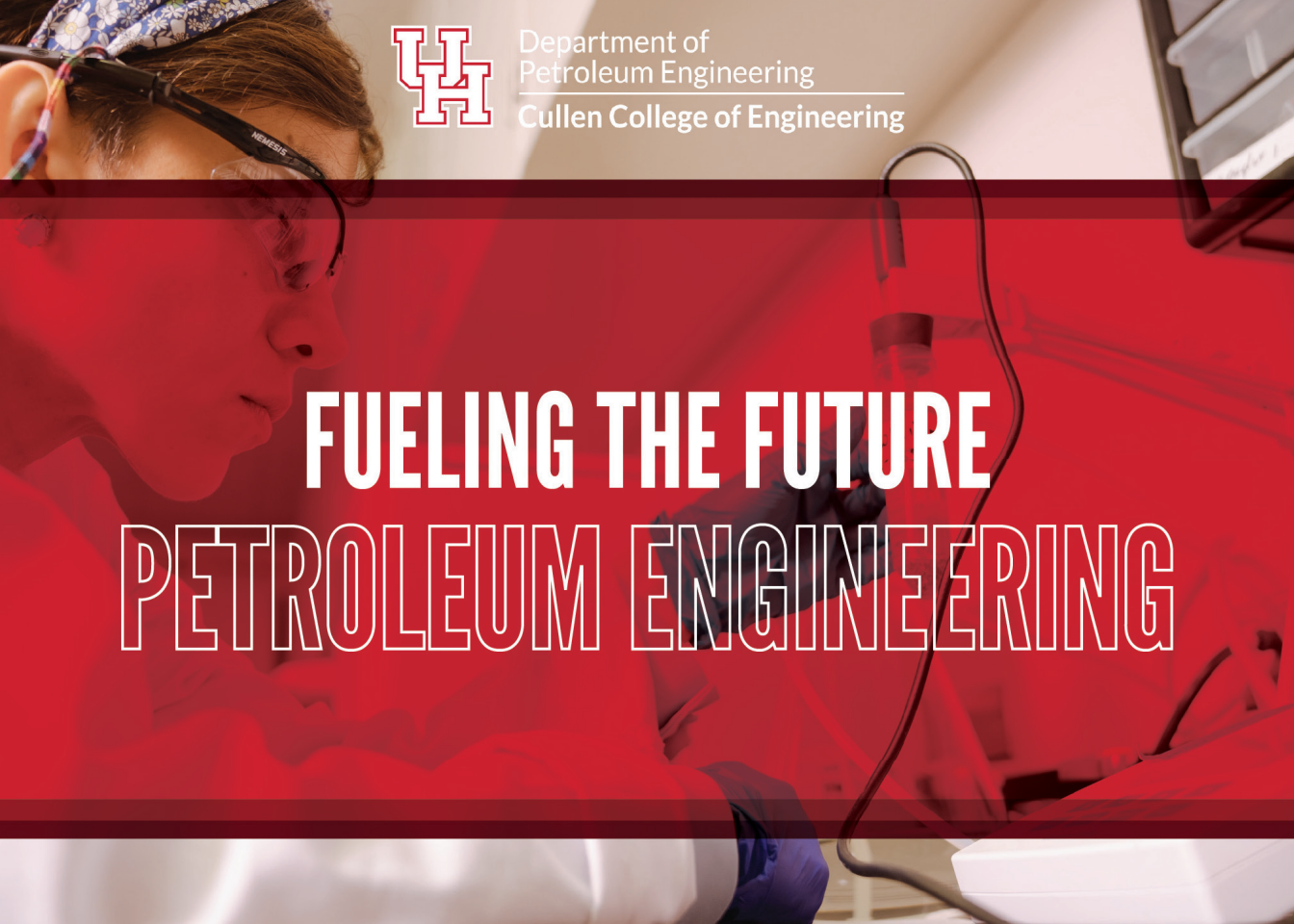


Department of
Petroleum Engineering
Cullen College of Engineering

# FUELING THE FUTURE

# PETROLEUM ENGINEERING

# PETROLEUM'S THAKUR AND WONG RECEIVE MORE THAN $1M FOR RIGOROUS RESERVOIR SIMULATION, STATISTICAL ANALYSIS

A pair of professors in the Petroleum Engineering Department of the Cullen College of Engineering have received four Ocean Energy Safety Institute (OESI) grants totaling $1.1 million for works on reservoirs and analysis of past efforts to effectively produce high impact deepwater Gulf of America (GoA) reservoirs.

The PIs for the projects will be Ganesh Thakur, NAE, Distinguished Professor and the Director of UH Energy Industrial Partnerships; and George K. Wong, Associate Professor and Graduate Studies Director. Funding was approved on July 31 as part of the OESI TRUST (Technical Response for Urgent and Significant Topics) initiative.

