Doctoral research by two recent Tufts graduates—Dr. Ali Akanda of the University of Rhode Island and Dr. Antarpreet Jutla of West Virginia University—led to the discovery that the macro-environmental factors that drive cholera can be tracked using remote sensing data and other forecasting methods.

The result? A collaborative initiative between Tufts University and the University of Maryland that involved several former students, university faculty, and researchers from these two institutions. It also brought together international partners, integrated and advanced scholarship, field experience in ecology and microbiology of cholera, hydrology and remote sensing, limnology and plankton taxonomy, public health, epidemiology and biostatistics, and modeling.

“Cholera outbreak prediction from satellite has the capabilities and functionalities to be useful for many regions of the world where minimal or no resources are available for ground measurements,” says Professor Shafiqul Islam.

For his leading role in developing the model, Professor Shafiqul Islam received a prestigious international water award.

Continued on page 3
FROM THE CHAIR

Dear CEE alumni, friends, and colleagues,

It is with mixed emotions that I inform you that I have accepted a faculty position at Brown University and will be leaving Tufts in 2018. Over the past eight years, the department has made tremendous strides with respect to faculty hiring, improved laboratory and teaching facilities, and alumni engagement. Our program rankings from U.S. News & World Report have steadily improved during this time, moving to #36 for environmental engineering/environmental health, and #53 in civil engineering — a positive reflection of the many contributions made by faculty, students, staff, and alumni. I have very much enjoyed my time at Tufts, and I wish you and the department continued success as I hand over the helm to Professor Laurie Baise in September 2017.

Best,
Professor Kurt Pennell

Dear CEE community,

September is always a time of renewal on a college campus, as students and faculty return from such activities as summer internships and international research collaborations. This year brings an added element of change for our department, as this is my first time addressing you as the chair of the Department of Civil and Environmental Engineering. After almost 17 years at Tufts, I am excited by this new opportunity to serve the department. To begin, I would like to thank Professor Kurt Pennell for his eight years of leadership as department chair. Kurt worked tirelessly to improve the reputation of our programs, to recruit world-class faculty members, and to engage alumni to participate in departmental activities. We wish Kurt all the best in his future endeavors at Brown.

With construction wrapping up on the new Science and Engineering Complex, the department office is moving. As of this fall, you can find us in room 204 on the second floor of Anderson Hall. If you are on campus, please stop by.

In the following pages, we will share some accomplishments and activities from the last year. The department recently welcomed a new tenure track faculty member, strengthening our research in water resources. Assistant Professor Jonathan Lamontagne joins us from a postdoctoral position at Cornell University, where he completed his M.S. and Ph.D. His areas of research include hydrologic statistics, integrated global change assessment, and decision-making under uncertainty. In addition, I’m pleased to announce that Daniele Lantagne was granted tenure and promoted to the rank of associate professor.

As always, your generous continued support of the department allows us to provide invaluable opportunities to our undergraduate and graduate students. Over the last few years, the N. Bruce and Lorry Hanes Endowed Fellowship has raised $214,000 toward a goal of $250,000, and has been awarded to two master’s candidates. I hope to see you at our next Alumni and Student Awards Dinner on Saturday, April 21, 2018, where you can learn more about department activities and connect with old friends. Finally, I look forward to collaborating with all of you in my new role as chair of CEE. Don’t hesitate to reach out.

Sincerely,
Professor Laurie Gaskins Baise

Research Highlights

Associate Professor John Durant and alumni Allison Patton, EG14, and Chad Milando, E12, published a paper in Environmental Science & Technology on computational models of traffic-related air pollution. The paper was featured as an extramural paper of the month by the NIEHS’ Environmental Factor.

The Executive Board of the International Water Resources Association (IWRA) selected a Tufts team’s paper as Honorable Mention for Best Paper of 2015. Authors Stephanie Galaitsi, EG13, Visiting Scholar Annette Huber-Lee, Research Professor and Professor Emeritus Richard Vogel, and Adjunct Professor Elena Naumova used water insecurity to predict domestic water demand in the Palestinian West Bank.

Continues on page 3
Professor Emeritus and Research Professor Richard Vogel was named a 2017 Fellow of the American Geophysical Union (AGU), an honor awarded to individual AGU members who have made exceptional scientific contributions and gained prominence in their respective fields of Earth and space sciences.

As part of her work as a U.S. Science Envoy, University Professor and Dean Emerita Linda Abriola traveled to Nepal. Her visit highlighted the need to expand the engagement of girls in STEM fields in Nepal, fostered new relationships with a diverse range of stakeholders, and shared ideas on integrated water management.

Research Professor Jack Germaine was reelected chairman of ASTM International’s Committee D18 on Soil and Rock. This will be his third and final term, which will run through December 31, 2019.

