# Daniele Zonta

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## Education

Doctorate Degree (Ph.D.) in Structural Mechanics, at the University of Bologna, Italy, 2000. Dissertation: "Structural damage detection and localization by using vibrational measurements".

Laurea, (B.S./M.S.) magna "cum laude", in Civil Engineering, University of Padova, Italy, 1996. Dissertation: “Structural identification techniques: numerical methods and applications”.

## Previous Appointments

Assistant Professor, University of Trento, Italy, Mar 2001-Sep 2014

Departmental Guest, Princeton University, Princeton (NJ), Dec 2012; Jan-Feb 2013.

Departmental Guest, Princeton University, Princeton (NJ), Dec 2010; Feb-Mar 2011

Visiting Scholar, University of Michigan, Ann Arbor (MI), Jan-Feb 2010.

Departmental Guest, Princeton University, Princeton (NJ), Dec 2009.

Visiting Professor, University of California, San Diego, 2002.

Post-Doctorate Researcher, University of California, San Diego, 2000-2001.

Post-Doctorate Researcher, University of Padova, Italy, 2000.

## Technical Areas of Specialization

- Smart structures
- Structural health monitoring
- Structural reliability
- Bayesian decision-making
- Infrastructure management
- Fiber optic sensors

## Teaching Experience

### Graduate

*Control and Health Monitoring of Civil Structures,* University of Trento, lectures, 2012/13, 2013/14. Teaching evaluation not available.

*Special Structures*, University of Trento, lectures: 2007/08, 2008/09, 2009/10, 2010/11, 2011/12, 2012/13, 2013/14. Course approval: 100%. Instructor approval: 100%.

*Structural Safety,* University of Trento, lectures, 2011/12, 2012/13, 2013/14, 2014/15.

Course approval: 95.1%.

*Structural Design (Advanced Concrete)*, University of Trento, lectures: 2007/08, 2008/09, 2009/10, 2010/11. Course approval: 100%. Instructor approval: 100%.

*Smart Structures (Doctoral level)*, University of Trento, lectures: 2006/07, 2010/11. Teaching evaluation not available.

*Modal Analysis of Civil Structures (Doctoral level)*, University of Trento, lectures: 2005/06, 2007/08, 2009/10. Teaching evaluation not available.

*Earthquake Engineering*, University of Trento, tutorials: 2001/02, 2002/03, 2003/04.

*Earthquake Engineering*, University of California, San Diego, tutorials: 2000/01.

*[Teaching evaluation based on last available record]*

### Undergraduate

*Fundamentals of Bridges and Precast Structures,* University of Trento, lectures: 2005/06, 2006/07. Course approval: 100%. Instructor approval: 100%.

*Fundamentals of Structural Elements 2 (Concrete),* University of Trento, lectures: 2003/04 1004/05, 2005/06, 2006/07, 2007/08, 2008/09, 2009/10. Course approval: 58.8%. Instructor approval: 93.3%.

*Fundamentals of Structural Elements 1 (Steel)*, University of Trento, lectures: 2003/04, 2004/05, 2005/06, 2006/07. Course approval: 87.5%. Instructor approval: 84.0%.

*System Identification and Diagnostics*, Northeastern University, lectures on Bayesian parametric estimation, 2012/13.

*Restoring and Preservation of the Historical Heritage,* University of Padova, tutorials: 1999/2000.

*Structural Design 2*, University of Padova, tutorials: 1997/98, 1998/99.

*[Teaching evaluation based on last available record]*

### Other

*Bayesian Logic for structural health monitoring*, lectures, *3rd International Summer School on Smart Materials, Structures and Systems*, Trento, 2013.

*Bayesian Logic for structural health monitoring*, lectures, *2nd International Summer School on Smart Materials and Structures*, Trento, 2013.

*Bayesian Methods and Decision Making* lectures, *1st International Summer School on Smart Structures*, Trento, 2012.

*Bridge Assessment* module, *Eurocode Design* course, Trento, Course for continuing professional development: 2007.

*Concrete Design* module, *Structural Design* course, Trento, Course for continuing professional development: 2005.

*Concrete Design* module in the *Structural Design* course, Verona, Course for continuing professional development: 2004, 2005.

## Funded projects

### European Commission

"MEMSCON: Radio frequency identification tags linked to on board Micro-Electro-Mechanical Systems in a wireless, remote and intelligent monitoring and assessment system for the maintenance of constructed facilities." **PI**. Source: European Commission. Period: 10/1/2008-3/31/2012. Amount: € 256,406 (€ 5,163,893 overall).

"SEQBRI: Performance-based earthquake engineering analysis of short-medium span steel-concrete composite bridges." Co-I. Source: European Commission. Period 7/1/2012-8/31/2015. Amount: € 258,121 (€1,401,959 overall).

“INDUSE: Structural Safety of Industrial Steel Tanks, Pressure Vessels and Piping Systems Under Seismic Loading.” Co-I. Source: European Commission. Period 7/1/2009-9/31/2012. Amount: € 262,953 (€1,773,060 overall).

"MONICO: Fiber optic-based intelligent monitoring and assessment system for proactive maintenance and seismic disaster prevention in reinforced concrete tunnel lining." Co-I. Source: European Commission. Period: 7/1/2008-6/30/2010. Amount: € 114,000 (€ 4,367,230 overall).

*[PI: Principal Investigator; Co-I: Co-Investigator]*

### Other Government Agencies

“RELUIS-3: Executive project DPC/ReLUIS 2014 – AQ DPC/ReLUIS 2014-2018 – Year 3.” PI. Source: Italian Earthquake Engineering Laboratories Network (RELUIS). Period: 4/1/2016-3/31/2017. Amount: € 10,285.

“PAT-DPC: Development of a data acquisition procedure for predictive risk seismic analysis” **PI**. Souce: Autonomous Province of Trento, Department of Civil Protection. Period: 23/11/2015-31/03/2015. Amount: € 24,600.

“RELUIS-3: Executive project DPC/ReLUIS 2014 – AQ DPC/ReLUIS 2014-2018 – Year 2.” **PI**. Source: Italian Earthquake Engineering Laboratories Network (RELUIS). Period: 4/1/2015-3/31/2016. Amount: € 10,285.

“PAT-BMS: Update and extension of the APT-BMS.” **PI**. Souce: Autonomous Province of Trento, Department of Transportation. Period: 8/13/2014-6/13/2015. Amount: € 74,420.

“RELUIS-3: Executive project DPC/ReLUIS 2014 – AQ DPC/ReLUIS 2014-2018 – Year 1.” **PI**. Source: Italian Earthquake Engineering Laboratories Network (RELUIS). Period: 4/1/2014-3/31/2015. Amount: € 12,100.

"Portogruaro-2014: Monitoring of the Civic Tower." **PI**. Source: Municipality of Portogruaro. Period: 1/1/2014-12/31/2014. Amount: € 47,580.

"Portogruaro-5: Update of Civic Tower monitoring system." **PI**. Source: Municipality of Portogruaro. Period: 9/1/2013-12/31/2013. Amount: € 17,495.

"Pilot assessment of the load carrying capacity of a sample of bridges from the APT stock". **PI**. Souce: Autonomous Province of Trento, Department of Transportation. Period: 10/12/2012-2/12/2014. Amount: € 102,850.

"Portogruaro-4 Modeling of the Portogruaro Civic Tower." **PI**. Source: Municipality of Portogruaro. Period: 9/1/2012-12/31/2013. Amount: € 22,800.

"RELUIS-RFI: Development of procedures for seismic vulnerability evaluation of steel railways bridges". **PI**. Source: Italian Earthquake Engineering Laboratories Network (RELUIS). Period: 1/3/2011-29/2/2012. Amount: € 90,000.

