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## PWEB 175

### Explainable AI for Trustworthy IIoT-Based Management of Industrial Equipment

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**Abstract:** Artificial Intelligence has the potential to simplify complex tasks in industrial asset management, such as predicting equipment failure based on IIoT-collected vibration data. This presentation aims to demystify how IIoT and AI can better manage machinery and reduce equipment downtime. We will not only explore how IIoT-backed AI can help predict, identify, and rectify defects in equipment, but we will also delve into how Explainable AI (XAI) concepts can be used to help users understand and trust an AI's decisions.

**Biographical Sketch:** Dr. Andy Zimmerman has been building AI-inspired wireless sensing and cloud-based health monitoring systems for civil infrastructure and industrial machinery since 2005. At Grace Technologies, Dr. Zimmerman serves as the CTO and has been instrumental in architecting and building the GraceSense Predictive Maintenance line of IIoT technologies. He has also managed several federally-funded R&D efforts aimed at the development of probabilistic and explainable deep learning methods for predicting bearing failure in rotating equipment.

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