A Message From the Dean

These are exciting times for the University as we embark on the first academic year with President Gregory Woodward. CETA has enjoyed an increase in its student population and enrollment is now 50 percent greater than the historical enrollment levels of both the former College of Engineering and the Ward College of Technology. The disciplines offered by the college are in growing demand. As our enrollment increases we have revisited our core values.

Faculty-student engagement is crucial to the CETA experience. The CETA faculty dedicate their time to engaging with students and forging relationships that enable students to thrive during and beyond their college experience. This high level of faculty interaction and support has powerful outcomes in student retention, GPA, and success in graduation rates. CETA is proud to say that we have always asked more of our faculty and they rise to the challenge each and every time.

Faculty meet with professionals in their related industries to continuously adjust their curriculum to reflect the new demands of the workforce. Upon entering our college, students are assigned a faculty advisor who will personally meet and guide them through their entire program. Faculty and staff organize and host events that help students to perfect networking, résumé building, and leadership skills. In addition, faculty spend numerous hours outside of the classroom developing undergraduate research with students.

CETA is #14 in the nation for top graduate salaries, tied with MIT, Carnegie-Melon, and Cooper Union, in part by the strong faculty-student support culture.

Louis Manzione, Dean

CT Space Grant Consortium, a team collaboration between University of Hartford and University of Bridgeport, launched a high altitude balloon near the Sports Center on the University of Hartford campus in preparation for helping NASA live stream the solar eclipse Watch a video of the practice launch at: hartford.edu/launchvideo
Mohd Hatta ’91 Improves the Lives of Many in Malaysia

Professor Saleh Keshawarz, chair of the Civil, Environmental, and Biomedical Engineering Department, reminisced recently about the University of Hartford during the mid-1980s to the late 1990s, when Mohd Hatta ’91, a former student from Malaysia, reached out to reconnect, and it awakened memories of the College of Engineering, Technology, and Architecture (CETA) during that time period.

Back then, CETA had not yet merged into what we know it as today. Until the 2004-05 academic year, the College of Engineering and the Ward College of Technology were separate entities. When they first combined, they were one college but two schools. The next academic year, 2005-06, they became what we now know as CETA: one college with four departments. CETA currently offers ten different undergraduate programs of study, as well as five graduate level programs. In addition, CETA offers a graduate dual degree option with the Barney School of Business.

Mohd was part of the first group of nearly 100 applicants who arrived from Malaysia in the late 1980s. Samuel Skinner, the Director of International Admissions recalls, that “most of the students were engineering majors, but some were focused on computer science or business.”

Professor Keshawarz formed very close relationships with these students and they “loved him,” notes Sam. Despite CETA’s steadfast growth in programs, the social interaction and relationships between faculty and students have remained a priority. Faculty advising has and will remain an indispensable element of the CETA experience.

Mohd is currently living in Kuala Lumpur, Malaysia, and is heavily involved in the Mass Rapid Transit (MRT) Project. They are currently installing a permanent platform for the city’s Pusat Bandar Damansara Station. The development of the MRT is dramatically changing the lives of citizens of Malaysia by providing transportation for approximately 400,000 passengers per day. The Kajang Line is 51km long and served by 31 stations. The project is far from being over and everything is “on track for the launch of the MRT phase two,” according to the facebook group, MRTMalaysia. Launching a system like the MRT is crucial to Malaysia’s economic development, allowing the country to expand their businesses to areas that typically had limited accessibility. Mohd believes his education at Uhart has given him the tools to facilitate his country’s objective toward economic progress.

As we look to the future of our University, our students and the innovative possibilities they make a reality, CETA cannot help but be in awe of what our University’s history proves time and time again. Our students improve the lives of many, and we are grateful for the time we share with them in and out of the classroom. Our faculty go above and beyond to ensure that our students succeed and CETA continues to enjoy and share in the accomplishments of our alumni. With the remembrance of years past, we are eager to embark upon the possibilities of the 2017-18 academic year.
Alumna Develops Mobile App to Help Headache Sufferers Find Relief

Recent graduate Rosemarie Day '17 is developing a mobile app she hopes will have headache sufferers reaching for their phones instead of the medicine cabinet. The app, tentatively named “Whitman,” tracks environmental factors like temperature, humidity levels, and light and combines them with users’ personal data so they can alter their environment to minimize or even avoid headache symptoms. Day, who suffers from headaches herself, started developing “Whitman” for her senior capstone project, which she completed under the advisement of Visiting Assistant Professor Hassan Salehi in the College of Engineering, Technology, and Architecture. It now has the backing of iDevices, an Avon, Conn.-based company where Day works as a software engineer and spent time as an intern.