"BMS A&E: Update and extension of the APT-BMS." **PI**. Source: Autonomous Province of Trento, Department of Transportation. Period 10/21/2009-4/20/2012. Amount: € 108,000.

"ADIGE: Structural monitoring of the Trento North-Rocchetta cable stayed bridge on Adige river." **PI**. Source: Autonomous Province of Trento, Department of Transportation. Period 6/1/2009-28/2/2013. Amount: € 108,000 (€ 300,000 overall).

"PRIN 2007JHK33Y_002: New technologies for the real-time assessment of the seismic vulnerability of bridges." **PI**. Source: Italian Ministry of Education (MIUR). Period: 9/20/2008-9/19/2010. Amount: € 62,900 (€ 250,000 overall).

"APT-BMS-6: Guided startup of the APT-BMS: support to the inspections on the Provincial

Roads." Project manager. Co-I. Source: Autonomous Province of Trento, Department of Transportation. Period 2/1/2007-3/11/2008. Amount: € 96,000.

"PRIN 2004089844: Monitoring and control of the Histotical Heritage.", Project manager. Co-I. Source: Italian Ministry of Education (MIUR). Period: 1/1/2007-12/31/2008. Amount: € 59,000.

"RELUIS: Reserch Line 10: New technologies for managing the seismic hazard in road infrastructure". **PI**. Source: Italian Earthquake Engineering Laboratories Network (RELUIS). Period: 11/1/2005-10/31/2008. Amount: € 70,000.

"PRIN 2006084179: New technologies for the management of historical structures and infrastructure." Project manager. Co-I. Source: Italian Ministry of Education (MUR). Period: 1/1/2005-12/31/2006. Amount: € 58,600.

"APT-BMS-4: Guided startup of the APT-BMS: training and support of the inspectors." Project manager. Co-I. Source: Autonomous Province of Trento, Department of Transportation. Period: 9/15/2004-12/12/2005. Amount: € 108,000.

"Portogruaro-3: Monitoring of the Civic Tower." **PI**. Source: Municipality of Portogruaro. Period: 9/1/2004-8/31/2010. Amount: € 31,920.

"APT-BMS-3: APT Bridge Management System: pilot inspections." Project manager. Co-I. Source: Autonomous Province of Trento, Department of Transportation. Period: 5/10/2004-8/10/2004. Amount: € 7,200.

"APT-BMS-2: APT Bridge Management System: deployment and update of the system." Project Manager. Co-I. Source: Autonomous Province of Trento, Department of Transportation. Period: 9/15/2003-12/12/2004. Amount: € 186,000.

"PRIN 2002088932: Structural monitoring and control using advanced techniques." Project manager. Co-I. Source: Italian Ministry of Education (MURST). Period: 1/1/2003-12/31/2004. Amount: € 59,000.

"Portogruaro-2: Monitoring of the Civic Tower." **PI**. Source: Municipality of Portogruaro. Period: 8/18/2003-8/17/2004. Amount: € 21,600.

"Portogruaro-1: Investigation on the safety of the Civic Tower." **PI**. Source: Municipality of Portogruaro. Period: 7/16/2002-2/28/2003. Amount: € 11,772.

"APT-BMS-1: Development of a prototype of Bridge Management System." Project manager. Co-I. Source: Autonomous Province of Trento, Department of Transportation. Period: 7/29/2002-7/29/2003. Amount: € 156,000.

*[PI: Principal Investigator; Co-I: Co-Investigator]*

### Industry and Private Bodies

“BBT- Interim Project for the preparation of an EUREGIO proposal”. **PI**. Source: Brenner Basestunnel BBT SE. Period: 1/1/2016-30/4/2016. Amount: € 32,491

“RFI-DOMUS: Update and Validation of DOMUS bridge management system”. **PI**. Source: Rete Ferroviaria Italiana SpA. Period: 11/21/2014-8/18/2015. Amount: € 76,860.

“A22-2 Development of a prototype of Decision Support System for the Colle Isarco Viaduct management based on instrumental monitoring”. **PI**. Source: Autostrada del Brennero SpA - Brennerautobahn AG. Period: 11/112014-11/11/2016. Amount: € 106,964.

"AREA-1: Development of a seismic monitoring system for prefabricated industrial buildings". **PI**. Source: Area Prefabbricati SpA. Period: 04/09/2012-03/11/2013. Amount: € 58,080.

"A22-1: Probabilistic analysis of the structural reliability of Colle Isarco Viaduct based on instrumental monitoring". **PI**. Source: Autostrada del Brennero SpA - Brennerautobahn AG. Period: 20/02/2012-20/02/2014. Amount: € 96,000.

"Pedemontana: Feasibility study for an integrated maintenance, management and monitoring system for the new Pedemontana Lombarda Highway." **PI**. Source: Far System SpA, Roverto. Period: 12/16/2010-01/14/2011. Amount: € 9,600.

"SantaMaria-3/4: Monitoring and vibration analysis of the Church of Santa Maria Maggiore." **PI**. Source: Parish of Santa Maria Maggiore, Trento. Period: 12/1/2010-

12/31/2011. Amount: € 19,800.

"EUCentre-1: Development of a bridge management system for the seismic vulnerability of the national road network." **PI**. Source: Foundation EUCentre, Pavia. Period: 12/1/2010-12/31/2011. Amount: € 33,600.

"SantaMaria-2: Monitoring of the Church of Santa Maria Maggiore." **PI**. Source: Parish of Santa Maria Maggiore, Trento. Period: 9/18/2009-12/31/2010. Amount: € 18,000.

"SantaMaria-1: Monitoring of the Church of Santa Maria Maggiore." **PI**. Source: Parish of Santa Maria Maggiore, Trento. Period: 8/20/2008-8/19/2009. Amount: € 21,600.

"RIVOLI-1: Design of a new model of partially post-tensioned precast concrete box-girder element." **PI**. Source: Rivoli SpA. Period: 4/1/2008-11/31/2008. Amount: € 12,500.

"HEIDI-4: Update of the APT-BMS." **PI**. Source: Heidi SpA. Period: 7/16/2007-7/15/2008. Amount: € 61,200.

"HEIDI-3: Update of the APT-BMS." **PI**. Source: Heidi SpA. Period: 7/27/2006-7/15/2007. Amount: € 61,200.

"HEIDI-2-PISTA: Application of PISTA procedures to the industrial deployment in service mode of a specific software package." **PI**. Source: Heidi SpA. Period: 11/24/2006-02/15/2007. Amount: € 24,000.

"HEIDI-1: Update of the APT-BMS." **PI**. Source: Heidi SpA. Period: 11/26/2005-7/26/2006. Amount: € 88,200.

*[PI: Principal Investigator]*

**Editorial Activity**

Member of the Editorial Board, Structural Monitoring and Maintenance: an International Journal, Techno Press (2014-present).

Member of the Editorial Board, International Journal of Distributed Sensor Networks, Hindawi (2014-present).

Member of the Editorial Board, International Journal of Sensor Networks, Inderscience (2015-present)

Guest editor, Journal of Civil Structural Health Monitoring, special issue on "Probabilistic Structural Health Monitoring", publication expected 2015.

