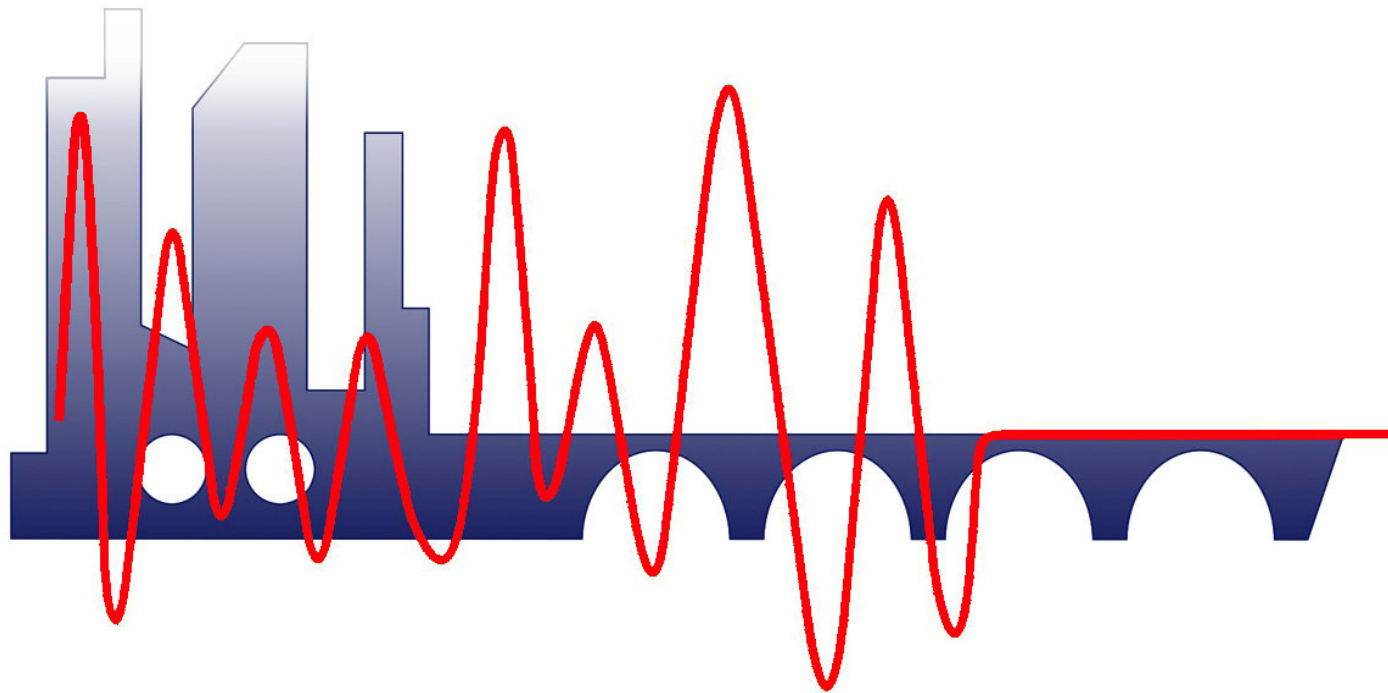


4th International Conference on
EXPERIMENTAL VIBRATION ANALYSIS FOR CIVIL ENGINEERING STRUCTURES
3-5 OCTOBER 2011, VARENNA, ITALY



Preliminary Program

Day 1: 3 October 2011

09:15-09:45	Opening ceremony (Sala Fermi)		
09:45-10:30	Opening Lecture: M. DOLCE (Sala Fermi)		
10:30-11:15	Keynote Lecture: D. BERNAL (Sala Fermi)		
11:15-11:45	Coffee-break		
	ROOM 1 (Sala Fermi)	ROOM 2 (Sala Polvani)	ROOM 3 (Sala Nera)
	Testing and Monitoring of Bridges -1- (Chairs: A. Cunha, C. Gentile)	Experimental Vibration Analysis for the Post-earthquake Assessment in L'Aquila -1- (Chairs: P. Clemente, M. Dolce)	Vibration-based damage assessment and SHM -1- (Chairs: G. Feltrin, C. Ventura)
11:45-12:05	Dynamic tests of two old masonry arch bridges over the Odra river in Wrocław <i>J. Bień, J. Zwolski, T. Kamiński, J. Rąbiega, P. Rawa & M. Kuźawa</i>	Experimental dynamic analysis of Palazzo Margherita in L'Aquila after the April 6 th , 2009, earthquake <i>G. Buffarini, P. Clemente, G. P. Cimellaro & A. De Stefano</i>	Wind driven damage detection on a suspended bridge <i>M. Domaneschi, M.P. Limongelli & L. Martinelli</i>
12:05-12:25	Long-term structural health monitoring of a steel road-rail bridge based on symbolic data analysis <i>A. Orcesi, C. Cremona, A. Cury & L. Dieleman</i>	A case study about the influence of infilled walls on the behaviour of r.c. buildings during the 6 th April 2009 L'Aquila earthquake <i>F. Benedettini, A. De Sortis & G. Milana</i>	An inverse analysis for track integrity in space based on acceleration response of the moving vehicle <i>W.F. Chen, C.Y. Wang & C.L. Liao</i>
12:25-12:45	Dynamic monitoring of bridges at VIBEST/FEUP: Ongoing applications <i>A. Cunha, E. Caetano, C. Moutinho, F. Magalhães, W.-H. Hu & F. Marques</i>	Post-earthquake dynamic analysis as part of retrofit proposal <i>G. Buffarini, P. Clemente, F. Saitta & S. Serafini</i>	Time-frequency analysis of small frequency variations in civil engineering structures ... <i>P. Gueguen & C. Michel</i>
12:45-14:15	Lunch		
14:15-15:00	Keynote Lecture: G. REGA (Sala Fermi)		
	Testing and Monitoring of Bridges -2- (Chairs: A. Cunha, C. Gentile)	Experimental Vibration Analysis for the Post-earthquake Assessment in L'Aquila -2- (Chairs: P. Clemente, M. Dolce)	Vibration-based damage assessment and SHM -2- (Chairs: G. Feltrin, C. Ventura)
15:00-15:20	Uncertainty quantification in Operational Modal Analysis: Application to a damaged pre-stressed concrete bridge <i>E. Reynnders</i>	Input characterization and dynamic analysis of a damaged building in L'Aquila <i>G. Buffarini, G. Bongiovanni, P. Clemente & D. Rinaldis</i>	Distributed dynamic monitoring systems for SHM <i>D. Potter, K. Veggeberg, M. Banfi & F. Persia</i>
15:20-15:40	Monitoring of vertical loads on the bearings of a suspension bridge <i>R. Karoumi</i>	Dynamic characterization of three earthquake damaged buildings <i>G. Mancinelli, G. Buffarini, P. Clemente & F. Saitta</i>	Some advances in extensive bridge monitoring using low cost dynamic characterization <i>J. García-Palacios, A. Samartín, R. Ortega, F. Tirado, A. Araujo, O. Nieto-Taladriz, J. Blesa, E. Romero, E. Reynnders, G. De Roeck, L. He & F. Percivale</i>
