

8:50 AM	Welcome Remarks, Dr. Alfred L. Wicks, IMAC Conference Chair, Virginia Polytechnic Institute and State University, <i>Grand Ballroom 1-2</i>
9:00 AM	PLENARY LECTURE, Daniel J. Inman, University of Michigan "What Happened to 30 Years of IMAC Papers?," <i>Grand Ballroom 1-2</i>
10:00–10:30 AM	Coffee Break, <i>Grand Ballroom 1-3 Foyer</i>

	City Terrace 4	City Terrace 5	City Terrace 6	City Terrace 10	City Terrace 8	City Terrace 9	City Terrace 7	City Terrace 11
<i>Session/Chair</i>	1. AEROSPACE Chair: R.D. Brillhart, ATA Engineering, Inc.	2. NONLINEAR STRUCTURAL DYNAMICS - THE FUNDAMENTALS TUTORIAL Chair: G. Kerschen, Université de Liège	3. ANALYTICAL METHODS I Chair: B. Zwink, Sandia National Laboratories	4. ACOUSTICS Chair: W.R. Shapton, Michigan Technological University	5. ENERGY HARVESTING Chair: A.L. Wicks, Virginia Polytechnic Institute and State University	6. HUMAN-INDUCED VIBRATIONS I Chairs: V. Racic, University of Sheffield E.T. Ingolfsson, Technical University of Denmark	7. BASICS OF MODAL ANALYSIS FOR THE NEW/YOUNG ENGINEER Chair: C.D. Van Karsen, Michigan Technological University	8. MODAL PARAMETER IDENTIFICATION I Chairs: A.W. Phillips, University of Cincinnati
10:30 AM	Multibody Dynamic Simulation of the Lunar Landing, #192 <i>H.N. Rhee, S.Y. Lee, S.J. Park, T.S. Kim, Sunchon National University</i>	Nonlinear Structural Dynamics - The Fundamentals Tutorial (90 Minute Presentation), #379 <i>D.E. Adams, Purdue University</i> Oral Pres. Only	A Review of Uncertainty Quantification of Estimation of Frequency Response Functions, #301 <i>C.C. Majba, R.J. Allemang, A.W. Phillips, University of Cincinnati</i>	A Spectrally Preconditioned Iterative Reduced Correction Algorithm for Vibro-acoustic Problems, #187 <i>U. Tabak, D.J. Rixen, Delft University of Technology</i>	Piezoaeroelastic Typical Section for Wind Energy Harvesting, #278 <i>V.C. de Sousa, D. D'Assunção, C. De Marqui Jr., University of São Paulo</i>	Damping Effect of Humans, #274 <i>L. Pedersen, Aalborg University</i>	Compressed Sensing Applied to Modeshapes Reconstruction, #28 <i>J. Morlier, Université Toulouse ICA/ISAE; D. Bettebghor, Airbus/Onera</i>	
11:00 AM	Experimental and Numerical Approaches on Behavior of GLARE 5 Beams: Influences of Thickness and Stacking Sequence, #90 <i>A. Seyed Yaghoubi, B. Liaw, The City College of New York</i>	Sensitivities of Eigenvalues and Eigenvectors from Complex Perturbations, #284 <i>D. Bernal, Northeastern University</i>	Numerical and Experimental Study of Local Cell Resonators to Obtain Low-Frequency Vibrational Stopbands in Periodic Lightweight Structures, #196 <i>C.C. Claeys, M. Vivolo, P. Sas, W. Desmet, Katholieke Universiteit Leuven</i>	Nonlinear Testing and Models Comparison of Magneto-mechanical Energy Scavengers, #262 <i>E. Bonisoli, C. Rosso, F. Di Monaco, Politecnico di Torino</i>	Development of a Laboratory Test Program to Examine Human-structure Interaction, #239 <i>N.C. Noss, K.A. Salyards, Bucknell University</i>	Comparison of Modal Parameters Estimated From Operational and Experimental Modal Analysis Approaches, #122 <i>L.H. Thibault, T.C. Marinone, P. Avitabile, University of Massachusetts Lowell; C. Van Karsen, Michigan Technological University</i>		
11:30 AM	Structural Analysis of the Effects of Wing Payload Pods on Small UAS, #111 <i>K.J. Lemler, W.H. Semke, University of North Dakota</i>	Passive Noise Reduction Using the Modally Enhanced Dynamic Absorber, #112 <i>C. Page, P. Avitabile, C. Niezrecki, University of Massachusetts - Lowell</i>	Identification of Material Parameters in Biot's Model by Homogenization Method, #87 <i>T. Yamamoto, Kogakuin University; S. Maruyama, Nissan Motor Co., Ltd.; K. Izui, S. Nishiwaki, Kyoto University</i>	The Benefits of Duffing-type Nonlinearities and Electrical Optimisation of a Randomly Excited Energy Harvester, #383 <i>P.L. Green, K. Worden, K. Atallah, N.D. Sims, University of Sheffield</i>	Experimental and Numerical Studies of the People Effects on a Structure Modal Parameters, #317 <i>A. Cappellini, S. Manzoni, Politecnico di Milano; M. Vanali, Università degli studi di Parma</i>	Operational Modal Analysis Using a Fast Stochastic Subspace Identification Method, #157 <i>M. Döhler, INRIA; P. Andersen, Structural Vibration Solutions A/S; L. Mevel, INRIA</i>		
12:00–1:30 PM	Lunch, on own							
1:00 PM	IMAC Future Conference Committee Meeting, Boardroom 3							

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<i>Session/ Chair</i>	9. DAMPING OF MATERIALS AND MEMBERS Chairs: L. Gaul, University of Stuttgart P. Reuss, University of Stuttgart	10. APPLICATION OF NON-LINEARITIES: AEROSPACE STRUCTURES Chair: A. Carrella, LMS International nv	11. EXPERIMENTAL DYNAMIC SUBSTRUCTURES Chairs: M.S. Allen, University of Wisconsin-Madison S.N. Voormeeren, Delft University of Technology	12. NON-LINEAR DYNAMIC EFFECTS UNDER SHOCK LOADING Chairs: J. Wolfson, Air Force Research Laboratory J.R. Foley, Air Force Research Laboratory	13. ROBUSTNESS TO LACK OF KNOWLEDGE IN DESIGN Chairs: S. Cogan, LMARC-University of Franche-Comte L. Horta, NASA Langley Research Center	14. HUMAN-INDUCED VIBRATIONS II Chairs: S. Zivanovic, University of Warwick V. Racic, University of Sheffield	15. BASICS OF MODAL ANALYSIS FOR THE NEW/YOUNG ENGINEER Chair: C.D. Van Karsen, Michigan Technological University	16. MODAL PARAMETER IDENTIFICATION II Chairs: R.J. Allemang, University of Cincinnati
1:30 PM	Tutorial Guideline VDI 3830: Damping of Materials and Members (90 Minute Presentation), #16 <i>L. Gaul, University of Stuttgart</i> <i>See page 12 for details</i>	Application of the Restoring Force Surface Method to a Real-life Spacecraft Structure, #52 <i>J.P. Noel, G. Kerschen, Université de Liège; A. Newerla, European Space Agency (ESTEC)</i>	Tutorial on Experimental Dynamic Substructuring Using the Transmission Simulator Method (1 Hour Presentation), #161 <i>R.L. Mayes, Sandia National Laboratories</i>	Transfer Function for a Low- to High-Amplitude Input, #75 <i>J. Wolfson, J.R. Foley, J. Dodson, Air Force Research Laboratory; G. Falbo, LMS; D. Reding, Jacobs Engineering; A.L. Beliveau, Applied Research Associates, Inc.</i> Oral Pres. Only	Info-Gap Analysis and Design of Mechanical Systems: A Tutorial (1 Hour Presentation), #18 <i>Y. Ben-Haim, Technion - Israel Institute of Technology</i>	A Refined Model for Human Induced Loads on Stairs, #195 <i>B. Czwikla, M. Kasperski, Ruhr-University Bochum</i>	<i>Continues</i>	Time-frequency Domain Modal Parameter Estimation of Time-varying Structures Using a Two-step Least Square Estimator, #205 <i>S.-D. Zhou, Beijing Institute of Technology; W. Heylen, P. Sas, Katholieke Universiteit Leuven; L. Li, Beijing Institute of Technology</i>
2:00 PM		Nonlinear Dynamic Model and Simulation of Morphing Wing Profile Actuated by Shape Memory Alloys, #61 <i>C.T. Faria, Virginia Polytechnic Institute and State University; C. De Marqui, Jr., University of Sao Paulo; D.J Inman, Virginia Polytechnic Institute and State University; V. Lopes Jr., São Paulo State University</i>		Filter Response to High Frequency Shock Events, #305 <i>J.R. Foley, J.C. Dodson, Air Force Research Laboratory; A.L. Beliveau, Applied Research Associates, Inc.</i>		Comparative Evaluation of Current Pedestrian Traffic Models on Structures, #85 <i>E. Shahabpoor, A. Pavic, The University of Sheffield</i>		Automated Modal Analysis Based on Frequency Response Function Estimates, #191 <i>V. Yaghoubi, T. Abrahamsson, Chalmers University of Technology</i>
2:30 PM	Applications Committee Meeting, Boardroom 4							
2:30 PM	<i>continues</i>	Environmental Testing and Data Analysis for Non-linear Spacecraft Structure-Impact on Virtual Shaker Testing, #189 <i>S. Manzato, B. Peeters, R. Van der Vorst, J. Debille, LMS International</i>	A Brief History of Substructuring in Structural Dynamics, #339 <i>D.J. Ewins, University of Bristol</i> Oral Pres. Only	Simplified Nonlinear Modeling Approach for a Bolted Interface Test Fixture, #79 <i>C.M. Butner, D.E. Adams, Purdue University; J.R. Foley, Air Force Research Laboratory</i>	On Assessing the Robustness of Structural Health Monitoring Technologies, #36 <i>C.J. Stull, F.M. Hemez, C.R. Farrar, Los Alamos National Laboratory</i>	Sensitivity of Footbridge Response to Load Modeling, #273 <i>L. Pedersen, C. Frier, Aalborg University</i>	<i>Continues</i>	Implementation of an SDOF Parameter Estimation Method With Generalized Residuals, #266 <i>W.A. Fladung, ATA Engineering, Inc.</i>