**Review Activity**

**Project Proposals**

Research Foundation –Flanders (FWO)

Portuguese Foundation for Science and Technology (FCT)

Cyprus Research Promotion Foundation (RPF)

Italian Ministry of Education (MIUR)

**Book Proposals**

Wiley

Elsevier

**Journals**

ACI Structural Journal

Advances in Structural Engineering

ASCE Journal of Bridge Engineering

ASCE Journal of Computing in Civil Engineering

ASCE Journal of Engineering Mechanics

Computer-Aided Civil and Infrastructure Engineering

Computers and Structures

Earthquake Engineering & Structural Dynamics

Engineering Structures

Geomechanics and Engineering

International Journal of Mechanical Sciences

Journal of Civil Structural Health Monitoring

Journal of Cultural Heritage

Journal of Earthquake Engineering

Journal of Intelligent Material Systems and Structures

Journal of Microwaves and Optoelectronics

Journal of Sound and Vibration

Measurement

Mechanical Systems and Signal Processing

Optical Fiber Technology

Sensors & Actuators: A. Physical

Smart Materials and Structures

Smart Structures and Systems

Structural Control and Health Monitoring

Structural Health Monitoring

Structural Monitoring and Maintenance

Transactions on Mechatronics

**Awards**

**2014 Person of the Year Award** for outstanding contribution to the field of Structural

Health Monitoring, Editorial board of Structural Health Monitoring: An International Journal, SAGE.

**Best Young Researcher Paper Award**: C. Cappello, D. Bolognani, D. Zonta (2015). “Mechanical equivalent of logical inference from correlated uncertain information”. 7th International Conference on Structural Health Monitoring of Intelligent Infrastructure (SHMII-7 2015). Turin, Italy, 1-3 Jul 2015.

**Best Paper Award**: M. Bimpas, D. Trapani, D. Zonta, A. Amditis, S. Frondistou Yannas, V. Kalidromitis, Y. Stratakos, A. Gkaretsos (2011). “MEMSCON project: Wireless Sensor Network for post-earthquake evaluation of concrete buildings”. 5th International Conference on Structural Health Monitoring of Intelligent Infrastructure (SHMII-5 2011). Cancun, Mexico, 11-15 Dec 2011.

**Best Paper Award**: M. Ceriotti, L. Mottola, G. Picco, A. L. Murphy, S. Guna, M. Corrà, M. Pozzi, D. Zonta, P. Zanon (2009). “Monitoring Heritage Buildings with Wireless Sensor Networks: The Torre Aquila Deployment”. 8th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN 2009, SPOTS track), San Francisco, 13-16 Apr 2009.

**SPIE Senior Membership**, International Society of Photo-Optical Instrumentation Engineering (SPIE), 2015.

## Invited Lectures

### Invited presentations at conferences and workshops

“Wireless technology for seismic protection of buildings”, Invited talk, The Cambridge Conference on Wireless Sensor Network for Civil Engineering and Infrastructure, Cambridge, 29-30 Jun 2015.

"On estimating the accuracy of monitoring methods using Bayesian error propagation technique", Invited talk, “SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems”, San Diego, 9-13 Mar 2014.

”On the impact of prior perception on bridge health diagnosis”, Invited talk at the 6th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-6 2013, Hong Kong, 9-11 Dec, 2013.

"On the impact of prior engineering perception on structural health diagnosis", Invited talk at the 9th International Workshop on Structural Health Monitoring, IWSHM 2013, Stanford, 10-12 Sep, 2013.

"Bayesian analysis of monitoring data from cable-stayed bridge", Invited talk at the 11th International Conference on Structural Safety & Reliability, ICOSSAR 2013, New York, 16-20 Jun 2013.

“Tall buildings, data monitoring and Bayesian epistemology”, **Keynote talk** at the International symposium by young researchers for advances in disaster responses to seismic hazards in tall buildings using innovative sensing technologies, Kyoto University, 18-19 Dec 2012.

"Analysis of monitoring data from cable-stayed bridge using sensor fusion techniques", Invited talk,“SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems”, San Diego, 10-14 Mar 2013.

"Streicker Bridge: The impact of monitoring on decision making", Invited talk at the 8th International Workshop on Structural Health Monitoring, Stanford, 13-15 Sep, 2011.

"Wireless sensor network for seismic evaluation of concrete buildings", Invited talk at the 5th European Workshop on Structural Health Monitoring (EWSHM 2010)", Sorrento, Italy, 29 Jun - 02 Jul, 2010.

"Real-time health monitoring of historic buildings with wireless sensor networks", Invited talk at the 7th International Workshop on Structural Health Monitoring, Stanford, 9-11 Sep 2009.

"Strain-Based Approaches to Damage Localization in Civil Structures", Invited talk at the XXIV IMAC Conference on Structural Dynamics, St.Louis (MO), 30 Jan–2 Feb 2006.

### Seminars

“Bayesian Logic for Intelligent Civil Infrastructure”, Seminar at the University of Strathclyde, Glasgow (UK), 21 Jan 2015.

“Bayesian Logic for Intelligent Civil Infrastructure”, Seminar at the University of Innsbruck (Austria), 13 May 2014.

“Bridge Managers on the Verge of a Nervous Breakdown”, Seminar at the University of California, Berkeley (CA), 11 Mar 2013.

“Bayesian Logic for Intelligent Civil Infrastructure”, Seminar at the University of Oxford (UK), 15 Feb 2013.

“Risk-informed Management of Road Infrastructure”, Webinar at the Center for Advanced Infrastructure and Transportation, Rutgers University, New Brunswick (NJ), 7 Feb 2013.

“Toward Intelligent Civil Infrastructure”, Seminar at the University of Cambridge (UK), Apr 2011.

“Risk-informed Management of Bridge Infrastructure”, Seminar at the University of Michigan, Ann Arbor (MI), Feb 2011.

"Bayesian Logic for Smart (and Not-so-smart) Bridge Elements", Seminar at the Imperial College, London, May 2010.

"Bayesian Logic for Smart (and Not-so-smart) Bridge Elements", Seminar at the University of South Carolina, Columbia (SC), Mar 2010.

"Bayesian Logic for Smart (and Not-so-smart) Bridge Elements", Seminar at Tufts University, Medford (MA), Mar 2010.

“Risk-informed Management of Bridge Infrastructure”, Seminar at the University of Connecticut, Storrs (CT), Mar 2010.

"Bayesian Logic for Smart (and Not-so-smart) Bridge Elements", Seminar at the Northeastern University, Boston (MA), Feb 2010.

"Bayesian Logic for Smart Bridge Elements", Seminar at the University of Florida, Gainesville (FL), Feb 2010.

“Bayesian Assessment Model for Smart Precast Concrete Elements”, Seminar at Princeton University, Princeton (NJ), 2009.

“Bayesian Logic Applied to Damage Assessment of a Smart Precast Concrete Element”, Seminar at Columbia University, New York, 2009.

“Smart precast elements for bridge construction”, Seminar at the University of Kyoto (Japan), 2009.

“Risk Informed Management of Road Infrastructure”, Seminar at the University of Rhode Island, Narragansett (RI), 2009.

“Smart Structural Element for the Condition Monitoring of Bridge Structures”, Seminar at the University of Connecticut, Storrs (CT), 2009.

“Risk-informed Management of Road Facilities”, Seminar at the Tongji University, Shanghai (China), 2008.

"A Reliability-Based Bridge Management Concept", Seminar at the Northeastern University, Boston (MA), 2008.

"Smart structural elements for the condition monitoring of bridge structures." Seminar at the University of California, Berkeley (CA), 2008.

"Smart structural elements for the condition monitoring of bridge structures." Seminar at the University of Michigan, Ann Arbor (MI), 2008.

"A Reliability-Based Bridge Management Concept", Seminar at the University of California, San Diego (CA), 2007.

"A Reliability-Based Bridge Management Concept." Seminar at the University of Missouri, Rolla (MO), 2006.

"Vibration-based Condition Monitoring of Smart Prefabricated Concrete Elements." Seminar at the Northeastern University, Boston (MA), 2005.

"Vibration-based Damage Assessment of Civil Structures." Seminar at the University of Minho, Guimaraes (Portugal), 2004.

"Experimental modal testing of civil engineering structures"; "Damage identification and localization techniques"; "Structural health monitoring techniques." Seminars at the University of Bologna (Italy), 2001.

