

Preface

Rotating Machinery, Structural Health Monitoring, and Shock and Vibration Topics represents one of six clusters of technical papers presented at the 29th IMAC, A Conference and Exposition on Structural Dynamics, 2011 organized by the Society for Experimental Mechanics, and held in Jacksonville, Florida, January 31 - February 3, 2011. The full proceedings also include volumes on Advanced Aerospace Applications; Modal Analysis, Linking Models and Experiments, Civil Structures; and Sensors, Instrumentation, and Special Topics.

Each collection presents early findings from experimental and computational investigations on an important area within Structural Dynamics. The current volume on *Rotating Machinery, Structural Health Monitoring, and Shock and Vibration* includes studies on Random Vibrations, Wind Turbine Blade Sensing and Health Monitoring, Rotating Machinery, Machinery Condition Monitoring and Diagnostics, Structural Health Monitoring, Shock and Vibration, Acoustics, and Damage Detection.

Condition monitoring, diagnostics and damage detection are a series of related topics of increasing importance. Structural Health Monitoring (SHM) has been an evolving technology for a number of years. Machinery monitoring and non-destructive testing topics have been active areas in IMAC and other forums. With the development of more powerful computational capability and miniaturized sensors, SHM schemes are being explored that can be designed into the structure, providing a comprehensive health evaluation.

The organizers would like to thank the authors, presenters, session organizers and session chairs for their participation in this track.

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