15:40-16:00	SHM of a centenary iron arch bridge: 1. Ambient vibration tests and condition assessment <i>C. Gentile & A. Saisi</i>	SHM for historical buildings: preventive and post-earthquake controls <i>F. Casarin, F. da Porto, F. Lorenzoni & C. Modena</i>	Structural damage detection using phase space geometry changes <i>Z. Nie, H. Hao & H. Ma</i>
16:00-16:30	Coffee-break		
	Wind-excited structures: full-scale and wind tunnel testing -1- (Chairs: A.L. Materazzi, E. Simiu)	Vibration Serviceability of Civil Structures -1- (Chairs: A. Pavic, T. Murray)	Experimental Vibration Analysis for the Post-earthquake Assessment in L'Aquila -3- (Chair: M.K. Celebi)
16:30-16:50	Simplified wind flow and aerodynamic response of residential homes: Laboratory and Computational Fluid Dynamics simulations <i>T.-C. Fu, A.M. Aly, A.G. Chowdhury, G. Bitsuamlak, D.H. Yeo & E. Simiu</i>	Reliability of assessment criteria for office floor vibrations <i>P. Reynolds & A. Pavic</i>	Seismic microzonation of the "Conca di Roio" <i>G. Martini & D. Rinaldis</i>
16:50-17:10	The use of wind tunnel testing for the computation of the response of slender structures <i>G. Barbella & F. Perotti</i>	Improvement comfortability through adding soft rubber pavement on lively footbridges <i>M. Istrate et al.</i>	Interval eigenvalue analysis of a concrete building <i>F. Saitta, P. Clemente & N. Impollonia</i>
17:10-17:30	Structural damage recognition at a wind energy converter by response monitoring and comparative wind tunnel tests <i>S. Lachmann, X. Liu, K.-R. Leimbach, R. Hoeffler & D. Hartmann</i>	Impact of human occupancy on the modal properties of lightweight structures <i>P.J. Fanning & J. Forkan</i>	
	Wind-excited structures: full-scale and wind tunnel testing -2- (Chairs: A.L. Materazzi, E. Simiu)	Vibration Serviceability of Civil Structures -2- (Chairs: A. Pavic, T. Murray)	Damping Estimation (Chair: R. Karoumi)
17:30-17:50	Characterization of wind induced excitations on tall buildings by means of wind tunnel tests <i>E. Bernardini, F. Cluni, M. Giofrè, V. Gusella & S.M.J. Spence</i>	A parametric study of pedestrian vertical force models for dynamic analysis of footbridges <i>P. Archbold, J. Keogh, C. Caprani & P. Fanning</i>	Full scale measurements to determine the self-damping of stays <i>M. Belloli, L. Rosa, M. Villani & A. Zasso</i>
17:50-18:10	Identification of aeroelastic forces on bridge cables from full-scale measurements <i>A. Acampora, J.H.G. Macdonald & C.T. Georgakis</i>	Dynamic testing and behavior of in-situ composite office floors <i>A.R. Barrett & T.M. Murray</i>	An experiment setup for studying the effect of bolt torque on damping <i>H. Sumali</i>
18:10-18:30	Super tall buildings: response in higher modes <i>S.M.J. Spence, E. Bernardini, M. Giofrè & A. Kareem</i>	Presentation of the NIKER Research Project <i>A. Saisi</i>	Experimental measurement of damping in buried structures under surface dynamic loading <i>S. Ivorra & B. Ferrer</i>
20:00-22:00	Reception Dinner		

Day 2: 4 October 2011

