

Dean's Remarks

For seven years, we have built a culture of research excellence at the Tagliatela College of Engineering. We have done this without compromising the outstanding teaching or the student focus for which the college is known. The

In early 2020, communications students will be able to collaborate with criminal justice and cybersecurity students to develop a virtual crime scene in the virtual reality communications studio. Music industry, art and design, and engineering students will create together in the center's Makerspace and College of Business students can partner with health science students on a startup, sketching out ideas together with plenty of space to perfect their pitch. "No one owns the new building; everyone does," Annino says.

University President Steve Kaplan says the 44,000 square-foot facility will embody the University's culture of innovation. Named to honor long-time University benefactors Samuel S. Bergami Jr. '85 EMBA, '02 Hon., and Lois Bergami, the center "will provide an exceptional environment for our students to learn, create, and collaborate with each other ... and it will provide even more opportunities for our students to develop the same forward-thinking mindset that Sam has demonstrated throughout his distinguished career."

The first floor will feature a communications suite with state-of-the-art video and audio, teaching spaces and an expansive Makerspace. Maria-Isabel Carnasciali, associate professor of mechanical engineering and chair of the Department of Engineering and Applied Science Education, says the new University Makerspace will build upon the successes of the current one, "where students can see and touch an idea in a way that they can't see it with an equation on paper. It's been designed so the University can grow with it, everything can be moved around and yet tools and equipment are accessible to all and ready for use," she says.

Joseph Smolinski, chair of the Department of Art and Design, says many art and design classes use the current University Makerspace, and he looks forward to the innovation opportunities the new building will provide. "One of the great things that happens in the space is a convergence of



The Tagliatela College's Innovative Project to Integrate Technical Communication Habits Is Thriving

When Julia Benitez started in the Tagliatela College of Engineering, the Project to Integrate Technical Communication Habits (PITCH) program didn't yet exist. "We'd have to write technical memos and many of us were lost," Benitez says. "We'd put a lot of effort in and wouldn't get the grades we were expecting. So, we asked our professors for a program to teach us those technical writing skills, and the University listened."

Developed by a team of faculty members across the Tagliatela College, the program is integrated across all levels and engineering disciplines. Benitez became a PITCH peer assistant in her senior year, working with Judy Randi, professor of education and PITCH coordinator, helping other students write succinct technical memos and learning a great deal about technical communication along the way.

Today, as a supplier quality engineer at MacDermid Alpha, working in the electronics and semiconductor industry, Benitez says she uses the skills she developed through PITCH every day. She can turn mountains of data into a tight, clear technical report. "These are very busy people. The semiconductor industry moves very fast, 4 MacDerm 9.713 (ea)4.1 (t deal aboutdo15 (fi(o writ)6 (bus)10ocle)11 (ery)16 (ud.385 TD [6e0 (try)4ik9t)-3)13 (epy)16 (ud.385 0s she)-5 (as)3 (t, TD [(De)11 (v14 (l)16 (l (f)5 (as)3 (t,)4ar)13as)3 (t,d)e (f)5 (as)3 n26..9 (C)-1 f)5 (a)-7.1 (n)2.9 (g)]TJ 0 0 0 1 k (

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University of New Haven Named One of 12 Collegiate Teams to Take Part in the Highly Selective U.S. Department of Energy’s Collegiate 2020 Wind Competition

In the four years since it began, the U.S. Department of Energy’s Collegiate Wind Competition has quickly become the country’s most prominent undergraduate-level wind energy competition. The University’s Tagliatela College of Engineering has been selected as one of the of the 12 teams to compete in the 2020 Collegiate Wind Competition.

The University’s student team will compete at the American Wind Energy Association’s WINDPOWER Conference and Exhibition in Denver in June, 2020 with teams from California State University–Chico, California State University Maritime Academy, James Madison University, University of Maryland, Northern Arizona University, Pennsylvania State University, Texas Tech University, Tuskegee University, Virginia Polytechnic Institute and University, Washington State University–Everett, and University of Wisconsin-Madison.

“Qualifying to participate in the Collegiate Wind Competition is yet another remarkable success for the college and demonstrates the passion and dedication of the interdisciplinary faculty team that worked on the proposal to the Department of Energy,” says Dean Ron Harichandran. “I am confident that our students will now reciprocate by performing at a high level.”

According to the Office of Energy Efficiency and Renewable Energy, the design built by the interdisciplinary student team for the college’s wind competition will demonstrate the passion and dedication of the interdisciplinary faculty team that worked on the proposal to the Department of Energy, says Dean Ron Harichandran. “I am confident that our students will now reciprocate by performing at a high level.”

