prof. Maurizio PIAZZA
University of Trento
Department of Civil, Environmental and Mechanical Engineering

MAURIZIO PIAZZA - CURRICULUM VITAE

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1. PERSONAL DATA

Name:	Maurizio Piazza
Born:	1953, Vicenza (Italy)
Present employment:	Full Professor (retired 2021), currently Senior Professor at UNITN Department of Civil, Environmental and Mechanical Engineering University of Trento (Italy)
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2. CURRICULUM VITAE

- March 1978: degree in Civil Engineering, University of Padova, cum laude.
- June 1978 - October 1983: teaching and research activity in Structural Analysis and Design at the Istituto di Scienza e Tecnica delle Costruzioni, Faculty of Engineering of the University of Padova; professional activity for industry, as consultant engineer (steel and concrete structures).
- October 1983: winner in a selection for university Researcher (regular position), at the Faculty of Engineering of the University of Padova; underwent in 1986/87 the evaluation to be confirmed, having successfully passed this last has been enrolled as permanent researcher from October 27th, 1986.
- October 1983 - October 1992: Researcher (regular position) and Assistant Professor in Structural Analysis and Design, at the Faculty of Engineering of the University of Padova; study and research activities at the Faculty of Engineering of the University of Padova in the field of Structural Analysis.
- 1990/91 and 1991/92: Associate Professor (as substitute teacher) in Structural Analysis and Design, at the Faculty of Engineering of the University of Trento.
- 1992: winner of the National selection for Associate Professor Position, in the group "Structural Analysis and Design".
- November 1, 1992: Associate professor of Structural Analysis and Design at the Faculty of Engineering of the University of Trento.
- From October 1992: Research activities at the Faculty of Engineering of the University of Trento (Department of Mechanical and Structural Engineering).
- From 1996: member of the Committee and teacher in the Ph. D. Program in "Modelling, Conservation and Control of Materials and Structures" at the Department of Mechanical and Structural Engineering of the University of Trento.
- 2001: winner of the selection for Full Professor position, in the group "Structural Design" (H07B-Tecnica delle costruzioni), University of L'Aquila.
- 2005: Full Professor position, Faculty of Engineering of the University of Trento.
- 2006-2012: Associate Dean of the courses of Civil Engineering, University of Trento
- 2018-2021: Associate Dean of the course of the 5-years Master course of Architecture and Building Engineering

In his didactic activity has been responsible for about 250 graduation theses in the field of structural design and static rehabilitation, at the University of Trento, and about 40 theses at the University of Padova.

Prof. Piazza moreover was involved in didactic activity as a teacher in the frame of the post-graduate course "Metodologie e Tecniche di Recupero e Restauro Edilizio" (Static restoration), organised since 1986 by the University of Padova. Prof. Piazza has carried out research activities in fields typical of the structural design and of the structural rehabilitation,

initially at the Istituto di Scienza e Tecnica delle Costruzioni of the University of Padova (1978/92), then at the Department of Mechanical and Structural Engineering (DIMS) of the University of Trento, later at the Department of Civil, Environmental and Mechanical Engineering (DICAM) of the University of Trento.

His research activity covered different topics, mentioned hereafter and whose results are published, partially at least, in the papers quoted in the references:

1) steel structures for civil buildings and connections (welded or bolted) for steel structures;
2) connections in metallic tubular structures;
3) earthquake resistant steel structures;
4) composite steel-concrete structures;
5) steel grade for reinforced concrete bars and structural safety;
6) existing timber structures: mechanical characterisation;
7) rehabilitation procedures for existing timber structures;
8) static and seismic behaviour of traditional timber structures;
9) traditional connections in timber structures;
10) innovative connection systems for glued laminated timber structures;
11) fire resistance of r.c. and timber structures.