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3:00 - 3:30 PM		Coffee Break, City Terrace Foyer						
3:30 PM		Pre-Technical Planning/Focus Group Meeting, Boardroom 3						
3:30 PM	Model Calibration and Validation for Material Damping Using Finite Element Analyses, #248 <i>R. Menefee, UCLA; J. Rinker, Harvey Mudd College; P. Shin, North Carolina State University; A. Siranosian, P. Schembri, Los Alamos National Laboratory</i>	Using Impact Modulation to Detect Loose Bolts in a Satellite, #345 <i>J. Jaques, D.E. Adams, Purdue University</i>	Experimental-analytical Substructure Model Sensitivity Analysis for Cutting Machine Chatter Prediction, #135 <i>A. Liljehrn, Chalmers University of Technology/AB Sandvik Coromant; T. Abrahamsson, Chalmers University of Technology</i>	Transmission of Guided Waves Across Prestressed Interfaces, #269 <i>J.C. Dodson, Virginia Polytechnic Institute and State University/Air Force Research Laboratory; J. Wolfson, J.R. Foley, Air Force Research Laboratory; D.J. Inman, University of Michigan</i>	Design of an Uncertain Prestressed Space Structure: An Info-gap Approach, #136 <i>A. Hot, S. Cogan, E. Foltête, FEMTO-ST Institute; G. Kerschen, Université de Liège; F. Buffe, Centre National des Etudes Spatial; J. Buffe, S. Behar, Thales Alenia Space</i>	Crowd-induced Vibrations of a Steel Footbridge in Reykjavik, #44 <i>E.T. Ingólfsson, Technical University of Denmark; G.V. Gudmundsson, Efla Consulting Engineers; S. Zivanovic, University of Warwick; A. Pavic, University of Sheffield</i>	<i>continues</i>	Autonomous Identification of the Fast Time-varied Modal Parameters, #62 <i>J.M. Liu, China Orient Institute of Noise & Vibration/Dept. of Mechanical Engineering/ Tsinghua University; S.W. Dong, M. Ying, S. Shen, China Orient Institute of Noise & Vibration</i>
4:00 PM	Damping Properties Assessment of Very Highly Compliant Sandwich Materials: Are Traditional Methods Really too old?, #92 <i>M. Martarelli, Università degli Studi e-campus; C. Santolini, Università Politecnica delle Marche; A. Perazzolo, AgustaWestland; P. Castellini, Università Politecnica delle Marche</i>	Nonlinear Modal Analysis of the SmallSat Spacecraft, #43 <i>L. Renson, G. Kerschen, Université de Liège; A. Newerla, European Space Agency (ESTEC)</i>	Eliminating Indefinite Mass Matrices With the Transmission Simulator Method of Substructuring, #163 <i>R.L. Mayes, Sandia National Laboratories; M.S. Allen, D.C. Kammer, University of Wisconsin Madison</i>	Equivalent Reduced Model Technique Development for Nonlinear System Dynamic Response, #121 <i>L.H. Thibault, P. Avitabile, University of Massachusetts Lowell; J.R. Foley, J. Wolfson, Air Force Research Laboratory</i>	Robust Control Design for Uncertain Nonlinear Dynamic Systems, #60 <i>S.P. Kenny, NASA Langley Research Center; L.G. Crespo, National Institute of Aerospace; L. Andrews, Old Dominion University; D.P. Giesy, NASA Langley Research Center</i>	Random Model of Vertical Walking Force Signals, #96 <i>V. Racic, J.M.W. Brownjohn, A. Pavic, University of Sheffield</i>		An Efficient Iterative Algorithm for Accurately Calculating Impulse Response Functions, #337 <i>J.M. Liu, Tsinghua University; W.D. Zhu, University of Maryland, Baltimore County; Q.H. Lu, G.X. Ren, Tsinghua University</i>

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4:30 PM	Wind-induced Vibrations in the European Court Towers, #149 <i>J.B. Hansen, Engineering College of Aarhus; R. Brincker, K.G. Andersen, S. Andersen, Aarhus University; C.T. Georgakis, Technical University of Denmark</i>	A Dynamic Model Tailored to Flexible Launch Vehicle Umbilical Analysis, #285 <i>J.P. Atkinson, University of Technology, Jamaica; R.N. Thomas, Nelson Engineering Co.; R.C. Burton, National Aeronautics and Space Administration</i>	Using Substructuring to Predict the Human Hand Influence on a Mechanical Structure, #72 <i>S. Perrier, Y. Champoux, J-M. Drouet, Université de Sherbrooke</i>	Efficient Computational Nonlinear Dynamic Analysis Using Modal Modification Response Technique, #120 <i>T. Marinone, P. Avitabile, University of Massachusetts Lowell; J.R. Foley, J. Wolfson, Air Force Research Laboratory</i>	Identification of Hysteretic Systems Using NARX Models, Part I: Evolutionary Identification, #331 <i>K. Worden, R.J. Barthorpe, University of Sheffield</i>	Towards Modelling In-service Pedestrian Loading of Floor Structures, #343 <i>S. Zivanovic, University of Warwick; A. Pavic, V. Racic, University of Sheffield</i>	<i>continues</i>	A "Local Solve" Method for Extracting Modal Parameters from Inconsistent Data, #232 <i>M.L. Mains, Brüel & Kjær North America; S. Chauhan, H.B. Herlufsen, Brüel & Kjær Sound & Vibration Measurement A/S</i>
5:00 PM	Padding Dynamic Stiffness Using Impedance Modeling of Helmet-head System, #384 <i>D.E. Adams, J. Jaques, Purdue University</i>		Simple Experiments to Validate Modal Substructure Models, #86 <i>M.S. Allen, D.C. Kammer, University of Wisconsin-Madison</i>	Spectral Domain Force Identification of Impulsive Loading in Beam Structures, #97 <i>P. Ghaderi, A.J. Dick, Rice University; J.R. Foley, Air Force Research Laboratory; G.L. Falbo, LMS Americas, Inc.</i>	Roundtable: The session chairs and speakers will participate in a roundtable discussion addressing design for variation methods with emphasis on lack of knowledge. Questions and remarks from the audience will be welcomed.	Discomfort Evaluation on Lively Footbridges With Soft-rubber Pavement, #259 <i>M. Istrate, N. Ibán, A. Vasallo, CARTIF Centro Tecnológico; A. Lorenzana, University of Valladolid, ITAP; I.M. Diaz, University of Castilla La-Mancha</i>		Boundary Constrained Modal Test Method for Large Scale Highly Flexible Structures, #32 <i>D. Wang, Tsinghua University; L. Liu, China Academy of Space Technology; G. Zheng, Tsinghua University</i>
5:30 PM	Dynamic Stiffness-based Test Systems for Viscoelastic Material Characterization: Design Considerations, #264 <i>G.O. Ozgen, F. Erol, A.C. Batihan, Middle East Technical University</i>		Experimental Realization of System-Level Vibration by Use of Single Component Based on Virtual Boundary Condition Concept, #8 <i>K. Furuya, T. Hiyama, N. Okubo, T. Toi, Chuo University</i>			Direct Output Feedback and Model-based Control Approaches for Mitigation of Human-induced Vibrations in Floors, #202 <i>D.S. Nyawako, P. Reynolds, M. Hudson, The University of Sheffield</i>		Exciter Impedance and Cross-Axis Sensor Sensitivity Issues in FRF Estimation, #298 <i>M. Hassan Pour Dargah, R.J. Allemang, A.W. Phillips, University of Cincinnati</i>
6:30 - 8:00 PM	Welcome Reception, River Terrace 1							

