

# CURRICULUM VITAE

EUROPEAN FORMAT

## PERSONAL INFORMATION

Name, Surname **Stefano Varas**

## WORK EXPERIENCE

CNR employee:

**QUALIFICATION: TECHNICIAN  
LEVEL: 5<sup>TH</sup>**

Date	01-09-2010 → today
Name and address of employer	CNR-IFN Sez. Trento, Via alla cascata 56/C – 38123 Trento Italy
Type of business or sector	Technician
Occupation or position held	Technician 5 <sup>th</sup> level
Main activities and responsibilities	Technical support in the instrumentations photonics field and related activity of the laboratory for Characterization and the Development of Materials for Photonics and Optoelectronics (CSMFO)
Date	01-04-2009 → 31-08-2010
Name and address of employer	CNR-IOM, National Laboratory, Area Science Park, 34149 Basovizza, S.S.14 - Km 163.5 (TS) Italy
Type of business or sector	Technician
Occupation or position held	Technician 6 <sup>th</sup> level
Main activities and responsibilities	Coordinator of the activity in Electronics and ICT in technical section on the lines of Synchrotron Light
Date	01-02-2007 → 28-02-2009
Name and address of employer	ETH LAB, Research Centre of Eurotech Group, Viale Dante 300 – 38057 Pergine Valsugana (TN) Italy
Type of business or sector	Technician
Occupation or position held	Technician
Main activities and responsibilities	Hardware and software developer. Design, development and testing of electronic equipment in the context of wearable computers



Date	01-12-2004 → 31-01-2007
Name and address of employer	CNR-INFM-TASC, National Laboratory, Area Science Park, 34149 Basovizza, S.S.14 - Km 163.5 (TS) Italy
Type of business or sector	Technician
Occupation or position held	Technician 6 <sup>th</sup> level
Main activities and responsibilities	Technical support team in electronic and ICT. Design, assembly, consulting and repair of electronic equipment for research laboratory. Software development for interfacing electronic equipment

Date	25-02-2002 → 30-11-2004
Name and address of employer	INFM-TASC, National Laboratory, Area Science Park, 34149 Basovizza, S.S.14 - Km 163.5 (TS) Italy
Type of business or sector	Technician
Occupation or position held	Technician 6 <sup>th</sup> level
Main activities and responsibilities	Technical support team in electronic and ICT. Design, assembly, consulting and repair of electronic equipment for research laboratory. Software development for interfacing electronic equipment

## EDUCATION AND TRAINING

Date	19-04-2019 → 20-04-2019
Name and type of organisation providing education and training	Attending the workshop "Advanced Lithography"
Title of qualification awarded	Certificate of participation

Date	14-06-2002
Name and type of organisation providing education and training	Attending the seminar "Dry Vacuum" – Pompe e strumentazione per l'industria e la ricerca – Leybold
Title of qualification awarded	Certificate of participation

Date	13-05-2002 → 17-05-2002
Name and type of organisation providing education and training	Training programme of LabVIEW Basic I – National Instruments
Title of qualification awarded	Attended and successfully completed

Date	1993 → 1998
Name and type of organisation providing education and training	Istituto Tecnico Industriale G. Marconi, 38068 Rovereto (TN)
Title of qualification awarded	Diploma di Maturità di perito industriale capotecnico in elettronica e telecomunicazioni



## TECHNICAL AND RESEARCH ACTIVITIES

### Research sectors

From the September 2010 I started to work in the framework of the research activities of the Characterization and Development of Materials for Photonics and Optoelectronics Laboratory (CSMFO Lab.)

The research group CSMFO is coordinated by Dr. Maurizio Ferrari and is a unit of the Institute of Photonics and Optoelectronics (IFN) of the CNR and perform its activity in the framework of the Department "Materials and Devices",

The research group has a great experience in the preparation of glassy materials for photonics and their characterization with various spectroscopic techniques such as resolved time luminescence and Raman spectroscopy.

My competences have enriched the scientific and technical skill fund of the group.

### Recent Scientific Activities

The principal research activities are:

- Properties, structure and processing of glasses and films for photonic applications.
- Massive glasses obtained by melting and sol-gel route activated with rare earth ions (local structure, crystallization, energy transfer processes, optical and spectroscopic properties).
- Optical planar waveguides obtained with various techniques (dip-coating, spin-coating, rf-sputtering, ion-exchange) activated with rare earth ions (local structure, crystallization, energy transfer processes, optical and spectroscopic properties).
- Nanostructured and composite materials (massive systems, films, planar waveguides, ultra-transparent glass-ceramics).
- Fabrication with sol-gel route and rf-sputtering technique and optical, structural and spectroscopic characterization of 1D photonic crystal and artificial opals.
- Spherical microresonators (fabrication, spectroscopic and morphologic characterization).

### Books and Articles

- 18 Articles on International Scientific ISI Journal
- 57 Conference Proceedings and Communications

## ADDITIONAL INFORMATION

- Member of the organizing committee of 22th International Conference on Transparent Optical Networks – ICTON 2020 – July 19<sup>th</sup>–23<sup>rd</sup> 2020, Bari
- Member of the organizing committee of 1<sup>st</sup> International Conference on Dielectric Photonic Devices and Systems Beyond Visible – D-Photon 2018 – October 1<sup>st</sup>–2<sup>nd</sup> 2018, Bari
- Member of the organizing committee of 7<sup>th</sup> International Workshop on Photoluminescence in Rare Earths: Photonic Materials and Devices – PRE 17 – November 30<sup>th</sup>–December 2<sup>nd</sup> 2017, Rome
- Member of the organizing committee of International Conference on Rare-Earth Doped Glass Materials and Fibre Lasers – EAGLES 2016 – October 18<sup>th</sup>–19<sup>th</sup> 2016, Trento
- Member of the organizing committee of 18<sup>th</sup> International Conference on Transparent Optical Networks – ICTON 2016 – June 10<sup>th</sup>–14<sup>th</sup> 2016, Trento
- Member of the organizing committee of International Conference on Micro and nano-photonic materials and devices - MINAP2012 – January 16<sup>th</sup>–18<sup>th</sup> 2012, Trento
- Co-Editor on Proceedings of International Conference MINAP2012
- SIOF (Società Italiana di Ottica e Fotonica) Member



## PERSONAL SKILLS AND COMPETENCES

### Technical skills and competences

- Standard and time resolved luminescence spectroscopy in the visible and NIR regions.
- M-line spectroscopy and luminescence spectroscopy in waveguide configuration
- Absorbance and reflectance at different angle measurements in the UV-VIS-NIR regions
- Attenuation, amplification and signal enhancement measurements.
- Fabrication and develop of glasses, planar waveguides and photonic crystals with sol-gel and rf-sputtering techniques
- Development and operation of vacuum systems for research
- Development, design and assembly of electronic circuits
- Develop and maintenance of rf-sputtering apparatus.
- Programming in LabView, LabWindows CVI, Microsoft Visual Studio C++, Borland C++
- Programming Microcontrollers with core-based 8051 in C language
- Programming of CPLD (Complex Programmable Logic Device) in VHDL language

Mother tongue(s)

Italian

Other language(s)

English

Self-assessment

European level

Language

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
B1	B1	B1	B1	B1

## TRATTAMENTO DEI DATI PERSONALI, INFORMATIVA E CONSENSO

Il D.Lgs 30/06/2003, n. 196 "Codice in materia di protezione dei dati personali" regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento.

La norma in considerazione intende come "trattamento" qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati.

In relazione a quanto riportato, autorizzo il CNR al trattamento dei dati contenuti nel presente curriculum vitae e nella documentazione della quale fa parte integrante, sollevandolo da ogni responsabilità e autorizzandolo alla pubblicazione, sul sito web del CNR, della relazione inerente alle proprie ricerche svolte nell'ambito del Progetto finanziato dal CNR. Inoltre acconsento all'aggiornamento delle informazioni intranet che mi riguardano sia relative le pubblicazioni sia alle ricerche svolte.

*The Undersigned hereby authorises the CNR to utilize and store the personal sensitive data contained in the attached Curriculum Vitae for the purposes of bilateral Joint research projects and within the framework of the Data protection Act No. 196, dates 30 June 2003 as promulgated by the Italian Government.*

( barrare la casella)

☒ Si, acconsento

Trento, 12-06-2020



**Curriculum vitae****PERSONAL INFORMATION**

Family name, First name: Giongo, Ivan

**• EDUCATION**

- 2013 PhD in "Engineering of Civil and Mechanical Structural Systems", University of Trento, Italy.
- 2012 PhD exchange student at the University of Auckland, New Zealand
- 2009 Master in Civil Engineering, University of Trento, Italy
- 2007 Bachelor of Science in Civil Engineering, University of Trento, Italy

**• CURRENT POSITION(S)**

- 2019 – to date Assistant Professor, University of Trento, Department of Civil, Environmental and Mechanical Engineering, Italy

**• PREVIOUS POSITIONS AND ACADEMIC EXPERIENCE**

- 2019 Research fellow at the University of Trento, Department of Civil, Environmental and Mechanical Engineering, Italy.
- 2016 – 2019 Assistant Professor, University of Trento, Department of Civil, Environmental and Mechanical Engineering, Italy
- 2013 – 2016 Research fellow at the University of Trento, Department of Civil, Environmental and Mechanical Engineering, Italy.
- 2014 (Post-doc) Scientific Mission to the University of Auckland, New Zealand.
- 2013 (Post-doc) Scientific Mission to Bristol University, United Kingdom.

