NATIONAL TRANSPORTATION SAFETY BOARD
Investigative Hearing

Norfolk Southern Railway general merchandise freight train 32N derailment with subsequent hazardous material release and fires, in East Palestine, Ohio, on February 3, 2023

GROUP	A
EXHIBIT	
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Agency / Organization

University Transportation Center for Railway Safety
The University of Texas Rio Grande Valley

Title

Biography of Constantine Tarawneh

Biographical Sketch

Constantine M. Tarawneh, Ph.D.

Louis A. Beecherl, Jr. Endowed Professor in Engineering

Constantine Tarawneh is a Distinguished Teaching Professor of Mechanical Engineering at the University of Texas Rio Grande Valley (UTRGV) where he worked since 2003. He obtained his M.S. and Ph.D. degrees from the University of Nebraska-Lincoln (UNL) in 1999 and 2003, respectively. He founded the University Transportation Center for Railway Safety (UTCRS) in 2013 and the CREST Center for Multidisciplinary Research Excellence in Cyber-Physical Infrastructure System (MECIS) in 2021 and serves as the Founding Director for both Centers. He also serves as the Sr. Associate Dean for Research and Graduate Programs for the College of Engineering and Computer Science since 2016. His various research and educational activities have resulted in over $35 Million in funding from federal, industry, state, private, and local sources. He has two decades of experience conducting a variety of railroad research with emphasis on advanced bearing condition monitoring techniques. He received 30 teaching, mentoring, and research awards highlighted by the UT System Regents' Outstanding Teaching Award in 2009. In Fall of 2017, he was appointed as the Louis A. Beecherl, Jr. Endowed Professor in Engineering. To date he has taught 24 different courses in his discipline.

Specific Qualifications Relevant to the NTSB Panel on Wheel Bearings and Wayside Defect Detectors include:

- Two decades of research experience conducting railroad research with emphasis on advanced bearing and wheel condition monitoring techniques.
- Developed several onboard sensors for health monitoring of railroad bearings and wheels that have been licensed by a private rail industry. These sensors have undergone extensive laboratory testing and targeted field testing.
- Acquired over $35 million in funding from federal, industry, state, private, and local sources. Research efforts supported several rail industry partners and Class I railroads.
- Founding director for two multi-million dollar federally funded centers performing research on railway safety and cyber-physical infrastructure systems with emphasis on automation, sensors, and artificial intelligence.
- Published 77 journal and conference paper publications with emphasis on railway safety and infrastructure condition monitoring.
- Chaired 50 theses and dissertations over the past two decades.
- Member of the TRB Railroad Operating Technologies Committee (AR030).
- Member of the Council of University Transportation Centers (CUTC) Executive Committee.
- One of the four Directors of the Research and Education Division (RED) within the American Road and Transportation Builders Association (ARTBA).