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<i>Session/ Chair</i>	17. HONORARY SESSION: DR. DAVID J. EWINS Chairs: N.M.M. Maia, Instituto Superior Tecnico/Tech. University of Lisbon D. Di Maio, University of Bristol	18. APPLICATION OF NON-LINEARITIES: VIBRATION REDUCTION Chair: M.L. Mains, Brüel & Kjær North America	19. EXPERIMENTAL SUBSTRUCTURES FOCUS GROUP TEST BED - AMPAIR 600 WIND TURBINE SYSTEM Chair: D.J. Rixen, Delft University of Technology	20. SHOCK AND VIBRATION Chairs: H.A. Gaberson, Consultant	21. MODEL CALIBRATION Chair: T.W. Simmermacher, Sandia National Laboratories	22. ACOUSTIC FLUID STRUCTURE INTERACTION OF CARS & SHIPS TUTORIAL Chair: U. Tabak, Delft University of Technology	23. TUTORIAL ON SENSORS AND INSTRUMENTATION I Chair: G.C. Foss, Boeing Test & Evaluation Northwest	24. FINITE ELEMENT Chair: C.E. Ventura, The University of British Columbia
8:30 AM	Ewins' Modal Testing: Theory and (Endless) Practice, #385 <i>N.A.J. Lieven, University of Bristol</i> Oral Pres. Only							
9:00 AM	An Overview of the Transmissibility Concept and its Application to Structural Damage Detection, #373 <i>N.M.M. Maia, Instituto Superior Tecnico; A.P.V. Urgueira, R.A.B. Almeida, Universidade Nova de Lisboa</i>	Free-pendulum Vibration Absorber Experiment Using Digital Image Processing, #12 <i>R. Landis, Raytheon Company; A. Ertas, Texas Tech University; E. Gumus, Applied Materials; G. Faruk, Texas Tech University</i>	An Introduction to the SEM Substructures Focus Group Test Bed - The Ampair 600 Wind Turbine, #160 <i>R.L. Mayes, Sandia National Laboratories</i>	A Closed Form Solution to the Early-time Underwater Explosion (UNDEX) Response of a Rectangular Air-backed Ship Hull Panel, #276 <i>F.A. Costanzo, Naval Surface Warfare Center Carderock Division, UERD</i>	Simulating Unbalance for Future IVHM Applications, #151 <i>R.B. Walker, S. Perinpanayagam, I.K. Jennions, University of Cranfield</i>	Acoustic Fluid-Structure Interaction of Cars and Ships Tutorial (90 Minute Presentation), #17 <i>L. Gaul, J. Herrmann, University of Stuttgart</i>	Fundamentals of Charge Amplifiers for use With Piezoelectric Accelerometers, #342 <i>S. Mayo, Meggitt Sensing Systems</i> Oral Pres. Only	Identification of Wheel-Rail Contact Forces Based on Strain Measurement and Finite Element Model of the Rolling Wheel, #150 <i>H. Ronasi, H. Johansson, F. Larsson, Chalmers University of Technology</i>
9:30 AM	From Discretization to Continuous; Advanced Mechanical Measurements Using Continuous Scanning Methods, #328 <i>D. Di Maio, University of Bristol</i>	Suppression of Regenerative Instabilities by Means of Targeted Energy Transfers, #229 <i>A. Nankali, Y.S. Lee, New Mexico State University; T. Kalmar-Nagy, Texas A&M University</i>	Modal Assessment of Wind Turbine Blade in Preparation of Experimental Substructuring, #115 <i>M.S. Nurbhai, D.J. Macknelly, AWE plc</i>	Passive Vibration Isolation and Absorber System for Earth Imaging From the International Space Station (ISS), #31 <i>J. Ranganathan, D. Olsen, W.H. Semke, University of North Dakota</i>	Inverse Eigensensitivity Approach in Model Updating of Avionic Components, #265 <i>E. Bonisoli, C. Rosso, C. Delprete, F. Stratta, Politecnico di Torino</i>		Advancements and Challenges in Primary and Low Frequency Accelerometer Calibration, #350 <i>M.I. Schieffer, The Modal Shop, Inc.</i> Oral Pres. Only	Modal Testing and FE Model Updating of a Lively Staircase Structure, #148 <i>A.V. Belver, CARTIF Centro Tecnológico; S. Zivanovic, H.V. Dang, University of Warwick; M. Istrate, CARTIF Centro Tecnológico; A.L. Iban, University of Valladolid (ITAP)</i>
10:00 AM - 5:00 PM	Exposition Open, Conference Center							
10:00 - 11:00 AM	Coffee Break in the Exposition, Conference Center							
10:30 AM	Experimental Techniques Editorial Committee Meeting, St. John's							

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11:00 AM	Ewins Versus Structural Dynamics, #377 <i>D.J. Inman, University of Michigan</i> Oral Pres. Only	Force Displacement Curves of a Snapping Bistable Plate, #329 <i>A.D. Shaw, A. Carella, University of Bristol</i>	Comparison of Some Wind Turbine Blade Tests in Various Configurations, #101 <i>J. Harvie, P. Avitabile, University of Massachusetts Lowell</i>	Pseudovelocity Modal Stress Velocity Proportionality, #319 <i>H.A. Gaberson, Consultant</i>	Shape Optimization of Plates for Desired Natural Frequencies From Coarse Grid Results, #126 <i>E.B.M.R. Germano, R. Nicoletti, University of São Paulo</i>	<i>continues</i>	Calibration and Production Test Systems for Accelerometers and Microphones, #351 <i>K. Veggeberg, National Instruments</i> Oral Pres. Only	Characterization of Bio-Inspired Synthetic Hair Cell Sensors, #246 <i>E.A. Jampole, Stanford University; N.A. Spurgeon, Rose-Hulman Institute of Technology; T.D. Avant, K.M. Farinholt, Los Alamos National Laboratory</i>
11:30 AM	Measurement of Friction Contact Parameters for Nonlinear Dynamic Analysis, #381 <i>C.W. Schwingshackl, Imperial College London</i>	Characterization of a Strongly Nonlinear Vibration Absorber for Aerospace Applications, #268 <i>S.A. Hubbard, University of Illinois at Urbana-Champaign; T.J. Copeland, m+p International; D.M. McFarland, L.A. Bergman, A.F. Vakakis, University of Illinois at Urbana-Champaign</i>	Experimental Dynamics Substructuring Focus Group Meeting starts 11:30 AM	Numerical Modeling of One-dimensional Wave Propagation in Non-homogeneous Materials, #13 <i>A. Mazzei, Kettering University; R.A. Scott, The University of Michigan</i>	Model Updating of Complex Assembly Structures Based on Substructures-Joint Parameters, #180 <i>M.H. Sadeghi, P. Soleimani, Tabriz University; H. Samandari, Middle East Technical University</i>		Wireless Industrial Vibration Sensors, #352 <i>D. Lally, PCB Piezotronics, Inc.</i> Oral Pres. Only	
12:00 PM	The Use of Modal Correlation Methods to Speed up Design and Test for Variant Design, #375 <i>P.G. Blaschke, TH Wildau (FH)</i> Oral Pres. Only			Stiffness and Damping Characterisation for a Hydraulic Engine Mount, #176 <i>C.B. Nel, A.J. Steyn, North-West University</i>				
12:00–1:30 PM	Lunch, TD/Focus Group Meetings with Pizza Lunch, see pg. 17-18 for details.							
	UNLESS NOTED, MEETING IS IN RIVER TERRACE 1							
	Civil Structures Testing TD							
	Experimental Dynamics Substructuring Focus Group, <i>City Terrace 6</i>							
	Exposition Planning Committee							
	Modal Analysis & Dynamic Systems TD							
	Model Validation & Uncertainty Quantification TD							
	Nonlinear Systems Focus Group							
	Sensors & Instrumentation TD, <i>City Terrace 10</i>							