**• FELLOWSHIPS AND AWARDS**

- 2019 "Starting grant for young researchers 2019", University of Trento (IT)
- 2015 "2015 Otto Goglau Award", New Zealand Society for Earthquake Engineering (NZ)  
Motivation: "This award is offered annually to the author or authors presenting the best paper during the three years ending 30 June preceding the date of the award." (NZSEE)
- 2014 Grant by Cost Action FP1101 for a Short-Term Scientific Mission as Visiting Research Fellow at the University of Auckland
- 2013 Grant by Cost Action FP1004 for a Short-Term Scientific Mission as Visiting Research Fellow at Bristol University, United Kingdom

**• PATENTS**

- 2017 "System to connect timber-based panels for the construction of seismic resilient buildings; system components and construction process" Italian Patent Application (pending)
- 2015 "Method for cambering and pre-stressing composite beams" Italian Patent Application

**• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

- 2016 – to date Supervisor/Co-supervisor of 6 PhD candidates at the Doctoral school in Civil, Environmental and Mechanical Engineering (University of Trento): Gianni Schiro, Ermes Rizzi, Daniele Riccadonna, Andrea Gaspari, Francesco Smioldo, Davide Cassol
- 2010-to date Supervisor and co-supervisor of more than 50 master's thesis (courses in Civil Engineering and Building Engineering/Architecture) in the field of "Timber Structures and Masonry Buildings in Seismic Prone Areas"

**• TEACHING ACTIVITIES**

- 2018 Teacher and organizer of the PhD course "Vulnerability of existing structures in earthquake-prone areas and the role of timber", University of Trento, Italy
- 2017 – to date Lecturer of "Structural Rehabilitation" for the Master's degree courses in Civil Engineering and in Building Engineering/Architecture, University of Trento, Italy



- 2010 – 2016 Teaching assistant (lecturing and tutoring) in “Structural Rehabilitation” for the Master’s degree courses in Civil Engineering and in Building Engineering/Architecture, University of Trento, Italy
- 2016 Teacher at the PhD course “Wood as construction material” Politecnico di Milano, Italy
- 2014 – 2015 Seminars on topics related to the “Assessment and Retrofit of Existing Buildings” Master’s degree courses in Civil Engineering and in Building Engineering/Architecture, University of Trento, Italy
- 2014 Teacher at the “Training School on Reinforcement of Timber Structures” (post-graduate/doctoral school), National University of Ireland Galway, Ireland
- **ORGANISATION OF SCIENTIFIC MEETINGS**
- 2016 – to date Member of the Organizing Committee of the “*Forum Internazionale dell’Edilizia in Legno*”, an ANNUAL international conference on timber constructions.
- 2013 Member of the Organizing Committee of the 2nd SHATIS Conference International Conference on Structural Health Assessment of Timber Structures, Trento, Italy
- **INSTITUTIONAL RESPONSIBILITIES**
- 2016 – to date Member of the Teaching Quality Committee (Civil Engineering), Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy
- 2016 – to date Member of Master’s Degree Committees (Civil Engineering and Building Engineering/Architecture), Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy
- 2016 – to date Member of the Doctoral School Committee, Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy
- 2019 - External Examiner, PhD Review Committee, Cycle XXXI – “Dottorato in Ingegneria Civile, Edile-Architettura, Ambientale”, University of L’Aquila, Italy
- **REVIEWING ACTIVITIES**
- 2017 – to date Editorial Board Member, journal “Proceedings of the Institution of Civil Engineers - Structures and Buildings”, ISSN 0965-0911 | E-ISSN 1751-7702
- 2016 – to date Editorial Committee, journal “Structural Magazine”, ISSN 0965-0911 | E-ISSN 1751-7702
- 2018 Guest Editor for the “International Journal of Architectural Heritage” ISSN 1558-3058 | E-ISSN 1558-3066
- 2014 – to date Reviewer for the following journals (14) and international conferences (2): “Journal of Earthquake Engineering, Journal of Structural Engineering, Journal of Wood and Wood Products, Engineering Structures, Journal of Structural Control and Health Monitoring, Structures, Bulletin of Earthquake Engineering, Material and Structures, Construction and Building Materials, Proceedings of the Institutions of Civil Engineers: Structures and Buildings, International Journal of Architectural Heritage, Journal of Materials in Civil Engineering, Advances in Civil Engineering, Advances in Structural Engineering, International Conference on Structural Health Assessment of Timber Structures, Pacific Conference on Earthquake Engineering”
- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**
- 2017 – 2019 Member of the Working Group drafting a new chapter on “Timber Structures” in “Eurocode 8 Part 3: Assessment and retrofitting of buildings and bridges”
- 2015 - 2018 Member of “Working Group 4 (Hybrid Timber Structures) of FP1402 COST Action” FP1402 Basis of structural timber design - from research to standards.
- 2015 – to date Associate Member of the Wood Committee and the Masonry Committee for the updating of Standard ASCE/SEI 41 Seismic Evaluation and Retrofit of Existing Building” American Society of Civil Engineers – Virginia, United States of America
- 2014 PR4 Timber structures - Working Group for drafting “ReLUIIS Guidelines for Design, Execution and Control of Timber Structures”, granted by Italian Emergency Management Agency

Ivan Giongo



# Daniele Zonta

Professor  
Department of Civil, Environmental and Mechanical Engineering  
University of Trento

Associate Researcher  
Institute for Photonics and Nanotechnologies  
National Research Council

## 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

Visiting Professor, University of Strathclyde, Glasgow, UK, Sep 2019-present

Head, Centre for Intelligent Infrastructure, University of Strathclyde, Glasgow, UK, Jan 2016-Aug 2019

Professor, University of Strathclyde, Glasgow, UK, Oct 2015-Aug 2019

Departmental Guest, Northeastern University, Boston (MA), Jun-Aug 2015

Associate Professor, University of Trento, Italy, Oct 2014-Mar 2020

Associate Researcher, Institute for Photonics and Nanotechnologies (IFN), National Research Council (CNR), Italy, Jun 2014-present

Departmental Guest, Princeton University, Princeton (NJ), Dec 2010-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, Aug-Sep 2002.

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

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

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

## Technical Areas of Specialization

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

## Teaching Experience Graduate

*CL991-Structural Health Monitoring*, University of Strathclyde, lectures, 2017/18, 2018/19, 2019/20.

*CL976-Prestressed Concrete, Steel-concrete Composite and Structural Stability*, University of Strathclyde, lectures, 2016/17, 2017/18, 2018/19.

*[140221]-Control and Health Monitoring of Civil Structures*, University of Trento, lectures, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17, 2018/19, 2019/20. Course approval: 100%.

*[140228]-Special Structures*, University of Trento, lectures: 2007/08, 2008/09, 2009/10, 2010/11, 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17. Seminars: 2017/18, 2018/19, 2019/20. Course approval: 100%. Instructor approval: 100%.

*[140166]-Structural Safety*, University of Trento, lectures, 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17, 2018/19, 2019/20. Course approval: 92.5%.

*[140169]-Structural Design*, University of Trento, lectures, 2018/19, 2019/20. Course approval: 73.17%.

*[40626]-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.

*Modal Analysis of Civil Structures (Doctoral level)*, University of Trento, lectures: 2005/06, 2007/08, 2009/10.

*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

*CL435-Prestressed Concrete, Steel-concrete Composite and Structural Stability*, University of Strathclyde, lectures, 2016/17, 2017/18, 2018/19.

*[40371]-Fundamentals of Bridges and Precast Structures*, University of Trento, lectures: 2005/06, 2006/07. Course approval: 100%. Instructor approval: 100%.

*[40379]-Fundamentals of Structural Elements 2 (Concrete)*, University of Trento, lectures: 2003/04, 2004/05, 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 smart structural elements*, lectures, 12th Asia-Pacific-Euro Summer School on Smart Structures Technology (APESS 2019), Rome, 2019.

*Bayesian Logic for structural health monitoring*, lectures, 5th International Summer School on Smart Materials, Structures and Systems, Trento, 2016.

*Bayesian Logic for structural health monitoring*, lectures, 3rd International Summer School on Smart Materials, Structures and Systems, Trento, 2014.

*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

"TURNKEY: Towards more Earthquake-resilient Urban Societies through a Multi-sensor-based Information System enabling Earthquake Forecasting, Early Warning and Rapid Response Systems" Co-I, Source: European Commission. Period: 1/06/19-31/05/22. Amount: €8,000,000 overall.

"XP-RESILIENCE: Extreme Loading Analysis of Petrochemical Plants and Design of Metamaterial-Based Shields for Enhanced Resilience" Co-I. Source: European Commission. Period: 1/9/2016-31/8/2020. Amount: €3,393,811 overall.

"INDUSE-2-SAFETY: Component fragility evaluation and seismic safety assessment of special risk petrochemical plants under design basis and beyond design basis accidents". Source: European Commission. Period: 1 Jul 2014-30 June 2017. Amount: €1,713,842 overall.

"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 FP7-NMP-2007-SME-1. 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, FP7-SME-221978. Period: 7/1/2008-6/30/2010. Amount: € 114,000 (€ 4,367,230 overall).

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

### Research Councils and other Government Agencies

"NE/R009090/1 Early warning decision support system for the management of underwater scour risk for road and railway bridges" **PI**. Source: Natural Environment Research Council (NERC). Period: 6/11/2017-5/11/2018. Amount: £93,602.

"A new skin for ageing concrete structures: 3D-printed smart cement patches" Co-I. Source: Royal Society. Period: 1/4/2017-31/3/2018. Amount: £ 14,453.

"Scour Monitoring - River Nith" **PI**. Source: Transport Scotland. Period: 1/6/17 - 31/5/18. Amount: : £13,422.00

"Portogruaro-FOS: Extension of the Portogriaro Tower's monitoring system with Fiber Optic Sensor and development of a Decision Support System". **PI**. Source: Comune di Portogruaro. Period: 1/1/2017, 31/12/2017. Amount: € 37,820.

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

"RELUIS-3: Executive project DPC/ReLUI 2014 – AQ DPC/ReLUI 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: 23/11/2015-31/03/2016. Amount: € 24,600.

"RELUIS-3: Executive project DPC/ReLUIIS 2014 – AQ DPC/ReLUIIS 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/ReLUIIS 2014 – AQ DPC/ReLUIIS 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

"ASPI-3-Model for defining the priority of intervention". **PI.** Source: Autostrade per l'Italia SpA. Period 7/6/2020-6/8/2020. Amount: € 195,200.

"A22-3- Analysis of the structural behavior of the Bridge on Po River based on structural health monitoring. Analysis and interpretation of monitoring data from Colle Isarco viaduct". **PI.** Source: Autostrada del Brennero SpA - Brennerautobahn AG. Period: 01/02/2020-30/04/2023. Amount: € 329,400.

"ASPI-2-Design and supervision of the experimental tests to be carried out at the open-air laboratory for infrastructure safety, Alveo Vecchio Viaduct, in Candela". **PI.** Source: Autostrade per l'Italia SpA. Period 2/10/2019-1/12/2019. Amount: € 30,000.

"ASPI-1-Requirements analysis for the development of test protocols and monitoring systems addressing the safety evaluation of existing road bridges". **PI.** Source: Autostrade per l'Italia SpA. Period 7/6/2019-6/8/2019. Amount: € 20,000.

"ITEA-Stardust: development of a method for characterizing the seismic capacity of RC buildings". **PI.** Source: Istituto Trentino Edilizia Abitativa (ITEA) SpA. Period: 8/5/2018-7/9/2018. Amount: € 42,700.

"RFI-DOMUS: Update and Validation of DOMUS bridge management system". **PI.** Source: Rete Ferroviaria Italiana SpA. Period: 01/7/2017-31/10/2017. Amount: € 42,698.

"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: 11/11/2014-11/11/2016. 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 Panel, Smart Infrastructure and Construction, ICE Publishing (2016-present).

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

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).

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

## Review Activity

### International Research Councils

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; Civil Structural Health Monitoring; Computer-Aided Civil and Infrastructure Engineering; Computers and Structures; Earthquake Engineering & Structural Dynamics; Engineering Structures; Geomechanics and Engineering; International Journal of Distributed Sensor Networks; International Journal of Mechanical Sciences; International Journal of Sensor Networks; 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; Smart Infrastructure and Construction; Structural Monitoring and Maintenance; Transactions on Mechatronics



## Awards

**Nominee for the Teaching Excellence Award 2019**, 'Most Supportive', Student Union, University of Strathclyde.

**Bridge Research Award for the Best Paper by a University Researcher:** A. Maroni, E. Tubaldi, J. Douglas, N. Ferguson, D. Zonta, H. McDonald, D. Walker, E. Greenoak, C. Green (2018). "Using Bayesian Networks for the assessment of underwater scour for road and railway bridges", Structural Fault + Repair 2018' & 'European Bridge Conference 2018, Edinburgh, 14-17 May 2018.