“Sunlight reflections, glare, fluorescent light, and extreme heat are just some of the environmental factors that can cause headaches if you’re prone to sensitivities.”

“I discovered that my headaches, migraines, and sinus headaches could be misdiagnosed due to their similarities, as many people’s can. Having a way to keep track of the role the environment plays makes it easier to diagnose them and ultimately treat them,” Day says.

Small, wireless sensors placed in rooms inside the user’s home track environmental factors, and they enter personal data into the app, including daily eating, sleeping, and activity habits. The information is combined and sent to an iPhone or tablet. The data is then analyzed and displayed on the screen, revealing patterns between changes in the environment and the onset of a headache or migraine. “For example, if the app reveals that higher temperatures and light sensitivity combined are a factor, the user can make adjustments to reduce their exposure to these elements,” she says.

Aside from sponsorship from iDevices, “Whitman” earned Day first place among the dozens of senior projects showcased at the College of Engineering, Technology, and Architecture’s 2017 Spring Expo. She also presented it at the 2016 IEEE MIT Undergraduate Research Technology Conference in Cambridge, Mass. But she still sees room for improvement.

“I have some ideas to make “Whitman” more usable and efficient, so I’ll keep working on it as a project when I enter graduate school at Worcester Polytechnic Institute (WPI) in the fall,” Day shares. “My dream is to expand it to include other chronic illnesses affected by environmental changes, including asthma and joint-related disorders.”
Two UHart Professors and Three Students Worked and Studied at NASA this Summer

Students and faculty soaring to new heights at NASA

Mechanical Engineering major Wesaam Lepak ’18 knows he’s achieved what many only dream of—landing an internship with NASA (the National Aeronautics and Space Administration). He is spending the summer working on a space shuttle system that, in the next two decades, may launch humans to the moon, asteroids, and Mars.

“NASA has been a dream of mine for a while;” says Wesaam, a Washington D.C. native who cultivated his affinity for faraway places while living in Brazil and Qatar during elementary school and Germany and Sweden in high school. “NASA has some of the best engineers and scientists in the world, and my goal is to be part of that group,” Wesaam says with confidence.

His summer responsibilities in the Structural Dynamics Laboratory at NASA Glenn Research Center in Cleveland, Ohio, take advantage of his concentration in acoustics, and included working with aerospace engineers to analyze the effects sound waves have on a space launch. “I’ve always found math and science interesting because it affects the world, and I also have a passion for music, which is where studying acoustics come in,” he shares.

Recent graduate Sara Huelsman ’17, headed to California this summer to intern in the Aeromechanics branch of NASA Ames Research Center in Mountain View, and Lucas Shearer ’17, a former marine is doing his second NASA internship at the Fluid Dynamics branch of the Marshall Space Flight Center in Huntsville, Alabama. Both majored in mechanical engineering with an acoustics concentration in the College of Engineering, Technology, and Architecture (CETA) and both are working on sound measurement projects as their assignments this summer.

Professor of Mechanical Engineering Ivana Milanovic is also in Cleveland this summer with Wesaam. She was awarded a remarkable sixth NASA faculty fellowship award to conduct research this summer. Also in Cleveland is Assistant Professor of Mechanical Engineering Paul Slaboch, who secured his second NASA faculty fellowship. Milanovic says working for NASA isn’t an impossible dream.

“While NASA internships are notoriously competitive for students to secure, the structure of UHart’s mechanical engineering and acoustics programs equips our future engineers with skills that are currently of great interest to NASA.”

These skills include the ability to engineer and analyze materials to optimize how sound is absorbed and transmitted. “Understanding acoustics and vibrations is critical to the success of a space mission, because as sound waves travel through the space shuttle, they have the ability to physically damage mission-critical components like the electrical and avionics systems,” explains Wesaam.

While Wesaam’s ultimate focus is on space exploration, he’s learned that NASA’s research extends beyond there. “Every aircraft in the U.S. has NASA-developed technology on board, so researching new ways to control jet engine noise on airplanes, especially when they take off and land, is part of what they do,” he says.

In fact, his time at NASA with professors Milanovic and Slaboch has included a preview of their research on reducing the noise level of jet engines to determine if there is a renewed future of commercial supersonic jets. (hartford.edu/nasagrc)

Wesaam says that his favorite part of the internship was “hearing all about the exciting research on cutting-edge technology that is going on around me and the idea that I could play a role in sending humans to Mars.”

Find out more at: hartford.edu/ceta/nasa2
UTC Senior Vice President Visits CETA

J. Michael McQuade, senior vice president for science and technology at United Technologies Corporation, visited the Center for Manufacturing and Metrology this past spring and discussed opportunities for cooperative work in the areas of supplier quality and failure analysis. This is his first visit after he inaugurated the metrology lab in 2012. The Center for Manufacturing and Metrology has run short courses on Fundamentals of Metrology for six cohorts and is scheduled to offer four more in 2017. The Center has also offered and offers services in the area of electron microscopy and failure analysis.