09:30-10:15	Keynote Lecture: P.B. LOURENÇO (Sala Fermi)		
	ROOM 1 (Sala Fermi)	ROOM 2 (Sala Polvani)	ROOM 3 (Sala Nera)
	Active, Semi-active and Hybrid Control -1- (Chairs: F. Casciati, J. Rodellar)	Forum for the Young Engineers -1- (Chair: D. Bernal, G. Fabbrocino)	Vibration Tests: Buildings -1- (Chairs: C. Cremona, P. Fanning)
10:15-10:35	Digital testing of a control law for an active mass damper <i>F. Casciati, L. Faravelli & U. Yildirim</i>	Analysis of the influence of environmental factors on modal properties of the Braga Stadium suspension roof <i>S. Amador, F. Magalhães, E. Caetano & A. Cunha</i>	Dynamic signature versus temperature: a case study <i>S. Casciati, R. Daminelli, A. Marcellini & A. Tenta</i>
10:35-10:55	Numerical and experimental verification of piezoelectric sensor networks for health monitoring and control of frame structures <i>M. Krommer, M. Zellhofer & H. Irschik</i>	Novelty detection applied to a long-term monitoring of the PI-57 bridge <i>A. Cury & C. Cremona</i>	Efficient operational modal testing and analysis for design verification and restoration baseline assessment: Italian case studies <i>B. Peeters, G. Sforza, L. Sbaraglia & F. Germano</i>
10:55-11:15	Fatigue mitigation in a long span suspension bridge <i>M. Domaneschi & L. Martinelli</i>	Predictive correlations for the estimation of the elastic period of masonry towers <i>C. Rainieri & G. Fabbrocino</i>	Experimental vibration analysis of a seven-storey tilted building <i>A. Morassi</i>
11:15-11:45	Coffee-break		
	Active, Semi-active and Hybrid Control -2- (Chairs: F. Casciati, J. Rodellar)	Forum for the Young Engineers -2- (Chairs D. Bernal, G. Fabbrocino)	Vibration Tests: Buildings -2- (Chairs: C. Cremona, P. Fanning)
11:45-12:05	Bio-inspired control of dish-Stirling generators <i>R. Cervavolo, A. De Stefano, E. Matta, C. Surace & G. Abbiati</i>	Fully automated modal parameter estimation for SHM <i>E. Reynders & G. DeRoock</i>	Comparison of foundation and free-field motions of instrumented buildings during earthquakes <i>C. E. Ventura, B. H. Pandey & W. D. L. Finn</i>
12:05-12:25	Mechanical behaviour, promptness and dissipative capability of variable dampers for semi-active control <i>N. Caterino, M. Spizzuoco & A. Occhiuzzi</i>	On the automatic identification of modal parameters by subspace methods <i>F. Ubertini, C. Gentile & A.L. Materazzi</i>	Modal masses estimation of a 15 tonnes simply supported concrete slab <i>F. Pelayo, P. Reynolds, M. López-Aenlle & A. Fernández-Canteli</i>
12:25-12:45	Numerical characterization of RNC isolator experimental prototypes <i>M. Ismail & J. Rodellar</i>	Discussion	Non-load bearing elements and their contribution to a structure's dynamic response <i>A. Devin & P. J. Fanning</i>
12:45-14:15	Lunch		
14:15-15:00	Keynote Lecture: M. MAJOWIECKI (Sala Fermi)		
	Experimental Vibration Analysis by Laser and Non-contact Measurement Techniques -1- (Chairs: E.P. Tomasini, A. Cigada)	Testing and Monitoring of Bridges -3- (Chairs: J. Bien, F. Benedettini)	Vibration Serviceability of Civil Structures -3- (Chair: P. Reynolds)
