# Structural Health Monitoring: 2011: Condition-Based Maintenance and Intelligent Structures

**Description:**

This 2-volume set of books, comprising over 2,700 total pages, presents 325 fully original presentations on recent advances in structural health monitoring, as applied to commercial and military aircraft (manned and unmanned), high-rise buildings, wind turbines, civil infrastructure, power plants and ships. One general theme of the book is how SHM can be used for condition-based maintenance, with the goal of developing prediction-based systems, designed to save money over the life of vehicles and structures. A second theme centers on technologies for developing SHM systems comprising sensors, diagnostic data and decision-making, with a focus on intelligent materials able to respond to damage and in some cases repair it. Finally the book discusses the relation among data, data interpretation and decision-making in managing a wide variety of complex structures and vehicles.

More recent technologies discussed in the book include SHM and environmental effects, energy harvesting, non-contact sensing, and intelligent networks.

Material in these books was first presented in September, 2011 at a conference held at Stanford University and sponsored by the Air Force Office of Scientific Research, the Army Research Office, the Office of Naval Research and the National Science Foundation.

- SHM technologies for condition-based maintenance (CBM) and predictive maintenance
- Verification, validation, qualification, data mining, prognostics systems for decision-making
- Structural health, sensing and materials in closed-loop intelligent networks
- Military and aerospace, bioinspired sensors, wind turbines, monitoring with MEMS, damage sensing, hot spot monitoring, SHM and ships, high-rise structures
- Includes a fully-searchable CD-ROM displaying many figures and charts in full color.

## Contents

### VOLUME 1

**Preface**

**KEYNOTE PRESENTATIONS**
- Integration of Structural Health Monitoring Systems into Unmanned Aerial Systems—Challenges and Opportunities
- The Journey to Incorporate Health Monitoring and Condition Based Maintenance of Sikorsky Commercial Helicopters
- Embraer Perspective on the Introduction of SHM into Current and Future Commercial Aviation Programs
- Structural Health Monitoring for Civil Infrastructure—From Instrumentation to Decision Support
- Does the Maturity of Structural Health Monitoring Technology Match User Readiness?

**ADVANCED DIAGNOSTICS FOR DAMAGE ASSESSMENT**
- Damage Diagnosis Algorithm for Civil Structures Using a Sequential Change Point Detection Method and Time-Series Analysis Cointegration and SHM of Bridges
- Piezoceramic-Based 2-D Spiral Phased Array for Damage Detection Of Thin Orthotropic Composite Laminates
- Guided Wave and Probability Based Diagnostic Imaging for Detection of Multiple Welding Damages in Welded Tubular Steel Structures
- Nonlinear Cointegration as a Combinatorial Optimisation Problem
- Characterizing Damage in Plate Structures Based on Local Perturbation to Dynamic Equilibrium
- Robust Diagnostics for Bayesian Compressive Sensing Technique in Structural Health Monitoring
- Damage Monitoring and Evaluation for Building Structures Based on Measurement of Relative Story Displacements by Noncontact-Type Sensors
- Joint Condition Identification with Partially Measured Frequency Response Function
- Multi-Classifier Fusion Method Based on the Reliability of the Individual Classifiers
- Validation of a Hybrid Automated Modal Identification Algorithm for Structural Health Monitoring Applications
- Power Losses in PZT Disk Actuators’ Adhesive
- Sensitivity of the Excitelet Imaging Algorithm on Material Properties for Isotropic Structures
- Damage Detection Index Based on Statistical Inference and PCA
- Effective Damage Sensitive Feature Extraction Methods for Crack Detection Using Flaw Scattered Ultrasonic Wave Field Signal
- Time-Domain Localized Structural Damage Identification with Incomplete Excitation Measurements
- A Novel Damage Sensitive Feature Based on State-Space Representation
- Damage Classification in Composite Laminates: Matrix Micro-Cracking and Delamination
- Identifying Scatter Targets in 2D Space Using In Situ Phased-Arrays for Guided Wave Structural Health Monitoring
- Reference-Free Damage Identification Using Statistical Modeling
- Infrared Thermography and Piezoelectric Patches for Impact Damage Detection in Composite Structures
- An Integrated Structural Intensity Based Damage Detection Approach for Nonlinear Behaving Damage
- Experimentation and Detection Characters of Lamb Wave Phase Array on a Large Thin Aluminum Plate
- Damage Detection of Composite Structure Using Independent Component Analysis
- Rapid Localization and Ultrasonic Imaging of Multiple Damages in Structural Panel with Piezoelectric Sensor Actuator Network
- Damage Assessment of CFRP Stiffened Panels by Electro-Mechanical Impedance Method
- Optimal Sensor Fusion for Structural Health Monitoring of Aircraft Composite Components
- Impact and Damage Location Detection on Plate-Like Structures Using Time—Reversal Method
- Fatigue Crack Detection Using Guided Waves and Probability-Based Imaging Approach
- Adaptive Fuzzy-Based Approach for Classification of System’s States
- Image Processing Technique for Vibrothermographic Field Tests
- An Optimal Image-Based Method for Identification of AE Sources on Plate Structure
- Structural Health Monitoring System Based on Electromechanical Impedance Measurements
- Damage Monitoring Based on Wave Illumination of Structures

