

# RESEARCH MILESTONES

Industrial Engineering • Spring 2021



OPTIMUM

UNIVERSITY of  
**HOUSTON**  
CULLEN COLLEGE of ENGINEERING  
Department of Industrial Engineering

# Letter from the Chair



Dear Colleagues,

I hope you are well. Our department is doing very well despite ongoing challenging circumstances. Our professors and students continue to conduct impactful research, bringing in numerous grant awards and accolades to our department.

I am delighted to share some of our recent highlights with you, including some exciting research breakthroughs and newly-funded projects. If you would like to learn more about how to support a project or collaborate with our department, please do not hesitate to let me know.

Warm Regards,

**Gino J. Lim, Ph.D.**

Chair, Department of Industrial Engineering  
Cullen College of Engineering  
University of Houston

## UH IE **BY THE NUMBERS**



### TOP 50

INDUSTRIAL  
ENGINEERING  
PROGRAM IN THE U.S.

\*Source: US News & World Report

### TOP 100

ENGINEERING SCHOOLS  
IN THE NATION

\*Source: US News & World Report



**22:1** UNIVERSITY-WIDE  
STUDENT TO FACULTY RATIO



**118** UNDERGRADUATE  
STUDENTS

**114** GRADUATE  
STUDENTS

**232** TOTAL STUDENTS  
IN DEPARTMENT

\*Student Totals are from Fall 2020



**35M+** IN RESEARCH  
EXPENDITURES AT THE CULLEN  
COLLEGE OF ENGINEERING



**80%** OF UH ENGINEERING  
UNDERGRADUATES ARE EMPLOYED  
WITHIN 1 YEAR OF GRADUATION



**55** RESEARCH LABS, CENTERS,  
INSTITUTES & INDUSTRY CONSORTIUMS

## GLOBAL CONNECTIONS



The UH IE Department recently received a grant to establish a network among three countries for digital systems requirements. **Dr. Gino J. Lim**, a professor and the chairman of the Industrial Engineering Department at the Cullen College of Engineering, is leading the project.

The grant, “Digital System Requirements for Natural Resources Engineering,” is meant to establish an interdisciplinary network of academic and industrialists in Norway, Brazil and the United States. The effort will stretch from October 2020 through September 2023, and it is sponsored by the University of Oslo in Norway.

“DSYNE is a project to build an international research, education and innovation network in digital requirements management in engineering,” Lim wrote. “This process is a vital, but very expensive part of the capital projects that are used to build today’s oil platforms, energy plants,



infrastructure and processing facilities.”

As part of this networking, there will be three, week-long workshops with tutorials, held in conjunction with major industry conferences, as well as the development of a course to be taught at the partner universities and offered as continuing education courses. There will also be short and long-term exchanges of staff, students and interns between the participating organizations. ⚙️



## FIGHTING CANCER

**Dr. Gino J. Lim**, a professor and the chairman of the Industrial Engineering Department at the Cullen College of Engineering, has received a grant to further research into cancer treatment. The grant, “Determining lymphopenia risk factors with intensity-modulated photon and proton therapy,” is sponsored by the M.D. Anderson Cancer Center. The project period runs from September 2020 through August 2021, and the grant is for \$31,084.

In a summary describing the research, Lim noted that radiation therapy is a common treatment for cancer patients. Although radiation therapy is effective against many types of localized cancers, ample evidence suggests that it can cause immunosuppression by inducing lymphocytotoxicity. ⚙️





## UH INFORMS EARNS **SUMMA CUM LAUDE DISTINCTION**



The University of Houston's student chapter of the Institute for Operations Research and the Management Sciences (INFORMS) has been awarded summa cum laude distinction for 2020, one of only five chapters internationally to earn it.

INFORMS is an international society for practitioners in the fields of operations research, management science and analytics. INFORMS promotes greater public awareness, interest and understanding about the benefits of these fields, and provides a variety of programs and services that support lifelong learning and networking. This includes publishing 16 peer-reviewed journals, hosting numerous conferences and meetings, providing continuing education courses and professional certification, and administering dozens of special-interest communities that help professionals network and collaborate with colleagues from around the world.