Continue Reading at: hartford.edu/UTCmet

Saleh Keshawarz Leads Workshop Held in Laos

CETA faculty crosses national borders to create relationships with students, in order to share their knowledge with the world. Saleh Keshawarz, P.E., professor and chair of the Civil, Environmental, and Biomedical Engineering Department, led a team of Afghan Graduate Students at the Asian Institute of Technology during a workshop held in the headquarters of the Mekong River Commission, Vientiane, Laos.

The workshop was entitled: Transboundary Water Issues of Mekong River. Keshawarz led the discussion in the workshop in addition to giving two presentations. One presentation was on “Afghanistan Water Sharing Agreements with Neighbors” and the other was on “Economic Collaboration involving water Resources in Central Asia, Background and Future Prospects.”

Robert Celmer wins prestigious Acoustical Society Award

Congratulations to Bob Celmer ’78, program director of CETA's acoustical engineering programs, who has been selected to receive the Acoustical Society of America's 2017 Rossing Prize in Acoustics Education!

The gift made in 2003 to the Acoustical Society Foundation by Thomas D. Rossing was intended to recognize an individual who has made significant contributions toward furthering acoustics education through distinguished teaching, creation of educational materials, textbook writing, and other activities. The Prize will be presented to Professor Celmer during the Plenary Session of the Acoustical Society of America (ASA) fall 2017 meeting in New Orleans, LA., in December 2017. At that meeting, Professor Celmer will deliver the “Rossing Prize Lecture” in a session sponsored by the Committee on Education in Acoustics. He was named a Fellow of ASA in 2014.

The University of Hartford has the only ABET-accredited undergraduate BSE Acoustical Engineering and Music degree. Professor Celmer directs the program, which requires students to have both the math and science background, as well as successfully pass the Hartt School entrance requirements, including an audition.

Help support CETA and its 42 labs and studios for students.

Louis Manzione, Dean, CETA manzione@hartford.edu

To Donate Please Visit:

hartford.edu/ceta/donate

For additional ways to get involved in supporting CETA:

Alex Devivo
Institutional Advancement
Devivo@hartford.edu
860.768.2405
HIGHLIGHTS FROM THE SPRING 2017 SEMESTER

Thesis Presentations

On Monday, April 24, CETA hosted its Annual Master of Architecture Thesis Presentations in the 1877 Club, located in the Harry Jack Gray Center. The work of 16 second-year graduate students was on display from 12:1:00 p.m., followed by individual presentations and reviews of each project. The event was culminated by a reception in the Rotunda from 6:00 p.m. Students featured included: Ahmed Abdelghany, Hajar Aldouri, Fahed Baker, Tomas Botero, Daniel Condon, Laura Crowley, Alyssa Danielewicz, Jameson Gay, Lance Green, Todd Josselyn, Matthew Lawrence, Ryan Miller, Juan Pinto Castaneda, Evan Switzer, Ronald Wassmer, and Kalkidan Zerfu. Graduate Program Director and Thesis Coordinator Daniel Davis, AIA, was pleased with a high turnout, as approximately 250 people were in attendance.

Thesis Supervisors Mark Hopper, AIA; Craig Saunders, AIA; and Tyler Smith, FAIA; supported a wide range of student projects, including academic buildings, museums, a rehabilitation retreat, a refuge center, a library, a community center, a transit-oriented development, an urban market, an office building, and a tiny house.

Twenty-one industry professional reviewers attended the event and provided feedback following each student presentation. These reviews from practicing architects help prepare students for their professional lives where design presentations are an integral part of having a project built.

Architecture firms that attended the event:

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Hajdar Aldouri '17 presenting her Heterotopian Housing Complex, now on display at the Connecticut American Institute of Architecture.

Thesis work on display at the Connecticut American Institute of Architecture in New Haven

On Thursday, May 11th, University of Hartford Master of Architecture Thesis Projects went on display in the American Institute of Architects/Connecticut Gallery in New Haven, Conn. The work was to be exhibited through June. AIA/CT Director Diane Harp-Jones said “the work is absolutely beautiful; we should make this an annual event.”

Students featured include: Ahmed Abdelghany, Hajar Aldouri, Fahed Baker, Laura Crowley, Alyssa Danielewicz, Matthew Lawrence, Juan Pinto Castaneda, and Ronald Wassmer.