ADVANCED MONITORING FOR LOAD/ENVIORMENTS
- Design of a Self-Powered Load Monitoring System for Hot Spot Applications
- A Robust Impact Force Determination Technique for Complex Structures
- Analytical Formulation for the Determination of Torsional Forces and Shear Stresses in Hydraulic Steel Structures from Field Experiments
- Experimental Evaluation of a Wavelet-Based FEM and its Application to Load History Identification
- Application of Polarization-Maintaining Fiber Bragg Grating to
- Optical Frequency Domain Reflectometry for Simultaneous Measurements of Strain and Temperature Distributions
- A System for Static and Dynamic Monitoring and Ice Sport Arena
- Wireless, Batteryless Distributed Strain Sensing for Structural Health Monitoring
- Distributed Optical Fiber Sensing for Wind Blade Strain Monitoring and Defect Detection

AEROSPACE STRUCTURES: FIELD EVALUATION AND VALIDATION
- Real-Time Micro-Explosive Damage Detection in an Unmanned Rotorcraft Vehicle Using Embedded Sensing
- Comparisons of SHM Sensor Models with Empirical Test Data for Sandwich Composite Structures
- Large Sensor Network Architectures for Monitoring Large-Scale Structures
- Overview of CVM Technology Tests Performed by Embraer
- Advanced System-Level Reliability Analysis and Prediction with Field Data Integration
- Development and Testing of an Ultrasonic Phased Array System Based on Piezo Actuators and Fiber Optic Sensors
- Damage Detection Method for CFRP Bolted Joints Using Embedded BOCDA Optical Fiber Sensor
- Development of Simultaneous Measurement System for Strain and Acoustic Emission Using a Fiber Bragg Grating Sensor and a Fiber Ring Laser
- Wireless and Batteryless Accelerometry for Aircraft Structural Health Monitoring
- Flight Data from an Airworthy Structural Health Monitoring System for an Unmanned Air Vehicle Using Integrally Embedded Fiber Optic Sensors
- Algorithms to Monitor Damaging Events on a Plane Blade with an Autonomous Embedded Microsystem
- Numerical Predictions of Elastic Wave Scattering from a Sub-Surface Defect in an F-111 Wing Skin
- Real-Time Condition Assessment of RAPTOR Telescope Systems
- Autonomous Battery-Less Wireless Strain Gauge for Structural Health Monitoring
- Mission and Scale Analysis on SHM of UAV’s