Researches on wood as a structural material have been carried out within different Research Projects of national interest funded by the Italian Ministry of University (MURST): "Timber structures: behaviour of the connections" (years 1990-1993), involving the Universities of Trento, Milano, Pavia, Firenze and Padova. In this project he has been responsible for the Padova operating unit. He was member, in the same period (from 1989 to 1993), of the RILEM Technical Committe on Timber Structures TC.112 "Creep in timber structures", that issued, under the same title, the Report edited by P. Morlier.

Prof. Piazza has been involved in the Trento operating unit of the MURST project of national interest "Problems concerning the analysis and preservation of historic buildings " (Universities of Ancona, Basilicata, Calabria, Catania, Firenze, Genova, Milano, Napoli, Palermo, Roma, Roma III, Torino, Trento, Venezia), from 1994 to 1996 (scientific co-ordinator of the programme: prof. Salvatore Di Pasquale, Firenze).

At the University of Trento, he has been involved in the research project of relevant national interest: "The project of the preservation: guidelines for the preliminary analyses, the intervention, the control of the efficiency", from 1999 to 2001 (scientific co-ordinator of the programme: prof. Amedeo Bellini, Milano).

Finally, Prof. Piazza has been national responsible for the Research Project of national interest (PRIN), funded by the Italian Ministry for University and Research, "Diagnosis techniques and totally removable low invasive strengthening methods for the structural rehabilitation and the seismic improvement of historical timber structures" (years 2007-2008), involving the Universities of Trento, Bologna, Napoli "Federico II", Seconda Università degli Studi di Napoli, Trieste.

Prof. Maurizio Piazza has been a member of the Working Group 20 "Wood and wood materials", within the Committee "Beni culturali - NORMAL" of UNI, dealing with standards about diagnostics and conservation of cultural heritage. In this context, he was responsible and rapporteur for the project n. 14 "Cultural Heritage. Wooden artworks. Load bearing structures in buildings. Proposals for the preliminary evaluation, the design and the execution of works" (UNI 11138:2004).

He has been and he is active member of a number of RILEM Technical Committes:

- TC 215-AST, *Assessment of Timber Structures*;
- TC 245-RTE, *Reinforcement of Timber Elements in Existing Structures*;
- TC TPT (Cluster E. Masonry, Timber and Cultural Heritage), *Tests methods for a reliable characterization of resistance, stiffness and deformation properties of timber joints*.

He was also member of the:

- Committee CNR (Research National Council) charged to set up the instructions for the use of Fiber Reinforced Plastic Materials for civil constructions (DT 201/2005), in view of future relevant national standards, and the instructions for the design of timber structures (DT 206:2007);
- Committee CNR (Research National Council) charged to set up the instructions for the use of structural timber: Istruzioni per la Progettazione, l'Esecuzione ed il Controllo delle Strutture di Legno (DT 206/2007 and DT 206 R1).

3. MEMBERSHIP TO TECHNICAL SOCIETIES AND SCIENTIFIC COMMITTEES

- Reunion Internationale des Laboratoires d'Essais et de Recherches sur les Materiaux et les Constructions (RILEM)
- International Association for Bridge and Structural Engineering (IABSE)
- CTA Collegio dei Tecnici dell'Acciaio (College of Steel Technicians and Designers)
- CTE Collegio dei Tecnici dell'Edilizia (College of Technicians and Designers of Civil and Industrial Buildings)
- ATE Associazione Tecnici dell'Edilizia (Association of Technicians and Designers of Civil and Industrial Buildings)