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Session/ Chair	25. NEW METHODS Chair: A. Grillenbeck, Industrienanlagen-Betriebsgesellschaft mbH	26. NONLINEAR DYNAMICS: TESTING Chair: M. Boeswald, DLR German Aerospace Center	27. SUBSTRUCTURE METHODS I Chair: B. Zwink, Sandia National Laboratories	28. BAYESIAN AND MARKOV CHAIN MONTE CARLO METHODS Chair: R. Barthorpe, University of Sheffield	29. WIND TURBINE ANALYTICAL-EXPERIMENTAL METHODS Chair: D.T. Griffith, Sandia National Laboratories	30. BRIDGE DYNAMICS Chairs: F. Benedettini, Università dell'Aquila C. Gentile, Politecnico di Milano	31. TUTORIAL ON SENSORS AND INSTRUMENTATION II Chair: E.T. Wee Sit, SV-community.com	32. STRUCTURAL HEALTH MONITORING Chair: D.J. Inman, The University of Michigan
1:30 PM	Advanced Frequency-domain Modal Analysis for Dealing With Measurement Noise and Parameter Uncertainty, #334 <i>M.E. El-Kafafy, P. Guillaume, Vrije Universiteit Brussel; B. Peeters, LMS International; F. Marra, G. Coppotelli, University of Rome</i>	Identifying and Computing Nonlinear Normal Modes, #154 <i>A. Cammarano, A. Carrella, University of Bristol; L. Renson, G. Kerschen, Université de Liège</i>	Consideration of Interface Damping in Dynamic Substructuring, #225 <i>P. Reuss, B. Zeumer, J. Herrmann, L. Gaul, University of Stuttgart</i>	The Bayesian Paradigm for Quantifying Uncertainty and the Markov Chain Monte Carlo Method (1 Hour Presentation), #372 <i>N.D. Singpurwalla, George Washington University</i> Oral Pres. Only	Demonstrating Predictive Capability of Validated Wind Turbine Blade Models, #341 <i>K.L. Van Buren, Clemson University; F. M. Hemez, Los Alamos National Laboratory; S. Atamturktur, Clemson University</i>	The Valle Castellana Twin-arch Bridge: Dynamical Tests, Identification, Seismic Performances, #171 <i>R. Alaggio, F. Benedettini, Università dell'Aquila, Italy; M. Dilena, A. Morassi, University of Udine, Italy</i>	Applications of Vibration and Motor Current Sensors for Induction Motor Fault Diagnosis (1 Hour Presentation), #363 <i>S. Ganeriwala, SpectraQuest, Inc.</i> Oral Pres. Only	Damage Detection in Steel Structures Using Bayesian Calibration Techniques, #304 <i>J.L. Hegenderfer, S. Atamturktur, A. Gillen, Clemson University</i>
2:00 PM	Updated Cepstral Methods for Operational Modal Analysis, #344 <i>R.B. Randall, University of New South Wales</i>	Nonlinear Identification Using a Frequency Response Function With the Jump, #155 <i>A. Carrella, University of Bristol</i>	Direct Hybrid Formulation for Substructure Decoupling, #78 <i>W. D'Ambrogio, Università dell'Aquila; A. Fregolent, Università di Roma La Sapienza</i>		Towards the Experimental Assessment of NLBeam for Modeling Large Deformation Structural Dynamics, #249 <i>S. Dalton, Clemson University; L. Monahan, University of Pittsburgh; I. Stevenson, Rose-Hulman Institute of Technology; D.J. Luscher, K.M. Farinholt, G. Park, Los Alamos National Laboratory</i>	Directionality in the Transverse Response of Skewed Multi-span Bridges With Integral Abutments, #314 <i>S.S. Catacol, C.E. Ventura, S. McDonald, University of British Columbia</i>		Symbolic Dynamics-based Structural Health Monitoring, #94 <i>D.Y. Harvey, M.D. Todd, University of California, San Diego</i>
2:30 PM	A Non-hermitian Joint Diagonalization based Blind Source Separation Algorithm for Operational Modal Analysis, #190 <i>J. Antoni, University of Technology of Compiègne; S. Chauhan, Brüel & Kjær</i>	Nonlinear Structural Modification and Nonlinear Coupling, #88 <i>T. Kalaycioglu, Middle East Technical University/ASELSAN Inc.; H.N. Özgüven, Middle East Technical University</i>	Substructuring with Nonlinear Subcomponents: A Nonlinear Normal Mode Perspective, #74 <i>M.S. Allen, R.J. Kuether, University of Wisconsin-Madison</i>	Bayesian Damage Localisation at Higher Frequencies with Gaussian Process Error, #240 <i>C. Lecomte, J.J. Forster, University of Southampton; B.R. Mace, The University of Auckland; N.S. Ferguson, University of Southampton</i>	Wind Turbine Experimental Dynamic Substructure Development, #368 <i>R.L. Mayes, Sandia National Laboratories</i> Oral Pres. Only	Analysis of Seismic Records to Evaluate Soil-structure Interaction Effects on Bridges, #335 <i>M.J. Fraino, C.E. Ventura, University of British Columbia</i>	Providing Flexibility and Openness in a COTS System Allows Proprietary Customization for Testing, #354 <i>J. DeBille, LMS International</i> Oral Pres. Only	Modeshapes Recognition Using Fourier Descriptors: A Simple SHM Example, #27 <i>J. Morlier, M. Bergh, Université Toulouse ICA/ISAE; L. Mevel, Inria Rennes</i>