"Damage detection and localization using vibrational measurement: methodological approach and applications." Seminar at the Asian Institute of Technology, Bangkok (Thailand), 2000.

## Organization of Courses, Conferences and Special Sessions

**Co-Chair**, “5rd International Summer School on Smart Materials and Structures”, Trento, 14-16 Jul 2016.

**Co-Chair**, “18th International Conference on Transparent Optical Networks (ICTON 2016)”, Trento, 10-24 Jul 2016.

Co-organizer, Mini-Symposium “MS 7-Smart Bridge Structural Health Monitoring”, IABMAS 2016, Foz do Iguaçu (Brazil), 26-30 Jun 2016.

Program Committee Member, “Seventh International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2016, Nice, 24-28 Jul 2016.

Program Committee Member, “SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems”, Las Vegas, 20-24 Mar 2016.

Program Committee Member, “Sixth International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2015, Venice, 23-28 Aug 2015.

Program Committee Member, Third Conference on Smart Monitoring, Assessment and Rehabilitation of Structures, SMAR 2015, Antalya, 7-9 Sep 2015.

Co-organizer, Special sessions “Probabilistic SHM” and “Very dense arrays of sensors: 1D, 2D, and 3D distributed and quasi-distributed sensors”, International Workshop on Structural Health Monitoring 2015, Stanford, 1-3 Sep 2015.

**Co-Chair**, “2015 IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS 2015)”, Trento, 9-10 Jul 2015.

**Co-Chair**, “4rd International Summer School on Smart Materials and Structures”, Trento, 3-9 Jul 2015.

Co-organizer, Mini-Symposium “Probabilistic Structural Health Monitoring”, 7th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-7 2015, Torino, 1-3 Jul 2015.

Program Committee Member, 7th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-7 2015, Torino, 1-3 Jul 2015.

Program Committee Member, “SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems”, San Diego, 8-12 Mar 2015.

**Co-Chair**, “3rd International Summer School on Smart Materials, Structures and Systems”, Trento, 21-25 Jul 2014.

Program Committee Member, “2014 World Congress on Advances in Civil, Environmental, & Materials Research”, ACEM14, Busan (Korea), 24-27 Aug 2014.

Co-organizer, Special session “Probabilistic Structural Health Monitoring”, 7th European Workshop on Structural Health Monitoring, EWSHM 2014, Nantes, 8-11 Jul 2014.

Program Committee Member, “SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems”, San Diego, 9-13 Mar 2014.

Co-organizer, Special session “Probabilistic Structural Health Monitoring”, 6th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-6 2013, Hong Kong, 9-11 Dec 2013.

Program Committee Member, “6th International Conference on Structural Health Monitoring of Intelligent Infrastructure”, SHMII-6 2013, Hong Kong, 9-11 Dec 2013.

Co-organizer, Special sessions “Statistical Methods for SHM” and “Very Dense Arrays of Sensors”, International Workshop on Structural Health Monitoring 2013, Stanford, 10-12 Sep 2013.

**Co-Chair**, “2nd International Summer School on Smart Materials & Structures”, Trento, 22-26 Jul 2013.

Co-organizer, Mini-Symposium “Structural Health Monitoring: Uncertainty Analysis and Decision Making”, ICOSSAR 2013, New York, 16-20 Jun 2013.

Program Committee Member, “SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems”, San Diego, 10-14 Mar 2013.

**Scientific Secretary and Co-organizer**, “1st International Summer School on Smart Structures”, Trento, 3-7 Sep 2012.

**Co-organizer**, “2nd International Memscon Workshop: Towards Intelligent Civil Infrastructure”, Athens, 29 Mar 2012.

Co-organizer, Mini-Symposium “MS 7-Smart SHM and Application to Bridge Condition Assessment and Maintenance”, IABMAS 2012, Stresa, 8-12 Jul 2012.

Co-organizer, Special Sessions “Decision Making in Structural Health Monitoring”, International Workshop on Structural Health Monitoring 2011, Stanford, 13-15 Sep 2011.

**Co-organizer**, “1st International Memscon Workshop: Structural Monitoring and Assessment of Civil Engineering Structures”, Bucharest, 7 Oct 2010.

Co-organizer, Special Session “Health Monitoring for Civil Structures”, European Workshop on Structural Health Monitoring 2010, Sorrento, 29 Jun - 02 Jul 2010.

Co-organizer, Special Session “Model updating methods for civil applications”, World Forum on Smart Materials and Smart Structures Technology (SMSST07), Chongqing and Nanjing, 22-27 May 2007.

**Memberships**

International Society of Photo-Optical Instrumentation Engineering (SPIE).

Institute of Physics (IoP).

International Association for Bridge Management and Safety (IABMAS).

International Society for Structural Health Monitoring of Intelligent Infrastructure (ISHMII).

American Society of Civil Engineers (ASCE).

Italian National Association of Earthquake Engineering (ANIDIS).

Italian National Standardization Agency (UNI).

**International Doctoral Committees**

Doctoral committee member (Reader), Dorotea Hoeg Sigurdardottir, Princeton University, 2015.

International supervisor and Doctoral committee member, El Hassan Ait Laasri, Ibn Zohr University (Morocco), 2014.

Doctoral committee member, Nicholas De Battista, University of Sheffield (UK), 2014.

International supervisor and Doctoral committee member, Benjamin Torres Gorriz, University of Valencia (Spain), 2012.

Doctoral committee member, Davide Roia, Università Politecnica delle Marche (Italy), 2011.

**Alumni in Academia**

Matteo Pozzi, Assistant Professor, Carnegie Mellon University, USA, 2012-present.

Yanchao Yue, Assistant Professor, Xi'an Jiaotong University, China, 2011-present

**Postdoctoral Researchers Supervised**

Davide Trapani, 2015-2016

Emiliano Debiasi, 2014-present

Huayong Wu, 2009-2010

Matteo Pozzi, 2008-2011

Francesca Bortot, 2007-2011

**Research Students Supervised**

**Doctoral students**

Jingsi Li, University of Strathclyde, expected 2019 (Co-Supervisor: Neil Ferguson).

Andrea Maroni, University of Strathclyde, expected 2019 (Co-Supervisor: John Douglas).

Tran Thi Ngoc Lam, University of Trento, expected 2019 (Co-Supervisor: Maurizio Ferrari).

Valentina Piccolo, University of Trento, expected 2019 (Co-Supervisor: Luca Deseri).

Denise Bolognani, University of Trento, expected 2019 (Sole Supervisor).

Angela Beltempo, University of Trento, expected 2018 (Co-Supervisor: Oreste Bursi)

Carlo Cappello, University of Trento, expected 2017 (Sole Supervisor).

Anna Piotrowska, University of Trento, expected 2017 (Co-Supervisor: Maurizio Ferrari).

Davide Trapani, University of Trento, “A monitoring method for after-earthquake damage evaluation of buildings”, completed 2015 (Sole Supervisor).

Emiliano Debiasi, University of Trento, "Decision making for bridge stock management", completed 2014 (Sole Supervisor).

Yanchao Yue, University of Trento, "Impact of seismic vulnerability on bridge management systems", completed 2011 (Co-Supervisor: Matteo Pozzi).

Cristiano Loss, University of Trento, "Displacement-based seismic design of timber

structures", completed 2011 (Co-Supervisor: Maurizio Piazza).

Huayoung Wu, University of Trento, "Fiber optic sensors and damage evaluation methods for structural health monitoring", completed 2009 (Sole Supervisor).

Matteo Pozzi, University of Trento, "Structural health monitoring of reinforced concrete structures by fiber optic sensors", completed 2007 (Sole Supervisor).

Francesca Bortot, University of Trento, "Reliability-based decision-making in infrastructure management", completed 2006 (Co-Supervisor: Riccardo Zandonini).

