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Data Science in Engineering, Vol. 11

Proceedings of the 43rd IMAC, A Conference and Exposition on Structural Dynamics 2025

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Description:

Data Science in Engineering, Volume 11: Proceedings of the 43rd IMAC, A Conference and Exposition on Structural Dynamics, 2025, the eleventh volume of twelve from the Conference brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on fundamental and applied aspects of Data Science in Engineering, including papers on:

- Novel Data-Driven Analysis Methods
- AI-Driven Digital Twins for Structural Modeling and Dynamic Characterization
- Transfer Learning and Population Based Monitoring
- Data-Driven Techniques for System Prognostics and Health Monitoring
- Applications of AI in Structural Dynamics and System Identification
- Uncertainty Quantification in Data-Driven and Hybrid Models
- Advanced Techniques for Real-Time Monitoring and Predictive Analysis

Keywords: turbomachinery, neural-network, structural dynamics, PCB, FFT, shock mitigation, signal processing

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