



SCHOOL OF  
**CHEMICAL ENGINEERING**  
College of Engineering, Architecture and Technology

# CHE SEMINAR SERIES

## Energy Safety: Ensuring a Safer and More Sustainable Future through Large-Scale Testing

**QINGSHENG WANG, PH.D., PE, CSP**

As the global energy landscape increasingly embraces sustainable solutions, the role of chemical engineers in ensuring energy safety becomes ever more critical. This presentation will delve into advancements in safety engineering and technologies across various energy sources, with a focus on crude oil, Liquefied Natural Gas (LNG), and CO<sub>2</sub>. The key topics include: (1) large-scale field testing of fire whirls for offshore oil spill remediation, (2) large-scale LNG pool fire testing to validate passive fire mitigation systems for steel structures, and (3) the development and validation of machine learning tools through large-scale experiments to predict the Potential Impact Radius (PIR) of pipelines in CO<sub>2</sub> transportation, addressing challenges in current Carbon Capture, Utilization and Storage (CCUS) initiatives. The talk will highlight the ongoing research from Texas A&M University, contributing to a safer and more sustainable energy future for the nation.

NORTH CLASSROOM BUILDING 203  
NOVEMBER 5, 10:30 - 11:45AM

Dr. Wang is a Professor and George Armistead '23 Faculty Fellow in the Artie McFerrin Department of Chemical Engineering at Texas A&M University (TAMU). Before rejoining TAMU in 2019, he served as the Dale F. Janes Endowed Professor at



Oklahoma State University. Dr. Wang received his BS and MS in Chemistry from Zhejiang University and his PhD in Chemical Engineering from TAMU under the supervision of the late Sam Mannan. With nearly 20 years of experience in process safety and energy safety, Dr. Wang has published over 190 journal papers, 11 book chapters, 2 books, and holds 2 patents. He has successfully supervised 18 PhD students and 26 MS students, with three pursuing academic careers and the others contributing to the energy industry. Currently, Dr. Wang leads the TAMU Multiscale Process Safety Laboratory, where he pioneers research in fire and explosion process safety, machine learning, composites manufacturing, and flame-retardant polymers.