Tommaso Saccone, University of Bologna, "Generalized formulation for linear MDOF Systems utilizing complex operators", completed 2004 (Co-Supervisor: Erasmo Viola).

Paolo Franchetti, University of Padova, "Vibration-based damage assessment of precast elements", completed 2004, (Co-Supervisor: Claudio Modena).

### Master's students

Niccolò Grossi, University of Trento, expected 2016 (Sole Supervisor).

Marco Mensel, University of Trento, expected 2016 (Sole Supervisor).

Francesca Parolini, University of Trento, expected 2016 (Sole Supervisor).

Andrea Verzobio, University of Trento, expected 2016 (Sole Supervisor).

Gianluca Carravieri, University of Trento, expected 2016 (Sole Supervisor).

Anna Groff, University of Trento, expected 2016 (Sole Supervisor).

Claudia Sguazzardo, University of Trento, expected 2016 (Sole Supervisor).

Marco Baroni, University of Trento, completed 2016 (Sole Supervisor).

Giulio Ferlisi, University of Trento, completed 2016 (Sole Supervisor).

Matteo Licitra, University of Trento, completed 2016 (Sole Supervisor).

Klemens Raffl, University of Trento, completed 2016 (Sole Supervisor).

Denise Bolognani, "Mechanical equivalent of logical inference", University of Trento, completed 2015 (Sole Supervisor).

Gianluigi Tonidandel, University of Trento, completed 2015 (Sole Supervisor).

Andrea Maroni, "After-earth quake damage detection: numerical and experimental uncertainty analyses of different monitoring strategies" University of Trento, completed 2015 (Sole Supervisor).

Cristiano Bazzoli, University of Trento, expected 2015 (Sole Supervisor).

Mirco Agosti, "Analysis and extension of DOMUS railway bridge management system" University of Trento, 2015 (Sole Supervisor).

Andrea Anselmo, "Development of seismic monitoring system for school buildings", University of Trento, 2015 (Sole Supervisor).

Stefano Decarli, "An investigation of the structural behavior of Portogruaro Civic Tower in view of its reinforcement intervention", University of Trento, 2015 (Sole Supervisor).

Alessio Vallarini, "Structural behavior interpretation of Colle Isarco Viaduct based on Bayesian analysis of monitoring data" University of Trento, 2015 (Sole Supervisor).

Luca Mazzi, University of Trento, "Bayesian estimation of the effectiveness of a monitoring system for Colle Isarco Viaduct: design and analysis of a measurement system based on topographic stations and optical prisms", 2014 (Sole Supervisor).

Alessandro Massarotto, University of Trento, "Bayesian estimation of the effectiveness of a monitoring system for Colle Isarco Viaduct: design and analysis of a network of fiber optic sensors and thermocouples", 2014 (Sole Supervisor).

Patrick Soraruf, University of Trento and TU Dresden, "Reliability assessment of roadway bridges under overweight vehicle traffic" 2014 (Co-Supervisor: Wolfgang Graf).

Daniele Dellai, University of Trento, “Evaluation of the load-carrying capacity of existing girder bridges under overweight vehicle traffic”, 2014 (Sole Supervisor).

Luca Perlini, University of Trento, “Structural reliability assessment of Portgruaro Civic Tower”, 2013 (Sole Supervisor).

Carlo Cappello, “An implementation of expected utility theory in a civil engineering decision problem”, University of Trento, 2013 (Sole Supervisor).

Francesco Chesini, “Evaluation of the carrying capacity of girder bridges under overweight vehicle load”, University of Trento, expected 2013 (Sole Supervisor).

Francesco Demozzi, “Reliability analysis of arch bridges of the Province of Trento under overweight vehicle traffic”, University of Trento, 2013 (Sole Supervisor).

Marion Furtschegger, “Analysis of long term structural response of Colle Isarco viaduct using non-classical creep model“, University of Trento, 2013 (Sole Supervisor).

Mattia Montanari, “Analysis and evaluation of a method for seismic damage detection for prefabricated buildings based on instrumental monitoring”, University of Trento, 2013 (Sole Supervisor).

Alberto Palma, “Application of deterioration models for identifying the structural behaviour of Colle Isarco Viaduct”, University of Trento, 2013 (Sole Supervisor).

Luca Perolo, “Specifications for a seismic monitoring system for prefabricated industrial buildings and implementation of an event classification algorithm”, University of Trento, 2013 (Sole Supervisor).

Saulo Maestranzi, “Bayesian analysis of long-term behaviour of the cable-stayed bridge on the Adige river, near Zambana, based on structural monitoring”, University of Trento, 2012 (Sole Supervisor).

Federico Bruschetta, “Structural reliability evaluation of the Adige cable-stayed bridge via Bayesian analysis of the monitoring data”, University of Trento, 2012 (Sole Supervisor).

Luca Mattiuzzi, “Evaluation of the reliability of the Autonomous Province of Trento bridge stock under overweight-vehicle loads”, University of Trento, 2012 (Sole Supervisor).

Daniele Coato, “Laboratory validation of Memscon technology for after-earthquake assessment of RC buildings”, University of Trento, 2012 (Sole Supervisor).

Enrico D’Alessandro, “Seismic risk evaluation of steel railway bridges: an application to the Italian Railway Network (RFI) bridge stock”, University of Trento, 2012 (Sole Supervisor).

Giacomo Cigognetti, “Wireless sensors for seismic monitoring of reinforced concrete buildings: experimental characterization and application to a full-scale frame structure”, University of Trento, 2012 (Sole Supervisor).

Gianfranco Anolfi, “Structural monitoring and analysis of the cantoria in Santa Maria Maggiore Church, Trento”, University of Trento, 2011 (Sole Supervisor).

Marco Molignoni, “Structural monitoring of the cable-stayed bridge on Adige river: analysis of sensors working principle and of structural behaviour”, University of Trento, 2011 (Sole Supervisor).

Federico Larcher, “Experimental validation of Memscon Phase II sensors for reinforced concrete buildings”, University of Trento, 2011 (Sole Supervisor).

Aldo Madaschi, University of Trento, 2011 (Co-Supervisor: Alessandro Gajo).

Alessandro Lastei, “Reliability analysis of the bridge stock of the Autonomous Province of Trento under overweight load condition”, University of Trento, 2011 (Sole Supervisor).

Mattia Modunutti, “The Basilica of Santa Maria Maggiore in Trento: when architecture, archaeology and engineering meet”, University of Trento, 2011 (Co-Supervisor: Giorgio Cacciaguerra).

Paolo Esposito, University of Trento, “Structural Monitoring of the North Trento-Rocchetta Adige Bridge”, 2010 (Sole Supervisor).

Davide Dal Bosco, “Wireless technology for the after-earthquake evaluation of damage

state in reinforced concrete structures", University of Trento, 2010 (Sole Supervisor).

Davide Trapani, "Experimental characterization of wireless sensors for the post-earthquake assessment of reinforced concrete buildings", University of Trento, 2010 (Sole Supervisor).

Massimo Dalle Vedove, University of Trento, "Analysis of the collapse mechanism and of the provisional post-seismic artworks for the case of Santa Margerita ex-Jesuits Church in L'Aquila", 2010 (Co-Supervisor: Maurizio Costantini).

Moreno Rosi, University of Trento, "Seismic vulnerability analysis of renaissance churches: the case of Santa Maria Church in Trento", (Co-Supervisor: Paola Gatti).

Alessandro Porto, University of Trento, "Method for evaluating the seismic vulnerability of the tunnel system of the Autonomous Province of Trento", 2010 (Co-Supervisor: Alessandro Gajo).

Emiliano Debiasi, University of Trento, "Theoretical Analysis of seismic vulnerability of buried structures", 2010 (Co-Supervisor: Alessandro Gajo).

