



We are pleased to report that the College of Engineering and Computer Science at Texas A&M University-Corpus Christi (TAMU-CC) has secured a significant federal award of \$722,000 from the Pipeline and Hazardous Materials Safety Administration (PHMSA) at the U.S. Department of Transportation (DOT). This grant marks the first TAMU-CC award from PHMSA's Competitive Academic Agreement Program (CAAP).

The Coastal Bend Midstream Program (CBMP) supported Dr. Jangwoon Park, Associate Professor of Industrial Engineering, in developing the winning proposal. This grant will fund Dr. Park's midstream-focused research project titled "*Human-Centered HMI Protocol Development for Pipeline Control Rooms Using a Functional Digital Twin Technology.*" The project will run from 2025 through 2027.



Pipelines are monitored in specialized control rooms where operators watch screens and make critical decisions every day. If the information displayed is unclear or the system is difficult to use, even the most skilled workers can make mistakes — and those mistakes can have serious consequences.

At TAMU-CC, our new project will replicate a standard pipeline control room used in the midstream industry, allowing researchers and students to study exactly how people work in these high-pressure environments. By closely observing operations and identifying where errors may occur, the team will develop smarter designs to better support control room operators. The goal is simple but powerful: to help operators perform their jobs more safely, reduce human error, and protect both communities and the environment.

Dr. Park said, "Through this PHMSA-supported project, we look forward to working closely with our industry partners while providing our students with hands-on experience that prepares them to contribute to the future of the midstream sector."

Thomas Kalb, Director of CBMP, commented, “This award, along with our ongoing efforts to expand collaborations with industry partners, is clear evidence that TAMU-CC is building strong momentum and recognition in the midstream sector, which is vital to our region and beyond.

PHMSA’s primary responsibility is to develop and enforce regulations for the safe, reliable, and environmentally sound transportation of hazardous materials, including chemicals, explosives, and flammable liquids. PHMSA ensures the safe movement of these materials across various transportation modes, including pipelines

CBMP’s mission is to build the value proposition and partnership between TAMUCC, its faculty and students, and the midstream industry through research, education, and knowledge transfer.