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Session	25. NEW METHODS		27. SUBSTRUCTURE METHODS I	28. BAYESIAN AND MARKOV CHAIN MONTE CARLO METHODS	29. WIND TURBINE ANALYTICAL-EXPERIMENTAL METHODS	30. BRIDGE DYNAMICS	31. TUTORIAL ON SENSORS AND INSTRUMENTATION II	32. STRUCTURAL HEALTH MONITORING
<p align="center">Exhibitor Dessert Break, Conference Center Sponsored by:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>3:00 - 4:00 PM</p>  </div> <div style="text-align: center;">  </div> </div>								
4:00 PM	Modal Identification From Nonstationary Ambient Vibration Data Using Random Decrement Algorithm, #292 <i>C.S. Lin, National Synchrotron Radiation Research Center; D.Y. Chiang, National Cheng Kung University</i>		An Effective Method for Assembling Impulse Response Functions to Linear and Non-linear Finite Element Models, #70 <i>P.L.C. van der Valk, D.J. Rixen, Delft University of Technology</i>	Identification of Hysteretic Systems Using NARX models, Part II: A Bayesian Approach, #332 <i>K. Worden, R.J. Barthorpe, J.J. Hensman, University of Sheffield</i>	Validation of a Finite Element Model Used for Dynamic Stress-Strain Prediction, #104 <i>J. LoPiccolo, J. Carr, C. Niezrecki, P. Avitabile, University of Massachusetts Lowell; M. Slattery, Southwest Windpower</i>	Dynamic Testing of a Truss Bridge Using a Vibroseis Truck, #287 <i>E.V. Fernstrom, T.R. Wank, K.A. Grimmelsman, University of Arkansas</i>	Plume Impingement Aero-acoustic and Vibration Test Performance, #355 <i>D. Knox, ATA Engineering</i> Oral Pres. Only	Fuzzy Cluster Analysis Methods Applied to Impedance Based Structural Health Monitoring for Damage Classification, #35 <i>L.V. Palomino, V. Steffen, Jr., Federal University of Uberlandia; R.M. Finzi, Federal University of Goias</i>
4:30 PM	Modified Ibrahim Time Domain Method for Identification of Closely Spaced Modes: Experimental Results, #309 <i>A. Malekjafarian, Semnan University; R. Brincker, Aarhus University; M.R. Ashory, M.M. Khatibi, Semnan University</i>		Truncating the Impulse Responses of Substructures to Speed up the Impulse-based Substructuring, #102 <i>D.J. Rixen, N. Haghighat, Delft University of Technology</i>	Bayesian Methods for Uncertainty Quantification in Multi-level Systems, #280 <i>S. Sankararaman, K. McLemore, S. Mahadevan, Vanderbilt University</i>	Dynamic Stress-Strain on Turbine Blade Using Digital Image Correlation Techniques Part 1 - Static Load and Calibration, #105 <i>J. Carr, J. Baqersad, C. Niezrecki, P. Avitabile, University of Massachusetts Lowell; M. Slattery, Southwest Windpower</i>	Modal Identification of a Cable-stayed Bridge by Means of Truck Induced Vibrations, #231 <i>T. Argentini, M. Belloli, L. Rosa, E. Sabbioni, M. Villani, Politecnico di Milano</i>	Distributed Dynamic Monitoring Systems for SHM, #356 <i>K. Veggeberg, National Instruments</i> Oral Pres. Only	Nonlinear Structural Identification of a Three-story Infilled Frame Using Instantaneous Modal Parameters, #141 <i>E. Asgari, B. Moaveni, Tufts University; A. Stavridis, University of Texas, Arlington</i>
5:00 PM	A Comparison of Non-parametric Techniques for FRF Estimation Using Pure Random Excitation, #296 <i>A. Brandt, C. Vaarning, University of Southern Denmark</i>		Application of Residual Vectors to Superelement Modeling of an Offshore Wind Turbine Foundation, #23 <i>B.P. Nortier, S.N. Voormeeren, D.J. Rixen, Delft University of Technology</i>	Sampling Techniques in Bayesian Finite Element Model Updating, #117 <i>I. Boukhaibet, T. Marwala, L. Mthembu, University of Johannesburg; M.I. Friswell, S. Adhikari, Swansea University</i>	Dynamic Stress-Strain on Turbine Blade Using Digital Image Correlation Techniques Part 2 - Dynamic Measurements, #106 <i>J. Carr, J. Baqersad, C. Niezrecki, P. Avitabile, Univ. of Massachusetts Lowell; M. Slattery, Southwest Windpower</i>		Efficient High Speed Transient Data Capture, #366 <i>T. Keller, Spectral Dynamics, Inc.</i> Oral Pres. Only	Blade Bearing Friction Estimation of Operating Wind Turbines, #147 <i>N. Perisic, B.J. Pedersen, LAC Engineering; P.H. Kirkegaard, Aalborg University</i>
5:30 PM				Bayesian Model Updating Approach for Systematic Damage Detection of Plate-type Structures, #281 <i>M. Kurata, J.P. Lynch, University of Michigan; K.H. Law, Stanford University; L.W. Salvino, Naval Surface Warfare Center</i>			The Fatigue Damage Spectrum and Kurtosis Control, #387 <i>M. Millard, Vibration Research Corporation</i> Oral Pres. Only	Vibration Characteristics of Foundation and Free-field Motions of Instrumented Buildings During Earthquakes, #313 <i>B.H. Pandey, C.E Ventura, W.D.L Finn, University of British Columbia</i>

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<i>Session/Chair</i>	33. PROCESSING MODAL DATA Chair: Y. Bulut, J.D. Stevenson & Associates	34. NONLINEAR DYNAMICS: SIMULATION Chair: G. Kerschen, Université de Liège	35. OPERATIONAL MODAL ANALYSIS Chair: R.K. Singhal, David Florida Lab., Canadian Space Agency	36. BIODYNAMICS Chair: D.J. Rixen, Delft University of Technology	37. WIND TURBINE SENSING AND HEALTH MONITORING Chair: T.G. Carne, Consultant	38. EXPERIMENTAL TECHNIQUES AND MODELING FOR CIVIL STRUCTURES Chair: S. Atamturktur, Clemson University	39. TUTORIAL ON SENSORS AND INSTRUMENTATION III Chair: G.C. Foss, Boeing Test & Evaluation Northwest	40. ANALYTICAL METHODS II Chair: A. Brandt, University of Southern Denmark
9:00 AM	Estimating the Elastic Period of Masonry Towers, #63 <i>C. Rainieri, G. Fabbrocino, University of Molise</i>	Nonlinear Dynamic Response of Two Bodies Across an Intermittent Contact, #107 <i>C.C. Watson, D.E. Adams, Purdue University</i>	Non-Contact Operational Modal Analysis of an Optical Membrane for Space Application, #169 <i>N. Ameri, University of Bristol; P. Tarazaga, Virginia Tech; D. Di Maio, D.J. Ewins, University of Bristol</i>	3D Motion Analysis of Cycling Biodynamics for Setup, Efficiency and Prevention of Injuries, #214 <i>H. Berger, M. Möller, M. Klein, GOM mbH</i>	Structural Health Monitoring of Wind Turbine Blades under Fatigue Loads, #251 <i>S.J. Dias, Colorado School of Mines; J. Scheidler, Ohio State University; S.G. Taylor, K.M. Farinholt, G. Park, Los Alamos National Laboratory</i>	Dynamic Characterization of Flexible Structures Through Vision-based Vibration Measurements, #321 <i>G. Busca, A. Cigada, E. Zappa, Politecnico di Milano</i>	Fibre Bragg Grating Vibration Transducer Based on Novel Mechanical Sensing Element for Monitoring Applications, #357 <i>B. Kriegbaum, Brüel & Kjær Sound & Vibration</i> Oral Pres. Only	A Reduced Model Approximation Approach Using Model Updating Methodologies, #118 <i>T. Marinone, A. Butland, P. Avitabile, University of Massachusetts Lowell</i>
9:30 AM	Operational Analysis in the Launch Environment, #300 <i>G. James, M. Kaoak, T. Cao, V. Fogt, R. Rocha, K. Schultz, J.-M. Tucker, E. Rayos, NASA Johnson Space Center; J. Bell, ESCG Jacobs; D. Alldredge, T. Howsman, Dynamic Concepts Incorporated</i>	Application of Continuation Methods to Nonlinear Post-buckled Structures, #82 <i>T.C. Lyman, L.N. Virgin, Duke University; R.B. Davis, NASA Marshall Space Flight Center</i>	Experimental Modal Test of Civil Concrete Bridges, #311 <i>A. Gharighoran, R. Nematollahi, Gh. Bagheri, Department of Structural Engineering, Islamic Azad University</i>	Designing an Experiment Inspired by Cochlea for Travelling Waves Observation, #143 <i>S. Foucaud, G. Michon, Y. Gourinat, Université de Toulouse, ICA, ISAE; A. Pelat, F. Gautier, Laboratoire d'Acoustique de l'Université du Maine</i>	Dynamic Characterization of Whisper 500 Turbine Blade, #253 <i>C. Nonis, University of Massachusetts Lowell; S. Garrett, Stanford University; S.G. Taylor, K.M. Farinholt, G. Park, Los Alamos National Laboratory</i>	Rapid Soil Displacements From MEMs Accelerometers, #15 <i>F.M. Levy, D.J. Richards, University of Southampton</i>	Analysis of Error Sources in a Fiber Optic Sensor Demodulation System, #358 <i>M. Todd, University of California, San Diego</i> Oral Pres. Only	Variability Improvement of Key Inaccurate Node Groups - VIKING, #123 <i>L.H. Thibault, A. Butland, P. Avitabile, University of Massachusetts Lowell</i>
10:00 AM - 12:00 PM		Exposition Open, Conference Center						
10:00 - 11:00 AM		Coffee Break in the Exposition, Conference Center						
10:00 AM		IMAC Program Planning Committee, St. John's						
11:00 AM	Design of Marimba Keys - A Study for Better Harmonic Support, #185 <i>S. Balsillie, S.E. Semercigil, O.F. Turan, Victoria University</i>	Finding Local Nonlinearities Using Error Localization From Model Updating Theory, #233 <i>A.L. Linderholt, Linnaeus University; T.A. Abrahamsson, Chalmers University of Technology</i>		<i>In Vivo</i> Measurement of the Human Thorax and Abdomen Surface Using Laser Vibrometry: A new Diagnostic Tool?, #103 <i>D.J. Rixen, T. Schuurman, Delft University of Technology</i>	Developing a Finite Element Model in Conjunction With Modal Test for Wind Turbine Blade Models, #152 <i>E. Harvey, P. Avitabile, C. Niezrecki, University of Massachusetts Lowell</i>	Frequency Domain Optimization of Dry Friction Dampers on Buildings Under Harmonic Excitation, #108 <i>Z.E. Erisen, E. Cigeroglu, Middle East Technical University</i>	Programming a Fully Autonomous, Scalable, Time-synchronized Wireless Sensing Network (1 Hour Presentation), #359 <i>S. Arms, MicroStrain, Inc.</i> Oral Pres. Only	A Novel Optimization Strategy for Command Shaping Control, #41 <i>K.A. Alghanim, K.A. Alhazza, Kuwait University; Z.N. Masoud, The German-Jordanian University</i>
11:30 AM					Dynamic Stress-strain Prediction From Limited Measurements in the Presence of Structural Defects, #153 <i>E. Harvey, P. Avitabile, C. Niezrecki, University of Massachusetts Lowell</i>			A Novel Modal Combination Rule Under Multi-Component Ground Motion, #182 <i>A. Sadhu, University of Waterloo, Canada; V. K. Gupta, Indian Institute of Technology Kanpur, India</i>

12:00 - 2:00 PM

AWARDS LUNCHEON, Grand Ballroom 5

See pg. 6 for details. (One ticket to the Luncheon is included with paid conference registration ONLY if you obtain that ticket from the IMAC registration desk PRIOR to 10:00 AM on Tuesday, Jan. 31. Additional tickets may be purchased prior to 10:00 AM on Tuesday, Jan. 31 for \$60 each.)