- From 1989 to 1993, member of the RILEM Technical Committe on Timber Structures TC.112 "Creep in timber structures" (Report edited by P. Morlier).
- Since 1999, member of the Working Group 20 "Legno e derivati" (Wood and wood materials), whithin the Committee "Beni culturali - NORMAL" of UNI, the Italian Public Body for Standardization.
- Member of the Committee CNR (Research National Council) charged to set up the instructions for Timber structures and for the use of Fiber Reinforced Plastic Materials for civil constructions.
- Member of the RILEM (International Union of Laboratories and Experts in Construction Material) Technical Committe 215-AST "In-situ assessment of structural timber" (2005-2012).
- Member of the RILEM Technical Committe 245-RTE "Reinforcement of Timber Elements in Existing Structures" (activity started in 2011).
- Member of the RILEM Technical Committe TC TPT (Cluster E. Masonry, Timber and Cultural Heritage), “Tests methods for a reliable characterization of resistance, stiffness and deformation properties of timber joints”.
- Member of COST Action C 12 "Improving building structural quality by new technologies".
- Member of the Management Committee of COST Action FP1101 “Assessment, Reinforcement and Monitoring of Timber Structures”.
- Member of COST Action FP1004 “Enhance mechanical properties of timber, engineered wood products and timber structures”.
- Member of COST Action FP1402 "Basis of structural timber design - from research to standards".

4. RESEARCH. SHORT OVERVIEW

4.1 RESEARCH TOPICS

Prof. Piazza has carried out research activities in fields typical of the structural design and of the structural rehabilitation, initially at the Istituto di Scienza e Tecnica delle Costruzioni of the University of Padova (1978/1992), then at the Department of Mechanical and Structural Engineering of the University of Trento. The research has been and is mainly devoted to the themes mentioned hereafter, and whose results are published, partially at least, in the papers quoted in the references (Section 9).

4.1.1 STEEL STRUCTURES FOR CIVIL BUILDINGS AND CONNECTIONS FOR STEEL STRUCTURES

The research has been done, mainly, at the 'Istituto di Scienza e Tecnica delle Costruzioni' of the University of Padova, and based on experimental and numerical models. A notable research activity has been done on the well known bolted end-plate connection, on the connections made with bolts in shear, and on the friction connections with pre-loaded bolts.

Journal and Conference Papers, parts of Book, Reports:
/1 Br/, /2 Br/, /1 Jo/, /3 Ci/, /1 Cit/, /2 Cit/, /5 Cit/, /18 Cit/, /1 Re/, /1 Tp/

4.1.2 CONNECTIONS IN METALLIC TUBULAR STRUCTURES

Different typologies of bolted connections to be used in metallic tubular structures have been studied and experimentally tested, with a particular emphasis on the Flowdrill® system. The research has been partially funded by the 'Comité International pour le Dévelopment et l'Étude de la Construction Tubulaire' (CIDECT); a possible normative formulation, to be included as Annex in Eurocode 3, has been proposed.

Journal and Conference Papers, parts of Book, Reports:
/12 Jo/, /13 Jo/, /14 Jo/, /27 Jo/, /13 Ci/, /16 Cit/, /17 Cit/

4.1.3 EARTHQUAKE RESISTANT STEEL STRUCTURES

The research was based on a number of experimental and numerical tests done on particular joints to be implemented in steel structures for civil buildings, with particular regard to earthquake resistant structures, in order to improve the structural overall ductility.
To this end, Prof. Piazza has developed a project of a bi-directional testing machine for displacement controlled tests on structural elements and components, based on a computer controlled electric jack, with a capacity of 300 kN, maximum stroke ±200 mm (global 400 mm), at the University of Padova (years 1985/87).
Some original elasto-plastic devices have been proposed in order to provide good energy dissipation during the seismic event and suitable to be easily incorporated in the steel frames of buildings.

Journal and Conference Papers, parts of Book, Reports:
/5 Jo/, /7 Jo/, /8 Jo/, /11 Jo/, /1 Ci/, /4 Ci/, /4 Cit/, /8 Cit/, /9 Cit/, /10 Cit/, /14 Cit/

4.1.4 COMPOSITE STEEL-CONCRETE STRUCTURES

In the period 1984-1986, research activity has been devoted also to the behaviour of the shear - connections in the well known steel - concrete composite structure, with special attention to the influence of the stiffness of different kinds of connectors on the overall behaviour of the composite structure. Comparisons have been given between numerical and physical models, regarding the behaviour of composite bridge decks.

