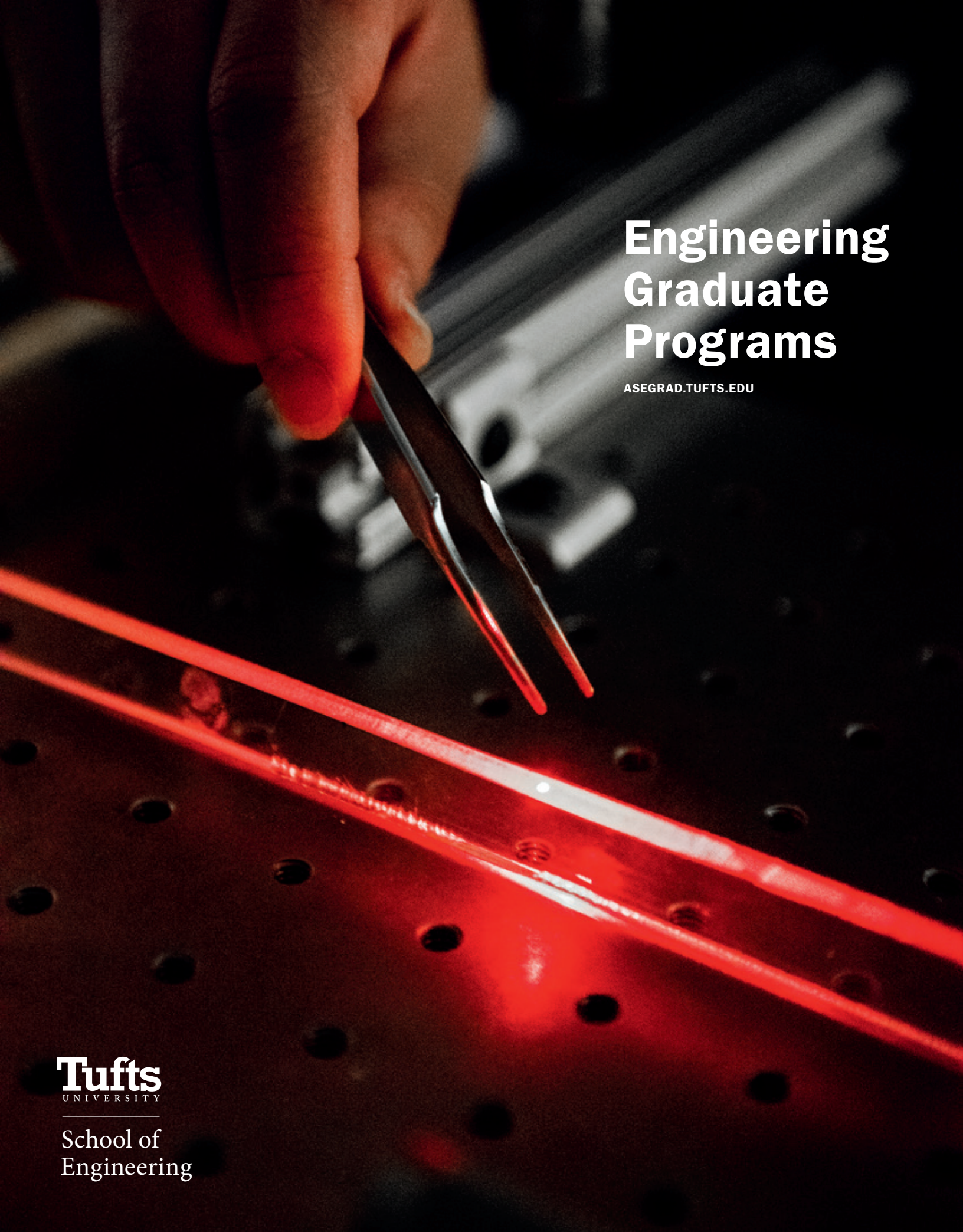


Engineering Graduate Programs

ASEGRAD.TUFTS.EDU

Tufts
UNIVERSITY

School of
Engineering

ON THE COVER: A graduate student carries out laser Doppler vibrometry measurements in the Microscale Sensors and Systems Lab to help characterize and design ultrasonic and acoustic transducers, or investigate structural vibrations in mechanical systems.

INSIDE COVER: Ph.D. candidate Gabrielle String prepares a water filtering device for field use in the research lab of Associate Professor Daniele Lantagne.

Tufts School of Engineering's graduate programs challenge the traditional roles of engineers and boundaries of academic disciplines and research in our increasingly interconnected global community. Every day, Tufts researchers are developing new tools to improve medical diagnosis and treatment; novel materials for a greener future; smarter, more power-aware devices; and innovative ways to educate the engineers of tomorrow.

OFFICE OF GRADUATE ADMISSIONS
Tufts University
Bendetson Hall
2 The Green
Medford, MA 02155
617-627-3395

asegrad.tufts.edu
gradadmissions@tufts.edu

SUSTAINABILITY

Tufts engineers are changing the way we use the world's finite resources and plan for our future. (Think water, fossil fuels, and green energy.) The age of planned obsolescence is over. The age of responsible, ethical, and sustainable engineering practice has begun.