**Nominee for the Teaching Excellence Award 2018**, Student Union, University of Strathclyde.

**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.

**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 Paper Award:** M. Bimpas, D. Trapani, D. Zonta, A. Amditis, S. Frondistou Yannis, V. Kalidromitis, Y. Stratakis, 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

"Validating 3D photonic crystals for structural health monitoring", Invited talk at the 11th International Workshop on Structural Health Monitoring, IWSHM 2017, 12-14 Sep, 2017.

"Expected utility theory for monitoring-based decision making", Invited talk at the 2nd International Conference on Safety and Reliability of Ships, Offshore and Subsea Structures (SAROSS 2016), Glasgow, 15-17 Aug, 2016.

"Solving Bayesian multi-parameter estimation problems using the mechanical equivalent of logical inference", Invited talk at the 8th European Workshop on Structural Health Monitoring (EWSHM 2016), Bilbao, 5-8 July 2016.

"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

"An Introduction to Bayesian Logic for SHM Enthusiasts", Seminar at the Georgia Institute of Technology, Atlanta (GA), 9 August 2019.

"Towards Intelligent Civil Infrastructure", Seminar at the University of Cambridge (UK), 16 Nov 2018.

"Mechanical Equivalent of Logical Inference", Seminar at the Carnegie-Mellon University, Pittsburgh (PA), 5 Mar 2018.

"Bayesian Logic for Intelligent Civil Infrastructure", Seminar at the University of Aberdeen (UK), 17 Nov 2016.

"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**, "SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems", Anaheim (CA), 26-30 Apr 2020.

Technical Advisory Panel, 3rd International Conference on Health Monitoring of Civil & Maritime Structures (HeaMES 2020), Edinburgh, 28-29 May 2020.

Program Committee Member, "Tenth International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2019, Nice, 27-31 Oct 2019.

International Organization Committee, 12th International Workshop on Structural Health Monitoring (IWSHM2019), Stanford, 10-12 Sep 2019.

**Co-Chair**, 12th Asia-Pacific-Euro Summer School on Smart Structures Technology (APESS 2019), Rome, 15 Jul-3 Aug, 2019.

International Scientific Committee, 9th International Conference on Structural Health Monitoring of Intelligent Infrastructure, SHMII-9 2019, Saint Louis, 1-3 Jul 2019.

International Scientific Committee, 9th European Workshop on Structural Health Monitoring, EWSHM 2018, Manchester, 10-13 Jul 2018.

Program Committee Member, "SPIE Sensors and Smart Structures Technologies for Civil,



Mechanical, and Aerospace Systems", Denver (CO), 3-7 Mar 2019.

Program Committee Member, "Ninth International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2018, Venice, 16-20 Sep 2018.

**Co-Chair**, "7th International Summer School on Smart Materials and Structures", Trento, 16-19 Jul 2018.

International Scientific Committee, 9th European Workshop on Structural Health Monitoring, EWSHM 2018, Manchester, 10-13 Jul 2018.

Co-organizer, Special session "Probabilistic SHM", 9th European Workshop on Structural Health Monitoring, EWSHM 2018, Manchester, 10-13 Jul 2018.

Program Committee Member, "SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems", Denver (CO), 4-8 Mar 2018.

International Organization Committee, International Workshop on Structural Health Monitoring 2017, Stanford, 12-14 Sep 2017.

Co-organizer, Special sessions "Probabilistic SHM" and "Distributed and quasi-distributed fiber-optic and electrical sensors, and associated data analysis and management", International Workshop on Structural Health Monitoring 2017, Stanford, 12-14 Sep 2017.

**Co-Chair**, "6th International Summer School on Smart Materials and Structures", Trento, 25-28 Jul 2017.

Program Committee Member, "Eighth International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2017, Rome, 10-14 Sep 2017.

Program Committee Member, "SPIE Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems", Portland (OR), 26-29 Mar 2017.

International Advisory Committee Member, "1st Biennial Conference on Bridge Management System", IBMS 2016, New Delhi, 4-5 Oct 2016.

**Co-Chair**, "5th 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, 10-14 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”, ICOSAR 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 Memsccon 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 Memsccon 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

Associate Researcher, Institute for Photonic and Nanotechnology (IFN), National Research Council (CNR).

Board of Directors, International Association for Structural Control and Monitoring (IASCM).

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

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

Member, International Association for Bridge Management and Safety (IABMAS).

Member, Italian National Association of Earthquake Engineering (ANIDIS).



Member, Italian National Standardization Agency (UNI).  
Member, European Committee for Standardization (CEN).

#### **International Doctoral Committees**

Doctoral committee member (Reader), Rebecca Napolitano, Princeton University, 2020.  
Doctoral committee member (Reader), Hiba Abdel-Jaber, Princeton University, 2017.  
Doctoral committee member, Simon Hoell, University of Aberdeen, 2016.  
Doctoral committee member, Chuanchuan Hou, University of Edinburgh, 2016.  
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, 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**

Cristiano Loss, Assistant Professor, University of British Columbia, Canada, 2018-present  
Matteo Pozzi, Associate Professor, Carnegie Mellon University, USA, 2012-present.  
Yanchao Yue, Assistant Professor, Xi'an Jiaotong University, China, 2011-present

#### **Postdoctoral Researchers Supervised**

Denise Bolognai, University of Trento, 2019- present  
Valentina Piccolo, University of Trento, 2019-2020  
Carlo Cappello, University of Trento, 2017-2018  
Davide Trapani, University of Trento, 2015-2016  
Emiliano Debiasi, University of Trento, 2014-present  
Huayong Wu, University of Trento, 2009-2010  
Matteo Pozzi, University of Trento, 2008-2011  
Francesca Bortot, University of Trento, 2007-2011

#### **Research Students Supervised**

##### **Doctoral students**

Elisa Saler, University of Trento, expected 2023 (Co-Supervisor: Mario Rosa Valluzzi).  
Francesco Rossi, University of Strathclyde, expected 2022 (Co-Supervisor: Enrico Tubaldi, John Quigley).  
Aleksandar Zhelyazkov, University of Trento, expected 2020 (Co-supervisors: Helmut Wenzel, Peter Furtner).  
Andrea Verzobio, University of Strathclyde, expected 2020 (Co-Supervisor: Enrico Tubaldi, John Quigley).  
Daniel Tonelli, University of Trento, expected 2020 (Sole Supervisor).  
Andrea Maroni, University of Strathclyde, expected 2020 (Co-Supervisors: Enrico Tubaldi, John Douglas).  
Jingsi Li, University of Strathclyde, expected 2019 (Co-Supervisor: Neil Ferguson).  
Tran Thi Ngoc Lam, "Tin dioxide-based photonic glass-ceramics", University of Trento, 2019 (Co-Supervisor: Maurizio Ferrari).  
Valentina Piccolo, University of Trento, "Experimental and Novel Analytic Results for

Couplings in Ordered Submicroscopic Systems: from Optomechanics to Thermomechanics", 2019 (Co-Supervisors: Luca Deseri, Maurizio Ferrari).

Denise Bolognani, University of Trento, "Making decisions based on Structural Health Monitoring: an advanced theory", 2019 (Sole Supervisor).

Angela Beltempo, "Study of the aging hereditariness of concrete through a novel viscoelastic formulation", University of Trento, completed 2018 (Co-Supervisors: Oreste Bursi, Massimiliano Zingales).

Carlo Cappello, University of Trento, "Theory of decision based on structural health monitoring", completed 2017 (Sole Supervisor).

Anna Piotrowska, University of Trento, "Mechanochromic Photonic Crystals as Strain Sensors for Structural Applications", completed 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).

#### **Research Master's students**

Francesca Poli, University of Trento, completed 2020 (Sole Supervisor).

Michele Luchetta, University of Trento, completed 2020 (Sole Supervisor).

Ahmed Dabbas, University of Trento, completed 2018 (Sole Supervisor).

Simone Pavan, University of Trento, completed 2018 (Sole Supervisor).

Andrea Giovannini, University of Trento, completed 2018 (Sole Supervisor).

Daniele Rizzo, University of Trento, completed 2017 (Sole Supervisor).

Anna Groff, University of Trento, completed 2017 (Sole Supervisor).

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

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

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

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

Gianluca Carravieri, University of Trento, completed 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 Portogruaro 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 Margherita 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 Debiassi, 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 of 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

Joint Board of Moderators (JBM) Accreditation Group, Department of Civil and Environmental Engineering, University of Strathclyde (2018-2019).

Management Committee, Department of Civil and Environmental Engineering, University of Strathclyde (2016-2019).

Head, Centre for Intelligent Infrastructure, Department of Civil and Environmental Engineering, University of Strathclyde (2016-2019).

Member, Executive Committee, Doctoral School in Civil, Environmental and Mechanical Engineering, University of Trento (2013-2018).

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.

Grant "Sviluppo di un sistema di monitoraggio sismico per patrimoni edilizi esistenti Source: "APIAE Agenzia provinciale per l'incentivazione delle attività economiche,

Provincia Autonoma di Trento". Period: Mar 2017-June 2018. Amount: € 61,233.41.

### Patents

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

### Technical Committees

Convener, Technical Committee TG3.5 "Forensic engineering", International Federation for Structural Concrete (FIB).

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

Member, Workgroups UNI-CIS-GL-6 "Structural Health Monitoring" and UNI-CIS-GL-2 "Existing Structures", Italian Standardization Agency (UNI).

Member, CEN/TC250 "Structural Eurocodes", WG2 "Existing Structures", European Committee for Standardization (CEN).

