



ASCE/UESI Pipeline Research Needs Symposium

Sunday, August 10, 2025

12:30 – 3:30 pm EDT

Grand Ballroom: Salon F



Agenda

12.30 - 12.35:

1. **Welcome Speech from Research Symposium Chair**

- Dr. Ram Krishna Mazumder, Georgia Southern University

12.35 -13.00:

2. **Keynote - 1: *Overview of Pipelines Research at WRF***

- Dr. Jian Zhang, Water Research Foundation

13.00-13.25:

3. **Keynote - 2: *PIPES in Action: Smart Investment, Practical Research, and a Safer Water Future***

- Mr. Brad and Mr. Rory, City of Tampa

13.25 -14.40:

4. **Research Presentation (10 mins + 2 mins Q&A)**

Moderator: Dr. Khalid Kaddoura, GHD & Dr. Harshit Shukla, Texas Transportation Institute

I. Structural Analysis & Integrity of Pipelines

- a. Non-linear Analysis of Buried Steel Pipelines with Out of Roundness Defect
 - Mr. Ikram Efaz, Xylem
- b. Finite Element Simulation of Steel Pipe Fabrication for Hydrocarbon Pipeline Applications
 - Dr. Spyros Karamanos, University of Thessaly

II. Trenchless Technology, Spray-In-Place Lining Rehabilitation Methods Standards

- c. What Are the Limitations of ASTM F3182 in Defining the Performance of Spray-In-Place-Polymeric Liners, and How Can They Be Resolved to Support Structural Classification and Field Qualification?
 - Dr. Sanaz Ghalambor, Thompson Pipe Group
- d. Is Fully Structural SIPP Lining Possible? A Look at Current and Emerging Spray Applied Pipe Rehabilitation Technologies and SIPP Lining Design Methodologies
 - Mr. Jeff Maier, Dewberry

III. Subsurface Conditions & Trenchless Construction

- a. Value of Geological Information and Drilling Data for Annular Pressure Analysis in Horizontal Directional Drilling
 - Mr. Inshik Park, University of Alberta

IV. Asset Management & Condition Assessment

- b. AI-Driven Capital Planning and Asset Management in Wastewater Infrastructure
 - Eric Sullivan, SewerAI

14.40 -15.25:

5. **Group Discussion:**

Lead by: Dr. Mo Najafi and Mr. Ehsan Rajaie, The University of Texas at Arlington

15.25 -15.30:

6. Closing Remark

Organizing Committee:

Chair: Ram Krishna Mazumder, Ph.D., P.E., Georgia Southern University

Co-Chair: Mo. Najafi, Ph.D., P.E., The University of Texas at Arlington

Member(s): Ehsan Rajaie, The University of Texas at Arlington
Harshit Shukla, Ph.D., Texas Transportation Institute
Khalid Kaddoura, Ph.D., P.E., GHD

Note Takers: Inshik Park, Justin Park, Swaranjit Roy, Abul Hasnat

Speaker Bio	Headshot
Dr. Ikram Efaz , a Structural Engineer at Xylem with over eight years' experience, specializes in designing, analyzing, and evaluating pipelines, bridges, buildings, and towers. His expertise includes Finite Element Modeling, materials mechanics, and fatigue analysis. He has authored numerous publications in respected journals and conferences, making significant contributions to structural engineering.	
Dr. Sanaz Ghalambor is a Strategic Products Technical Resource Engineer at Thompson Pipe Group with 15+ years of experience in pipeline protection, corrosion prevention, and rehabilitation. Holds a PhD in Civil Engineering and a background in polymer engineering. Technical Lead for ASTM F3182, Lead Contributor to ASCE MOP 120, and Voting Member/Peer Reviewer for AWWA M28, M81, and C620. Committed to science-based solutions that safeguard critical infrastructure.	
Dr. Spyros A. Karamanos is Professor of Mechanical Engineering, at the University of Thessaly, Greece. From 2016-2019 he was Chair of Structural Engineering, at The University of Edinburgh. He specializes in structural mechanics of energy infrastructure. He received his PhD from The University of Texas at Austin, USA, in Structural Mechanics. Currently, he is the Editor-in-Chief of the ASME J Pressure Vessel Technology.	
Mr. Jeff Maier serves as the Western Water Infrastructure Discipline Leader at Dewberry Engineers. He is responsible for providing in-depth technical expertise for a variety of trenchless pipeline and manhole rehabilitation technologies, pipeline construction applications, corrosion mitigation, advanced pipeline inspection methods and asset management strategies. He is a Colorado, Utah and Texas registered professional engineer with over 25 years of experience, primarily in the water and wastewater sectors.	
Mr. Inshik Park , a PhD Candidate/Graduate Research Assistant at the University of Alberta's Underground Trenchless Construction Program under Dr. Bayat, also serves as a Teaching Assistant in the Department of Civil and Environmental Engineering, actively teaching undergraduate and graduate courses. His research focuses on geotechnical aspects of horizontal directional drilling.	
Mr. Eric Sullivan is Director of Strategic Development at SewerAI. Over 18 years, he has worked with water and sewer utilities, consulting engineers, and contractors on trenchless projects. Since 2012, he's been a NASSCO Trainer, leading programs across the US and Canada. He is based in Seattle, WA.	

Small Group Discussion Research Topics:

- I. **Structural Analysis & Integrity of Pipelines**
- II. **Trenchless Technology, Spray-In-Place Lining Rehabilitation Methods Standards**
- III. **Subsurface Conditions & Trenchless Construction**
- IV. **Asset Management & Condition Assessment**