Electric cars could offer some relief from the environmental consequences of vehicle emissions, but driving an electric car any significant distance requires a lengthy charge. The answer, Assistant Professor Iryna Zenyuk says, is to develop hydrogen fuel cells—a cleaner, more efficient power source that converts hydrogen gas into electricity through a series of electrochemical reactions. However, building fuel cells that are both efficient and affordable has proved difficult. Zenyuk is developing new ways to look inside cathodes, which could help overcome a key stumbling block to creating a commercially viable fuel cell.

HUMAN-TECHNOLOGY INTERFACE

Touch screens and implantable devices blur the line between technology and the body. Robotics takes inspiration from cognition and the human mind. Tufts engineers integrate thought, sight, and touch into interfaces as intuitive as they are high-tech.

Professor Sameer Sonkusale and Associate Professor Qiaobing Xu worked with colleagues to integrate nano-scale sensors, electronics, and microfluidics into threads that can be sutured through multiple layers of tissue to wirelessly gather diagnostic data. The threads collect data on tissue health, pH, and glucose levels, which can help medical professionals determine how a wound is healing and whether infection is emerging. The results are transmitted to a cell phone and computer. The research suggests that the thread-based diagnostic platform could be an effective substrate for a whole new generation of implantable diagnostic devices and smart wearable systems.

HEALTH ADVANCES

Tissue engineering. Genomics. Arterial grafts made of silk. When Tufts engineers think about human health advances, we think on every scale—from tracing the neurological effects of nano-sized pollutants to mapping patterns of disease transmission worldwide.

Professor Irene Georgakoudi and colleagues demonstrated that signs of mitochondrial dysfunction—which can signal human diseases like cancer—can be seen in living human skin by monitoring the mitochondrial metabolic coenzyme NADH. With this new technique allowing for near real-time assessments of mitochondrial organization, researchers were able to differentiate healthy skin from melanoma and basal cell carcinoma. This represents a significant step from current techniques, which rely on mitochondria-specific dyes or invasive biopsies.

BIOMEDICAL ENGINEERING

DEGREES

Biomedical Engineering (M.S., Ph.D.)

Biomedical Engineering and Materials Science and Engineering (Joint-Ph.D.)

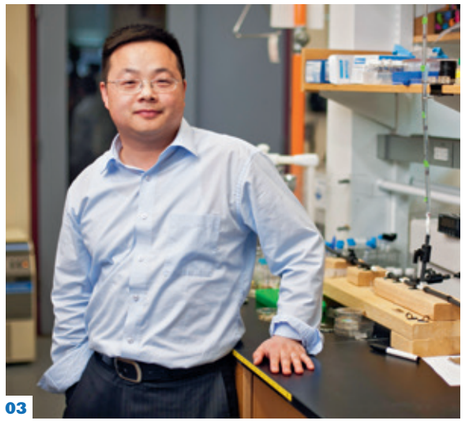
Biomaterials: Bioengineering (M.S.)

Bioengineering (Certificate)

Biotechnology Engineering (Certificate)

01

02



03

01 A noninvasive method using scattered light and fluorescence can detect the difference between white blood cells and cancer cells in our blood. **02** By removing cells from a tissue structure like this heart, engineers can understand how the extracellular matrix supports and signals cardiac cells. **03** Research in material science engineering will allow the intracellular delivery of therapeutic biomacromolecules.

01/ IRENE GEORGAKOUDI SHEDS LIGHT ON DISEASE

When it comes to diagnostic techniques, no word eases a patient's mind more than "noninvasive." For more than 15 years, Professor Irene Georgakoudi has been conducting research related to the use of light in detecting and treating human diseases. Her main research areas are the development of novel optical biomarkers for early cancer detection, *in vivo* flow cytometry, and optical monitoring of cell–matrix interactions in engineered tissues. With funding from the NIH, the NSF, and the American Cancer Society, her work may make "biopsy" an anachronism.

02/ LAUREN BLACK MENDS BROKEN HEARTS

Heart attack remains one of the leading causes of death in the United States. But Associate Professor Lauren Black is working to change that statistic through cardiovascular tissue engineering. His focus: understanding the biophysical signaling mechanisms responsible for the development of healthy and diseased myocardium. He studies mechanical forces, electrical stimulation, and cell–matrix interactions. The ultimate goal is to design and develop new methods for repairing heart tissue—methods that will save and extend the lives of heart patients.

03/ QIAOBING XU TREATS UNDRUGGABLE DISEASES

Associate Professor Qiaobing Xu is developing ways to enable drugs to destroy cancerous growth more effectively than existing treatments and to target other diseases traditionally considered "undruggable." New protein-based therapy allows for highly targeted disease treatment. The problem is that, unlike compounds used in chemotherapy, proteins are too large to easily cross the cell membrane to penetrate into the cytoplasm. Instead, most protein therapies work by targeting specific receptors on the surface of diseased cells. Xu is developing a method to transport the protein inside the cell by binding it with a nanoparticle that can cross the cell membrane and release the protein.