## Professional Experience

### Professional Registration

Chartered 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

ORCID ID: 0000-0002-7591-9519

Scopus Author ID: 6506811083

ResearcherID: D-7947-2014

### A. Referred Journal Papers

- A50 Zhelyazkov, A., Zonta, D., Wenzel, H., Furtner, P. "On the estimation of the ductility demand on reinforced concrete bridge piers from structural health monitoring data", *Journal of Civil Structural Health Monitoring*, 10 (2), pp. 283-295, 2020.
- A49 Chiappini, A., Armellini, C., Piccolo, V., Zur, L., Ristic, D., Jovanovic, D.J., Vaccari, A., Zonta, D., Righini, G.C., Ferrari, M., Colloidal crystals based portable chromatic sensor for butanol isomers and water mixtures detection, *Optical Materials*, 90, pp. 152-158, 2019.
- A47 Chiappini, A., Armellini, C., Bazzanella, N., Nodehi, S., Lukowiak, A., Pietralunga, S.M., Piccolo, V., Zonta, D., Nunzi Conti, G., Righini, G.C., Ferrari, M., Modification of the Near-Infrared Spontaneous Emission in Er<sup>3+</sup>-Activated Inverse Silica Opals, *Physica Status Solidi (B) Basic Research*, art. no. 1900476, 2019.
- A47 Chiappini, A., Armellini, C., Piccolo, V., (...), Righini, G.C., Ferrari, M. "Colloidal crystals based portable chromatic sensor for butanol isomers and water mixtures detection", *Optical Materials*, 90, 152-158, 2019.
- A46 Piccolo, V., Chiappini, A., Armellini, C., (...), Ferrari, M., Zonta, D. "Quasi-hemispherical voids micropatterned PDMS as strain sensor", *Optical Materials*, 86, 408-413, 2018.
- A45 Bolognani, D., Verzobio, A., Tonelli, D., Cappello C, Glisic B., Zonta, D., Quigley, J. "Quantifying the benefit of structural health monitoring: what if the manager is not the owner?", *Structural Health Monitoring*, 17(6), 1393-1409, 2018.
- A44 Tran, L.T.N., Massella, D., Zur, L., (...), Zonta, D., Ferrari, M., "SiO<sub>2</sub> -SnO<sub>2</sub> :Er<sup>3+</sup>glass-ceramic monoliths", *Applied Sciences*, 8(8),1335, 2018.
- A43 Regni, M., Arezzo, D., Carbonari, S., Gara, F., Zonta, D., "Effect of Environmental Conditions on the Modal Response of a 10-Story Reinforced Concrete Tower", *Shock and Vibration*, 2018,9476146, 2018.
- A42 Bursi, O.S., Zonta, D., Debiassi, E., Trapani, D., "Structural health monitoring for seismic protection of structure and infrastructure systems", *Geotechnical, Geological and Earthquake Engineering*, v.46, pp. 339-358, 2018.
- A41 Cappello, C., Zonta, D., Laasri, H.A., Glisic, B., Wang, M., "Calibration of elastomagnetic sensors on in-service cable-stayed bridges for stress monitoring", *Sensors*, 18(2),466, 2018.
- A40 Piccolo, V., Alaimo, G., Chiappini, A., (...), Zonta, D., Zingales, M., Deseri, L., "Fractional-order theory of thermoelasticity. II: Quasi-static behavior of Bars", *Journal of Engineering Mechanics* 144(2),04017165, 2018.
- A39 Alaimo, G., Piccolo, V., Chiappini, A., (...), Zonta, D., Deseri, L., Zingales, M. "Fractional-order theory of thermoelasticity. I: Generalization of the Fourier equation", *Journal of Engineering Mechanics*, 144(2),04017164, 2018.
- A38 Beltempo, A., Bursi, O.S., Cappello, C., Zonta, D., Zingales, M., "A Viscoelastic Model for the Long-Term Deflection of Segmental Prestressed Box Girders", *Computer-Aided Civil and Infrastructure Engineering*, 33(1), pp. 64-78, 2017.
- A37 Lukowiak, A., Zur, L., Tran, T.N.L., (...), Zonta D., Righini, G.C., Ferrari, M. "Sol-gel-

derived glass-ceramic photorefractive films for photonic structures”, *Crystals* 7(2),61, 2017.

- A36 Zur L., Tran L.T.N., Meneghetti M., Tran V.T.T, Lukowiak A., Chiasera A., Zonta, D., Ferrari M., Righini G.C. “Tin-dioxide nanocrystals as Er<sup>3+</sup> luminescence sensitizers: Formation of glass-ceramic thin films and their characterization”, *Optical Materials*, v.63, n.1, p. 95-100, 2017.
- A35. 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*, v. 142(7), n.04016026, 2016.
- A34. Cappello C., Zonta D., Glišić B., “Expected utility theory for monitoring-based decision making”, *Proceedings of the IEEE*, 104(8), p.1647-1661, 2016.
- A33. Pozzi M., Zonta D., “The remarkable story of Portogruaro Civic Tower’s probabilistic health monitoring”, *Structural Monitoring and Maintenance*, v.2, n.4, p.301-318, 2015.
- 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., 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., Stratakis 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., Savadkoobi 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., Savadkoobi 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.
- B102 Tran, L.T.N., Armellini, C., Balda, R., Benabdesselam, M., Berneschi, S., Blanc, W., Boulard, B., Carpentiero, A., Chiappini, A., Chiasera, A., Dentella, P., Dorosz, D., Eaton, S., Falconi, M.C., Fernandez, J., Ferrari, M., Gates, J., Gluchowski, P., Ischia, G., Lukowiak, A., Mady, F., Massella, D., Nunzi Conti, G., Prudeniano, F., Rossi, B., Ramponi, R., Righini, G.C., Sazio, P.-J., Speranza, G., Varas, S., Zonta, D., Zur, L., Photonic glass ceramics based on SnO<sub>2</sub> nanocrystals: Advances and perspectives Proceedings of SPIE - The International Society for Optical Engineering, 11276, art. no. 1127614, 2020.
- B101 Ngoc Tran, L.T., Massella, D., Balda, R., Berneschi, S., Blanc, W., Boulard, B., Chiappini, A., Chiasera, A., Dentella, P., Eaton, S., Fernandez, J., Ferrari, M., Gates, J., Gluchowski, P., Ischia, G., Lukowiak, A., Conti, G.N., Prudeniano, F., Rossi, B., Righini, G.C., Zonta, D., Zur, L., SiO<sub>2</sub>-SnO<sub>2</sub> photonic glass-ceramics, International Conference on Transparent Optical Networks, 2019-July, art. no. 8840012, 2019.
- B100 Chiasera, A., Meroni, C., Scotognella, F., Boucher, Y., Lukowiak, A., Ristic, D., Speranza, G., Varas, S., Zur, L., Ivanda, M., Taccheo, S., Tran, L.T.N., Zonta, D., Ramponi, R., Righini, G.C., Ferrari, M., RF-sputtering technique for fabrication of dielectric multilayer structures with low-threshold coherent emission at 1.5  $\mu$ m, 2019 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference, CLEO/Europe-EQEC 2019, art. no. 8871816, 2019.
- B99 Verzobio, A., Bolognani, D., Zonta, D., Quigley, J., Quantifying the benefit of structural health monitoring: Can the value of information be negative?, Structural Health Monitoring 2019: Enabling Intelligent Life-Cycle Health Management for Industry Internet of Things (IIOT) - Proceedings of the 12th International Workshop on Structural Health Monitoring, 1, pp. 1447-1454, 2019.
- B98 Zhelyazkov, A., Furtner, P., Wenzel, H., Zonta, D., Estimating damage level in reinforced concrete structures based on the detection of high-frequency transients (2019) Structural Health Monitoring 2019: Enabling Intelligent Life-Cycle Health Management for Industry Internet of Things (IIOT) - Proceedings of the 12th International Workshop on Structural Health Monitoring, 2, pp. 2501-2508, 2019.
- B97 Maroni, A., Tubaldi, E., Val, D., McDonald, H., Lothian, S., Riches, O., Zonta, D., A decision support system for scour management of road and railway bridges based on Bayesian networks, Structural Health Monitoring 2019: Enabling Intelligent Life-Cycle Health Management for Industry Internet of Things (IIOT) - Proceedings of the 12th International Workshop on Structural Health Monitoring, 2, pp. 2394-2401, 2019.
- B96 Chiasera, A., Meroni, C., Scotognella, F., Boucher, Y., Lukowiak, A., Ristic, D., Speranza, G., Varas, S., Zur, L., Ivanda, M., Taccheo, S., Tran, L.T.N., Zonta, D., Ramponi, R., Righini, G.C., Ferrari, M., RF-sputtering technique for fabrication of dielectric multilayer structures with low-threshold coherent emission at 1.5  $\mu$ m, Optics InfoBase Conference Papers, Part F140-CLEO\_Europe 2019, art. no. 2019-ce\_2\_2, 2019.
- B95 Verzobio A., Bolognani D., Zonta D., Quigley J., "Quantifying the benefit of SHM: can the Vol be negative?", Proceedings of 13th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP), Seoul (Korea), May 26-30, 2019.
- B94 Bolognani D., Verzobio A., Zonta D., Quigley J., "How heuristic behaviour can affect SHM-based decision problems?", Proceedings of 13th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP), Seoul (Korea), May 26-30, 2019.
- B93 Bolognani, D., Verzobio A., Zonta D., "Bayesian multi-parameter estimation using

the mechanical equivalent of logical inference”, Proceedings of 13th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP), Seoul (Korea), May 26-30, 2019.

- B92 Zur, L., Tran, L.T.N., Massella, D., Vaccari, A., Chiappini, A., Chiasera, A., Varas, S., Armellini, C., Carpentiero, A., Boulard, B., Dorosz, D., Pelli, S., Trono, C., Berneschi, S., Nunzi Conti, G., Gates, J., Sazio, P.-J., Rossi, B., Iacob, E., Micheli, V., Speranza, G., Ischia, G., Prudeniano, F., Lukowiak, A., Zonta, D., Ramponi, R., Righini, G.C., Ferrari, M., Si=O<sub>2</sub>-SnO<sub>2</sub> transparent glass-ceramics activated by rare earth ions, Proceedings of SPIE - The International Society for Optical Engineering, 10914, art. no. 1091411, 2019.
- B91 Bolognani, D., Verzobio, A., Zonta, D., Quigley, J., “Quantifying the benefit of SHM: Can the Vol be negative?”, Proceedings of SPIE, 10170, art. no. 1097011, 2019.
- B90 Bursi O.S., Zonta D., Debiasi E., Trapani D., “Structural health monitoring for seismic protection of structure and infrastructure systems in Proceedings of the 16th International Conference on Earthquake Engineering and Structural Dynamics (16ECEE), Thessaloniki, 18-12 June, 2018.
- B89 Bolognani, D., Verzobio, A., Tonelli, D., Cappello, C., Glisic, B., Zonta, D., “Quantifying the benefit of SHM: What if the manager is not the owner?”, Proceedings of the 11th International Workshop on Structural Health Monitoring, IWSHM 2017, 1, pp. 1324-1331, 2017.
- B88 Piccolo, V., Chiappini, A., Vaccari, A., Lesina, A.C., Ferrari, M., Deseri, L., Zonta, D., “Validating 3D photonic crystals for structural health monitoring”, Proceedings of the 11th International Workshop on Structural Health Monitoring, IWSHM 2017, 1, pp. 1405-1412, 2017.
- B87 Tonelli, D., Verzobio, A., Cappello, C., Bolognani, D., Zonta, D., Bursi, O.S., Costa, C., “Expected utility theory for monitoring-based decision support system”, Proceedings of the 11th International Workshop on Structural Health Monitoring, IWSHM 2017, 2, pp. 2072-2079, 2017.
- B86 Bolognani, D., Verzobio, A., Tonelli, D., Cappello, C., Glisic, B., Zonta, D., “An application of prospect theory to a SHM-based decision problem”, Proceedings of SPIE, 10170, art. no. 101702G, 2017.
- B85 Piccolo, V., Chiappini, A., Vaccari, A., Calà Lesina, A., Ferrari, M., Deseri, L., Perry, M., Zonta, D., “Finite difference analysis and experimental validation of 3D photonic crystals for structural health monitoring”, Proceedings of SPIE, 10168, art. no. 101681E, 2017
- B84 Tran, L.T.N., Meneghetti, M., Zur, L., Chiasera, A., Armellini, C., Varas, S., Tran, T.T.V., Lukowiak, A., Zonta, D., Righini, G.C., Ferrari, M., “Tin dioxide based photonic systems”, Optics InfoBase Conference Papers, Part F82-CLEO\_Europe 2017.
- B83 Zur, L., Tran, L.T.N., Meneghetti, M., Varas, S., Armellini, C., Ristic, D., Chiasera, A., Scotognella, F., Pelli, S., Conti, G.N., Boulard, B., Zonta, D., Dorosz, D., Lukowiak, A., Righini, G.C., Ramponi, R., Ferrari, M., “Glass and glass-ceramic photonic systems”, Proceedings of SPIE, 10106, art. no. 1010603, 2017.
- B82 Cappello, C., Bolognani, D., Zonta, D., “Mechanical equivalent of Bayesian inference from monitoring data”, Proceedings of SPIE - The International Society for Optical Engineering, 9803, art. no. 98031O, 2016.
- B81 Cappello, C., Bolognani, D., Zandonini, R., Zonta, D., “An application of expected utility theory for the optimization of bridge maintenance strategies”, Maintenance, Monitoring, Safety, Risk and Resilience of Bridges and Bridge Networks - Proceedings of the 8th International Conference on Bridge Maintenance, Safety and Management, IABMAS 2016, pp. 854-860, 2016
- B80 Tran, T.N.L., Meneghetti, M., Zur, L., Van Tran, T.T., Lukowiak, A., Zonta, D., Righini, G.C., Ferrari, M., “SnO<sub>2</sub> based glasses: A viable photonic system”, IET Conference Publications (CP704), 2016