15:00-15:20	Dynamic measurement on historic masonry towers using microwave remote sensing <i>C. Gentile & A. Saisi</i>	Influence of ballasted railway track on bridge dynamic performance <i>J. Zwolski</i>	Prediction and verification of human perceptible vibrations in a stadium due to railway traffic <i>P.M. Samarajiva & D. Choudhuri</i>
15:20-15:40	High speed imaging and algorithms for non-invasive vibrations measurement <i>D. Mas, J. Espinosa, J. Perez, C. Illueca, B. Ferrer & A. B. Roig</i>	Temperature effects on the natural frequencies and modal dampings of timber footbridges with asphalt pavement <i>G. Feltrin, S. Schubert & R. Steiger</i>	Loads due to groups for vibration serviceability of footbridges <i>R. L. Pimentel, A. Brasiliano, P. F. Viero, N. Roitman, C. Magluta, J. L. V. Brito, G. N. Doz, S. M. Ávila, F. S. Barbosa & F. M. A. Nogueira</i>
15:40-16:00	Structural integrity detection of historical structures by dynamic digital image correlation <i>M. Moretti, G. L. Rossi & E. Speranzini</i>	Dynamic validation of a masonry arch bridge seismic retrofit <i>K. Islami, G. Tecchio, F. Da Porto & C. Modena</i>	Dynamic research on stadium entrance stairs <i>P. Olaszek</i>
16:00-16:30	Coffee-break		
	Experimental Vibration Analysis by Laser and Non-contact Measurement Techniques -2- (Chairs: E.P. Tomasini, A. Cigada)	Testing and Monitoring of Bridges -4- (Chairs: J. Bien, F. Benedettini)	Vibration Measurement Techniques (Chairs: C. Magluta)
16:30-16:50	Remote assessment of building frequencies using LIDAR <i>P. Gueguen, C. Michel, V. Jolivet, B. Augère, M. Valla, J. Totems & A. S. Schweitzer</i>	Traffic-induced vibration response analysis of expressway bridges <i>D. Su, Y. Fujino & J. Laomanit</i>	Monitoring of civil structures and weight-in-motion <i>M. Garsi</i>
16:50-17:10	Pantograph dynamic analysis by means of non-contact optical measurement techniques <i>A. Bassa, A. Collina, M. Galimberti & R. Sala</i>	Vibration monitoring of the Hong Kong Stonecutters Bridge <i>E. Dascotte</i>	Development of a self-powered smart sensor for structural monitoring <i>D. Mayer, M. Koch & M. Kurch</i>
17:10-17:30	Vision-based vibration monitoring of a large steel structure <i>G. Busca, A. Cigada, M. Vanali & E. Zappa</i>	Comparative study of dynamic response of two instrumented bridges at different levels of ground shaking <i>C.E. Ventura & P. Andersen</i>	400 mm base extensometer for measurement of structural deformations <i>F. Oliveira, P. Morais & A. Freitas</i>
17:30-17:50	Structural fault identification by non-contact Laser Doppler Vibrometry <i>M. Martarelli & E. P. Tomasini</i>	Dynamic testing and structural identification of a curved multi-span viaduct <i>R. Alaggio, F. Benedettini, M. Dilena & A. Morassi</i>	Laser monitoring of building structures located in the areas affected by underground mining - case studies <i>H. Passia, W. Bochenek & A. Szade</i>
20:00-23:00	Conference Dinner		

Day 3: 5 October 2011

09:15-10:0	Keynote Lecture: M.K ÇELEBI (Sala Fermi)		
	ROOM 1 (Sala Fermi)	ROOM 2 (Sala Polvani)	ROOM 3 (Sala Nera)
	Vibrations and Residual Life Assessment (Chair: A. De Stefano)	Experimental Vibration Analysis of Historic Structures -1- (Chairs: TBA, A. Brencich)	Vibration Tests: Bridges -1- (Chairs: F. Barbosa, A. Morassi)