CHEMICAL AND BIOLOGICAL ENGINEERING

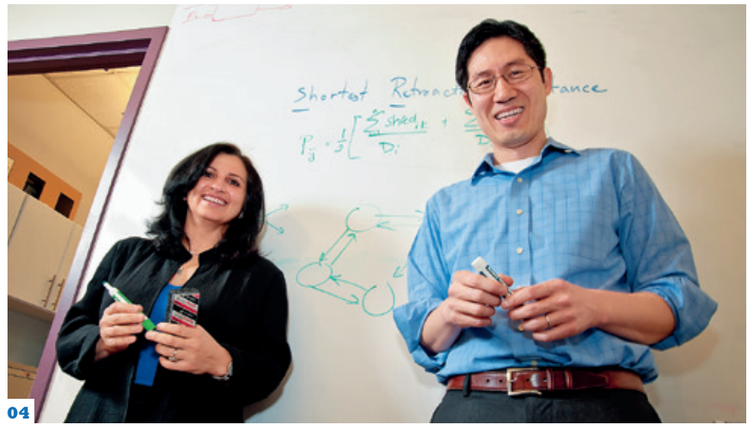
DEGREES

Chemical Engineering (M.S., Ph.D.)

Chemical Engineering and Materials Science and Engineering (Joint-Ph.D.)

Biotechnology (Ph.D.)

Cell and Bioprocess Engineering: Bioengineering (M.S.)



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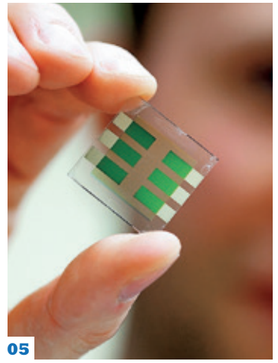


05

06

04 Chemical engineers and computer scientists collaborate to develop computational tools to better understand metabolic systems ranging from a single pathway to a whole cell. **05** To create the next generation of solar cells, researchers in the Green Energy and Nanostructured Electronics Lab seek to boost the power conversion efficiency of organic photovoltaics. **06** By manipulating nanoscale structures, chemical engineers create new catalysts to decrease the cost of producing alternative fuels, like hydrogen.

04/ KYONGBUM LEE AND SOHA HASSOUN'S LEAN OPERATION

Obesity is an epidemic—a consequence of the abundance of cheap, high-calorie foods—leading to health problems from diabetes to heart disease. Professor Kyongbum Lee is working to identify enzyme targets to reduce cellular lipid accumulation and the formation of new fat tissue. Computer Science Professor Soha Hassoun works with Professor Lee in his Tissue and Metabolic Engineering Laboratory to build computational tools to better understand these metabolic processes.

05/ MATTHEW PANZER'S ELECTRIC FLEXIBILITY

Associate Professor Matthew Panzer is working to make the next generation of solar cells lighter, cheaper, and more flexible. By capturing ionic liquid in a gel, Panzer can create a new generation of flexible electronics that could be used in inventive ways that today's rigid and bulky batteries and supercapacitor devices can't match. Think wallpaper lighting or touch-screen t-shirts. These new supercapacitors could also be used to provide additional acceleration and charging power for electric vehicles.

06/ MARIA FLYTZANI-STEPHANOPOULOS WORKS TO CLEAR THE AIR

Professor Maria Flytzani-Stephanopoulos, director of Tufts' Nanocatalysis and Energy Laboratory, conducts research to solve problems in the production of clean energy. She investigates the properties of nanoscale metals and oxides as catalysts and sorbents for fuel processing and the production of hydrogen for fuel cell applications. In recognition of her work, she was elected to the National Academy of Engineering, one of the highest professional distinctions accorded an engineer. She was also named the Robert and Marcy Haber Endowed Professor in Energy Sustainability.

CIVIL AND ENVIRONMENTAL ENGINEERING

DEGREES

Civil and Environmental Engineering (certificate, M.S., Ph.D.)

Civil and Environmental Engineering and Materials Science and Engineering (Joint-Ph.D.)

Environmental Biotechnology: Bioengineering (M.S.)

Environmental Management (certificate)

07

08

09

07 Since 2000, Lantagne has provided technical assistance to, and evaluation of, water treatment programs in more than 40 countries on three continents. **08** Abriola's primary research area is in the mathematical modeling of the transport and fate of organic chemical contaminants in porous media. **09** Moaveni, right, collaborates with Khan, left, to develop a wireless system using autonomous flying robots to monitor the structural health of bridges and buildings.

07/ DANIELE LANTAGNE ENGINEERS FOR PUBLIC HEALTH

Roughly 800 million people don't have access to an "improved" water source, like a piped system or protected well, designed to shield the water from microbiological contamination. What is the alternative? One short-term solution is to treat the water at home. Associate Professor Daniele Lantagne specializes in developing, implementing, and evaluating household water treatment projects in developing countries and areas of emergency. In addition to her lab research, she has applied her knowledge to help make water treatment products more approachable and easier to use.