- B79 Bonelli, A., Beltempo, A., Cappello, C., Bolognani, D., Bursi, O.S., Zonta, D., Costa, C., Pardatscher, W., "Multi-sensor structural monitoring of Colle Isarco viaduct", Maintenance, Monitoring, Safety, Risk and Resilience of Bridges and Bridge Networks - Proceedings of the 8th International Conference on Bridge Maintenance, Safety and Management, IABMAS 2016, pp. 380-387, 2016
- B78 Cappello, C., Zandonini, R., Zonta, D., "Expected utility theory for the optimization of bridge management", Proc. IABSE Conference, Guangzhou 2016: Bridges and Structures Sustainability - Seeking Intelligent Solutions, pp. 1020-1027, 2016.
- B77 Piccolo V., Piotrowska A., Chiappini A., Vaccari A, Ferrari M, Deseri L., Zonta D., "Photonic crystal slab strain sensors: A viable tool for structural health monitoring", Proc. 18th International Conference on Transparent Optical Networks, ICTON 2016; Trento, 10-14 July, 2016.
- B76 Cappello C., Bolognani D., Zonta D., "Mechanical equivalent of Bayesian inference from monitoring data", Proc. SPIE 9803, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2016, 98031O.
- B75 Madaschi A., Gajo A., Molinari M., Zonta D., "Dynamic characterization of shallow foundations with full-scale tests", Proc. 1st IMEKO TC4 International Workshop on Metrology for Geotechnics, MetroGeotechnics 2016, Benevento, 17 -18 Mar 2016.
- B74 Bolognani D., Cappello C., Zonta D., "Mechanical equivalent of logical inference: Application to structural health monitoring problems", Proc. 2016 International Conference on Smart Infrastructure and Construction, ICSIC 2016, Cambridge, UK; 27-29 Jun 2016.
- B73 Cappello, C., Sigurdardottir, D., Glisic, B., Zonta, D., Pozzi, M., "A formal approach to structural health monitoring design" Proc. 8th European Workshop on Structural Health Monitoring (EWSHM 2016), Bilbao, 5-8 July 2016.
- B72 Piccolo V., Piotrowska A., Chiappini A., Vaccari A., Ferrari M., Deseri L., Zonta D. "Numerical Characterization of Mechanochromic Photonic Crystals for Structural Health Monitoring" Proc. 8th European Workshop on Structural Health Monitoring (EWSHM 2016), Bilbao, 5-8 July 2016.
- B71 Bolognani, D., Cappello, C., Zonta, D., "Solving Bayesian multi-parameter estimation problems using the mechanical equivalent of logical inference", Proc. 8th European Workshop on Structural Health Monitoring (EWSHM 2016), Bilbao, 5-8 July 2016.
- B70 Cappello C., Zandonini R., Zonta D., "An implementation of expected utility theory in a civil engineering decision problem", Proc. IABSE Conference 2015: Structural 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., Debiassi 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 perception 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.
- B51. Zonta D., Bruschetta F., Zandonini R., Pozzi M., Wang M., Zhao Y., Inaudi D., Posenato D., Glisic B., "Analysis of monitoring data from cable-stayed bridge using sensor fusion techniques", Proc. SPIE. 8692, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2013 869229 (doi: 10.1117/12.2014733).

- B50. Trapani D., Biasi N., De Cecco M., Zonta D., "Validation of MEMS acceleration measurements for seismic monitoring with LVDT and vision system", Proc. "2012 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems (EESMS 2012)", Perugia, 28 Sep, 2012.
- B49. Yue Y., Pozzi M., Zonta D., Zandonini R., "Bayesian Networks for Post-Earthquake Assessment of Bridges", Proc. "International Symposium on Reliability Engineering and Risk Management (ISRERM 2012)", Yokohama, 05-08 Aug, 2012.
- B48. Yue Y., Pozzi M., Zonta D., Zandonini R., "Bayesian networks for post-earthquake assessment of bridges", In: "Bridge Maintenance, Safety, Management, Resilience and Sustainability", Leiden (NL): CRC Press/Balkema, 2012. Proc. "6th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2012)", Stresa, 8-12 Jul, 2012.
- B47. Debiasi E., Gajo A., Zonta D., "Seismic vulnerability of shallow buried rectangular structures", In: "Bridge Maintenance, Safety, Management, Resilience and Sustainability", Leiden (NL): CRC Press/Balkema, 2012. Proc. "6th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2012)", Stresa, 8-12 Jul, 2012.
- B46. Zonta D., Esposito P., Molognoni M., Pozzi M., Zandonini R., Wang M.L., Zhao Y., Inaudi D., Posenato D., "A combination of sensing techniques to estimate tension and elongation in bridge cable-stays", In: "Bridge Maintenance, Safety, Management, Resilience and Sustainability", Leiden (NL): CRC Press/Balkema, 2012. Proc. "6th International Conference on Bridge Maintenance, Safety and Management (IABMAS 2012)", Stresa, 8-12 Jul, 2012.
- B45. Zonta D., Esposito P., Molognoni M., Zandonini R., Wang M.L., Zhao Y., Yim J., Torres Gorris B., "Calibration of elasto-magnetic sensors for bridge-stay cable monitoring", In: "Structural Health Monitoring 2012", Berlin: DGZfP e. V., 2012. Proc. "6th European Workshop on Structural Health Monitoring", Dresden, 3-6 Jul, 2012.
- B44. Glisic B., Adriaenssens S., Zonta D., "The impact of monitoring on decision making", In: "Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2012", Proc. SPIE, v. 8345, p. 83452I, 2012 (DOI: 10.1117/12.915752)
- B43. Trapani D., Zonta D., Molinari M., Amditis A., Bimpas M., Bertsch N., Spiering V., Santana J., Sterken T., Torfs T., Bairaktaris D., Bairaktaris M., Camarinopoulos S., Frondistou-Yannas M., Ulieru D., "Full-scale laboratory validation of a wireless MEMS-based technology for damage assessment of concrete structures", In: "Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2012", Proc. SPIE, v. 8345, p. 83454L, 2012 (DOI: 10.1117/12.917621).
- B42. Zonta D., Esposito P., Molognoni M., Pozzi M., Zandonini R., Wang M.L., Zhao Y., Inaudi D., Posenato D., Glisic B., "Estimation of load redistribution on a cable-stayed bridge using a combination of sensing techniques", In: "Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2012", Proc. SPIE, v. 8345, p. 834509, 2012 (DOI: 10.1117/12.917540).
- B41. Zonta D., Glisic B., Adriaenssens S., "Streicker Bridge: The impact of monitoring on decision making", In: Structural Health Monitoring 2011, Lancaster, USA:DEStech Publications, p. 1847-1854, 2011. Proc. "8th International Workshop on Structural Health Monitoring", Stanford, 13-15 Sep, 2011.
- B40. Zonta D., Trapani D., Larcher F., Amditis A., Bertsch N., Bimpas M., Garetsos A., Saillen N., Santana J., Sterken T., Stratakis Y., Torfs T., Ulieru D., "Laboratory validation of MEMS-based sensors for post-earthquake damage assessment", In: Structural Health Monitoring 2011, Lancaster, USA:DEStech Publications, p. 2165-2172, 2011. Proc. "8th International Workshop on Structural Health Monitoring", Stanford, 13-15 Sep, 2011.
- B39. Pozzi M., Zonta D., Santana J., Colin M., Saillen N., Torfs T., Amditis A., Bimpas M., Stratakis Y., Ulieru D., Bairaktaris D., Frondistou-Yannas S., Kalidromitis V., "Laboratory validation of MEMS-based sensors for post-earthquake damage

assessment", In: "Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2011", Proc. SPIE, v. 7981, p. 79810Y, 2011 (DOI: 10.1117/12.882015).

