

Graduate Seminar



Stephanie Taboada, PhD, P.E.

*Assistant Engineering Professor at
SUNY Suffolk County*

September 9, 2024, (4:00 pm - 5:30 pm)

Location: Kupfrian Hall - Room 205

[Zoom Link: Click Here](#)

Meeting ID: 994 3917 6432 Passcode: 058807

Metal Hydrides for Hydrogen Storage: From Research to Real-World Applications

Abstract

Hydrogen, a globally recognized energy carrier, holds immense potential to revolutionize future energy systems, serving both as a fuel and a chemical resource. Metal hydrides, encompassing intermetallic, complex, and light metal hydrides, are emerging as promising solutions for hydrogen storage. Their unique ability to absorb and release hydrogen gas reversibly makes them a key player in the energy transition. Intermetallic hydrides, especially those involving rare earth or transition metals, offer high storage capacities and operate at moderate release temperatures. Recent advancements in this field are focused on enhancing the performance of metal hydrides through improved material design and processing techniques, with a particular focus on absorption kinetics. This seminar will delve into the latest research on advancing intermetallic metal hydrides for hydrogen storage and their potential applications, particularly in separating hydrogen from a methane-hydrogen blend, a key area for gas utilities.

About the Speaker

***Stephanie Taboada** is an Assistant Engineering Professor at SUNY Suffolk County Community College, where she teaches Engineering Science, Electrical Technology, and Information Technology. Taboada also serves as an Adjunct Professor at SUNY Stony Brook University, where she continues her doctoral research on metal hydrides for hydrogen storage. She holds a B.E., MSc, and Ph.D. in Chemical Engineering, along with graduate certificates in Communicating Science and Science Training and Research to Inform Decisions (STRIDE). In addition to her academic roles, she is actively involved in entrepreneurship and workforce development in the offshore wind sector.*