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Session/ Chair	41. UNCERTAINTY QUANTIFICATION Chair: F.M. Hemez, Los Alamos National Laboratory	42. NONLINEAR DYNAMICS: IDENTIFICATION Chair: T. Lyman, Duke University	43. SUBSTRUCTURE METHODS II Chair: J.P. De Clerck, Michigan Technological University	44. EXCITATION METHODS Chairs: R.D. Brillhart, ATA Engineering, Inc. D. Hunt, ATA Engineering, Inc.	45. WIND TURBINE MODAL ANALYSIS AND IDENTIFICATION TECHNIQUES Chair: S. Chauhan, Brüel & Kjær Sound and Vibration Measurement A/S	46. SYSTEM IDENTIFICATION FOR CIVIL STRUCTURES Chairs: R.W. Bolton, University of Southern Denmark; S.E. Semercigil, Victoria University	47. TUTORIAL ON SENSORS AND INSTRUMENTATION IV Chair: P.L. Walter, Texas Christian University/PCB Piezotronics	48. EXPERIMENTAL TECHNIQUES I Chair: P. Castellini, Università Politecnica Delle Marche
1:30 - 5:00 PM Exposition Open , Conference Center								
2:00 PM	On the Legitimacy of Model Calibration in Structural Dynamics, #47 <i>F.M. Hemez, C.J. Stull, Los Alamos National Laboratory</i>	Comparing Measured and Computed Nonlinear Frequency Responses to Calibrate Nonlinear System Models, #83 <i>M.W. Sracic, S. Yang, M.S. Allen, University of Wisconsin-Madison</i>	On the Mode Based Simulation of Dry Friction Inside Lap Joints, #137 <i>M. Breiffuss, Johannes Kepler University Linz; W. Witteveen, G. Prechtl, Upper Austria University of Applied Sciences</i>	A Comparison of Multiple Impact Testing Methods, #270 <i>K. Napolitano, N. Yoder, R. Brillhart, ATA Engineering, Inc.</i>	Vertical Axis Wind Turbine Operational Modal Analysis in Sheared Wind Flow, #165 <i>J.F. Kusnick, D.E. Adams, Purdue Center for Systems Integrity</i>	Blind Source Separation of Convolutional Mixtures Towards Modal Identification, #283 <i>A. Sadhu, S. Narasimhan, University of Waterloo</i>	Common Do's and Don'ts of Experimental Impact and Shaker Excitation (90 Minute Presentation), #360 <i>M. Peres, The Modal Shop, Inc.; P. Avitabile, University of Massachusetts Lowell; R. Bono, The Modal Shop, Inc.</i> Oral Pres. Only	Use of Non Contact Radar Techniques to Dynamic Measurement Purposes, #316 <i>A. Cappellini, Politecnico di Milano; D. Leva, C. Rivotta, LisaLab srl; M. Vanali, Università degli studi di Parma</i>
2:30 PM	Propagation of Uncertainty in Substructured Spacecraft Using Frequency Response, #223 <i>D.C. Kammer, D. Krattiger, University of Wisconsin-Madison</i>	Identifying the Modal Properties of Nonlinear Structures Using Measured Free Response Time Histories From a Scanning Laser Doppler Vibrometer, #139 <i>M.W. Sracic, M.S. Allen, University of Wisconsin-Madison; H. Sumali, Sandia National Laboratories</i>	Efficient Updating of Static Modes in the Craig-Bampton Reduction Basis, #24 <i>S.N. Voormeeren, D.J. Rixen, Delft University of Technology</i>	Advances in Six Degree of Freedom Vibration Tests, #19 <i>D.J. Osterholt, N.C. Yoder, D.W. Linehan, ATA Engineering, Inc.</i>	Output-only Estimation of Wind Induced Stresses in Structures, #131 <i>E.H. Hernandez, University of Vermont; D.P. Bernal, L. Caracoglia, Northeastern University</i>	Modal Identification Using SMITM, #215 <i>M. Chang, S.N. Pakzad, R. Leonard, Lehigh University</i>		Selection of Reference Locations for Modal Testing, #216 <i>M. Narita, Mitsubishi Electric Corporation</i>
3:00 PM	Possibilistic Interpretation of Mistuning in Bladed Disks by Fuzzy Algebra, #145 <i>H.Ç. Karatas, E. Cigeroglu, H.N. Ozguven, Middle East Technical University</i>	Nonlinear System Identification of the Dynamics of a Vibro-impact Beam, #228 <i>H. Chen, New Mexico State University; M. Kurt, University of Illinois at Urbana-Champaign; Y.S. Lee, New Mexico State University; D.M. McFarland, L.A. Bergman, A.F. Vakakis, University of Illinois at Urbana-Champaign</i>	Comparison of CMS, Krylov and Balanced Truncation Based Model Reduction from a Mechanical Application Engineer's Perspective, #213 <i>W. Witteveen, Upper Austria University of Applied Sciences, Wels</i>	Fixed Base FRF Using Boundary Measurements as References-Analytical Derivation, #254 <i>K.L. Napolitano, N.C. Yoder, ATA Engineering, Inc.</i>	On System Identification of Wind Turbines, #290 <i>P.H. Kikrgaard, Aalborg University; N. Perisic, B.J. Pedersen, LAC Engineering</i> Oral Pres. Only	Iterative Modal Identification Algorithm; Implementation and Evaluation, #172 <i>S.D. Dorvash, S.N. Pakzad, Lehigh University</i>		Evaluation of a Long Term Viable Dynamic Data Archive Format, #374 <i>A.W. Phillips, R.J. Allemang, University of Cincinnati</i>