AEROSPACE STRUCTURES: LABORATORY DEMONSTRATION
- Monitoring the Degradation by Fire of Composite Laminates by Embedded FBG Sensors
- Nonlinear Ultrasonic Techniques for Nondestructive Damage Assessment in Metallic Materials
- Hierarchical Sensing System Combining a Fiber-Optic Network and Distributed Built-in Capillary Sensors for Impact Damage Monitoring of CFRP Structures
- Waveguided and Noncontacting Thermoacoustic Sensing of Thermal Protection Systems
- Piezoelectric Wafer Active Sensor Network for Aircraft Structures Damage Localisation: Pitch-Catch Method
- Detecting the Point of Impact on an Anisotropic Cylindrical Surface Using Only Four Acoustic Sensors
- Impact Damage Assessment by Sensor Signal Analysis
- Beam Shape Sensing Using Inverse Finite Element Method: Theory and Experimental Validation
- Integrated Optical Fibers into Aluminum Extrusions Enabling Structural Health Monitoring of Aerospace Structures
- Early Results of Lamb Waves Approach to Assess Corrosion Damage Using Direct Image Path in an Aeronautical Aluminum Alloy
- Contact Pressure and Ultrasonic Damage Feature(s) in Health Monitoring of L-Shape Bolted Joints in Aerospace Structures
- Application of Unscented Kalman Filters, Wavelet Packet Transforms and Feedback Control to Monitoring and Compensate Damaged Aircraft Structures
- Bond Graph Model of a Thin SHM Piezoelectric Energy Harvester
- Impact Location Based on Multi-Agent Coordination and Fusion for Large Structures
- An Integrated Monitoring System for Damage Detection by Carbon Fibers and Optical Fibers
- Advanced Approach for Multi-Site Damage Monitoring on Aircraft Fuselage Panel Using Sparse PZT Actuator/Sensor Arrays
- Anomalous Wave Propagation Imaging with Adjacent Wave Subtraction: Composite Wing Application

CIVIL INFRASTRUCTURES: FIELD EVALUATION AND VALIDATION
- Self Powered Wireless Sensor Network for Structural Bridge Health Prognosis: Achievement in the First Two Years
- Fatigue Crack Monitoring with an Ultrasonic Sparse Array on a Real Steel Structure Component
- Challenges and Strategies in Remote Sensing Implementation for Bridge Monitoring
- An Innovative Method to Measure Bridge Deflection Using Single Telecom Fiber
- Diagnostic Performance Indication through Field Testing of a Bridge Superstructure
- Development of Reliable and Low-Power Wireless Health Monitoring Systems for Highway Bridges
- Design and Application of a Wireless Sensor Network for Vibration-Based Performance Assessment of a Tied Arch Bridge
- Risk Based Civil SHM and Life Cycle Management
- Integration of SHM into Bridge Management Systems: Case Study—Z24 Bridge
- RAPID System for Hot Spot Corrosion Monitoring of Gas Pipelines
- Acoustic Emission Evaluation of Cavitation Erosion in Hydraulic Turbines
- Structural Health Monitoring During Progressive Damage Test of S101 Bridge
- Sensing Resolution and Measurement Range of a Passive Wiressless Sensor Stran
- Ultrasonic Wall Thickness Monitoring at High Temperatures (>500°C)
- Early Detection of Fatigue Damage in Notched and Welded Steel Structures Using Active Thermography
- A Wavelet Based Methodology for Damage Detection and Severity Assessment on the ASCE Benchmark Structure Using Phase II Experimental Data
- Integrate On-Line RSSA and RSSI-COV Algorithms for Operational Modal Analysis of Bridge Structures
- Crack Growth Monitoring System for Concrete Structures Based on Non-Contact Displacement Measurements
- Experimental Verification of Controlled Substructure Identification Using Control Devices: A Preliminary Simulation Study
- High Frequency Axle Box Acceleration for Early Detection of Squats: Numerical Simulation, Prototype Development and Testing
- A Comparison of Experimental Characterization Results for Multiple Bridge Spans of the Same Design
- Damage Assessment with Time Series Analysis Using Wireless Sensors
- An Ultrasonic Guided Wave Sensor for Gas Accumulation Detection in Nuclear Emergency Core Cooling Systems
- Understanding the Effects of a Breathing Crack on the Dynamic Response of Cantilever-Type Structures for Damage Detection
- Residual Life Prediction of Steel I-Beams Using Acoustic Emission and Back Propagation Neural Networks
- Design of a Wheeled Climbing Robot for Automatic Inspection of Hydraulic Turbine Blade with Curved Surface
- Experimental Investigation of the Excitation Level in System Identification of Frame Structures Using Linear Shakers
- Identifying Foundation Impedance Properties from Seismic Records
- Application of Fuzzy Set Theory in Structural Health Monitoring to Pattern Different States of an RC Bridge at Interstate 40

