based Health Monitoring of Civil Structures
Advisor: Babak Moaveni

Brent B. Boehlert
Dissertation: A Critical Evaluation of the Application of Natural Hazard and Climate Models
Advisor: Richard Vogel

William Farmer
Dissertation: Estimating Records of Daily Streamflow at Ungaged Locations in the Southeast United States
Advisor: Richard Vogel

Alexander Liss
Advisor: Elena Naumova

Anjuliee Mittelman
Dissertation: The Effects of Surface Aging on Nanoparticle Fate and Transport in Natural and Engineered Porous Media
Advisor: Kurt Pennell
Boston Marathon

This year, the Tufts University’s 100-member marathon team raised $473,598 in support of research on nutrition, obesity, hunger, and famine and to sustain health and wellness programs across the university. The Tufts Marathon Team is the largest known collegiate marathon program in the United States, attracting runners from around the country and from around campus, including Associate Professor Luis Dorfmann and CEE student Katie Muller.

Top: Associate Professor Luis Dorfmann makes his way through Mile 9 of the 2015 Boston Marathon. Bottom: CEE students pose for a selfie at the finish line.

Tufts Travel-Learn Trips

Join your favorite CEE professors on a cruise through the Panama Canal or around Northern Europe. Learn more and register for your Travel-Learn trip at: http://tuftsalumni.org/benefits-services/travel-learn-program/

Panama Canal and Costa Rica
January 29, 2016–February 06, 2016

Join Professor Emeritus Lewis Edgers on a cruise from Puerto Caldera, Costa Rica, to Colón, Panama. After our San José hotel stay, we will tour of Panama City and its Casco Antiguo, a UNESCO World Heritage site. We will sail from the remote Isla Coiba and its Coiba National Park, snorkel at Granito de Oro, and visit the San Blas Islands, where the indigenous Kuna people have maintained their traditional lifestyle.

Baltic and Scandinavian Cruise
August 17, 2016–August 28, 2016

Join Professor Elena Naumova for a trip to some of Northern Europe’s celebrated cities. From Stockholm, we will head to Tallinn, an old-world city with spire-crowned churches that radiate tradition. Then, we will spend three days in St. Petersburg, admiring its onion-domed cathedrals and fabled palaces, including the immense Winter Palace and the lavish Catherine Palace. We will journey to Helsinki, an international design mecca, and then explore Riga, the “Paris of the East.” Our visit will also include Germany’s port of Warnemünde, home to Gothic churches, bustling market squares and a seaside promenade, or alternately head inland to Berlin before our voyage concludes in Copenhagen.

Brenner Publishes New Book

Professor of the Practice Brian Brenner published a new book through ASCE Press called Too Much Information: Living the Civil Engineering Life. He is the author of Don’t Throw This Away! The Civil Engineering Life and Bridginess: More of the Civil Engineering Life, also published by ASCE Press.

Science and Engineering Complex Construction

Abby Niesen, E14, civil engineer at GEI Consultants, explains the plans for the first phase of construction on the new Science and Engineering Complex scheduled to open in 2017. Students in Associate Professor Chris Swan’s class toured the construction site to inspect the progress.

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Top row, left: Eimy Bonilla, Dennis Fee, Killian Madden, Santiago Ossa, Rachel Paterson, Michelle Stevens, and Ripley Swan receive the undergraduate Littleton awards;  
Right: Bill Edgerton receives the department’s Distinguished Alumni Service Award. 

Second row, left: Alyssa Bonora, Connor Brown, Annie Levine, and Ruhui Zhao receive the undergraduate Cataldo awards; Right: Touhid Ahmed, Laura Corlin, and Anjuliee Mittelman receive the graduate Littleton awards. 

Third row, left: Peter Cheever is given the department’s Outstanding Alumni Achievement Award; Middle: Katherine Lamberti and Laura Sacco stop to admire their work; Right: Associate Professor Chris Swan receives the CEE Faculty Member of the Year from the Tufts ASCE student chapter. 

Fourth row: CEE alumni enjoy the festivities.
Learn more about the intersection of water and health in Professor David Gute’s free edX.org course “Sustainable Interventions” starting Sept. 29. Scan the QR code to enroll!

Carolyn Talmadge, GIS Specialist, and graduate of the Environmental Management certificate program and CEE master’s program, is one of the teachers in the “Sustainable Interventions” edX.org course launching this September.