Professor Dan Kuchma and collaborators such as Professor of the Practice Eric Hines were part of the Tufts University team named by the Massachusetts Clean Energy Center as one of six academic and research institutions that will receive a total of $300,000 in funding to explore offshore wind. The Massachusetts Research Partnership for Offshore Wind will develop a multi-disciplinary framework for offshore wind research, focusing on increasing innovation within projects and reducing costs by examining risks, finances, and regulations associated with the industry.

With water quality in Rio de Janeiro in the news, Associate Professor Daniele Lantagne published an article in The Conversation on countries’ failure to adequately treat and dispose of wastewater. She was also interviewed in the New York Times about audits of United Nations mission sites’ sanitation practices.
Gaeth Wins Student Poster Competition

Master’s candidate Sam Gaeth won first place in a student poster competition for his research, “Synergistic Effects of Utilizing Abiotic and Biotic Degradation Pathways Simultaneously for Chlorinated Solvents Remediation” with his advisors, Research Assistant Professor Natalie Cápiro and Professor Kurt Pennell. Gaeth presented the research at the Association for Environmental Health and Sciences (AEHS) Foundation’s 32nd Annual International Conference on Soils, Sediments, Water, and Energy.

Corlin Stands Out in Engineering

Ph.D. candidate Laura Corlin received the School of Engineering Award for Outstanding Graduate Contributor to Engineering Education.

Tufts SWE Chapter Gets the Gold

The Tufts chapter of the Society of Women Engineers (SWE) was awarded the organization’s Outstanding Collegiate Section Gold Award, which is the highest-level SWE award for a collegiate section. In the 2016–2017 academic year, a number of student organizers were CEE majors.

Galeano Receives Summer Scholars Funding

Mateo Galeano, E18, was awarded funds as a summer scholar in 2017. He worked with Associate Professor Daniele Lantagne to generate tools for determining chlorine taste, odor detection, and rejection thresholds, to prevent the rejection of safe drinking water in refugee camps.

NEW FACES

Jay Borkland
Research Associate Professor Jay Borkland is a marine and environmental scientist, geophysicist, geo-engineer, and offshore energy specialist with more than 30 years of industry, teaching, and research-related experience. He is the principal and part owner of a national environmental and engineering firm. He is currently a member of the Tufts team in the Massachusetts Research Partnership for the advancement of U.S. offshore wind research and standards.

Jonathan Lamontagne
Assistant Professor Jonathan Lamontagne received his M.S. and Ph.D. in environmental water resources systems analysis from Cornell University. Following his graduate studies on flood frequency analysis and the incorporation of uncertainty in hydropower systems planning, Lamontagne worked as a postdoctoral research associate at Cornell University, studying uncertainty and robustness issues for models of the integrated human-climate system.
CONGRATULATIONS TO OUR GRADUATES

Undergraduate Awards

**Dylan Jones** received the Michael E. Avtges Memorial Prize and the Joseph Bocchino Award.

**Nazifa Sarawat** received the Multicultural Service Award.

**Jennifer Skerker** was awarded the William P. Morse Scholarship.

**Lindsey Sundvik** received the Howe Walker Award.

**Steven Woodruff** received the Max O. Urbahn, F.A.I.A. Scholarship from the Society of American Military Engineers (SAME) New York City Post.