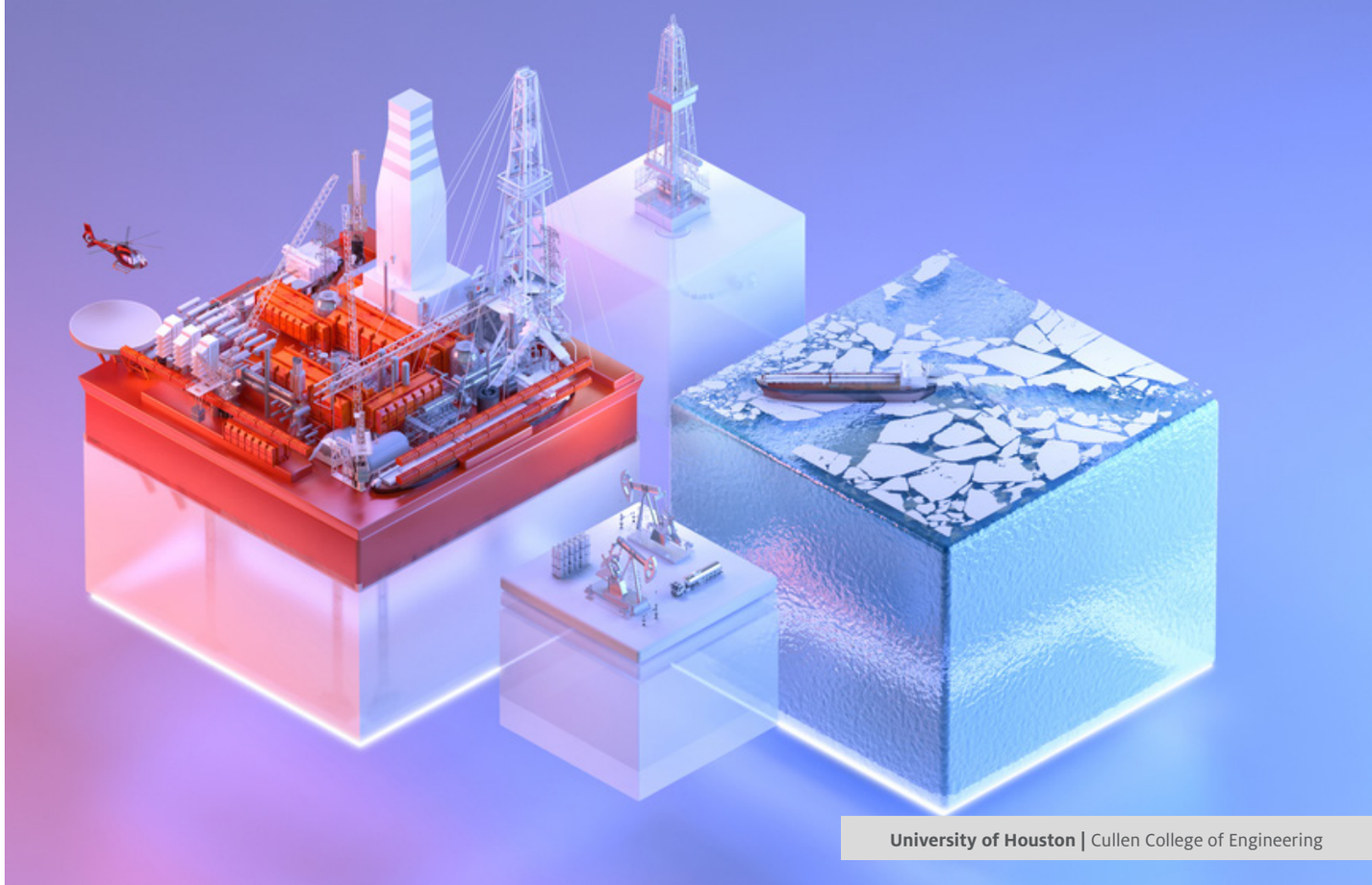
According to a Statement of Work filed by **Thakur** and **Wong**, there are three research objectives for the projects.

•Utilize simulation to quantify the relative impact of different reservoir parameters to EUR (estimated ultimate recovery) between commingled zones in Gulf of America (GoA) formations.

•Utilize simulation to apply a targeted multiple variable methodology to compare commingled and sequential production schemes and impact to EUR for different reservoir types in the GoA.

•Utilize statistical analyses and lookback findings within GoA fields and fault blocks, to systematically compare and contrast production strategies based on production data, reservoir parameters and other critical factors.





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# TEXAS ACADEMY OF MEDICINE, ENGINEERING, SCIENCE AND TECHNOLOGY NAMES THAKUR AS PRESIDENT, A FIRST FOR UH

For the first time in its history, the Texas Academy of Medicine, Engineering, Science and Technology has placed a University of Houston professor in its top leadership role.

