

AUGUST 1, 2021 | NEWSLETTER 4



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The Texas State University System

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## TOPICS:

- Internal Research Grants - 2
- Dirk van Oostendorp Day- 4

# CMMS CURRENT EVENTS OVERVIEW

August 1, 2021

The Midstream Center continues to fulfill its mission to build its value proposition and become a trusted partner with the midstream industry.

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By: Thomas Kalb/Director

## CMMS Awarded Eleven Internal Summer 2021 Faculty/Student Research Grants

Department	Project Name
Civil and Environmental Engineering	Life Cycle Synthesis for Methane Emissions
Chemical Engineering	Assessment of Corrosion Development
Civil and Environmental Engineering	Evaluation Scale-Up of Algal Based Water Treatment System
Civil and Environmental Engineering	GIS and Satellite Radar InSAR for Flooding Risk Analysis
Chemical Engineering	Microwave Crude-Water Demulsifier
Chemical Engineering	External Corrosion Analysis for Natural Gas Pipeline
Industrial and Systems Engineering	Dynamic Analysis of LNG Piping Hydraulic Hammer
Industrial and Systems Engineering	Cloud Based Compressor Monitoring
Industrial and Systems Engineering	Acoustic Based Machine Learning to Detect Crude Oil Pipeline Leaks
Finance – College of Business	Analysis of Midstream Risk Management Practices in SETX
Chemical Engineering	Enhancing NGL Fractionation Train Modeling

## CMMS Awarded Ten Internal FY 2021/22 Research Grants to LU Faculty

Department	Project Name
Chemical Engineering	Sensor Development for Water Wash Unit of an NGL Fractionation System
Chemical Engineering	Integrated Allam Cycle-LNG Complex for Greenhouse Gas Reduction and Efficient Energy Supply
Computer Science	Digital Twin Development for Real-Time Optimization and Control of an NGL Fractionation Train
Mechanical Engineering	Anti-Corrosive Superhydrophobic Top Coating-Analysis and Testing
Physics	Detection of Methane Leaks in Soils
Chemical Engineering	Development of a Microwave-Assisted, Four-Phase Crude Oil Demulsification Strategy
Chemical Engineering	Numerical and Electrochemical Analyses of Pipeline Corrosion in Midstream Industry
Industrial Eng/Mechanical Eng	Holistic Approach in Mitigation of Water Hammer in LNG Pipeline
Mechanical Engineering	Corrosion and Friction Resistance of Advanced Polymer Coatings for Oil and Gas Pipelines
Chemical Engineering	Assessment of Corrosion Development II

The Midstream Center hosted two webinars as part of the  
*New, Emerging, and Interesting Technology Webinar Series*

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**March 16, 2021**

**Rapid DNA field testing using man portable equipment to manage system corrosion due to bad bugs (bacteria and various flora/fauna)**

**Presented by  
EnerG-ID**

**May 11, 2021**

**Digital web-based platform that collects and manages pipeline and facility data that provides consolidated, accurate, and accessible manufacturing and construction data for energy infrastructure**

**Presented by  
Vintri Technologies, Inc.**

## UPCOMING WEBINARS

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**Tuesday, September 14th, 2021 | 10:00 A.M.**

Distributed Fiber Optic Sensing uses a fiber optic cable designed to measure and record temperature, noise, and vibration to identify and locate leaks

**Tuesday, November 16th, 2021 | 10:00 A.M.**

SmartBall multi-sensor inline inspection platform that collects a variety of pipeline data to help integrity departments manage assets more efficiently and safely (finds leaks/holes down to pinhole leaks, measures continuous pressure and temperature, and maps pipelines

# WHAT IS NEXT?

Midstream Center hosts CorrPro Dirk van Oostendorp Day

July | 2021

Dirk van Oostendorp, Director of Engineering and technology at CorrPro and Wes Johnson (LU '97), President of CorrPro, came to LU campus to present their perspectives on the midstream industry and its opportunities to faculty and students, and then meet with faculty/student teams to discuss their research projects. President Jaime Taylor and Dean Craig were also on hand, and Dr. Taylor gave a much-appreciated welcome to the crowd at the CICE building.



(Dr. H Lou, Dirk van Oostendorp, Thomas Kalb, Wes Johnson, Dean B Craig)

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I want to express my appreciation for the seminar organized by CMMS. In my workshop with my students, I discussed whether it was helpful and useful for them during the main session and breakout panel. My students highlighted that they learned a great deal. Our Panel with the guest speakers gave us the insight to move in the right direction in our research project. To summarize, it was a very productive event.

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- Dr. Sargsyan | College of Business



(Wes Johnson)



(Dr. Jaime Taylor)

# CMMS VISITS PIPELINE RESEARCH COUNCIL INTERNATIONAL

Dr. Helen Lou, Dr. Sidney Lin, and Thomas Kalb, Director of the Midstream Center, met with Lance Abney, Facility Operations Manager at the Pipeline Council International ("PRCI") to take a tour and discuss a midstream research alliance between the Midstream Center and PRCI.



(Dr. H Lou, Thomas Kalb, Lance Abney)

## CMMS VISITS ENTERPRISE PRODUCTS' MONT BELVIEU TRAINING CENTER

Dr. Helen Lou and Thomas Kalb, Director of the Midstream Center, visited Enterprise Products' Mont Belvieu Training Center where they visited with instructors and attended employee training sessions on corrosion and NGL fractionation trains. "Many midstream industry people view Enterprise's operations training program to be the best in industry and we wanted to take a look and learn," said Thomas Kalb.

**Dr. Maryam Hamidi and Dr. Jing Zhang from the Industrial Engineering and Computer Science departments, respectively, achieved a \$20,000 industry partner matching grant in support of their CMMS research project "Deep Learning ANomaly Detection and Defect Prediction - Compressors."**

**FACULTY RESEARCH TEAM  
WINS INDUSTRY  
MATCHING GRANT FOR  
CMMS FUNDED RESEARCH**