Journal and Conference Papers, parts of Book, Reports:
/12 Bc/, /6 Jo/, /6 Cit/

4.1.5 STEEL GRADE FOR REINFORCED CONCRETE BARS AND STRUCTURAL SAFETY

The research profits by the availability of the data base of the Laboratory of the 'Istituto di Scienza e Tecnica delle costruzioni' of the Univeristy of Padova, regarding the quality control of the steel bars to be used for building r.c. structures and, specifically, to new production technologies of those bars (e.g. Tempcore® process). The relations between normative requirements (Italian and European), actual production, and structural global safety have been studied, with special regard to ductility requirements for earthquake resistant r.c. structures.

Journal and Conference Papers, parts of Book, Reports:
/7 Ci/, /12 Cit/

4.1.6 EXISTING TIMBER STRUCTURES: MECHANICAL CHARACTERISATION

For the static restoration of timber structures, the choice of the methods for strengthening the same structures is mainly connected to their mechanical properties: the knowledge of these characteristics allows to select the adequate operative strategy. An adequate non-destructive on site experimentation allows to derive indication about those characteristics and/or on the residual life of some particular structures (e.g. bridges). The research programme on this subject has been set up since 1993, at D.M.S.E. of University of Trento, by prof. Piazza, also with the co-operation of some local government institutions and different Research Organization (CNR, National Research Council). It has been demonstrated that the combination of different ND testing techniques can give useful information for estimating timber mechanical properties and, occasionally, grading timber elements.
A special patent pending device for the execution of on site hardness test has been set up, and calibrated on the basis of a statistically significant number of tests on ancient load bearing timber elements.

Journal and Conference Papers, parts of Book, Reports:
/5 Bc/, /7 Bc/, /8 Bc/, /25 Jo/, /9 Ci/, /14 Ci/, /30 Ci/, /11 Cit/, /13 Cit/

4.1.7 REHABILITATION PROCEDURES FOR EXISTING TIMBER STRUCTURES

The static restoration of timber elements and timber structures is a research topic of particular interest for Italian regions. Prof. Piazza is involved in different research projects, pre-normative activities, and professional activities.
Since early 80s, he was interested in the development of the well known timber - concrete composite structure to be used for refurbishment purpose, and specifically when an earthquake

resistant structure is required. A number of full-scale specimens have been tested, and now this restoration technique is well established in Italy.

Journal and Conference Papers, parts of Book, Reports:
/5 Br/, /1 Bc/, /3 Bc/, /6 Bc/, /9 Bc/, /10 Bc/, /13 Bc/, /15 Bc/, /2 Jo/, /3 Jo/, /4 Jo/, /9 Jo/, /15 Jo/, /21 Jo/, /5 Ci/, /6 Ci/, /8 Ci/, /23 Ci/, /28 Ci/, /29 Ci/, /31 Ci/, /33 Ci/, /3 Cit/, /15 Cit/, /22 Cit/, /24 Cit/

4.1.8 STATIC AND SEISMIC BEHAVIOUR OF TRADITIONAL TIMBER STRUCTURES

Rehabilitation of old historic buildings often requires retrofitting of traditional timber connections. Experimental and numerical methods have been used to study the elastic and post-elastic behaviour of some traditional timber structures, which recur with great frequency in old timber roof structures, especially in the Mediterranean and Alpine region. Moreover, in those regions, it is of particular importance to have an important knowledge of the structural behaviour in the case of earthquake, in order to correctly orient the interventions with the aim of improving structural performance against such accidental actions
The research program has investigated the behaviour of old timber structures and examined retrofitting criteria. The main parameters affecting the mechanical behaviour of the elements and of the connections have been singled out and their effects quantified by means of experimental and numerical analyses. It has been demonstrated that the behaviour factor that may be expected from retrofitted timber structures reaches levels corresponding to newly designed structures.