Davide Emer, University of Trento, "Analysis of the structural monitoring of a cable-stayed bridge", completed 2010 (Sole Supervisor).

Silvia Cremasco, University of Trento, "Limit state assessment if a masonry barrel vault. The case of the Basilica of Santa Maria Maggiore", completed 2009 (Co-Supervisors: Giorgio Cacciaguerra, Matteo Pozzi).

Tiziano Sartori, University of Trento, "Dissipative behavior of doweled timber connections", completed 2008 (Co-Supervisor: Maurizio Piazza).

Nicola Gavet "Distributed technologies for monitoring and inventorying the historic heritage", completed 2008 (Co-Supervisors: Paolo Zanon, Matteo Pozzi).

Matteo Faccincani "Statistical models and methods for prestressed concrete structure monitoring", completed 2007 (Sole Supervisor).

Massimo Cadrobbi, University of Trento, "Distributed technologies for structural monitoring of historic buildings: the Torre Aquila in Trento", completed 2007 (Co-Supervisor: Paolo Zanon).

Matteo Apollonia, University of Trento, "Fiber optic sensors for structural health monitoring", completed 2006 (Co-Supervisors: Paolo Zanon, Matteo Pozzi).

Nicola Naldo, University of Trento, "Safety assessment of Portogruaro Civic Tower", completed 2005 (Co-Supervisor: Paolo Zanon).

Alberto Lonardi, University of Trento, "Typological analysis of historic buildings", completed 2005 (Co-Supervisor: Paolo Zanon).

Stefano Toffaletti, University of Trento, "Development of shared analysis instruments for the operation of an internet - based monitoring system", completed 2003 (Sole Supervisor).

Massimo Giuliani, "Development and application of an in-line monitoring system for real-time control of structural response", completed 2002 (Sole Supervisor).

## University Service

Head, Centre for Intelligent Infrastructure, Department of Civil and Environmental Engineering, University of Strathclyde (2015-present).

Member, Executive Committee, Doctoral School in Civil, Environmental and Mechanical Engineering, University of Trento (2013-present).

Member, Erasmus Committee, Department of Civil, Environmental and Mechanical Engineering, University of Trento (2012-present).

Member, Double Degree Committee, Department of Civil, Environmental and Mechanical Engineering, University of Trento (2012-present).

Member, "Collegio Area Didattica", Department of Civil, Environmental and Mechanical Engineering, University of Trento (2012-present).

Member, Self-assessment Committee, Master Program ("Laurea Magistrale") in Civil Engineering, School of Engineering, University of Trento (2011-2012).

Member, Student Curriculum Committee, School of Engineering, University of Trento (2006-2012).

Secretary, Doctoral School of Engineering of Civil and Mechanical Structural Systems, University of Trento (2006-present).

Member, Executive Committee, Doctoral School of Engineering of Civil and Mechanical Structural Systems, University of Trento (2006-2012).

Secretary, Doctoral School of Structural Engineering, University of Trento (2003-2006).

Member, Executive Committee, Doctoral School of Structural Engineering, University of Trento (2003-2006).

Member, "Multi Cultural University" program Committee, University of Trento, University of Trento (2002-present).

Member, Erasmus Committee, School of Engineering, University of Trento (2001-2012).

## Knowledge Transfer

### Start-up Activity

Academic tutor and Co-founder, "Intelligent Infrastructure Innovation srl", start-up Company of the University of Trento, established 2014.

Start-up grant "Seed Money FESR 2007-2013", Source: Fondo Sociale Europeo per lo Sviluppo Regionale (FESR). Period: Apr 2014-Oct 2015. Amount: €150,000.

### Patents

PR102015000009772 'Sistema e metodo per determinare l'entità della deformazione di una struttura edile e, più in generale, di una costruzione', 2015.

Option on co-inventorship of patent PR2013A000074 'Procedimento per la realizzazione di un sistema di monitoraggio sismico e sistema di monitoraggio sismico così ottenuto'.

### Technical Committees

Member, Technical Committee "Bridge Health Monitoring", International Association for Bridge Maintenance and Safety (IABMAS).

Member, Workgroup UNI-CIS-GL-6 "Structural Health Monitoring", Italian Standardization Agency (UNI).

## Professional Experience

### Professional Registration

Professional Engineer in Italy since 1997 (Registration number TN-2298).

### Forensic Consultants

Trento District Attorney's Office. On the collapse of a reinforced concrete cantilever roof in Cles (TN). Trento Criminal Court Proceeding #4738-12, 2012.

Trento District Attorney's Office. Verifying the specifications of a guard rail system. Trento Criminal Court Proceeding #1409-08, 2008.

Trento District Attorney's Office. On the failure of worker-fall protection system. Trento Criminal Court Proceeding #2410-06, 2006.

Trento District Attorney's Office. On an accident caused by the failure of a fan gun (snow-making machine). Trento Criminal Court Proceeding #947-06, 2006

Trento District Attorney's Office. On an accident caused by a structural failure in a cement plant. Trento Criminal Court Proceeding #3899-05, 2005

Trento District Attorney's Office. On the collapse of a stone masonry building in Albiano (TN). Trento Criminal Court Proceeding #6691-03-21, 2004.

Trento Court of Appeals. On the collapse of a floor-slab in Riva del Garda (TN). Trento Court of Appeals Proceeding #318-03-RG, 2004.

Trento District Attorney's Office. Verifying construction defects on a residential building block in Civezzano (TN). Trento Criminal Court Proceeding #11290-2001-RGNR, 2003.

Trento District Attorney's Office. On an accident caused by a mixing and pumping machine for concrete. Trento Criminal Court Proceeding #4249-02-21, 2003.

Trento District Attorney's Office. Investigation on the effect of working procedures in porphyry mining system. Trento Criminal Court Proceedings # 9711/00-21, 9717/00-21, 9709/00-21, 9712/00-21, 11996/00-21, 5389/02-21, 2003

Trento District Attorney's Office. On the failure of the anchorage of a fall protection system. Trento Criminal Court Proceeding #11328-01-21, 2002.

Trento District Attorney's Office. On the failure of a crane in a mechanical factory in Condino (TN). Trento Criminal Court Proceeding #10098-01-21, 2002.

Trento Civil Court. Verification of construction defects and economic damage evaluation in the IRST-ITC building in Trento. Trento Civil Court Case #816-2000-RG, 2002.

### Structural Design and Assessment

Rivoli SpA. Design of a new model of partially post-tensioned precast concrete box-girder element, 2008.

Autonomous Province of Trento. Safety evaluation and modal testing of the SP139 bridge on Castellaz gorge, 2004.

Autonomous Province of Trento. Safety evaluation of the SP76 bridge on Adige river, 2004.

Autonomous Province of Trento. Safety evaluation of the SP65 bridge on Larganza river, 2004.

Autonomous Province of Trento. Safety evaluation of the SP83 bridge on Nogarè run, 2003.

Autonomous Province of Trento. Safety evaluation of the SP65 bridge on Maso river, 2003.

Municipality of Portogruaro. Experimental modal testing and safety evaluation of the Civic Tower, 2002.

Consorzio Padova Ricerche, Padova. Preliminary design of a roadway bridge on the Adige River at Villa Bartolomea (VR), 1997.

### Monitoring and NDE

Area Prefabbricati SpA. Development of a seismic monitoring system for prefabricated industrial buildings, 2012.

Far System SpA, Rovereto. Feasibility study for an integrated maintenance, management and monitoring system for the new Pedemontana Lombarda Highway, 2010-2011.

Autonomous Province of Trento. Design and installation of an internet-based monitoring system on the Trento Nord-Rocchetta cable-stayed bridge on Adige river, 2009.