08/ LINDA ABRIOLA WORKS TO RESTORE OUR POLLUTED ENVIRONMENT

Despite decades of environmental clean-up efforts, groundwater contamination levels exceed regulatory standards at thousands of hazardous waste sites across the United States; in developing nations, the problem is staggering. Professor Linda Abriola's research explores how contaminants migrate and persist in the subsurface. Much of her work has focused on chlorinated solvents, a family of chemicals and known carcinogens used as degreasers and in dry cleaning, and on nanomaterials, emerging pollutants that may pose new risks. In the Integrated Multiphase Environmental Systems Laboratory, Abriola couples laboratory experiments and mathematical modeling to develop new tools for waste site characterization and remediation.

09/ BABAK MOAVENI ASSESSES STRUCTURAL HEALTH

Inspecting bridges for damage is a slow, dangerous, expensive process. Even the most experienced engineers can overlook cracks in the structure or other critical deficiencies. In the detection system developed by Associate Professor Babak Moaveni, sensors are permanently attached to bridge beams and joints. Each sensor continuously records vibrations and processes the recorded signal. Moaveni is collaborating with Associate Professor Usman Khan in Electrical and Computer Engineering to develop a wireless system that uses autonomous flying robots to collect data from the sensors while taking images of bridge conditions.

COMPUTER SCIENCE

DEGREES

Computer Science (postbac, certificate, M.S., Ph.D.)

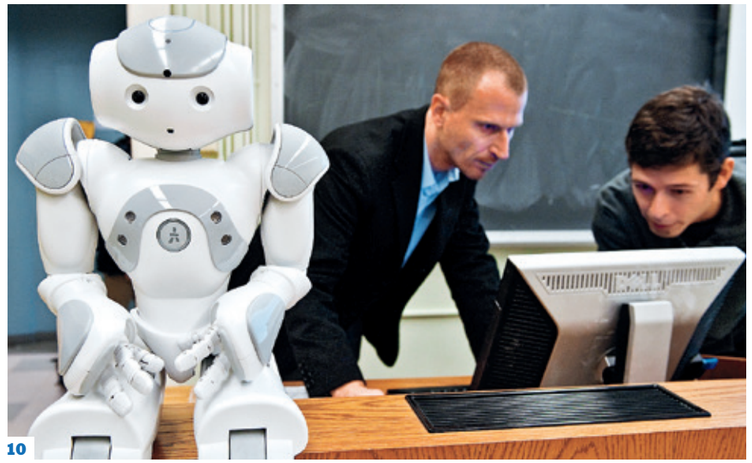
Computer Science and Cognitive Science (Joint-Ph.D.)

Computer Science and Human-Robot Interaction (Joint-Ph.D.)

Computer Science and Materials Science and Engineering (Joint-Ph.D.)

Bioinformatics: Bioengineering (M.S.)

Human-Computer Interaction (certificate)



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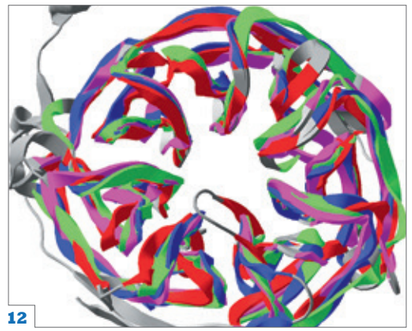


12

10 As robots increasingly become part of our lives, engineers connect cognitive science to computer science to make our interactions simpler and more natural. **11** Improving the tools and structure for building domain-specific languages will help keep hackers out of everything from cars to military equipment. **12** Computational biologists develop algorithms that can predict the structure and function of proteins, which are folded in complicated, highly asymmetrical 3D shapes.

10/ MATTHIAS SCHEUTZ AND THE FUTURE OF HUMAN-ROBOT COLLABORATIONS

Imagine a future in which robots and human beings work hand in hand. What would the robot need to know? How would the two communicate? Professor Matthias Scheutz is researching ways to answer these fundamental questions and developing methods for humans and robots to interact more intuitively. To be successful, intelligent robots must perceive their environment, make useful inferences and decisions, and communicate effectively with humans. Outcomes will influence the design of assistive mobility technologies for people with disabilities, and support applications in telemedicine and search and rescue operations.

11/ KATHLEEN FISHER LOCKS OUT HACKERS

Professor Kathleen Fisher served a three-year stint as a program manager for the Defense Advanced Research Projects Agency (DARPA). Fisher's DARPA project—known by the acronym HACMS, for High Assurance Cyber Military Systems—is devoted to finding ways to build vehicular software that is provably invulnerable to popular hacks. Of course, the Department of Defense's first priority wasn't safeguarding our Jeeps and Priuses, but rather the thousands of military vehicles—on land, sea, and air—that rely on similar technologies. The same principles apply in preventing hackers from gaining access to critical systems in everything from power grids to medical devices.

12/ LENORE COWEN UNFURLS THE MYSTERIES OF PROTEIN FOLDING

Professor Lenore Cowen studies all aspects of computational molecular biology as it relates to proteins, from sequence to structure to function, with particular interest in protein–protein interaction networks. Algorithms, machine learning, and even graphics/visualization are all part of the toolbox needed to solve problems in computational biology. Cowen uses these tools to predict the presence of a protein-fold pattern called a "beta-helix" in proteins that cause disease. Innovations in vaccination and drug therapies are built on this kind of knowledge.