- B38. Pozzi M., Zonta D., Wang W., Chen G., "A framework for evaluating the impact of structural health monitoring on bridge management". Proc. "5th International Conf. on Bridge Maintenance, Safety and Management (IABMAS2010)", Philadelphia, 11-15 Jul, 2010.
- B37. Yue Y., Zonta D., Bortot F., Zandonini R., "Assessment of the operation level of a bridge network in post-earthquake scenarios". Proc. "5th International Conf. on Bridge Maintenance, Safety and Management (IABMAS2010)", Philadelphia, 11-15 Jul, 2010.
- B36. Yue Y., Pozzi M., Zonta D., Bortot F., Zandonini R., "Seismic Assessment using a Bayesian Network". Proc. "International Symposium on Reliability Engineering and Risk Management (ISRERM2010)", Shanghai, 23-26 Sep, 2010.
- B35. Amditis A., Stratakis Y., Bairaktaris D., Bimpas M., Camarinopoulos S., Frondistou-Yannas S., Kalidromitis V., Pozzi M., Santana J., Saillen N., Torfs T., Ulieru D., Wenk B., Zonta D., "Wireless sensor network for seismic evaluation of concrete buildings", Proc. "5th European Workshop on Structural Health Monitoring (EWSHM 2010)", Sorrento, Italy, 29 Jun - 02 Jul, 2010.
- B34. Chiappini A., Armellini C., Battisti L., Benedetti M., Brenci M., Cacciari I., Ferrari M., Pozzi M., Righini G.C., Zonta D., "Mechanochromic photonic crystals as strain sensors", Proc. "Smart Systems Integration 2010", Como, Italy, 23-24 Mar, 2010.
- B33. Wu H., Zonta D., Pozzi M., Zanon P., Ceriotti M., Mottola L., Picco G.P., Murphy A.L., Guna S., Corrà M., "Wireless sensors for permanent monitoring of heritage buildings". In: Sensors and smart structures technologies for civil, mechanical, and aerospace systems 2010: 7 - 11 March 2010, San Diego, California, USA, Bellingham (WA):SPIE, 2010.
- B32. Zandonini R., Yue Y., Bortot F., Zonta D., "Network-level seismic risk management of regional road infrastructure". In: Large Structures and Infrastructures for Environmentally Constrained and Urbanised Areas, Zurich: IABSE, 2010. Proc. "IABSE Symposium", Venice, 22-24 Sep 2010.
- B31. Kim J., Lynch J.P., Zonta D., Lee J.J., Yun C.B. "Reconfigurable wireless monitoring systems for bridges: validation on the Yeondae Bridge", Proc. SPIE, v. 7292, p. 72920T, 2009 (DOI:10.1117/12.816007).
- B30. Zonta D., Chiappini A., Chiasera A., Ferrari M., Pozzi M., Battisti L., Benedetti M., "Photonic crystals for monitoring fatigue phenomena in steel structures", Proc. SPIE v. 7292, p. 729215, 2009 (DOI:10.1117/12.814915).
- B29. Bernal D., Zonta D., Pozzi M., "An examination of the ARX as a residual generator for damage detection", Proc. SPIE, v. 7295, p. 729521, 2009, (DOI:10.1117/12.816211).
- B28. Kim J., Lynch J.P., Zonta D., Yun C.B., Lee J.J., "Modal Analysis of the Yeondae Bridge using a Reconfigurable Wireless Monitoring System". In: Safety and Reliability of Engineering Systems and Structures, Rotterdam:MILL Press, 2009. Proc "10th International Conference on Structural Safety and Reliability (ICOSSAR 2009)", Osaka, 13-17 Sep, 2009.
- B27. Ceriotti M., Mottola L., Picco G.P., Murphy A.L., Guna S., Corrà M., Pozzi M., Zonta D., Zanon P. "Monitoring Heritage Buildings with Wireless Sensor Networks: The Torre Aquila Deployment". In: Proceedings of the 8th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN 2009, SPOTS track), San Francisco, CA, April 13-16, 2009. Best Paper Award.
- B26. Zonta D., Pozzi M., Wu H., Inaudi D., "Application of Bayesian logic to the condition assessment of a smart precast element". In: Safety and Reliability of Engineering Systems and Structures, Rotterdam:MILL Press, 2009. Proc. "10th International Conference on Structural Safety and Reliability (ICOSSAR 2009)", Osaka, 13-17



Sep, 2009.

- B25. Zonta D., Zandonini R., Bortot F., "Risk informed management of road infrastructure". In: Safety and Reliability of Engineering Systems and Structures, Rotterdam:MILL Press, 2009. Proc. "10th International Conference on Structural Safety and Reliability (ICOSSAR 2009)", Osaka, 13-17 Sep 2009.
- B24. Wu H., Zonta D., Pozzi M., Zanon P., Ceriotti M., Mottola L., Picco G.P., Murphy A.L., Guna S., Corrà M., "Real-time health monitoring of historic buildings with wireless sensor networks" In: Structural Health Monitoring 2009, Lancaster, USA:DEStech Publications, 2009. Proc. "7th International Workshop on Structural Health Monitoring", Stanford, 9-11 Sep 2009.
- B23. Zonta D., Zandonini R., Bortot F., "A Tool for Planning the Future of Regional Infrastructure". In: Sustainable Infrastructure Environment Friendly, Safe and Resource Efficient, Zurich: IABSE, 2009. Proc. "IABSE Symposium", Bangkok, 9-11 Sep 2009.
- B22. Zonta D., Pozzi M., Wu H., Inaudi D., "Experimental evaluation of a smart prestressed element instrumented with multiplexed interferometric fiber optic sensors" In: Structural Health Monitoring 2008, Lancaster, USA:DEStech Publications, 2008. Proc. "4rd European Workshop on Structural Health Monitoring", Krakow, 2-4 July 2008.
- B21. Zonta D., Pozzi M., Zanon P., Anese G.A., Busetto A., "Real-time Probabilistic Health Monitoring of the Portogruaro Civic Tower". In: Structural Analysis of Historical Constructions 2008, Rotterdam:Balkema, 2008. Proc. "VI International conference on Structural Analysis of Instorical Constructions (SAHC08)", Bath, 2-4 Jul 2008.
- B20. Zonta D., Pozzi M., Wu H., Inaudi D., "Design and laboratory validation of a structural element instrumented with multiplexed interferometric fiber optic sensors". In: Sensors and smart structures technologies for civil, mechanical, and aerospace systems 2008: 10 - 13 March 2008, San Diego, California, USA, Bellingham (WA):SPIE, 2008. Proceedings of SPIE, Vol. 6932.
- B19. Zonta D., Pozzi M., Wu H., Inaudi D., "Smart structural elements for the condition monitoring of bridge structures". In: Bridge Maintenance, Safety, Management, Life-Cycle Performance and Cost, Rotterdam:Balkema, 2008. Proc. "4th International Conf. on Bridge Maintenance, Safety and Management (IABMAS08)", Seoul, 13-17 Jul 2008.
- B18. Zonta D., Bortot F., Zandonini R., "A condition index based on the concept of Apparent Age". In: Bridge Maintenance, Safety, Management, Life-Cycle Performance and Cost, Rotterdam:Balkema, 2008. Proc. "4th International Conf. on Bridge Maintenance, Safety and Management (IABMAS08)", Seoul, 13-17 Jul 2008.
- B17. Pozzi M., Zonta D., Wu H., Inaudi D., "Multiplexing low-coherence interferometer sensors: laboratory tests and design for integration within RC structures ". In: Sensors and smart structures technologies for civil, mechanical, and aerospace systems 2007: 19 - 22 March 2007, San Diego, California, USA, Bellingham (WA):SPIE, 2007. Proceedings of SPIE, Vol. 6529.
- B16. Zonta D., Zandonini R., Bortot F., "Planning the future of regional road infrastructure: a case study". In: Improving Infrastructure Worldwide, Zurich: IABSE, 2007. Proc. "IABSE Symposium", Weimar, 19-21 Sep 2007.
- B15. Zonta D., Pozzi M., Zanon P., "Distributed technologies for the structural monitoring of the historical heritage". In: Structural Analysis of Historical Constructions 2006, Rotterdam:Balkema, 2006. Proc. "V International conference on Structural Analysis of Historical Constructions (SAHC06)", New Delhi, 6-8 Nov 2006.
- B14. Zonta D., Pozzi M., Colombo A., Inaudi D., Figini A., "Advances in Manufacture of Smart Prestressed Reinforced Concrete Elements". In: Structural Health Monitoring 2006, Lancaster, USA:DEStech Publications, 2006. Proc. "3rd European Workshop on Structural Health Monitoring", Granada, 5-7 July 2006.
- B13. Zonta D., Zandonini R., Bortot F., De Col R., Nicolussi Paolaz P., " An outline of the

- APT bridge management software". In: Bridge Maintenance, Safety, Management, Life-Cycle Performance and Cost, Rotterdam:Balkema, 2006. Proc. "3th International Conf. on Bridge Maintenance, Safety and Management (IABMAS06)", Porto, 16-19 Jul 2006.
- B12. Zonta D., Pozzi M., Bursi O. S., Colombo A., "Industrial Design of Instrumented PRC Elements for the Condition Monitoring of Civil Infrastructure". In: Smart Structures and materials, Bellingham, WA, USA:SPIE The International Society for optical Engineering, 2006. Proc. "SPIE Smart Structures and Materials", San Diego, CA, 26 Feb-2 Mar 2006.
- B11. Zonta D., Zandonini R., Bortot F., "A reliability-based approach to prioritization in bridge management. 9th International Conference on Structural Safety and Reliability". In: Safety and Reliability of Engineering Systems and Structures, Augusti G., Schueller G., Ciampoli M. (Eds.), Rotterdam:MILL Press, 2005. p. 147-147. Proc.: "9th International Conference on Structural Safety and Reliability", Rome (Italy), 19-23 Jun 2005.
- B10. Zonta D., Pozzi M., Forti M., Bursi O. S., "Smart RC elements for long-life monitoring of civil infrastructures: 12th SPIE Annual International Symposium on Smart Structures and Materials". In: Smart Structures and Materials 2005: Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems, Bellingham, Wash.:SPIE, 2005. Proc. of SPIE, Vol. 5765, p. 430-441. San Diego, 6-10 Mar 2005.
- B9. Zonta D., Bursi O. S., Novati G., Zandonini R., "An experimental evaluation of the performance of a smart-beam system. First International Conference on Experimental Structural Engineering". In: AESE 2005, vol. 2, Itoh Y., Aoki T. (Eds.), Japan:Hchiryusha, 2005. p. 717-724. . Proc. "AESE '05", Nagoya (Japan), 19-21 July 2005.
- B8. Zandonini R., Zonta D., Bortot F., "Bridge management systems for medium-sized local agencies: notes from an italian experience". In: Bridge maintenance, safety, management and cost, a cura di Watanabe E., Frangopol D. M., Utsonomiya T., Leiden:Balkema, 2004. p. 69-77. Proc. "IABMAS'04", Kyoto, 18-22 Oct 2004.
- B7. Zonta D., Bursi O. S., Pozzi M., "Development of an FBG-based dynamic measurement system for real-time monitoring of RC elements". In: Structural Health Monitoring 2004, Lancaster, PA, US:Destech Publications Inc., 2004. Proc. "2nd european workshop on structural health monitoring 2004", Muenchen, 07-09 July 2004.
- B6. Saccone G., Viola E., Zonta D., "Analysis of the Dynamic Response of MDOF Systems Exhibiting Dispersive Behaviour of the 'Frequency Splitting' Type". Proceedings "V World Congress on Computational Mechanics", H.A. Mang, F.G. Rammerstofer, J. Eberhardsteiner. (Eds.), Vienna, 7-12 Jul 2002.
- B5. Zonta, D., Modena, C., Bursi, O. S., "Analisis of dispersive phenomena in damaged structures", Proc. Conf. System Identification & Structural Monitoring, Madrid, 06-09 Jun 2000, Un. Politecnica de Madrid, SP, (2), pp. 801-810.
- B4. Modena C., Franchetti P., Zonta D., Menga R., Pizzigalli E., Ravasio F., Muti M., Meloni R., Bordone G., "Static and Dynamic Analyses of 'Maniace Castle' in Siracusa-Sicily". Proceedings "III Int. Seminar on Structural Analysis of Historical Constructions", Guimareas, Portugal, 2001.
- B3. Modena, C., Riolfo, A., Zonta, D., "Dynamic investigation on the Palazzo della Ragione Roof in Padua". Proc. "8th Int. Conf. on Structural Faults and Repair", Edinburgh 13-15 July 1999, Engineering Technics Press, Edinburgh, 1999, pp. 132-141.
- B2. Modena, C., Rossi, P. P., Zonta, D. "Static and dynamic investigation on the roman amphitheatre (Arena) in Verona." Proc., IABSE Int. Colloquium "Inspection and Monitoring of the Architectural Heritage", Seriate, 1997, Ferrari Ed., Clusone (BG), pp. 73-80.
- B1. Modena, C., Bettio, C., Zonta, D., "Structural characterisation of the roman

amphitheatre (Arena) in Verona." Proc., 7th Int. Conf. on Structural Faults and Repair, Engineering Technics Press, Edinburgh, 1997, vol. 3, pp. 247-254.