MODELING/SIMULATION
- Verification of Unified Framework for Plate Structures Using Kirchhoff's Plate Theory
- Finite Element Simulation of Compensation for Temperature Influence on Lamb Wave Propagation
- Experimental Validation of Algorithms for Wave Propagation Modeling in 2D and 3D Structures Based on the Spectral Element Method
- Damage Assessment Using Hyperchaotic Excitation and Nonlinear Prediction Error
- Wave Propagation in Anisotropic Layered 2D Structures Using Spectral Finite Elements
- 1-D and 2-D Modeling of Power and Energy Transduction of Piezoelectric Wafer Active Sensors for Structural Health Monitoring
- A Time Domain Spectral Element for Coupled Piezoelectric Actuator/Sensor with Complex Thin-Walled Assembly Structures
- Simulation Platform for UWB Impulse Radio Wireless Sensor Networks Dedicated to Aeronautic Applications
- Finite Element Driven Damage Detection of a Skewed Highway Bridge with Pin and Hanger Assemblies
- Analysis of Bearing Damage Using a Multibody Model and a Test Rig for Validation Purposes

NOVEL SIGNAL PROCESSING TECHNIQUES
- Real-Time Characterization of Aerospace Structures Using Onboard Strain Measurement Technologies and Inverse Finite Element Method
- Impact Echo Signal Interpretation Using Ensemble Empirical Mode Decomposition
- Mode Conversion Estimation of Filleted T-Joint Using FEM and 3D Laser Vibrometry
- Detection of Impact Strain Waves in Composites by High-Speed FBG Sensor System with AWG Filter
- The Application of Compressed Sensing to Detecting Damage in Structures
- Measuring the Average Thickness of a Plate Using a Bayesian Method and Free Vibration Data
- Morphological Filtering of SHM Datasets
- Examination of Wear Phenomena by Using Filtering Techniques for FDI Purposes
- Automated Data Interpretation for Modal Identification of a Truss Bridge
- Structural Health Monitoring of an Advanced Composite Aircraft Structure Using a Modal Approach
- On the Application of Bayesian Analysis and Advanced Signal Processing Techniques for the Impact Monitoring of Smart Structures
- Comparison of Damage Localization Based on Modal Filters Using Strain Measurements and Acceleration Measurements
- Multi-Source Acoustic Emission Signals Analysis Based on Blind Source Separation Using Macro Fiber Composite
- Finite Element Model Based State Estimation in Mechanical and Structural Systems
- Hybrid Immune Algorithm for Structural Health Monitoring Using Acceleration Data
- Simulation Method of Selection of Diagnostic Parameters in the Process of Monitoring the Rail Vehicle's Conditions
- Experimental Broadband Estimation of Guided Waves Group Velocity with High Signal to Noise Ratio
- Self Focusing of 2D Arrays for SHM of Plate-Like Structures Using Time Reversal Operator

OPERATIONAL EFFECTS CONSIDERATION IN SHM
- A View into Baseline Free Guided Wave Approaches for Structural Health Monitoring
- Physics Based Temperature Compensation Strategy for Structural Health Monitoring
- Load-Enhanced Imaging of Fatigue Cracks via Sparse Guided Wave Arrays
- Effect of Water Temperature on the Laser-Based Ultrasonic Testing of Immersed Structures
- Mystery Revealed on Natural Frequency Change of a Structure during Rainstorms
- Influence of Environment Condition on the Group Velocity of the Lamb Wave for SHM System
- Measurement of Distributed Strain and Deformation and Load Identification Using Optical Fiber Strain Sensors
- Extension of the Generalized Unknown Input Kalman Filter for Online-Reconstruction of External Structural Loads
- Characterization of the Temperature, Load and Damage Effects Using Piezoelectric Transducer Patches Based on Fuzzy Clustering
- An Efficient Temperature Compensation Technique for Guided Wave Ultrasonic Inspection
- Machine Learning for Pipeline Monitoring under Environmental and Operational Variations

PROGNOSTICS AND DATA MINING FOR HEALTH MANAGEMENT
- Prognostic Modeling and Experimental Techniques for Electrolytic Capacitor Health Monitoring
- Improving the Accuracy of Structural Fatigue Life Tracking Through Dynamic Strain Sensor Calibration
- A 9-Step Process for Developing a Structural Health Monitoring System
- Combined and I Indices Based on Principal Component Analysis for Damage Detection and Localization
- An Experimental and Numerical Investigation of Damage Detection in a Mistuned Bladed Disc
- Fatigue Evaluation and Prognosis for Steel Bridges with Remote Acoustic Emission Monitoring
- Impact Damage Characterisation Using a Statistical Approach
- Accelerated Aging Experiments for Prognostics of Damage Growth in Composite Materials
- Prognostics and Diagnostics of Rotorcraft Bearings
- Bayesian Sensitivity Analysis of Numerical Models for Structural Health Monitoring
- Adaptive Classification Based on Multisensor Decision
- Artificial Neural Network Based Damage Detection from Lamb Wave Response
- Integration of Data Mining Operations for Structural Health Monitoring
- Cognitive Architectures for Real-Time ISHM
- Integration of Structural Health Monitoring and Fatigue Damage Prognosis
- Wavelet-Based SVM System for Evaluation of Wear States and Remaining Life Time