Parish of Santa Maria Maggiore, Trento. Design and installation of an internet-based monitoring system for control of the Church of Santa Maria Maggiore, 2008-2009.

Municipality of Portogruaro. Design and installation of an internet-based monitoring system for control of the Civic Tower inclination, 2003-2009.

City of Verona. Design of a monitoring system to be installed on selected structures of the Roman Theatre in Verona, 2000.

Consorzio Padova Ricerche, Padova. Experimental modal testing and numerical modeling of the behavior of freestanding walls of the Roman Theatre in Verona, 2000.

Claudio Modena Engineer, Sommacampagna. Dynamic analysis of the XII century Castello di Maniace in Siracusa, 2000.

Cinel SpA, Castelfranco Veneto. Vibration measurement and consultant on an isolation intervention of a tool machine at the Cinel SpA factory, 2000.

Giotto High Technologies s.r.l., Padova. Vibration measurement and consultant on an isolation intervention of a laser machinery at the Ecoflam factory, 1999.

Veneto Region Conservancy. Design of a new monitoring system to be installed on the XIII century Santa Sofia Church in Padova, 1999.

City of Verona. Design of an updated monitoring system for the Roman Amphitheatre in Verona, 1999.

RWS srl, Vigonza. 1-year operation of the monitoring system for Santa Sofia church in Padova, 1999.

Immobiliare Giò srl, Villorba. Experimental measurements and consultant on the reliability of vibration based integrity tests of foundation piles, 1999.

Claudio Modena Engineer, Sommacampagna. Prediction of the dynamic response of a bell tower in Sopramente (TN), 1998.

Veneto Region Conservancy. Experimental modal analysis of the XIV century Santa Giustina bell tower in Padova, 1998.

RWS srl., Vigonza. Experimental dynamic analysis of the Colonna Marciana monument in Padova, 1998.

Claudio Modena Engineer, Sommacampagna. Signal processing and modelling of the Roman Amphitheatre in Verona, 1997.

Claudio Modena Engineer, Sommacampagna. Analysis of the dynamic response recorded on the Roman Amphitheatre in Verona, 1997.

**Daniele Zonta**

# Publication List

## A. Referred Journal Papers

AX3. Pozzi M., Zonta D., “The remarkable story of Portogruaro Civic Tower’s probabilistic health monitoring”, Structural Monitoring and Maintenance, 2015 (accepted).

AX2. Madaschi A., Gajo A., Molinari M., Zonta D., “Characterization of the dynamic behavior of shallow foundations with full-scale dynamic tests”. ASCE Journal of Geotechnical and Geoenvironmental Engineering, 2015 (accepted).

AX1. Pozzi M., Wu H., Zonta D., Inaudi D., Glisic B., "Bayesian Logic-based Damage Assessment in a Smart Precast Concrete Beam", Advances in Structural Engineering, 2014 (in review).

A33. Cappello C., Zonta D., Glišić B., “Expected utility theory for monitoring-based decision making”, Proceedings of the IEEE, n.99, p.1-15, 2016.

A32. Minati L., Chiappini A., Benetti F., Zonta D., Piotrowska A., Marciniak M., Ferrari M., “Fabrication and optical properties of assembled gold nanoparticles film on elastomeric substrate”, Colloids and Surfaces A: Physicochemical and Engineering Aspects, v. 482, p. 431–437, 2015.

A31. Cappello C., Zonta D., Pozzi M., Glisic B., Zandonini R., “Impact of prior perception on bridge health diagnosis”, Journal of Civil Structural Health Monitoring, v.5, n.4, p.509-525, 2015.

A30. Ait Laasri E.H., Akhouayri E.S., Agliz D., Zonta D., Atmani A., “A Fuzzy Expert System for Automatic Seismic Signal Classification”, Expert Systems with Applications, v.42, n.3, p. 1013-1027, 2015.

A29. Zonta D., Glisic B., Adriaenssens S., “Value of Information: impact of monitoring on decision making”, Structural Control and Health Monitoring, v.21, n.7, p. 1043-1056, 2014.

A28. Yue Y.C., Ma J.X., Gao J., Zonta D., Pozzi M., “Comparison of two approaches in reliability analysis for the network of Trentino's bridge management system”, Applied Mechanics and Materials, v. 351-352, p. 1700-1705, 2013.

A27. Zonta D., Bruschetta F., Zandonini R., Pozzi M., Wang M., Glisic B., Daniele Inaudi D., Posenato D., Zhao Y., “Sensor fusion on structural monitoring data analysis: application to a cable-stayed bridge”, Key Engineering Materials, v. 569-570, p. 812-819, 2013.

A26. Debiasi E., Gajo A., Zonta D., "Seismic design and analysis of shallow-buried rectangular structures", Tunnelling and Underground Space Technology”, v.38, p. 99-113, 2013.

A25. Loss C., Zonta D., Piazza M., "On estimating the seismic displacement capacity of timber portal-frames". Journal of Earthquake Engineering, v. 17, n. 6, p. 879-901, 2013.

A24. Torfs T., Sterken T., Brebels S., Santana J., van den Hoven R., Spiering V., Bertsch N., Trapani D., Zonta D. “Low Power Wireless Sensor Network for Building Monitoring”, IEEE Sensors Journal, v. 13, n. 3, p. 909-915, 2013.

A23. Santana J., Van den Hoven, R., Van Liemp C., Colin M., Saillen N., Trapani D., Zonta D., Torfs T., Van Hoof C. "A 3-axis accelerometer and strain sensor system for building integrity monitoring". Sensors and Actuators A: Physical, v.188, p. 141-147, 2012.

A22. Benedetti M., Fontanari V., Zonta D., "Structural health monitoring of wind towers: remote damage detection using strain sensors". Smart Materials and Structures, v. 20, n. 5, p. 055009, 2012.

A21. Bernal D., Zonta D., Pozzi M., "ARX Residuals in Damage Detection". Structural Control and Health Monitoring, v. 19, n. 4, p. 535–54, 2012.

A20. Pozzi M., Glisic B., Zonta D., Inaudi D., Lau J.M. and Fong C.C., " Analysis of lifespan monitoring data using Bayesian logic", Journal of Physics: Conf. Ser., v. 305, p. 012115, 2011.

A19. Pozzi M., Zonta D., Trapani D., Amditis A.J., Bimpas M., Stratakos Y.E., Ulieru D., "MEMS-based sensors for post-earthquake damage assessment". Journal of Physics: Conf. Ser., v. 305, p. 012100, 2011.

A18. Zonta D., Loss C., Piazza M., Zanon P., "Direct Displacement Based Design of glulam timber frame buildings". Journal of Earthquake Engineering, v. 15, p. 491-510, 2010.

A17. Zonta D., Wu H., Pozzi M., Zanon P., Ceriotti M., Mottola L., Picco G.P., Murphy A.L., Guna S., Corrà M., "Wireless sensor networks for permanent health monitoring of historic constructions". Smart Structures and Systems, v. 6, n. 5-6, p. 595-618, 2010.

A16. Wu H., Zonta D., Pozzi M., Zanon P., Corrà M., "Historic Buildings: Long Term Stability Evaluation Using Wireless Sensor Networks". Advanced Materials Research, v. 133-134, p. 235-240, 2010.

A15. Molinari M., Savadkoohi A., Bursi O. S., Friswell M. I., Zonta D., "Damage identification of a 3D full scale steel-concrete composite structure with partial strength joints at different pseudo-dynamic load levels". Earthquake Engineering and Structural Dynamics, v. 38, n. 10, p. 1219-1236, 2009.

A14. Zonta D., Pozzi M., Wu H., Inaudi D., “Bayesian Logic Applied to Damage Assessment of a Smart Precast Concrete Element”. Key engineering materials, v. 413-414, p. 351-358, 2009.