10:00-10:20	Structural assessment of a fire damaged highway bridge in Lagos-Nigeria with BRIMOS [®] Structural Health Monitoring <i>R. Veit-Egerer, M. Widmann & P. Furtner</i>	Dynamic properties of the <i>Guglia Maggiore</i> of the <i>Duomo</i> in Milano via Operational Modal Analysis <i>G. Busca, A. Cappellini, A. Cigada, M. Scaccabarozzi, M. Vanali</i>	Experimental characterization of the dynamic behaviour of the new railway bridge over the river Sado <i>C. M. C. Albuquerque, R. A. B. Calçada, N. M. P. Pinto & J. Gabriel</i>
10:20-10:40	Monitoring and evaluation of an arch bridge affected by the blasting of the adjacent highway bridge <i>M. Widmann, R. Veit-Egerer & H. Wenzel</i>	Structural identification of monuments in Rome using ambient vibration measurements <i>R. Alaggio, F. Benedettini, A. De Sortis & V. Lucarelli</i>	The effects of deficient construction details on the modal characteristics of bridges <i>R. Akbari, A. Oshaghi & A. Gharighoran</i>
10:40-11:00	Rapid bridge modal analysis for global structural assessment <i>Y. Zhou, J. Prader, J. DeVitis, D. Masceri, A. Deal, F. Moon & A.E. Aktan</i>	Dynamic identification and monitoring of the churches of St. Biagio and St. Giuseppe in L'Aquila <i>F. Casarin, F. Lorenzoni, K. Islami & C. Modena</i>	Dynamic Analysis of a Bridge over Rio Negro in Amazon <i>M. Juliani, D. David & L. Becocci</i>
11:00-11:20	Using non-linear identification from shaker tests for structural reliability assessment <i>R. Ceravolo, A. De Stefano, A. Quattrone, L. Zanotti Fragonara & G. Ruocci</i>	Seismic response of St. Peter's Church in S. Martino in Pensilis to aftershocks <i>G. Bongiovanni & P. Clemente</i>	
11:20-11:45	Coffee-break		
	Vibration Tests: Bridges -2- (Chairs: F. Barbosa, A. Morassi)	Experimental Vibration Analysis of Historic Structures -2- (Chairs: TBA, A. Brencich)	On site and laboratory tests (Chairs: N. Roitman)
11:45-12:05	Dynamic behaviour of UHPFRC arch bridge wild <i>M. Ralbovsky, H. Friedl & S. Wittmann</i>	Dynamic validation of DDBD procedures for masonry structures <i>A. Brencich</i>	Dynamic analysis of sandwich beams <i>F. Borges, N. Roitman, C. Magluta & D. Castello</i>
12:05-12:25	Monitoring of railroad reinforced concrete bridges of Carajás railroad – Brazil <i>R.A.C. Lopes, T. O. Batista, J.A. De C. Neto, L.A.C.M. Veloso, R.A.C. Sampaio, A.L. Rolim & R.A. Montoya</i>	Masonry bridges: validation of structural models through dynamic testing <i>A. Brencich & G. Riotto</i>	Experimental determination of natural frequencies for concrete blocks <i>M. V. S. Cavalcanti & G.N. Doz</i>
12:25-12:45	Dynamic monitoring of a railway viaduct with precast deck <i>J. Malveiro, R. Calçada & D. Ribeiro</i>	Structural Health Monitoring of a centenary iron arch bridge: 2. Long-term dynamic monitoring and preliminary tests <i>F. Busatta & C. Gentile</i>	Estimation of hydrodynamic loading on an oscillating sphere <i>D. Mirauda, A. Volpe Plantamura, S. Malavasi & L. Martinelli</i>
12:45-14:30	Lunch		
14:30-15:00	Closing ceremony (Sala Fermi)		