ELECTRICAL ENGINEERING

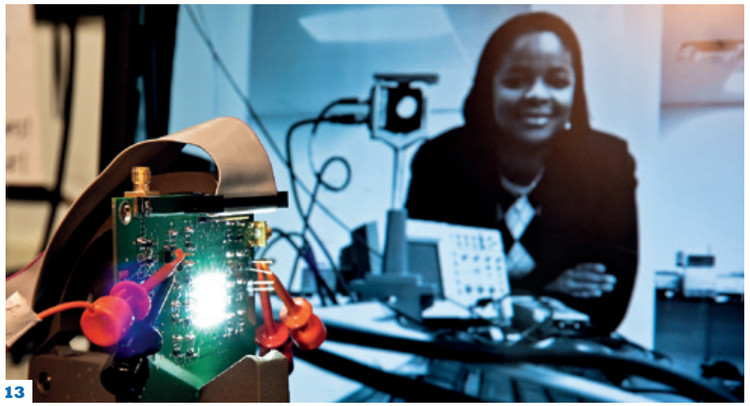
DEGREES

Electrical Engineering (M.S., Ph.D.)

Electrical Engineering and Human-Robot Interaction (Joint-Ph.D.)

Electrical Engineering and Materials Science and Engineering (Joint-Ph.D.)

Microwave and Wireless (certificate)



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14

15

13 Electrical engineers design the low-power hardware components for "smart lighting" systems to create truly high-speed optical wireless systems. **14** Enhancement algorithms take the guesswork out of object detection, which is important in making split-second security decisions in real-time. **15** Vu helps get wireless messages across by finding more efficient and cooperative pathways to send signals, enabling seamless communication for users wherever you go.

13/ VALENCIA KOOMSON SPURS A REVOLUTION IN BIOLOGICAL IMAGING

MRIs, CT scans, and X-rays have long represented the cutting edge of medical imaging technologies, but each has drawbacks because of the potential health risks they pose to patients. Associate Professor Valencia Koomson, who directs the Advanced Integrated Circuits and Systems Lab, is working to change that with noninvasive technology that does not require the patient to lie still. Her goal is to develop sensor circuitry that can process multiple wavelengths of light passing through human tissue and send high-resolution images to neurologists and cardiologists wirelessly and in real time.

14/ KAREN PANETTA HELPS COMPUTERS SEE

Traditionally, we use subjective evaluation to determine whether an unclear image can be enhanced in a way that becomes useful—for instance, to recognize faces or detect threat objects in airport security. This isn't feasible for processing large amounts of visual data in real time. In Professor Karen Panetta's Laboratory for Imaging and Simulation, engineers develop algorithms to allow computers to "see" and evaluate images as humans do. Panetta's Human Visual System Modeling is the foundation for many applications in robotic vision—from medical to military.

15/ MAI VU AND SUSTAINABLE NETWORKED COMMUNICATIONS

When it comes to wireless communications, the only thing worse than a dead cell phone is an overloaded network. Blending knowledge and tools from information theory, communication theory, optimization, and signal processing for communications, Associate Professor Mai Vu's research looks at everything from keeping battery power optimized to enabling cooperation between resources to enhance network efficiency and reduce overload. Her work's applications are far-reaching, touching cellular networks but also sensor networks and ad hoc networks in healthcare.

MECHANICAL ENGINEERING

DEGREES

Mechanical Engineering (M.S., Ph.D.)

Mechanical Engineering and Human-Robot Interaction (Joint-Ph.D.)

Mechanical Engineering and Materials Science and Engineering (Joint-Ph.D.)

Biomechanical Systems and Devices: Bioengineering (M.S.)

Human Factors (M.S.)

Human-Computer Interaction (certificate)

Manufacturing Engineering (certificate)

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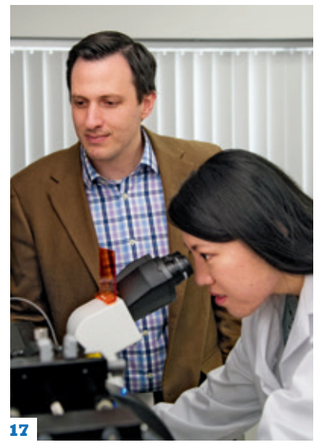

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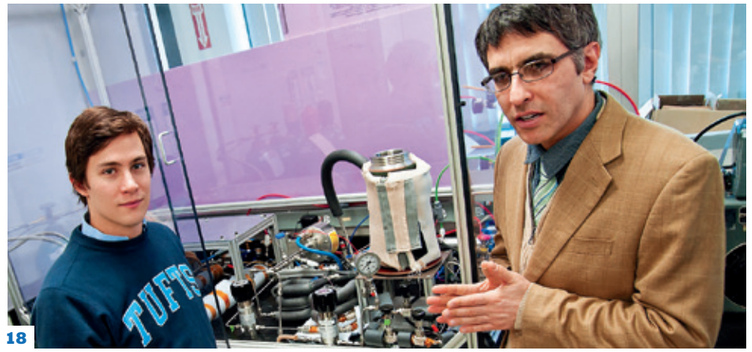


18

16 In the Human Factors and Applied Cognitive Systems Engineering Laboratory, students research the "human element" of design, including team performance during software simulations. **17** Using microfluidics and high-speed cameras, researchers can study the biomechanics and transport of swimming cells. **18** Using supercritical CO_2-based drying, mechanical engineers produce an energy-efficient insulation material called aerogel.