VOLUME 2

QUANTIFICATION/VALIDATION/CERTIFICATION
- Sensor Location Analysis for Fatigue Crack Detection Using Nonlinear Acoustics
- Uncertainty Quantification and Validation of Finite Element Models of Bridge Structures
- Identification of the Stiffness Distribution Using BOTDR
- Co-Bonding of Piezoelectric Sensors on CFRP Structures
- Development of Probability of Detection Data for Structural Health Monitoring Damage Detection Techniques Based on Acoustic Emission
- Uncertainty Assessment in Structural Health Monitoring

SENSORS AND ACTUATORS DEVELOPMENT
- Very Dense Arrays of Sensors for SHM Based on Large Area Electronics
- On-Board Structural Health Monitoring (OBSHM) Smart Tag
- Highly Nonlinear Granular Crystal Sensor and Actuator for Delamination Detection in Composite Structures
- The Implementation of Piezoelectric Wafer Sensors for Acoustic Emission Sensing in Aluminum
- Diagnosis of Internal Defect of a Pipe by Mechanoluminescent Sensor
- Development of an Integrated Fibre Bragg Grating Contact Pressure and Temperature Sensor for Composite Smart Manufacturing
- Development and Qualification of FBG-Based Strain Patches and Rosettes
- Characterization of Ultrasound Detection Using a Strain-Insensitive FBG Sensing System Incorporating Fiber Ring Laser
- Improved Sensor Concepts for Durability Monitoring of Reinforced Concrete Structures
- Photoacoustic Ultrasound Generation on an Optical Fiber Tip Using Gold Nanoparticles as the Target Material
- Properties of Interdigital Transducers for Lamb-Wave Based SHM Systems
- Piezoelectric Paint as Spatially Distributed Modal Sensors
- Towards Smart Sonar Transducers—Polarimetric Sensing for Sonar Array Compensation
- RF-Powered Wireless Strain Sensor
- Flexible Integration Techniques for Wireless Sensors Network Deployment: Application to Aircraft Structure Health Monitoring
- Detecting the Debonding of Adhesively Mounted Sensors in an Optimally Designed Structural Health Monitoring System
- Power Management in a Wireless Sensor for Structural Monitoring Application
- Integrating Diamond Sensors in Silicon Technology Integrated Circuits
- Development of a Bi-axial Accelerometer Based on Intensity Modulated Plastic Optical Fiber for Wind Turbine Monitoring
- Intelligent Structural Health Monitoring Using Carbon Nanomaterial Networks
- Characterization of an Elastomer Based Autonomous Sensing-Actuating System
- Overview of the European FP 7 Project “Aircraft Integrated Structural Health Assessment II” with Focus on the Detection of Corrosive and Hydraulic Liquids by Gauges Based on the Collapse of Percolation Conductivity
- Fiber-Optic Extensometer Array in a Small Alcove at 1.25-km Depth in the Sanford Laboratory at Homestake, Lead, South Dakota
- Inter-Digitized Transducers (IDTs) for Structural Health Monitoring (SHM) Applications
- Monitoring of 3D Composite Structures Using Fiber Optic Bragg Grating Sensors
- Inherently Conductive Polymer Based Structure Health Monitoring Sensor for Composite
- Versatile and Easy-to-Assemble Measurement System for Impedance-Based Structural Health Monitoring
RESEARCH AND MARKETS