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<i>Session</i>	41. UNCERTAINTY QUANTIFICATION	42. NONLINEAR DYNAMICS: IDENTIFICATION	43. SUBSTRUCTURE METHODS II	44. EXCITATION METHODS	45. WIND TURBINE MODAL ANALYSIS AND IDENTIFICATION TECHNIQUES	46. SYSTEM IDENTIFICATION FOR CIVIL STRUCTURES	47. TUTORIAL ON SENSORS AND INSTRUMENTATION IV	48. EXPERIMENTAL TECHNIQUES I
3:30-4:15 PM Dessert Break, Conference Center								
4:15 PM	FEM Sensitivity Technique for Dynamic Response Uncertainty Analyses, #156 <i>R.N. Coppolino, Measurement Analysis Corporation</i>	Modeling of Subsurface Damage in Sandwich Composites Using Measured Localized Non-linearities, #140 <i>S.S. Underwood, D.E. Adams, Purdue University</i>	Pseudo-static Corrections and Modal Truncation Augmentation Techniques for Thermomechanical Systems, #99 <i>A.M. Steenhoek, D.J. Rixen, Delft University of Technology</i> Oral Pres. Only	Fixed Base FRF Using Boundary Measurements as References- Experimental Results, #166 <i>N.C. Yoder, K.L. Napolitano, ATA Engineering, Inc.</i>	Modal Testing of Nine Meter CX-100 Turbine Blades, #119 <i>T. Marinone, B. LeBlanc, J. Harvie, C. Niezrecki, P. Avitabile, University of Massachusetts Lowell</i>	Modal Testing of Non-structural Components For Seismic Risk Assessment, #318 <i>M.A. Archila, C.E. Ventura, A. Figueira, Y. Yang, The University of British Columbia</i>	Analog Noise Documentation and Suppression in Ground Based and Flight Instrumentation Systems (1 Hour Presentation), #361 <i>P.L. Walter, Texas Christian University</i> Oral Pres. Only	Using High-speed Stereophotogrammetry Techniques to Extract Shape Information from Wind Turbine/ Rotor Operating Data, #20 <i>T. Lundstrom, J. Baqersad, C. Niezrecki, P. Avitabile, University of Massachusetts Lowell</i>
4:45 PM	Uncertainty Quantification of Weighted Residual Method in Loads Estimation, #242 <i>C.M. Haynes, M.D. Todd, University of California, San Diego; K.L. Napolitano, ATA Engineering</i>	Parametric Identification of Nonlinearity from Incomplete FRF Data Using Describing Function Inversion, #98 <i>M. Aykan, Middle East Technical University/ASEL-SAN Inc.; H.N. Ozguven, Middle East Technical University</i>		Converting a Slip Table Random Vibration Test to a Fixed Base Modal Analysis, #138 <i>B.R. Zwick, R.L. Mayes, D.W. Kelton, J.D. Heister, P.S. Hunter, A.J. Gomez, Sandia National Laboratories</i>	Some Considerations of Boundary Conditions in Dynamic Testing, #100 <i>J. Harvie, P. Avitabile, University of Massachusetts Lowell</i>	Dynamic Characterization of Multiple Arch Dams: A Finite Element Approach, #255 <i>E. Ritz, Z.H. Duron, Harvey Mudd College</i>		Surface Stitching of a Wind Turbine Blade Using Digital Image Correlation, #158 <i>B. LeBlanc, C. Niezrecki, P. Avitabile, J. Sherwood, J. Chen, University of Massachusetts Lowell</i>
5:15 PM	Rapid Structural Condition Assessment Using Transmissibility With Quantified Confidence for Decision Making, #234 <i>Z. Mao, M.D. Todd, University of California, San Diego</i>			Refinements on Estimating Fixed Base Modes on a Slip Table, #162 <i>R.L. Mayes, Sandia National Laboratories</i>		Estimation of Unmeasured DOF's Using the Local Correspondence Principle, #200 <i>A. Skafte, Engineering College of Aarhus; R. Brincker, Aarhus University</i>	Current Status of IEEE 1451.4 (TEDS), #362 <i>M.I. Schieffer, The Modal Shop, Inc.</i> Oral Pres. Only	Modal Testing Using Tracking-interferometers, #50 <i>C. Brecher, S. Bäumlner, RWTH Aachen University; M. Wissmann, ETALON AG; A.Guralnik, RWTH Aachen University</i>
5:45 PM								Comparison of Modal Analysis Between Laser Vibrometry and NAH Measurements, #325 <i>J.L. Potter, The Boeing Company; C.D. VanKarsen, J.P. DeClerck, Michigan Technological University; B.J. Sklanka, The Boeing Company</i>
Brüel & Kjær Customer Appreciation Event, stop by the Brüel & Kjær booth in the Exposition for details!								

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<i>Session/Chair</i>	49. DAMAGE DETECTION I Chair: J.L. Rose, Pennsylvania State University	50. AIRCRAFT/AEROSPACE Chair: A.L. Wicks, Virginia Polytechnic Institute and State University	51. ACTIVE CONTROL Chairs: W.H. Semke, University of North Dakota M.R. Marsico, University of Bristol	52. ROTATING MACHINERY Chair: J.R. Blough, Michigan Technological University	53. METHOD AND TECHNOLOGIES FOR BRIDGE MONITORING Chair: F.N. Catbas, University of Central Florida	54. DAMAGE DETECTION FOR CIVIL STRUCTURES Chair: M. Gul, University of Alberta	55. TUTORIAL ON SENSORS AND INSTRUMENTATION V Chair: G.C. Foss, Boeing Test & Evaluation Northwest	56. STRUCTURAL MODELING Chair: G. Park, Los Alamos National Laboratory
8:00 - 11:00 AM Exposition Open, Conference Center								
8:30 - 10:00 AM Breakfast in the Exposition, Conference Center								
10:00 AM	A Scenario-based Damage Identification Framework, #220 <i>T. Lauwagie, E. Dascotte, Dynamic Design Solutions</i>	Ground Vibration Testing of the Predator® B UAS with MTS Chin-Mount Structure, #125 <i>D. Linehan, J. Davis, ATA Engineering, Inc.; J. Korniski, General Atomics Aeronautical Systems, Inc.</i>	A Frictionless Lightweight Active Vibration Control Mount for Small UAS, #109 <i>N. Baer, W. Semke, University of North Dakota</i>	Detection of Shaft Cracks Using Vibration Signature Analysis, #336 <i>S.N. Ganeriwala, Spectra Quest, Inc.</i>	Use of FBG Sensors to Detect Damage From Large Amount of Dynamic Measurements, #369 <i>M. Malekzadeh, M. Gul, F.N. Catbas, University of Central Florida</i>	Structural Damage Detection Using Multivariate Time Series Analysis, #243 <i>R. Yao, S.N. Pakzad, Lehigh University</i>	Full-field Optical Measurements for Vibration and Shock Applications (1 Hour Presentation), #353 <i>T. Schmidt, Trillion Quality Systems</i> Oral Pres. Only	Optimum Column Layout Design of Reinforced Concrete Frames Under Wind Loading, #129 <i>P. Sharafi, M.N.S. Hadi, L.H. Teh, University of Wollongong</i>
10:30 AM	Bridge Scour Assessment Using Curvature of Horizontally Displaced Mode Shapes, #48 <i>A.H. Elsaid, R. Seracino, North Carolina State University</i>	Tracking the Evolution of Modal Properties of a Solid Propellant Launcher During Static Firing Test, #188 <i>S. Manzato, B. Peeters, LMS International; T. Brault, E. Fly, Snecma Propulsion Solide</i>	Embedded Active Vibration Cancellation of a Piston-driven Cryocooler for Nuclear Spectroscopy Applications, #245 <i>W. Johnson, Brigham Young Univ.; R. Long, University of Vermont; M.W. Nelson, Oklahoma State University; D.L. Mascarenas, Los Alamos National Laboratory</i>	Separation of Sine and Random Components From Vibration Measurements, #113 <i>C. Engelhardt, M. Baker, A.M. Mouron, H. Vold, ATA Engineering Inc.</i>	Bayesian FE Model Updating of the Dowling Hall Footbridge, #212 <i>I. Behmanesh, B. Moaveni, Tufts University; G. Lombaert, Katholieke Universiteit Leuven</i>	Changes in the Statistics of Ambient Excitations in the Performance of Two Damage Detection Schemes, #286 <i>J. Strout, Northeastern University; M. Dohler, INRIA, Rennes; D. Bernal, Northeastern University; L. Mevel, INRIA, Rennes</i>		Robust Design Optimization to Account for Uncertainty in the Structural Design Process, #302 <i>S.K. Dalton, I. Farajpour, S. Atamurktur, Clemson University</i>
11:00 AM	Environmental Effects on Torsional Vibration Feature Health Monitoring, #303 <i>M.S. Lebold, J.P. Bednar, M.W. Trethewey, Pennsylvania State University</i>	Response of Nuclear Containment Structure to Aircraft Crash, #380 <i>M.A. Iqbal, P. Bhargava, S. Rai, M.R. Sadique, Indian Institute of Tech. Roorkee</i>	Advanced Response Limiting Technique for Lightly Damped Structures, #128 <i>J.R. Silverstein, E.J. Wolf, Harris Corporation</i>	System Identification in Rotating Structures Using Vibration in Modal Analysis, #7 <i>H.A.H. AL-Khazali, M.R. Askari, Kingston University</i>	Design of Experiments Study to Obtain a Robust 3D Computational Bridge Model, #37 <i>Y.M. Al-Smadi, A. Bhargava, O. Avci, M. Elmorsi, AECOM</i>	Damage Identification From Flexibility Matrix Using Wavelet Transform, #174 <i>M. Masoumi, M.R. Ashory, Semnan University</i>	Powering Innovative Variable Capacitance Sensor Design With Bridge Amplifiers, #364 <i>D. Change, Dytran Instruments, Inc.</i> Oral Pres. Only	Optimum Spans' Lengths of Multi-span Reinforced Concrete Beams Under Dynamic Loading, #130 <i>P. Sharafi, M.N.S. Hadi, L.H. Teh, University of Wollongong</i>
11:30 AM	Experimental Damage Diagnosis of a Model Three-story Spatial Frame, #30 <i>S. Sabatino, Lehigh University; E.K. Ervin, University of Mississippi</i>	Application of Analytical Methods for Advanced Flight Flutter Test, #291 <i>W.G. Lubber, EADS-CASSIDIAN COEA</i>	Active Control of Beam Vibration Using Non-model Based Algorithm, #297 <i>H.N. Rhee, G. Hamm, S.Y. Lee, S.J. Park, T.S. Kim, Sunchon National University</i>	Comparison of Noise Floor of Various Torsional Vibration Sensors, #29 <i>S.N. Seidlitz, Cummins Power Generation; R.J. Kuether, M.S. Allen, University of Wisconsin-Madison</i>		Damage Identification Using Experimental Modal Analysis and Adaptive Neuro-Fuzzy Interface System (ANFIS), #132 <i>S.J.S. Hakim, H. Abdul Razak, University of Malaya</i>	Development of a Ground Based and Aerial Sonic Boom Measurement System, #365 <i>K. Veggeberg, National Instruments</i> Oral Pres. Only	Imposing Node on Linear Structures During Multi-harmonic Excitations, #198 <i>E. Jamshidi, S. Arshi, M.R. Ashory, N. Islamic Azad University</i>
12:00 - 1:00 PM Lunch, on own								