Cataldo Awards

**Caitlin Duffy, Jenna Kubiak, Grace Polakoski, Lucy Turner, Megan Wilson, Margaret Zahrah**

Undergraduate Littleton Awards

**Harshit Agrawal, Hannah Conroy, Jessica Lunte, Jennifer Skerker, David Stack, Lindsey Sundvik**

Bachelor of Science in Civil Engineering

**Harshit Agrawal**

**Nicole Allora**

**Connor Brown**

**Rachel Eisenberg**

**Alexander Gasca**

**Benjamin Levy**

**Matthew Masi-Phelps**

**Sara Pearce-Probst**

**Emily Pishgahzadeh**

**Lindsey Sundvik**

**Austin Wanandi**

**Steven Woodruff**

Bachelor of Science in Environmental Engineering

**Hannah Conroy**

**Jeremy Goldsmith**

**Emma Inhorn**

**Jiepu Li**

**Jacquelyn Nwagwu**

**Alex Rappaport**

**Liza Samy**

**Nazifa Sarawat**

**Jennifer Skerker**

**David Stack**

**Erynne van Zee**

**Marisa Zellmer**

Bachelor of Science in Engineering

**Jessica Lunte**

Bachelor of Science in Engineering Science

**Rachel Kramer**

**Giuliano Potsios**

Graduate Awards

**Cameron Bradley** was awarded the Kentaro Tsutsumi Fellowship.

**Elisa Jazan** received the N. Bruce and Lorry Hanes Fellowship.

**Jason Hnatko** was awarded the Jonathan Curtis Fellowship.

**Stephen Paul Lambert** was awarded the William Edgerton Fellowship.

**Marisa Zellmer** received the Littleton Fellowship for continued graduate study.

Graduate Littleton Awards

**Anthony Hanley, Elizabeth Kirtland, Tyler Marcet, Anna Murray, Hanshun Yu**

Master of Engineering

**Lucia Hiller**

**Yafangzhou Huang**

**Elizabeth Kirtland**

Master of Science

**Lily Beyer**

**Agustin Botteron** (February 2017)

**Susan Bresney** (August 2016)

**Jhanel Chew**

**Samuel Gaeth** (February 2017)

**Jason Hnatko**

**Amy Hunter**

**Caitlin Johnson**

**Christopher Martin** (August 2016)

**Chen Liu**

**Kyle Monahan** (February 2017)

**Jake Serago** (August 2016)

**Madeline Wrable**

**Hanshun Yu** (February 2017)

**Zhiyong Zhao**

Doctoral Recipients

**Margaret Garcia**


Adviser: Shafiqul Islam

**Jory Hecht**

Dissertation: Making Multi-Stakeholder Water Resource Decisions with Limited Streamflow Information

Adviser: Richard Vogel

**Alexandra Kulinkina** (February 2017)

Dissertation: Community Based Methods for Schistosomiasis Prediction and Sustainable Control

Adviser: Elena Naumova

**Yuan Wang** (February 2017)

Dissertation: Sediment Flux Modeling of Nutrients and Organic Pollutants

Adviser: Steven Chapra

**Travis Yates**

Dissertation: Emergency Water, Sanitation, and Hygiene Interventions in Low and Middle-Income Countries

Adviser: Daniele Lantagne

**Jing Zhu** (February 2017)

Dissertation: Improvements on Mapping Soil Liquefaction Hazard at a Regional Scale

Adviser: Laurie Baise
The American Society of Civil Engineers (ASCE) honored Tufts alumnus Jim Kaklamanos as one of its 2017 New Faces of Civil Engineering. He also received the ASCE’s 2017 ExCEEd New Faculty Excellence in Teaching Award. Kaklamanos is a triple Jumbo who earned his B.S., M.S., and Ph.D. from the Tufts Department of Civil and Environmental Engineering.

Kaklamanos specializes in geotechnical engineering and now teaches civil engineering at Merrimack College, where he’s an assistant professor. He has served as the faculty advisor to the Merrimack College student chapter of the ASCE for six years. He credits his own professors at Tufts with inspiring him to pursue engineering in the first place. He first came to Tufts as a student in the School of Arts and Sciences, planning to study law.

Now, Kaklamanos studies models for predicting earthquake-induced ground motions—an interest that started with an undergraduate research project during his senior year at Tufts. “As a student, my life was changed by the faculty I had. They helped me realize what I was truly passionate about, and I try to do the same for my students,” he says.
Harshit Agrawal, Jessica Lunte, Jennifer Skerker, and Lindsey Sundvik receive the undergraduate Littleton Awards.

Ph.D. candidate Cameron Bradley receives the Kentaro Tsutsumi Fellowship.

Charles Russo (EG98) receives the department’s Outstanding Alumni Achievement Award.

Professor of the Practice James Limbrunner (E96, EG98, EG08) receives the department’s Distinguished Alumni Service Award.

Anthony Hanley, Elizabeth Kirtland, and Tyler Marcet receive the graduate Littleton Awards.

Ph.D. candidate Jason Hnatko receives the Jonathan Curtis Fellowship.

Master’s student Elisa Jazan receives the N. Bruce and Lorry Hanes Endowed Fellowship.

Annie Hanley, Elizabeth Kirtland, and Tyler Marcet receive the graduate Littleton Awards.

Left to right, back row: Elizabeth Kirtland, Rachel Eisenberg, Jessica Lunte, Lindsey Sundvik, Matthew Masi-Phelps, Steven Woodruff, Harshit Agrawal. Left to right, front row: Connor Brown, Miranda Seeley, Sarah Pearce-Probst.
Viesca receives NSF CAREER Award

Assistant Professor Robert C. Viesca received a prestigious National Science Foundation CAREER Award for his proposal to examine the physical basis for the emergence of slow aseismic fault slip. The work will advance understanding in areas under consideration for fault operation during the seismic cycle and earthquake hazard assessment, including injection-induced fault slip.

This year, Viesca also published paired papers in *Physical Review E* and *Proceedings of the Royal Society of London A* on the nature of friction at the interface of elastic materials.