Graduate Program Director and Thesis Coordinator Daniel Davis, AIA, is pleased with this opportunity to display graduate student work in such a public forum. AIA/CT is the center for the Architectural profession within the State, and many architects, engineers and construction industry professionals visit the offices daily.
CETA Design Expo: Spring 2017

Winners of Senior Design/Capstone Competition

1st Place
Rosemarie Day
Environmental Analyzer

2nd Place
Anna Elefante, Lucas Shearer, Jacqueline Maynard, Ahmad Arabiyat
Using Acoustic Waves as a Therapeutic Tool for Osteogenic Differentiation

2nd Place
Jean Piard, Matthew Salvati
Cloud Enabled Irrigation Control System

Winners of the ES 242 Engineering by Design Sophomore Poster Competition

1st Place
Nick Ackley, Turki Almarri, Eric Sims, Ali Alsagoor
The Navigation Belt

2nd Place
Abdulla Albalali, Abdulrahman Alshammari, Jeff Fournier, Shaun Vasselin
Braille teacher

2nd Place
Griffin Shepherd, Alhassan Alyami, Uche Ulebor, Qahsan Almuammar, Ahmed Alwabari
Vibrating Necklace

Dean Manzione pictured with the Senior Design/Capstone winners.

View footage of the expo at: hartford.edu/designexpovid

Upcoming Events

To learn more about CETA events visit:
hartford.edu/cetaevents

If you interested in information regarding the University’s fall semester Career Fair, please contact Linda Schultz:
schultz@hartford.edu
860.768.4169

In addition to the faculty and staff who organized, served, and judged the event, we wish to give special thanks to all those who attended and viewed students’ work, and to the following external reviewers who assisted as judges:

Howard Altmann, Chemical Engineer
Anna Barry, CT Dept. of Trans.
Eric Benoit, Permasteelisa North America Corp.
Racquel Brown, Otis Elevator
Duffy Felmlee, ENHP
Al Fong, Media Consultant
Jeff Fournier, Carlin Contracting Co.
Zack Herrick, Secure Tek Solutions
Jeff Katz, IBM
Fred Kochanek
Kyle Kwaczala, Boston Scientific
Andrus Maandi, Oxford Performance Materials
Jessie Mabry, Bureau of Education and Services for the Blind
Corey MacDonald, Choroideremia Research Foundation
Chris Madison, Center for Education, Simulation, and Innovation at Hartford Hospital
Dan Patrick, Wrisley
Jordan Pike, CT Dept. of Trans.
Kristamarie Pratt, ENHP
Beth Richards, A & S
Joe Romagnano, Patent Attorney
Brian Romano, The Arthur G. Russell Company
Angela Sabino, Medtronic
Jonathan Slifka, Governor’s Liaison to the Disability Community
David Welch, Pratt & Whitney
Terri Wilson, BEACON
Severine Zygmont, Oxford Performance Materials

Read more at:
hartford.edu/cetadesignexpo17
University of Hartford Professor and Students Use the Solar Eclipse to Inspire a New Generation of Scientists

As the total solar eclipse of 2017 made its way across the United States, a University professor and two engineering students worked with hundreds of young visitors at the Connecticut Science Center to make sure they’d never forget the day.

Electrical engineering and computer science double major Erin Sussmann ’20 and physical therapy major Adrienne Fischer ’19 showed children a sun and moon relativity activity done with Oreo cookies and helped them create a pinhole viewing projector. “The pinhole filter means simply poking a hole in a paper plate that visitors have decorated,” said Erin. Adrienne added, “The hole lets the sun shine through and cast a shadow on the ground, but it’s not to be used to look through toward the sun.” The Oreos were helpful in showing children the relative sizes of the sun and moon. (The sun is about 400 times larger than the moon.)

Young people and their families were also able to watch a live stream of the NASA Connecticut Space Grant Consortium (CTSGC) team’s launch in Paducah, Kentucky of an eight-foot tall weather balloon. UHart students and professors are part of the team along with University of Bridgeport students and faculty. You can read more about their eclipse project here. The balloon ascended to an altitude of nearly 90,000 feet carrying a video camera that transmitted a live feed to NASA. (Watch for a story about their day later this week.)

At the Science Center, Cater Arico, Assistant Professor of civil and biomedical engineering and Associate Director of CTSGC said, “The next total solar eclipse visible in the United States will be on April 8, 2024, traveling a diagonal path crossing from Texas to Maine.” It’s possible some of today’s young scientists will be studying science at UHart by then!

View video of the day’s action: Hartford.edu/eclipse2017ct

Uhart students livestream total solar eclipse: hartford.edu/UHartEclipse

Adrienne Fischer ’19 (pictured left) and Erin Sussmann ’20 (pictured right) help children decorate a pinhole viewing projector.