- High Sampling Rate Fiber-Optic Extensometry for Ultrasonic Wave Detection

SPECIAL SESSION: STRUCTURAL HEALTH MONITORING OF WIND TURBINES
- Inertial Energy Harvester for Monitoring Wind Turbine Blades
- Load Shaping for Maximizing Energy Capture and Structural Health in a HAWT Using Rotor-Mounted Inertial Sensors
- Passive Damage Monitoring of Wind Turbine Rotor Blades Using Cyclic Signal Processing
- Vibration Based Damage Detection for Structures of Offshore Wind Energy Plants
- Investigation of Various Condition Monitoring Techniques Based on a Damaged Wind Turbine Gearbox

SPECIAL SESSION: ADVANCED SHM FOR SHIP STRUCTURES
- Compressive Sensing Approach for Structural Health Monitoring of Ship Hulls
- Structural Damage Identification in Stiffened Plate Fatigue Specimens Using Piezoelectric Active Sensing
- Health Monitoring of Aluminum Weldings with the Surface Response to Excitation (SuRE) Approach
- Distributed Sensor Network for Structural Health Monitoring of Ships

SPECIAL SESSION: BIO-INSPIRED SENSING AND ACTUATION TECHNOLOGY
- Cochlea-Based Spectral Decomposition of Sensor Signals for Resource-Constrained Sensor Networks
- Bio-Inspired Smart Skin Based on Expandable Network
- Integrated Piezo-Element Drive Electronics for Structural Health Monitoring
- Micropillar Sensing Element for Bio-Inspired Flow Sensors
- A Bio-Inspired Nanocomposite for Photocurrent-Based Strain Sensing
- Improving the Reliability of Sensor Skins for Structural Health Monitoring
- Bio-Inspired Computing Algorithms for Adaptive Structural Health Monitoring
- Field Validation of Flexure-Based Mobile Sensing Nodes on a Space Frame Bridge
- Development of a Bio-Inspired Bridge Health Monitoring System
- Towards Autonomous Wireless Sensors Systems in Civil Engineering: Paving the Way to an "Energy Oriented Design Method"
- Radar Sensor Based Accurate Tumor Tracking for Respiratory-Gated Lung Cancer Radiotherapy

SPECIAL SESSION: DECISION MAKING IN STRUCTURAL HEALTH MONITORING
- Computation of Lifetime Value of Information for Monitoring Systems
- Carbon Nanotube (CNT) Enhancements for Aerosurface State Awareness
- Optimal Sensor Placement and Weighted Residual Method in Loads Estimation Supporting Structural Health Monitoring
- Uncertainty Quantification in Transmissibility-Derived Features Used for Fault Detection
- Quantifying Damage Measures for a Composite Steel Girder Bridge Using Finite Element Analysis
- Hybrid Coherent/Incoherent Beam Forming Diagnostic Approach to Naval Assets
- Streicker Bridge: The Impact of Monitoring on Decision Making
- Advanced Sensing, Degradation Detection, Diagnostic and Prognostic Capabilities for Structural Health Management
- Acousto-Optic Measurements in CFRP Laminates Using Fiber Bragg Grating Sensors
- Uncertainties in Damage Identification and Lifetime Functions of Ageing Concrete Structures
- A Multi-Non-Linear Civil SHM Model for Decision Support
- Research on Software Platform of Bridge Health Monitoring System Based on JAVAEE and Scientific Computing Engine