A13. Zonta D., Elgamal A. W., Fraser M., Priestly M. J. N., "Analysis of change in dynamic properties of a frame-resistant test building". Engineering structures: the journal of earthquake, wind and ocean engineering, v. 30, p. 183-196, 2008.

A12. Zonta D., Pozzi M., Zanon P., "Managing the historical heritage using distributed technologies". International Journal of Architectural Heritage, v. 2, n. 3, p. 200-225, 2008.

A11. Pozzi M., Zonta D., Wu H., Inaudi D., "Development and laboratory validation of in-line multiplexed low-coherence interferometric sensors". Optical Fiber Technology, v. 14, p. 281-293, 2008.

A10. Zonta D., Zandonini R., Bortot F., "A reliability-based bridge management concept". Structure and Infrastructure Engineering, v. 3, n. 3, p.215-235, 2007.

A9. Zonta D., Pozzi M., Bursi O. S., "Performance evaluation of smart prefabricated concrete elements". Smart Structures and Systems, v. 3, n. 4, p. 475-494, 2007.

A8. Zonta D., Pozzi M., Zanon P., "Bayesian Approach to Condition Monitoring of PRC Bridges". Key engineering materials, v. 347, p. 227-232, 2007.

A7. Bursi O. S., Molinari M., Savadkoohi A., Zonta D., "Finite Element Model Updating of a Steel–Concrete Composite Moment- Resisting Structure with Partial Strength Joints". Key engineering materials, v. 347, p. 101-106, 2007.

A6. Elgamal A. W., Fraser M., Zonta D., "Webshaker: Live internet Shake-Table Experiment for Education and Research". Computer Applications in Engineering Education, v. 13, n. 1, p. 99-110, 2005.

A5. Zonta D., Pozzi M., Forti M., Zanon P., "Vibration-based Condition Monitoring of Smart Prefabricated Concrete Elements". Key engineering materials, n. 293-294, p. 743-750, 2005.

A4. Zonta D.; Lanaro A.; Zanon P. "A Strain-Flexibility- Based Approach to Damage Location", Key engineering materials, v. 245-246, p. 87-94, 2003.

A3. Zonta D., Modena C., "Observations on the Appearance of Dispersive Phenomena in Damaged Structures". Journal of Sound and Vibration, v. 5, n. 241, p. 925-933 2001.

A2. Zonta D., Zanardo G., Modena C., "Experimental evaluation of the ductility of a

reduced-scale reinforced masonry building". Materials and structures: research and testing = Matériaux et constructions : essais et recherches, v. 34, n. 244, p.636-644, 2001.

A1. Modena, C., Sonda, D., Zonta, D. "Damage localisation in reinforced concrete structures by using damping measurements", Key engineering materials, v. 167-168, p. 132-141, 1999.

## B. Refereed Conference Publications

B70 Cappello C., Zandonini R., Zonta D., "An implementation of expected utility theory in a civil engineering decision problem", Proc. IABSE Conference 2015 : Structura Engineering, Geneva, Sep 23-25, 2015.

B69 Cappello C., Bolognani D., Zonta D., ”Mechanical Equivalent of Logical Inference for Structural Health Monitoring”, Proc. 10th International Workshop on Structural Health Monitoring (IWSHM 2015), Stanford, 1-3 Sep, 2015.

B68 Piotrowska A., Piccolo V., Chiappini A., Ferrari M., Pozzi M., Deseri L., Zonta D. ”Mechanochromic Photonic Crystals for Structural Health Monitoring”, Proc. 10th International Workshop on Structural Health Monitoring (IWSHM 2015), Stanford, 1-3 Sep, 2015.

B67 Trapani D., Maroni M., Debiasi E., Zonta D., ”Uncertainty evaluation of after earthquake damage detection strategy”, 2015 IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS 2015), Trento, 9-10 Jul, 2015.

B66 Piotrowska A., Chiappini A., Lukowiak A., Armellini C., Carpentiero A., Mazzola M., Varas S., Marciniak M. Ferrari M., Zonta D., ” Strain-sensitive Photonic Crystals for Sensing Applications in Structural Health Monitoring ”, 2015 IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS 2015), Trento, 9-10 Jul 2015.

B65 Bolognani D., Cappello C., Zonta D., ”Mechanical equivalent of logical inference: application to monitoring data analysis”, 2015 IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS 2015), Trento, 9-10 Jul, 2015.

B64 Cappello C., Zonta D., Bonelli A., Bursi O., Costa C., Pardatscher W. ”Structural Health Monitoring of the Colle Isarco Viaduct”, 2015 IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS 2015), Trento, 9-10 Jul, 2015.

B63. Cappello C., Bolognani D., Zonta D., ”Mechanical equivalent of logical inference from correlated uncertain information”, Proc. 7th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-7 2015, Turin, 1-3 July, 2015.

B62. Costa C., Pardatscher W., Bonelli A., Cappello C., Bursi O.S., Zonta D., ”Monitoring based assessment of Colle Isarco Viaduct”, Proc. 7th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-7 2015, Turin, 1-3 July, 2015.

B61. Chiappini A., Piotrowska A., Marciniak M., Ferrari M., Zonta D., ”Design and fabrication of mechanochromic photonic crystals as strain sensor”, Proc. SPIE. 9435, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2015, 94352M.

B60. Cappello C., Sigurdardottir D., Glisic B., Zonta D., Pozzi M., ”On predicting monitoring system effectiveness”, Proc. SPIE. 9435, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2015, 94350J.

B59. Zonta D., Cappello C., Pozzi M., Glisic B. "On evaluating monitoring design effectiveness", Proc. 7th European Workshop on Structural Health Monitoring (EWSHM 2014), Nantes, 8-10 July, 2014.

B58. Zonta D., Bruschetta F., Cappello C., Zandonini R., Pozzi M., Wang M., Zhao Y., Inaudi D., Posenato D., Glisic B., "On estimating the accuracy of monitoring methods using Bayesian error propagation technique", Proc. SPIE. 9061, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2014.

B57. Cappello C., Bruschetta F., Zonta D., Zandonini R., Pozzi M., Glisic B., Inaudi D., Posenato D., ”On the impact of prior perceptionon on bridge health diagnosis”, Proc. 6th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-6 2013, Hong Kong, 9-11 Dec, 2013.

B56. Bruschetta F., Zonta D., Cappello C., Zandonini R., Pozzi M., Glisic B., Inaudi D., Posenato D., Wang M.L., Zhao Y., "Fusion of monitoring data from cable-stayed

bridge", Proc. "2013 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems (EESMS 2013)", Trento, 11-12 Sep, 2013.

B55. Cappello C., Bruschetta F., Zonta D., Zandonini R., Pozzi M., Glisic B., Inaudi D., Posenato D., "On the impact of prior engineering perception on structural health diagnosis", Proc. 9th International Workshop on Structural Health Monitoring, IWSHM 2013, Stanford, 10-12 Sep, 2013.

B54. Debiasi E., Zandonini R., Zonta D., "Reliability of road bridges under overweight vehicle" Proc. 11th International Conference on Structural Safety & Reliability, ICOSSAR 2013, New York, 16-20 Jun 2013.

B53. Bruschetta F., Zonta D., Cappello C., Zandonini R., Pozzi M., Glisic B., Inaudi D., Posenato D., Wang M.L., Zhao Y., "Bayesian analysis of monitoring data from cable-stayed bridge", Proc. 11th International Conference on Structural Safety & Reliability, ICOSSAR 2013, New York, 16-20 Jun 2013.

B52. Zandonini R., Debiasi E., Zonta D., "Management of overweight vehicle traffic on road bridges", in "Assessment, upgrading and refurbishment of infrastructures", Proc. International IABSE Conference, Rotterdam, 6-8 May, 2013.

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