16/ DAN HANNON ENGINEERS FOR PEOPLE

You might think military experts would be better than a group of novices at using tactical software to locate a fictitious enemy in a complex environment. But Professor of the Practice Dan Hannon would prove you wrong. An experimental psychologist by training, he recently led an experiment that shows that team performance can depend more on how information is provided—in terms of software design and experiment setup—than on prior knowledge or expertise. His research is one example of how the discipline of human factors engineering is clueing people in to the need to think about the end-user when designing products for real people.

17/ JEFF GUASTO SINGLES OUT CELLS

Associate Professor Jeff Guasto's research centers on the biomechanics of swimming cells, such as bacteria and plankton. Understanding how single cells behave—how they swim, find food, avoid danger, or, in the highly specialized case of sperm—navigate to an egg—could have significant impact on biomedical devices, ecosystem dynamics, and micro-robotics. To study fluid and biological physics at micron scales, Guasto's research incorporates state-of-the-art experimental methods including microfluidics and high-speed video microscopy.

18/ MARC HODES AND COOL TRENDS IN SUSTAINABLE ENGINEERING

Buildings account for roughly 40 percent of total global energy consumption, and heating and cooling systems account for 40 percent of their energy use. How can engineers reduce buildings' energy consumption? One way is to improve insulation. By extracting alcohol from a silica gel, engineers can produce aerogel—or frozen smoke—that is twice as effective as insulation commonly used today. Associate Professor Marc Hodes is performing experiments to create more cost-effective processes that will make aerogels the sustainable insulation material of the future.

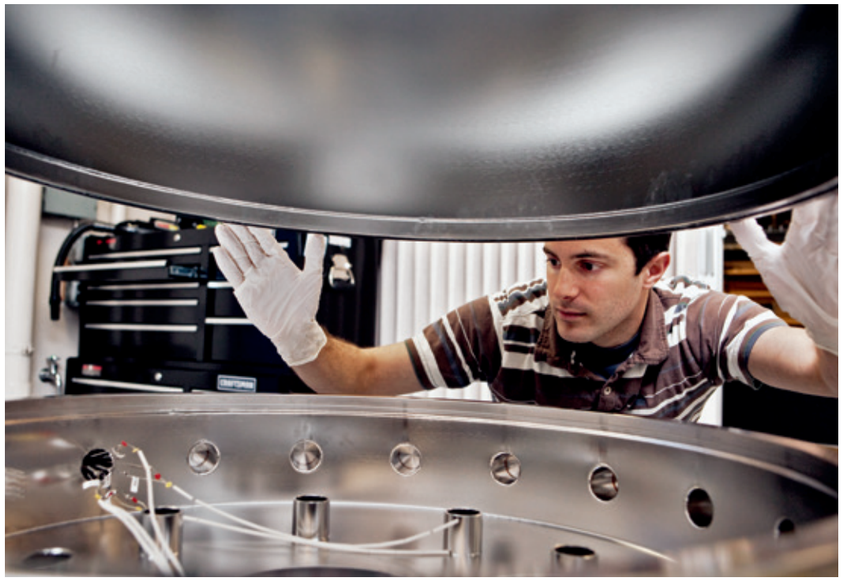
NEW PROGRAMS

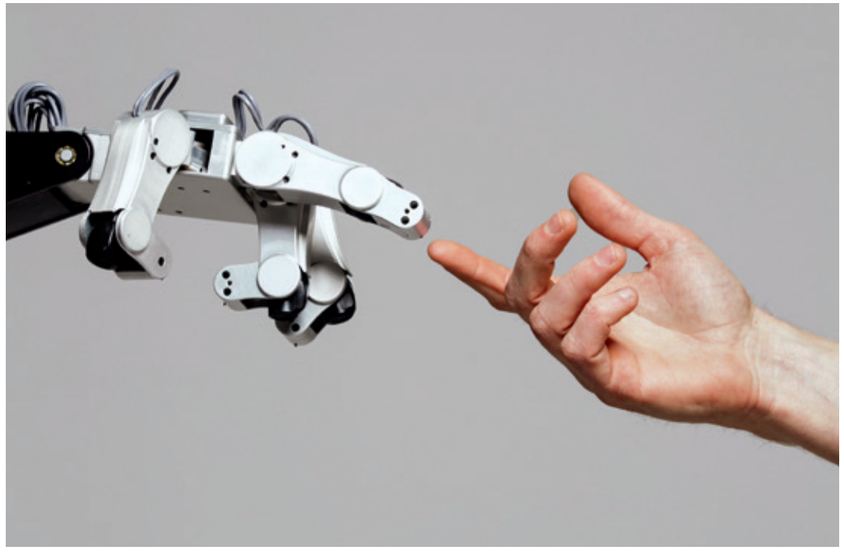
Drawing on its longstanding expertise in the areas of human-robot interaction and materials science and engineering, Tufts has launched exciting new programs in each field. Students will have the opportunity to collaborate with faculty and researchers across disciplines.