	City Terrace 4	City Terrace 5	City Terrace 6	City Terrace 9	City Terrace 10
<i>Session/ Chair</i>	57. DAMAGE DETECTION II Chair: S.S.C. Mosquera, The University of British Columbia	58. EXPERIMENTAL TECHNIQUES II Chair: G.H. James, III, NASA Johnson Space Center	59. SYSTEM IDENTIFICATION: APPLICATIONS Chair: T.L. Lagö, TechFuzion	62. MODAL TESTING OF CIVIL STRUCTURES Chair: A. Cigada, Politecnico di Milano	63. SPORTS EQUIPMENT DYNAMICS Chair: C. Niezrecki, University of Massachusetts Lowell
1:00 PM	Post-earthquake Damage Detection in Instrumented Buildings Using Identified Dissipated Energy, #186 <i>E.M. Hernandez, G. May, University of Vermont</i>	The Use of Continuous System Identification for Evaluation of Concrete E-modulus Evolution: Laboratory and Field Applications, #295 <i>Y. Aguilar, Pontifical Catholic University of Perú; L.F. Ramos, M. Azenha, University of Minho, ISISE</i>	Process Noise Identification and Observer Design for the Large Binocular Telescope, #224 <i>S. Engelke, L. Gaul, University of Stuttgart; J.-U. Pott, M. Kürster, J. Trowitzsch, J.L. Borelli, Max-Planck-Institut für Astronomie, Heidelberg</i>	Experimental Modal Analysis of a Full-scale Seven-story Shear Wall Based on Nonlinear Seismic Response, #142 <i>E. Asgariéh, B. Moaveni, Tufts University</i>	Technique to Measure the Dynamic Behaviour of Road Bike Wheels, #221 <i>J. Lépine, Y. Champoux, J.M. Drouet, Université de Sherbrooke</i>
1:30 PM	Ultrasonic Vibration Method for Damage Detection in Composite Aircraft Components, #222 <i>J.L. Rose, The Pennsylvania State Univ./FBS, Inc.; F. Yan, FBS, Inc.; Y. Liang, C. Borigo, The Pennsylvania State University</i>	Temperature Effect on Ballistic Impact of Woven Graphite/Epoxy Composites, #57 <i>Y. Budhoo, Vaughn College of Aeronautics and Technology; F. Delale, B. Liaw, The City College of New York</i>	Modal Analysis of a Heliostat for Concentrating Solar Power, #217 <i>D.T. Griffith, C.K. Ho, P.S. Hunter, J. Sment, A.C. Moya, A.R. Menicucci, Sandia National Laboratories</i>	Application of DDE-Model to Enhancing Seismic Response of Reinforced Concrete Frame, #5 <i>C.-H. Loh, J.-H. Li, National Taiwan University</i>	Sensor Nodes for the Dynamic Assessment of Alpine Skis, #247 <i>M. Bassetti, F. Braghin, F. Castelli-Dezza, S. Negrini, P. Pennacchi, Politecnico di Milano</i>
2:00 PM	Reliability of Dynamically Measured Flexibility Matrix on Damage Detection of Frame Structures, #260 <i>H. Monajemi, H. Abdul Razak, Z. Ismail, University of Malaya</i>	Spatial Noise Component Identification Based on Different Vibro-acoustic Data Sets, #76 <i>G.M. Revel, Università Politecnica delle Marche; M. Martarelli, Università degli studi e-campus; P. Chiariotti, Università Politecnica delle Marche</i>	Extension of Subspace Identification to LPTV Systems: Application to Helicopters, #206 <i>A. Jhinaoui, L. Mevel, INRIA, Centre Rennes - Bretagne Atlantique; J. Morlier, Université de Toulouse, ICA, ISAE/INSA/UPS/ENSTIMAC</i>	Modal Parameter Variation of an Earthquake Damaged Building, #81 <i>A.A. Aguilar, R.L. Boroschek, L.M. Massone, University of Chile</i>	The use of Stereo-photogrammetry to Precisely Determine 3D-positions, Motions and Deformations on Sports Equipment, #218 <i>H. Berger, O. Erne, M. Klein, GOM mbH</i>
2:30 PM	Wavelet Based Mode Shape Analysis for Damage Detection, #51 <i>M. Algaba, M. Solis, P. Galvin, University of Seville</i>	Improving Test Rig Performance Using Passive Components, #64 <i>A.T. Johansson, T.J.S. Abrahamsen, Chalmers University of Technology</i>	Dynamic Characterization of Structural Joints Using FRF Decoupling, #89 <i>S. Tol, Middle East Technical University/AEELAN Inc.; H.N. Ozguven, Middle East Technical University</i>	Modal Analysis of the Palazzo Lombardia Tower in Milano, #315 <i>A. Cigada, Politecnico di Milano; E. Mola, F. Mola, ECSD; G. Stella, CAD Data Consult; M. Vanali, Politecnico di Milano</i>	Experimental Assessment of Bobsleigh Dynamics and Ice-skate Contact Forces, #219 <i>F. Braghin, F. Cheli, S. Melzi, E. Sabbioni, Politecnico di Milano</i>
3:00 - 3:20 PM Coffee Break, 3rd Floor Sky Bridge					
3:20 PM	Application for FE Model Updating for Damage Assessment of FRP Composite Beam Structure, #299 <i>O.A. Adediran, University of Surrey; M.M. Abdel Wahab, Ghent University; W. Xu, A.D. Crocombe, University of Surrey</i>	Continuous Scanning LDV by Signal Re-sampling Method: A new Signal Processing Approach, #68 <i>P. Castellini, F. Sopranzetti, Università Politecnica delle Marche; M. Martarelli, Università degli Studi e-Campus; E.P. Tomasini, Università Politecnica delle Marche</i>	Kalman Filtering With Model Uncertainties, #288 <i>Y. Bulut, J.D. Stevenson & Associates; O. Bayat, Istanbul Kemerburgaz University</i>	Impact of Nonstructural Components on Modal Response & Structural Damping, #53 <i>A. Devin, P. Fanning, University College Dublin</i>	Instrumented Rowing Machine for Optimized Training, #258 <i>M. Bassetti, F. Braghin, F. Cheli, Politecnico di Milano; S. Maldifassi, Comitato Olimpico Nazionale Italiano</i>
3:50 PM	An Examination of some Aspects of Factor Analysis in Damage Detection, #237 <i>S. Mozaffari Kojidi, Northeastern University; D.P. Bernal, Northeastern University-Center for Digital Signal Processing</i>	Design of High Impedance Test Rig for Composite Structures Vibration Measurements, #178 <i>D. Di Maio, University of Bristol; S. Berardi, Università Politecnica delle Marche; N. Vitale, D.J. Ewins, University of Bristol</i>		Use of Family of Models for Performance Predictions and Decision Making, #367 <i>H.B. Gokce, F.N. Catbas, University of Central Florida; D.M. Frangopol, Lehigh University</i>	An Experimental Study of Climbers Performances Based on Hand-grip Force Measurement, #203 <i>F. Braghin, F. Cheli, Politecnico di Milano; S. Maldifassi, CONI; E. Sabbioni, M. Sbrasi, Politecnico di Milano</i>
4:20 PM					Identifying the Modes Excited in a Tennis Racket by a Fore-hand Drive, #382 <i>G. Banwell, J.R. Roberts, Loughborough University; S. Mohr, Head Sport AG; S.J. Rothberg, Loughborough University</i>