#### C. Other Conference Publications

- C59 Maroni A., Tubaldi E., Douglas J., Ferguson N., Zonta D., McDonald H., Walker D., Greenoak E., Green C., "Using Bayesian Networks for the assessment of underwater scour for road and railway bridges", Proc. Structural Fault + Repair 2018' & 'European Bridge Conference 2018, Edinburgh, 14-17 May 2018.
- C58 Cappello C., Zonta D., Glisic B., "Expected utility theory for monitoring-based decision making", Proc. 2nd International Conference on Safety and Reliability of Ships, Offshore and Subsea Structures (SAROSS 2016), Glasgow, 15-17 Aug, 2016.
- C57 Zonta D., Cappello C., Beltempo A., Bonelli A., Bolognani D., Bursi O.S., Costa C. Pardatscher W., "Structural retrofit and health monitoring of Colle Isarco viaduct", Proc. Structural Fault + Repair 2016, Edinburgh, 17-19 May 2016.
- C56. Yue Y., Pozzi M., Zonta D., Bortot F., Zandonini R., "Seismic risk assessment in Bridge Management Systems", Proc. "15th World Conference on Earthquake Engineering (15WCEE)", Lisbon, 24-28 Sep, 2012.
- C55. Trapani D., Zonta D., Molinari M., Amditis A., Bimpas M., Bertsch N., Spiering V., Santana J., Sterken T., Torf T., Bairaktaris D., Bairaktaris M., Camarinopulos S., Frondistou-Yannas M., Ulieru D., "Full-scale Laboratory Validation of a MEMS-based Technology for Post-earthquake Damage Assessment", Proc. "15th World Conference on Earthquake Engineering (15WCEE)", Lisbon, 24-28 Sep, 2012.
- C54. Loss C., Piazza M., Zonta D., "Direct displacement-based seismic design of timber structures with dowel-type fastener connections", Proc. "15th World Conference on Earthquake Engineering (15WCEE)", Lisbon, 24-28 Sep, 2012.
- C53. Loss C., Zonta D., Piazza M., "Analytical model to evaluate the equivalent viscous damping of timber structures with dowel-type fastener connections", Proc. "World Conference on Timber Engineering", Auckland, 16-19 Jul, 2012.
- C52. Pozzi M., Der Kiureghian A., Yue Y., Zonta D., "Bayesian network with Gaussian variables for post-earthquake emergency management", Proc. "Reliability and Optimization of Structural Systems, IFIP WG 7.5 Working Conference", Yerevan, Armenia, 24-27 Jun, 2012,
- C51. Zonta D., Esposito P., Pozzi M., Molognoni M., Zandonini R., Wang M.L., Inaudi D., Posenato D., Glisic B., "Monitoring Load Redistribution in a Cable-Stayed Bridge", Proc. "5th European Conference on Structural Control", Genova, 18-20 Jun, 2012.
- C50. Yue Y., Zonta D., Pozzi M., Bortot F., Zandonini R., "System reliability analysis of a Bridge Management System under earthquake hazards", Proc. "6th International ASRANet Conference for Integrating Structural Analysis, Risk and Reliability (ASRANet2012)", London, 02-04 Jul, 2012.
- C49. Torf T., Sterkn T., Brebels S., Santana J., van den Hoven R., Saillen N., Bertsch N., Trapani D., Zonta D., "Low power wireless sensor network for structural health monitoring of buildings using MEMS strain sensors and accelerometers", In: "Towards Intelligent Civil Infrastructure", Athens: Memscon, p. 41-48, 2012. Proc. "2nd International Memscon Workshop: Towards Intelligent Civil Infrastructure", Athens, 29 Mar, 2012.
- C48. Trapani D., Molinari M., Dalbosco D., Zonta D., Amditis A., Bimpas M., Bertsch N., Spiering V., Saillen N., Santana J., Sterken T., Torfs T., Bairaktaris D., Bairaktaris M., Camarinopolos S., Frondistou-Yannas S., Ulieru D., "Earthquake assessment of reinforced concrete buildings", In: "Towards Intelligent Civil Infrastructure", Athens: Memscon, p. 199-207, 2012. Proc. "2nd International Memscon Workshop: Towards Intelligent Civil Infrastructure", Athens, 29 Mar, 2012.
- C47. Bimpas M., Trapani D., Zonta D., Amditis A., Frondistou Yannas S., Kalidromitis V., Stratakis Y., Gkaretsos A., "MEMSCON project: Wireless Sensor Network for post-earthquake evaluation of concrete buildings", Proc. "5th International Conference on



Structural Health Monitoring of Intelligent Infrastructure (SHMII-5 2011)", Cancun, Mexico, 11-15 Dec, 2011. Best Paper Award.

- C46. Zonta D., Glisic B., Pozzi M., Inaudi D., Lau J.M., Fong C.C., "Concrete building, monitoring data, and Bayesian epistemology", Proc. "ACI Fall 2011 Convention", Cincinnati, 16-20 Oct 2012.
- C45. Yanchao Y., Zonta D., Pozzi M., Bortot F., Zandonini R., "Application of the Bayesian Network to Seismic Vulnerability Assessment in BMS" Proc. "XIV ANIDIS: L'Ingegneria sismica in Italia", Bari, 18-22 Sep 2011.
- C44. Debiassi E., Gajo A., Zonta D., "Vulnerabilità sismica di strutture interrate in "XIV ANIDIS: L'ingegneria Sismica in Italia", Proc. "XIV ANIDIS: L'Ingegneria sismica in Italia", Bari, 18-22 Sep 2011.
- C43. Yue Y., Pozzi M., Zonta D., Bortot F., Zandonini R., "Seismic Assessment using a Bayesian Network". Proc. "International Symposium on Reliability Engineering and Risk Management (ISRERM2010)", Shanghai, 23-26 Sep, 2010.
- C42. Fontanari V., Benedetti M., Monelli B.D., Zonta D., "Strain sensors for remote monitoring of the fatigue damage in wind towers". Proc. "Fourth International Conference on Engineering Failure Analysis", Cambridge (UK), 4-7 Jul, 2010.
- C41. Chiappini A., Armellini C., Battisti L., Benedetti M., Brenci M., Cacciari I., Ferrari M., Pozzi M., Righini G.C., Zonta D., "Mechanochromic photonic crystals as strain sensors", In: "Smart Systems Integration 2010", Berlin: VDE Verlag, 2010. Proc. "Smart Systems Integration 2010", Como, 23-24 Mar, 2010.
- C40. Zonta D., Pozzi M., Trapani D., "Laboratory validation of intelligent structure technologies". Proc. "MEMSCON Workshop: Structural Monitoring and Status-Dependent Maintenance and Repair of Constructed Facilities", Bucharest, 7 Oct, 2010.
- C39. Amditis A., Stratakis Y., Bairaktaris D., Bimpas M., Camarinopoulos S., Frondistou-Yannas S., Kalidromitis V., Pozzi M., Santana J., Saillen N., Torfs T., Ulieru D., Wenk B., Zonta D., "An overview of MEMSCON project: an intelligent wireless sensor network for after-earthquake evaluation of concrete buildings", Proc. "14th European Conference on Earthquake Engineering (14ECEE)", Ohrid, FYROM, 30 Aug - 03 Sep, 2010.
- C38. Molinari M., Pozzi M., Zonta D., Battisti L., "In-field testing of a steel wind turbine tower". In: IMAC-XXVIII : Structural Dynamics and Renewable Energy: Jacksonville, Florida. Bethel, CT:Society for Experimental Mechanics-SEM, 2010. Proc. "IMAC-XXVIII", Jacksonville (FL), 1-4 Feb, 2010.
- C37. Bernal D., Zonta D., Pozzi M., "ARX and Open Loop Residuals in Damage Detection". In: IMAC-XXVII : a Conference and Exposition on Structural Dynamics : Orlando, Florida. Bethel, CT:Society for Experimental Mechanics-SEM, 2009. Proc. "IMAC- XXVII", Orlando (FL), 9-12 Feb, 2009.
- C36. Loss C., Piazza M., Zonta D., Zanon P., "Direct Displacement Based Design applicato alle strutture in legno lamellare: calibrazione dello spostamento di progetto", 2009. Proc. "XIII Convegno Nazionale: L'Ingegneria Sismica in Italia ANIDIS 2009", Bologna, 28 Jun-2 Jul 2009.
- C35. Bortot F., Zonta D., Zandonini R., "La Vulnerabilità Sismica dei Ponti della Provincia Autonoma di Trento", 2009. Proc. "XIII Convegno Nazionale: L'Ingegneria Sismica in Italia ANIDIS 2009", Bologna, 28 Jun-2 Jul 2009.
- C34. Zonta D. Piazza M., Zanon P., Loss C., Sartori C., "Direct displacement-based design of glulam timber frame buildings", Proc. "14th World Conference on Earthquake Engineering (14WCEE)", Beijing, 12-17 Oct 2008.
- C33. Zonta D., Piazza M., Zanon P., Giuliani G., "Il Direct Displacement Based Design applicato a portali in legno lamellare". , 2007. Proc. "XII Convegno Nazionale: L'Ingegneria Sismica in Italia ANIDIS 2007", Pisa, 10-14 Jun 2007.
- C32. Zonta D., Pozzi M., "Probabilistic condition monitoring of smart structural elements". In: World Forum on Smart Materials and Smart Structures Technology:Chongquin

University, 2007. Proc. "SMSST07", Chongqing and Nanjing, 22-27 May 2007.