MATERIALS SCIENCE AND ENGINEERING (M.S., JOINT PH.D.)

Materials scientists study how the history of a material influences its structure and properties, advancing understanding in research areas that include metallurgy, solid-state physics, and biomaterials. Tufts faculty offer strengths in soft, structural, electronic, computational, and nano materials, and the new Tufts Interdisciplinary Advanced Materials (TIAMAT) Center brings it all together.

The master's degree is an interdisciplinary program, with students pursuing classes across multiple departments to achieve mastery in the field. Students graduating from the doctoral program will receive a joint Ph.D. in their home department and in Materials Science and Engineering. Participating faculty come from all Engineering departments, as well as Biology, Chemistry, Math, and Physics.





HUMAN-ROBOT INTERACTION (JOINT PH.D.)

As intelligent autonomous robots increasingly become part of our lives, human-robot interaction seeks to understand and improve all aspects of interactions between humans and robots. Doctoral students have the opportunity to build a unique degree program for themselves as they lay the foundations for future generations of researchers and practitioners working with robots.

Graduating doctoral candidates will receive a joint Ph.D. in their home department and in Human-Robot Interaction. Participating departments include Computer Science, Electrical and Computer Engineering, and Mechanical Engineering.

MANAGEMENT AND INNOVATION

Tufts University's Gordon Institute prepares scientists and engineers to become technology leaders and innovators. Taught by renowned faculty with extensive industry experience, our graduate programs feature a combination of classroom sessions, real-world projects, and team-based activities that prepare students to shape solutions for the future.

Graduates of the M.S. in engineering management and M.S. in innovation management programs have the technical competence, business knowledge, and leadership skills they need to inspire teams, bring innovative products to market, and advance their careers.

MASTER OF SCIENCE IN ENGINEERING MANAGEMENT (MSEM)

The Master of Science in Engineering Management (MSEM) is a part-time, two-year degree designed for working professionals who want to enhance their technical experience with advanced management and leadership skills. The intensive 21-month experience is a combination of classroom learning, a summer team consulting project, and a capstone leadership project.

Full weekend, evening, and Saturday class formats are available—each offering the same relevant, rigorous, and transformational educational experience that distinguishes the Tufts MSEM. Every detail of the program is designed with the needs of a working professional in mind, enabling students to balance work, life, and school.

Successful applicants come from a broad range of science and engineering backgrounds and work experiences. Most have an undergraduate degree in a STEM discipline, at least three years of strong work experience, and the ability to contribute in a dynamic, interactive classroom environment.

MASTER OF SCIENCE IN INNOVATION AND MANAGEMENT (MSIM)

The Master of Science in Innovation and Management (MSIM) is a new, full-time, one-year program designed to broaden the education of recent engineering and science graduates with the skills needed to succeed as leaders in the technology sector. Coursework focuses on: new product development, finance, and strategic management, as well as essential leadership skills including conflict resolution and building teams. Students can choose to specialize in one of three tracks: entrepreneurship, operations management, or technical depth.

The MSIM program is designed for those with an undergraduate STEM major or candidates with a strong interest in technology and strong quantitative skills. Unlike the MSEM, no work experience is required.

CERTIFICATE PROGRAMS

GET THE CONTENT—AND THE CREDIT—YOU NEED TO RETRAIN OR REFOCUS YOUR CAREER

Tufts' practice-oriented certificate programs consist of four or five graduate courses primarily offered in the late afternoon or evening. Our graduate courses are taught by award-winning, tenured professors in Tufts School of Engineering, as well as by industry professionals. The certificate credits equal roughly half of the credits you'll need for a master's degree, and most credits will transfer to our graduate programs.

More questions? Email us at certificates@tufts.edu or visit us at go.tufts.edu/certificates.

BIOENGINEERING
Advance your understanding of diagnostic imaging instrumentation and learn about biomaterials to design artificial joints and engineer tissue implants.

BIOTECHNOLOGY
Learn the techniques to engineer pharmaceutical products and manipulate genetic material to advance our understanding of disease prevention, nutrition, and material science.

CIVIL AND ENVIRONMENTAL ENGINEERING
Gain experience and research training at the intersection of the natural and built environment to pursue a career in environmental health, engineering mechanics, structural systems, geosystems, or water resources engineering.

COMPUTER SCIENCE
With technology advancing at a rapid pace, opportunities for innovative applications of computer science are limitless. The certificate program offers professionals the foundation in and knowledge of the hottest topics in computer science to rapidly advance your career.

ENVIRONMENTAL MANAGEMENT
Develop the skills you need to understand complex regulations, negotiate environmental treaties, and navigate multinational corporate programs.

HUMAN-COMPUTER INTERACTION
Solve tomorrow's complex programming challenges with a better understanding of how computer users think and act. Further your career in software engineering, web design, and human factors with training in user needs and preferences.