SPECIAL SESSION: HOT SPOT MONITORING
- Development and Performance Quantification of an Ultrasonic Structural Health Monitoring System for Monitoring Fatigue Cracks on a Complex Aircraft Structure
- Hot-Spot Fatigue and Impact Damage Detection on a Helicopter Tailboom
- Damage Identification in Structural Components Using Vibration and Wave Propagation Data
- Damage Detection Techniques in Composite Structures Using Ultrasonic Guided Waves
- Reference-Free Structural Health Monitoring for Detecting Delamination in Composite Plates
- Ultrasonic Guided Wave SHM for Probabilistic Fatigue Crack Growth Prognostics
- Guided Wave Based SHM Approach Using SAFT-Algorithm for Impact Detection in Composite Materials
- Baseline-Free Crack Detection in Nuclear Power Plants
- Strain Monitoring and Damage Detection of Single-Lap Joint with Embedded FBGs
- Health Monitoring of Composite Structures Using Carbon Nanotube and Acoustic Sensors
- Acousto-Ultrasonic In Situ Monitoring of Fatigue Cracking in an Aircraft Wing Skin Specimen
- Crack Detection Using Combinations of Acoustic Emission and Guided Wave Signals from Bonded Piezoelectric Transducers
SPECIAL SESSION: INTELLIGENT SENSOR NETWORKS FOR SHM
- Autonomous Structural Condition Monitoring Based on Dynamic Code Migration and Cooperative Information Processing in Wireless Sensor Networks
- An Intelligent Wireless Structural Health Monitoring Solution
- Towards Low-Cost Structural Health Monitoring with Sensor Networks in Earthquake Damage Detection
- Novel Optical-Fiber-Based Cure Monitoring Technique for Large-Scale Composite Structures by Hybrid Brillouin-Rayleigh System
- Wireless Sensor Network for Guided Wave Propagation with Piezoelectric Transducers
- Architecture of a Remote Impedance-Based Structural Health Monitoring System Used in Aircrafts
- Implementation of a Receptance-Based SHM Algorithm on Wireless Smart Sensors
- Distributed Optical Fiber Smart Sensors for Structural Health Monitoring
- Deformation Monitoring of Shield Tunnel Based on Distributed Optical Fiber Strain Sensing Technology
- Efficient Guided Wave SHM Baseline Capture and Selection
- Use of Carbon Nanotubes for Strain Sensing of Epoxy Based Composites
- Wireless Links for Global Positioning System Receivers
- Automatic Wireless Transfer of Acquired Usage Monitoring Data
- Sandwich Node Architecture for Task Preemption in Wireless Sensor Networks for Structural Health Monitoring Applications
- Small Battery-Free Wireless Sensor Networks for Structural Health Monitoring
- Military-Standard Sensor Nodes for the Smart Brick Structural Health Monitoring Platform

SPECIAL SESSION: MONITORING OF CIVIL ENGINEERING STRUCTURES WITH MEMS
- Fiber Optic Method for Buried Pipelines Health Assessment after Earthquake-Induced Ground Movement
- Decentralized Fault Detection in Wireless Sensor Networks
- Framework for Comparison Study of Stochastic Modal Identification Considering Accuracy and Efficiency
- Automated System Identification and Validation of Numerical Models of Offshore Wind Turbines as Basis for SHM-Analysis
- Novel Sensor Concept for Monitoring of Wind Turbine Blades
- Laboratory Validation of MEMS-Based Sensors for Post-Earthquake Damage Assessment
- Modal Identification of Steel Truss Bridges Using Wireless Sensor Network
- Challenges and Possibilities of WSN in the Dynamic Monitoring of Existent Structures
- Acoustic Emission Sensors Circular Array for Concrete Structure Damaging Source DOA Estimation
- Towards a Digital Image Correlation Based Strain Sensor
- An Innovative Non-Contact ECG and Biopotential Sensor

SPECIAL SESSION: NON-CONTACT SENSING TECHNOLOGIES
- Detection and Sizing of Subsurface Impedance Discontinuities Using Acoustic Wavefield Images
- Terahertz Phonon Amplification and Sasing in Semiconductor Superlattice Structures
- Lamb Wave Interaction with a T-Joint
- The Search for Optimal Sensor Network in Lamb Wave-based SHM Method
- Experimental Studies of Structure Inspection and Damage Detection Based on Elastic Waves Energy Distribution
- Robust Vision-Based Approaches for Structural Health Monitoring
- Visualization of Lamb Wave Interaction with a 5 mm Fatigue Crack using 1D Ultra High Frequency Laser Doppler Vibrometry
- Developing a Wireless Two-dimensional Image-based Crack Sensor for Concrete Structures
- Interaction of Lamb Waves with Fatigue Cracks in Aluminum
- Localization of Crack Initiation in a Pipe Structure Using a Laser Based Acoustic Emission Technique
- Applications of the Vision-Based Monitoring System Using a Digital Image Correlation Technique to Long-Span Bridge Cables
- Damage Detection Using Andrew Plots