- C31. Zonta D., Bursi O. S., Pozzi M., Bernal D., Tigli O., "Localization of Damage in a Set of Concrete Beams: Examination of Two Techniques". In: 4th World Conference on Structural Control and Monitoring, San Diego:IASCM, 2006. San Diego, CA, 11-13 July 2006.
- C30. Zonta D., Pozzi M., Colombo A., Inaudi D., "Progress in Design of Smart Precast Reinforced Concrete Elements for Bridge Construction". In: 4th World Conference on Structural Control and Monitoring, San Diego:IASCM, 2006. San Diego, CA, 11-13 July 2006.
- C29. Zonta D., Piazza M., Zanon P., Giuliani G., "An application of Direct Displacement Based Design to Glulam Timber Portal-Frame Structures". In: Proceedings of the First European Conference on Earthquake Engineering and Seismology ECEES, Zurich (CH):Swiss Federal Institute of Technology, ETH, 2006. Genève (CH), 3-8 Settembre, 2006. Note: paper n.932.
- C28. Zonta D., Bernal D., "Strain-Based Approaches to Damage Localization in Civil Structures". In: IMAC-XXIV : a Conference and Exposition on Structural Dynamics : St.Louis, Missouri. Bethel, CT:Society for Experimental Mechanics-SEM, 2006. Proc. "IMAC- XXIV", Saint Louis (MO), 30 Jan–2 Feb 2006.
- C27. Bursi O. S., Molinari M., Savadkoobi A., Zonta D., "Modal updating for the identification of a steel-concrete composite moment resisting structure with partial-strength joints". In: Sperimentazione su materiali e strutture : convegno nazionale, Venezia, 2006. Proc. "Sperimentazione su Materiali e Strutture", Venezia, 6-7 Dec 2006.
- C26. Bortot F., Zonta D., Zandonini R., "A Bridge Management Strategy Based on Future Reliability and Semi-Markov Deterioration Models". In: "ASRANet: Third International Colloquium 2006", Glasgow: ASRANet, 2006. Glasgow (UK), 10-12 July 2006.
- C25. Pozzi M., Zonta D., Zanon P., "Riconoscimento del danno in strutture in cemento armato tramite sensori a fibra ottica". In: "Atti del 5° Workshop su ottiche diffrattive, microottica e microsistemi" Sesto Fiorentino: Società italiana di ottica e fotonica, 2006. Proc. "5° Workshop su ottiche diffrattive, microottica e microsistemi (ODIMI)", Firenze, 11-12 May 2006.
- C24. Zonta D., Zandonini R., Bortot F., "Reliability-based model for decision-making in infrastructure management". In: Advances in Life-Cycle Analysis and design of Civil Infrastructure Systems, Lincoln:University of Nebraska, 2005. p. 281-289. .Proc. "LCC05", Cocoa Beach (FL), 8-11 May 2005.
- C23. Zonta D., Zanon P., Pozzi M., Thiel T., "Development of an FBG-based dynamic measurement system for the real-time monitoring of RC elements: experimental application to a smart beam specimen". In: Proceedings of the Third European Conference on Structural Control, Wien:TU Wien, 2005. Vol. 2, p. S2-38-S2-41. Wien, 12-15 July 2004.
- C22. Zandonini R., Zonta D., Bortot F., "A Multi-level probability-based assessment procedure for bridge management". In: PMC04, Albuquerque:Sandia national laboratories, 2004. Proc. "9th ASCE Joint specialty conference on probabilistic mechanics and structural reliability", Albuquerque, NM, 26-28 July 2004.
- C21. Zonta D., Zanon P., Molinari M., Toffaletti, S. Anese G.A., Busetto A. "Aggiornamento della vulnerabilità sismica della Torre Civica di Portogruaro basato su misure vibrazionali". Proc. "XI Conf. ANIDIS." Jan 2004.
- C20. Zonta D., Elgamal A. W., Fraser M., Priestly M. J. N., "A Vibrational Based Methodology For After-Earthquake Damage Assessment Of Multistory Frame-Resistant Buildings". Proceedings "12th European Conf. on Earthquake Engineering", London, 2002.
- C19. Zonta D., Ceravolo R., Bursi O. S., Erlicher S., Zanon P., De Stefano A., "Issues on Vibration-based Identification of Complex Monumental Structures: the Dome of S. Gaudenzio Church in Novara". Proc. "3rd World Conf. on Structural Control", Como,

7-12 Apr 2002.

- C18. Viola E., Zonta D., Saccone G., "A Generalized Formulation for Linear MDOF Systems Utilizing Complex Operators". Proc. "Int. Conf. Structural Dynamics Modelling", Madeira, Portugal, 3-5 Jun 2002.
- C17. Fraser M., Elgamal A. W., Zonta D., "The Webshaker Pilot Project: An Internet Framework For Real-Time Monitoring And Control Systems Of Civil Engineering Structures". Proc. "3rd World Conf. on Structural Control", Como, 7-12 Apr 2002.
- C16. Zonta D., Saccone G., Viola E., "A Dispersion-based Approach to Structural Damage Modeling in Location Problems". Proceedings "Second Int. Conf. on Advances in Structural Engineering and Mechanics (ASEM'02)", Busan, Korea, 21-23 Aug 2002.
- C15. Elgamal A. W., Zonta D., Fraser M., "A Pilot Web-Shared Controlling and Monitoring System for Real-Time Assessment of Civil Engineering Structures". Proceedings "2nd ECCE Symposium on Information and Communication Technology in the Practice of Building and Civil Engineering", Espoo, FL, 2001.
- C14. Bonelli A., Bursi O. S., Svaldi A., Zonta D., "A Predictor-Corrector alpha-Method Applied to Pseudo-Dynamic Tests". Proceedings "COST-F3 Conf. Structural System Identification", Kassel, DE, 05-07 Sep 2001.
- C13. Facchin D., Franchetti P., Menin A., Modena C., Vettore A., Zonta D., "Il Rilevamento del Teatro Romano di Verona". Proc. "AUTEC", Napoli, 2001
- C12. Bonelli A., Bursi O. S., Svaldi A., Zonta D., "Un Integratore alpha-Generalizzato Predictor-Corrector Applicato alla Sperimentazione Pseudodinamica". Proceedings "X Congresso Nazionale "L'ingegneria Sismica in Italia" ANIDIS 2001", Potenza-Matera, 9-13 Sep, 2001.
- C11. Zanon P., Bursi O. S., Erlicher S., Zonta D., Clemente P., Indirli M., "Intervention Scenarios on the Basilica of San Gaudenzio Dome in Novara". Proceedings "7th International Seminar on Seismic Isolation, Passive Energy Dissipation and Active Control of Vibrations of Structures", Assisi, 2-5 Oct 2001.
- C10. Modena, C., Zanardo, G., Zonta, D., "Seismic response of reinforced masonry structures." Proc., XII World Conf. on Earthquake Engineering, Auckland, NZ, 30 Jan-4 Feb 2000, pp. 1990/1-1990/8.
- C9. Zonta, D., Franchetti, P., Modena, C., "Analisi dinamica sperimentale della copertura del Palazzo della Ragione di Padova", Proc. "VI Conv. Naz. Ingegneria del Vento", Genova, 18-21 Jun 2000.
- C8. Modena, C., Sonda, D., Zonta, D., "Localizzazione del danno in strutture in c. a. attraverso l'analisi dei meccanismi dissipativi." Proc., IX Convegno nazionale su l'Ingegneria Sismica in Italia, Torino, 20-23 Sep 1999, 12 pp.
- C7. Modena, C., Zonta, D., "Analisi dei fenomeni dispersivi nella risposta dinamica di strutture danneggiate." Proc., IX Convegno nazionale su l'Ingegneria Sismica in Italia, Torino, 20-23 Sep 1999.
- C6. Modena, C., Sonda, D., Zanardo, G., Zonta, D., "Risposta sismica di un modello in scala ridotta di edificio in muratura armata." Proc., IX Convegno nazionale su l'Ingegneria Sismica in Italia, Torino, 20-23 Sep 1999, 12 pp.
- C5. Modena, C., Sonda, D., Zonta, D., "Structural identification of reinforced masonry structures." Proc., 4th Int. Symposium on Computer Methods in Structural Masonry, Firenze, 03-05 Sep 1998, E & FN Spon, London, UK, pp. 269-276.
- C4. Modena, C., Zanardo, G., Zonta, D. "Shaking table testing on a reduced scale reinforced masonry model." Proc., XII European Conf. on Earthquake Engineering, Paris, 06-11 Sep 1998, A. A. Balkema, Rotterdam, NL, 10 pp.
- C3. Modena, C., Sonda, D., Zonta, D., "Sulla localizzazione del danno strutturale in elementi di c.a.p." Proc., 12° Congresso Collegio dei Tecnici dell'Industria Edilizia, (Padova 5-7/11/1998), pp. 293-302.
- C2. Modena, C., Sonda, D., Zonta, D. (1997). "Sperimentazione dinamica su edifici in

scala reale e scala ridotta." Proc., 8° Convegno Nazionale ANIDIS "L'Ingegneria Sismica in Italia", Taormina, 20-24 Sep 1997, Vol. 2, pp. 1041-1048.

- C1. Modena, C., Valluzzi, M. R., Zonta, D., "Stability under lateral loads of tall free-standing masonry walls in historical monuments." Proc., Learning From Practice II Joint ITA/US Workshop, Los Angeles, 21-25 Jul 1996, pp. 29-46.

#### D. Books and Book Chapters

- D9. Zonta D., Bursi O.S. (Eds.), "6th International Summer School on Smart Materials & Structures: a Cross-disciplinary Perspective", Trento: University of Trento, 2017.
- D8. Zonta D., Bursi O.S. (Eds.), "5th International Summer School on Smart Materials & Structures: a Cross-disciplinary Perspective", Trento: University of Trento, 2016.
- D7. Zonta D., Bursi O.S. (Eds.), "4th International Summer School on Smart Materials & Structures: a Cross-disciplinary Perspective", Trento: University of Trento, 2015.
- D6. Zonta D., Pugno N., Bursi O.S. (Eds.), "3rd International Summer School on Smart Materials, Structures & Systems: from Nano- to Macro-scale", Trento: University of Trento, 2014.
- D5. Zonta D., "Sensor data analysis, reduction and fusion for assessing and monitoring civil infrastructure", Chap. 2, in Wang M.L., Lynch J.P., Sohn H. (Eds.), "Sensor Technologies for Civil Infrastructures: Volume 2: Application in Structural Health Monitoring", Sawston (UK): Woodhead Publishing, 2014.
- D4. Pugno N., Zonta D. (Eds.), "2nd International Summer School on Smart Materials & Structures: a Cross-disciplinary Perspective", Trento: University of Trento, 2013.
- D3. Zonta D., Gei M., Bursi O.S. (Eds.), "1st International Summer School on Smart Structures: New Technologies from a Civil and Mechanical Engineering Perspective", Trento: University of Trento, 2012.
- D2. Amditis A., Bimpas M., Loupos K., Frondistou-Yannas S., Zonta D. (Eds.), "Towards Intelligent Civil Infrastructure", Athens: Memscos, 2012.
- D1. Modena C., Riva G., Valluzzi M. R., Mar G., Sonda D., Zonta D., Berti M., Da Porto F., Franchetti P., Zanardo G., "Caratterizzazione strutturale e consolidamento di costruzioni in muratura", Chap. 9, in Pesenti S. (Ed.), "Il progetto di conservazione: linee metodologiche per le analisi preliminari, l'intervento, il controllo di efficacia", Firenze: Alinea, p. 415-447, 2001.

#### E. Other

- E2. Bridge Management System of the Autonomous Province of Trento (APT-BMS), 2003-2015, <http://www.bms.provincia.tn.it>
- E1. Prototype of Historical Heritage Management System (HHMS), 2006, <http://hhms.ing.unitn.it:8080/hhms>