MANUFACTURING ENGINEERING
Increase your knowledge of 3D design and production techniques to reduce labor costs, increase productivity and profitability, tighten performance standards, and improve quality.

MICROWAVE AND WIRELESS ENGINEERING
Learn the electrical engineering concepts and cutting-edge techniques to design devices for radar and satellite technology, wireless radio and optical communication, cable broadcast, and the medical field.

POST-BAC *The School of Engineering's Department of Computer Science also offers a post-baccalaureate program for academically talented, highly motivated students who have at least a Bachelor of Science or Bachelor of Arts degree in disciplines with relevant mathematics and science content.*

K–12 ENGINEERING EDUCATION

The next generation of innovators is sitting in your classroom. The Teacher Engineering Education Program (TEEP) empowers teachers to bring hands-on engineering to your students. TEEP online graduate courses are designed to build knowledge in engineering and expertise in teaching engineering. Participants enroll in four graduate-level courses that are rigorous and engaging.

The TEEP program is modeled after the Tufts Center for Engineering Education and Outreach's in-person, hands-on workshops and courses. Courses are fueled by hands-on challenges, work with your own students, and discussions. For content courses, participants are shipped a kit of materials right to their door, and upload pictures and video of their engineering design solutions in an easy-to-use website. Pedagogy courses task participants with interviewing students, trying activities in their classrooms, and discussing readings.

Learn more about the program at teep.tufts.edu.

ADMISSIONS INFORMATION

Tufts School of Engineering seeks students from across the country and around the world who are passionate about gaining the knowledge and know-how to meet the world's most pressing challenges.

FOR A COMPLETE SET OF INSTRUCTIONS AND PROGRAM DEADLINES, VISIT ASEGRAD.TUFTS.EDU

APPLY
Online application located at gradase.admissions.tufts.edu/apply/

International Student Admission

Applicants who are not native speakers of English are required to take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). A minimum TOEFL score of 90 on the internet-based exam is required. The minimum IELTS score is 6.5. Please note: student copies or photocopies of TOEFL/IELTS scores are not accepted.

If applicants satisfy one or more of the following conditions, they are not required to provide a TOEFL or IELTS score:

- Citizenship of Australia, Canada (except Quebec), Great Britain, Ireland, New Zealand, Guyana, an Anglophone country of Africa, or an English-speaking country of the Caribbean;
- A college or university degree earned, in the United States or in one of the countries listed above, prior to submission of this application;
- Current enrollment as a full-time student in a degree-granting program in the United States or at an English-speaking school in one of the countries listed above. The student must have successfully completed two consecutive full-time academic years of college or university work prior to the date of anticipated enrollment.

FINANCIAL AID
The cost of a graduate education varies, depending on the amount of support you receive. The types of funding (scholarships, fellowships, and assistantships) available to support students vary by program. To learn more about financial aid packages, please contact the department to which you are applying.

Types of Aid

For full-time students in doctoral programs who show scholarly promise, the School of Engineering offers scholarships, fellowships, and research or teaching assistantships. Certificate students are not eligible for these awards.

- Tuition scholarships are available in most doctoral programs for qualified students.
- Most departments offer teaching and research assistantships to full-time students in doctoral programs.
- Fellowships are offered to students who demonstrate outstanding records of achievement and a well-articulated plan of study.

Application Procedures

To apply for tuition scholarships, teaching assistantships, and research assistantships, complete the Financial Aid Application section of the online application.

DIVERSITY COMMITMENT
We believe that the diversity of our graduate students deeply enriches our community. A diverse student body is fundamental to our academic mission to provide multiple views and perspectives that enhance the teaching, research, and development of new knowledge. In addition to promoting academic and research diversity, our mission is also to achieve cultural diversity by creating a welcoming academic and social environment for all students.

VISITING TUFTS

Attend an Information Session

Visiting our campus is the best way to get a feel for the Tufts graduate school experience. By attending an information session, you will have the opportunity to learn more about the degree program you are interested in.

- Register for an upcoming session at asegrad.tufts.edu/graduate-admissions/plan-visit

We also encourage students to reach out to the department graduate directors to arrange meetings with faculty and/or current students.

Photography throughout by John Davis Photography or provided by Tufts Photo/Tufts University with the following exception: Georgakoudi Lab, pp. 6–7. Produced by Hecht/Horton Partners and the School of Engineering at Tufts University.

Tufts UNIVERSITY | School of Engineering

GRADASE.ADMISSIONS.TUFTS.EDU/APPLY

Fall admission deadline
December 15

You'll need to submit
- Academic records
- Letters of recommendation
- Personal statement
- Resume/CV
- GRE scores*
- $85 application fee

Spring admission deadline
September 15

Once you submit your application, the relevant academic department will review your materials. Throughout the process, you can follow the status of your application and receive your admissions decision through your Tufts admissions account. Please contact the Office of Graduate Admissions if you have any questions.

Submit Application → **Academic Department Reviews** → **Admissions Decision**

* GRE scores may be waived for part-time students with five years of industry experience who are U.S. citizens or permanent residents. Our M.S. in engineering management does not require GRE scores. Visit go.tufts.edu/engmasters for complete details.