President **Zahed Shahmoradi** and Secretary **Poria Dorali** praised the work of their members and coordination with the faculty as reasons why their work was recognized. ⚙️

NOW HIRING  
NOW HIRING  
NOW HIRING  
NOW HIRING  
**NOW HIRING**

**FULL TIME LECTURER POSITION**

**The Department of Industrial Engineering** at the University of Houston, Cullen College of Engineering invites applications for a full time Lecturer position to begin in Fall 2021 for its newly approved Bachelor's degree program in Systems Engineering program housed in Katy, TX.

**TO LEARN MORE AND APPLY, PLEASE VISIT:** [https://uhs.taleo.net/careersection/ex2\\_uhff/jobdetail.ftl?job=FAC00170101&lang=en](https://uhs.taleo.net/careersection/ex2_uhff/jobdetail.ftl?job=FAC00170101&lang=en)

## UH GRAD WALHEIM CONTINUES TO PLOT COURSE FOR THE STARS

When **Rex Walheim** first enrolled at the University of Houston's Cullen College of Engineering's Masters program in Industrial Engineering in the 1980s, his goals were literally sky high. At the time, he was a flight controller at the Johnson Space Center and a lieutenant in the United States Air Force, and he hadn't yet flown a vessel himself.

"I knew that an advanced degree was important for a career in the Air Force," he said. "I was interested in becoming an Air Force Flight Test Engineer, which required an Engineering Masters degree. A friend of mine told me about the UH Industrial Engineering program and it sounded interesting. I decided to try it out, and ended up enjoying it. I found that it was a good mix of engineering and management."



INDUSTRIAL ENGINEERING



After completing his Masters at UH in 1989, and several years at the Air Force Test Pilot School, Walheim joined NASA in 1996 as an astronaut, the beginning of what would be a long and successful career at the organization. Walheim retired from NASA as the deputy director of the Johnson Space Center's Safety and Mission Assurance Directorate in July 2020. The agency noted that he spent almost 36 years in government service, 36 days in space, and 36 hours on spacewalks. He still works for a space company and with the ISS, although in the private sector, with Axiom. ⚙️

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Photo from bearofficialsstore.com

INDUSTRIAL ENGINEERING

Photo from siliconangle.com

## ADAT BUILDING ON SKILLS FROM UH EDUCATION

Building on the skills he first learned while pursuing a Masters' degree in Industrial Engineering at the University of Houston's Cullen College of Engineering, **Arun Adat** is now in his second decade of a successful career at the Hewlett Packard Enterprise Company, a Fortune 500 company. While at UH, Adat completed his Masters' degree while studying with **Dr. Ali K. Kamrani**. His thesis topic was "A Simulation-Based Methodology to Measure and Analyze the Required Inventory due to Product Proliferation," and he co-authored three papers. Adat now serves as a Supply Chain Leader for HPE. He also gives back to the university, participating in the Industrial Advisory Board for Industrial Engineering.

Adat pointed at UH's programs and a scholarship offer as primary reasons why he attended UH. "Manufacturing and Operations have always been my passion," he said. "I was attracted to the UH program because of the strong faculty and course work in manufacturing and operations research. I was also fortunate to get a full scholarship from the university to pursue my master's and thesis. I graduated in 2005, and the UH program has provided me the foundation to be a confident operations professional." 🛠️



# The University of Houston

## Cullen College of Engineering

The University of Houston Cullen College of Engineering addresses key challenges in energy, healthcare, infrastructure and the environment by conducting cutting-edge research and graduating hundreds of world-class engineers each year. With research expenditures topping \$35 million and increasing each year, we continue to follow our tradition of excellence in spearheading research that has a real, direct impact in the Houston region and beyond.





# UNIVERSITY of **HOUSTON** | ENGINEERING

UH Cullen College of Engineering  
Department of Industrial Engineering  
Engineering Building 1  
4726 Calhoun Road, Suite N308  
Houston, Texas 77204-4008

    @UHEngineering

Research   
**MILESTONES**