SPECIAL SESSION: SHM BENCHMARK FOR HIGH-RISE STRUCTURES
- An Integrated MATLAB Toolbox for Optimal Sensor Placement Based on Multiple Optimization Strategies
- Experimental Verification of Substructure Damage Detection Method Using ARX and ARMAX
- Application of Distributed Optical Fiber Strain Measurement into Geotechnical Engineering Monitoring
- Structural Safety Monitoring During Construction of Shanghai Expo Puxi Entertainment Hall
- New Software for Real-time Modal Identification
- Proactive Condition Assessment in Civil Engineering Using Automated Multi-Sensor Systems
- Finite Element Model Updating of Guangzhou Television and Sightseeing Tower Using Regularization Technique
- Operational Modal Analysis for a Benchmark High-Rise Structure
- An Efficient Sensor Placement Method for High-Rise Structures—A Case Study: The Canton Tower, China
- Information Entropy-Based Algorithm of Sensor Placement Optimization for Structural Damage Detection
- SSA-Based Stochastic Subspace Identification of Structures from Output-Only Vibration Measurements
- SHM Benchmark for High-Rise Structures: Description of Host Structure and Measurement Data

SPECIAL SESSION: VERIFICATION AND VALIDATION OF DAMAGE SENSING
- On the Performance Quantification of Active Sensing SHM Systems Using Model-Assisted POD Methods
- Certification in Structural Health Monitoring Systems
- The Need and Requirements for Validating Damage Detection Capability
- Demonstration of Model Assisted Reliability Assessment Protocol on a Proposed Low Frequency Vibration Based Damage Sensing Case
- Challenges and Approach for SHM Technology Transition
- FAA Research and Development Efforts in SHM
- Condition-Based Maintenance Plus and Maintenance Credit Validation

SPECIAL SESSION: WAVE PROPAGATION SIMULATION
- A Wavelet-Based Spectral Finite Element Method for Simulating Elastic Wave Propagation
- A Method to Detect Structural Damage Using High-Frequency Seismograms
- Development of SEM-Based PESEA Code for Modeling PZT Induced Acousto-Ultrasonic Waves Propagating in Metallic and Composite Structures
- Nonlinear Guided Waves: Theoretical Considerations and Applications to Thermal Stress Measurement in Continuous Welded Rails
- Local Interaction Simulation of Guided-Wave Propagation in Composite Plates Using CLoVER Transducer
- Predictive Modeling of Ultrasics SHM with PWAS Transducers
- Lamb Wave Techniques for Damage Detection in CFRP-Components—Is This Really Possible?
- System Identification with Generalized Impulse and Frequency Response Function
- Propagation of Guided Elastic Waves in Aircraft Structural Elements by the Spectral Finite Element Method
- SHM of Structural Materials by Means of Highly Nonlinear Solitary Waves
- Interaction of Elastic Waves with Delaminations in CFRP Structures: A Numerical Study Using the Spectral Element Method
- Combining Guided Waves and Electromechanical Impedance Method for SHM Applications

SPECIAL SESSION: WIND TURBINES MONITORING
- Coupling Sensor-based Structural Health Monitoring with Finite Element Model Updating for Probabilistic Lifetime Estimation of Wind Energy Converter Structures
- Aspects of Automatization of Wind Farm Monitoring on the Example of a Diagnostic Center
- In-Operation Identification of a Wind Turbine Structure via Non-Stationary Parametric Models
- Structural Integrity Monitoring of the Critical Zones in the Wind Turbine Composite Blades with the Use of Integrated Sensors—SESS Project
- Lightning Protected Monitoring System for Wind Turbine Rotor Blades
- Appropriate Rigid Body Correction for Analyzing the Dynamics of Rotating Structures Using 3D Digital Photogrammetry
- Integrated Sensor System for Structural Integrity and Load Monitoring of Wind Turbines
- A Full-Scale Fatigue Test of 9-m CX-100Wind Turbine Blades
- Assessment of Structural Monitoring Techniques for a Small Wind Turbine Test Stand
- Structural Health Monitoring: An End User’s Point of View
- PZT Active Frequency Based Wind Blade Fatigue to Failure Testing Results for Various Blade Designs
- Ultrasonic Structural Health Monitoring of Cable Structures

Author Index for Volumes 1 and 2

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<th>Description</th>
<th>Details</th>
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<tr>
<td>Account number</td>
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<tr>
<td>Sort code</td>
<td>98-53-30</td>
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<tr>
<td>Swift code</td>
<td>ULSBIE2D</td>
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<tr>
<td>IBAN number</td>
<td>IE78ULSB98533083313083</td>
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</tbody>
</table>
| Bank Address        | Ulster Bank,
                     | 27-35 Main Street,
                     | Blackrock,
                     | Co. Dublin,
                     | Ireland.              |

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