**Ganesh Thakur**, a professor of petroleum engineering at the Cullen College of Engineering, has led TAMEST as its president since February, a role he hopes will bring more visibility to UH's programs.

"I want to give the University of Houston — my colleagues, our professors — more exposure. I want to create an opportunity for them to be more visible," Thakur said. "This is where the best professors from UH, the best from the University of Texas at Austin, the best from Texas A&M University and the best from around the state get to collaborate."

TAMEST is the highest-level educational organization in the state, with 350 national academy members and eight Nobel laurates, many of whom are considered to be among the top in their fields of engineering, science and medicine.

The organization's goal is to bring these minds together to solve real-life problems impacting society, ranging from disease vaccinations to energy storage.

"Our professors get to see what our colleagues are doing in other universities," he said. "It really creates a positive motivation and inspiration for our professors."

As president, Thakur will oversee the daily operations of TAMEST and is responsible for hosting the organization's annual conference, which invites researchers from across the country to discuss opportunities on a particular topic.




*Ganesh Thakur*
*Professor*

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# EXTERNSHIP Q&A **WITH MOHAMED SARHAN**

An externship provides Cullen College of Engineering students an opportunity to work on a significant, real world project at a company — to turn the knowledge they've gained in the classroom into a practical application.

**Mohamed Sarhan** earned his doctorate in Petroleum Engineering from Cullen and completed an externship program from June to August in 2024. We asked him about the experience, as well as what made him choose UH.

When it came your externship, what company did you do it with? Was that connection arranged for you by faculty and staff members, or did you and your group have some say in it as well?

I joined the UH externship program in summer 2024 (June–August). Together with my colleagues, Moaz Hiba and Mustapha Usman, we were assigned to a project offered by the Occidental Petroleum Corporation (OXY). The selection process typically requires from students to submit their resumes and fill out some questionnaires. Based on our background and qualifications, the program coordinators (Dr. Zeinab Zargar and Mr. Ed Behm) formed the groups and matched us with OXY's project. So while the final assignment was coordinated by the program coordinators, we also had the chance to express interest in projects aligned with our expertise.

# PRINCETON'S SUNDAR REFLECTS ON CULLEN DEGREE EXPERIENCE

When **Sankaran Sundaresan** shifted to emeritus status at Princeton University in July, it marked a new phase in his professional life after 45 years — work that began after he earned his doctorate in chemical engineering at the University of Houston's Cullen College of Engineering.

Sundar, as he's more commonly known to friends, racked up an impressive list of external awards during his time at Princeton. He won the 1999 R.H. Wilhelm Award in Chemical Reaction Engineering, the 2005 Thomas Baron Award in Fluid-Particle Systems, and the 2022 Elsevier Particle Technology Forum Award for Lifetime Achievements from the AIChE. He also earned a Distinguished Alumnus Award from IIT Madras, and the Alexander von Humboldt Research Award.

However, the internal awards he received for teaching and the success of his students were equally important to him. At Princeton, he received the Engineering Council Award for Excellence in Teaching multiple times, the SEAS Distinguished Teacher Award and the President's Award for Distinguished Teaching. He was also recognized as an excellent mentor for his graduate students, and he received the Graduate Mentoring Award from the university as well.

For Sundar, it was his interest in learning that motivated him in the lab, and that it what he wanted to impart to his students. These were principals that were strengthened in his time at the University of Houston. We asked Sundar about his experiences at UH, and he was happy to share with us.

When it came to considering places to pursue a graduate degree, what made UH so appealing to you?

The Chemical Engineering Department at UH was rated as one of the top 10 chemical engineering departments in the United States at that time. The reputation of the UH Chemical Engineering Faculty and their research projects were important factors in my decision.

*Sankaran Sundaresan*

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# PETROLEUM STUDENTS REAPING REWARDS OF FOCUSED EXTERNSHIP PROGRAMS

With the help of significant industry partners and the support of faculty members, students in the Petroleum Engineering Department are getting unique opportunities to apply their classroom knowledge to real world situations via the Externship Program.

Externships are a partnership between Cullen and real-world companies, who also provide funding for the program. They provide another pathway for students to acquire feedback and experience, and to make networking connections. Lecturer **Zeinab Zargar**, Ph.D., serves as the coordinator and a mentor for the program.

“This is a summer initiative designed to provide students with industry-driven project experience,” she said. “Participating companies provide real datasets, technical challenges, and one or more mentors, who work alongside UH faculty to guide students on a weekly basis.”

Externships are open to undergraduate and graduate students, and they offer a unique opportunity to collaborate with industry professionals, solve real-world problems and build meaningful industry connections. Examples of past focus areas include operations optimization, unconventional resource development, improved oil recovery (IOR), field development strategies, and carbon capture and sequestration (CCS).

Zargar said that at the end of the summer, student teams present their findings and proposed solutions to technical and management teams from the sponsoring companies. Summer 2025 featured two externship teams.

*Zeinab Zargar*

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