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As a doctor in her native Myanmar, May Thuzar Maung '19 M.S. knew all too well about the devastation that comes from infectious diseases and the difficulties that arise in treating them.

Four Questions with Shue Wang New Tagliatela College of Engineering Faculty Member

I am dedicated to developing novel engineering techniques at the University of New Haven to solve biological problems. The goal is to bridge the gap between biological and engineering paradigms.

My lab will be mainly working in two directions: mechanobiology and microfluidic systems for disease diagnostics. Mechanobiology is the study of mechanical force in regulating cell functions during tissue regeneration and development. In biological systems, mechanical force is a critical factor in the regulation of pattern formation, which results in cell function. Pattern formation examples include vascular systems, lung vascular structure, and retina vasculature. The central question we are exploring is how individual cells sense and respond to mechanical stimuli to finish self-organization and self-healing during development and repair.

I am also very interested in developing microfluidic systems for application in the field of forensic science and disease diagnostics. Specifically, I am interested in detecting microRNAs for the identification of body fluids.

My teaching philosophy is "motivating students and helping them to become accomplished and independent intellectuals." The students at the University of New Haven are highly motivated and very intelligent.

As an engineering teacher, I am dedicated to guiding students in the development of problem-solving and analytical skills.

I look forward to seeing the students develop communication and teamwork skills to become successful engineers through classroom activities.

I am also very interested in STEM education and outreach. I would like to promote diversity at the University by arranging workshops and other activities to advance the role of women in STEM fields.

Shue Wang is an assistant professor of biomedical engineering, mechanical engineering and mechanical engineering. She received her Ph.D. in Mechanical Engineering, in 2015 from the University of Arizona. She comes to the Tagliatela College of Engineering from the University of Michigan where she was a postdoctoral fellow in mechanical engineering.

My research focuses on engineering techniques such as microfluidics, biomechanics, and biosensor design for addressing important problems in biology and medicine. When I was a graduate student at the University of Arizona, I designed a nanobiosensor to detect biomarkers, messenger RNA (mRNA), and protein at the single-cell level. Using this nanobiosensor, we were capable of detecting gene expression dynamics in living cells and tissues.

A very good example is collective cell migration during wound healing. Individual cells sense the environment and respond by moving toward the area of wound. This nanobiosensor has been applied to study other dynamic phenomena, including cancer metastasis, tissue regeneration, and development. When I was at the University of Michigan, I was also

This semester I have five graduate students working on different projects. Onohome Akonure and Rui Yang are studying the effects of mechanical compression on tumor angiogenesis. Karan Suresh and Miroslava Avila are working on designing microfluidic devices for cell migration. Vidya Palanisamy is working on the project to understand how compressive stress modulates breast cancer cell migration. I am also interested in recruiting curious, creative, and self-motivated undergraduate students to do research in my lab.



EXEMPLARY PARTNER AWARD:
MITRE

When Cory Hall, MITRE's principal cybersecurity engineer, took on his first intern from the Tagliatela College of Engineering's Cyber Forensics Lab, he assigned him the hardest problem he had. "The intern presented a couple of different solutions that he shared with us and some of our partners," Hall says. That intern is now a full-time MITRE engineer.

The MITRE - Tagliatela College partnership has been

extremely fruitful, say Hall, Dean Ronald Harichandran, and Ibrahim Baggili, Elder Family Chair, and associate professor of computer science. "Engaged partnerships with prominent companies provide our students and faculty with outstanding opportunities," Harichandran said.

MITRE operates federally funded research and development centers — organizations that assist the U.S. government with scientific research and analysis, with a focus on systems engineering and exploring new and expanded uses of technologies to solve their sponsors' problems. Hall — who is now part of the Tagliatela College's Advisory Board—has come to the College to talk about the field. MITRE has provided paid internships to seven students and will take on more interns this summer. MITRE has also funded faculty and student research, and paid conference travel expenses for student researchers.

"They've hired five of our graduates in the past three years and they all make six-figure salaries," Dr. Baggili says. "As MITRE cybersecurity engineers, they get to work with all branches of the government on top-secret projects."

DISTINGUISHED LIFETIME ALUMNI AWARD:
William J. (Bill) O'Brien '64
B.S. in Industrial Engineering

Each day at work, William J. (Bill) O'Brien lived by the philosophy "we can always do it better." It began when he worked both shifts as a Schick engineer, so he could watch a product line run and make changes so the process could be more efficient.

It continued when he became president and owner of Precision Metal

To learn more about the University of New Haven, please contact:

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