Journal and Conference Papers, parts of Book, Reports:
/5 Br/, /17 Jo/, /19 Jo/, /24 Jo/, /26 Jo/, /19 Ci/, /20 Ci/, /27 Ci/, /20 Cit/, /21 Cit/

4.1.9 TRADITIONAL CONNECTIONS IN TIMBER STRUCTURES

Carpentry connections were extensively used in traditional timber structures. The project of refurbishment of existing buildings involves, frequently, the retrofitting of those traditional connections, especially when an improved seismic performance must be assured to the restored structure. An experimental and numerical research activity has been carried out with the aim of demonstrating the actual possibilities of traditional connections used in timber structures, specifically when their seismic behaviour is involved. Testing the rotational capability of carpentry joints retrofitted with different metal connectors has supplied information on capacity and post-elastic behaviour as well as indications on modes of failure at collapse. The effectiveness and possible inadequacies of the various types of reinforcement have appeared. A synthetic model for the cyclic behaviour has been formulated for such a connection, implemented in a finite element format, and used in the analysis of timber structures in seismic conditions. The model has been verified with full-scale experimentation on a roof truss. Different reinforcing methods have been compared on the basis of experimental observation and calculated structural response. The study has shown that a satisfactory post-elastic response, comparable to that of new structures, may be reached for suitably retrofitted structures, with an adequate performance in seismic conditions and without excessive stiffness increase and inappropriate modification of the original behaviour of the connection.

Journal and Conference Papers, parts of Book, Reports:
/5 Br/, /2 Bc/, /7 Bc/, /11 Bc/, /16 Jo/, /17 Jo/, /19 Jo/, /18 Ci/, /24 Ci/, /23 Cit/, /4 Tp/

4.1.10 INNOVATIVE ELEMENTS AND CONNECTION SYSTEMS IN GLULAM STRUCTURES

The research is focused on the innovative connections for glulam structures, made with glued-in steel bars parallel or perpendicular to the grain, or with steel plates. A number of significant results from the experimental tests have been presented and discussed, and some proposals are given regarding the implementation of simplified numerical models in order to adequately simulate the actual behaviour of the proposed connections. With regard to the technological transfer, results of the research have been used for timber structures in some civil and industrial buildings.
Recently, prof. Piazza is involved in a research project with an italian glulam factory in order to make possible an easy and cheap industrial process in order to include steel or CFRP small elements into glulam elements, so as to manufacture reinforced glued laminated timber.

Journal and Conference Papers, parts of Book, Reports:
/5 Br/, /4 Bc/, /14 Bc/, /20 Jo/, /23 Jo/, /2 Ci/, /11 Ci/, /21 Ci/, /25 Ci/, /26 Ci/, /32 Ci/, /7 Cit/, /2 Re/, /2 Tp/

4.1.11 FIRE RESISTANCE OF STRUCTURES AND OF TIMBER STRUCTURES

A thorough research programme has been carried out, since 1993, in co-operation with the Department of Mechanical and Structural Engineering (University of Trento) and the Wood Technology Institute (National Research Council, Rome). It envisages the running of real physical tests in furnaces on full-size models of timber elements and timber - based composite structures, with the purpose of being able to propose suitable numerical models to represent and, hence, to predict fire behaviour of timber elements.
Since any structure performance depends, obviously, on its material, this being true for static performance but also for fire behaviour, the assessment of the fire performance of a structure is closely connected to the assessment of the fire reaction of its components. Another research subject on this topic is then the evaluation of the performance of some intumescent coatings acting in wooden materials both as flame retardants and thermal insulators, to improve not only the reaction to fire but also the static performance of a timber element subject to fire, by reducing the charring rate.
Some results of the research have been transferred to a very important sector of the Italian Industrial world (Fireproof doors and windows).

Journal and Conference Papers, parts of Book, Reports:
/4 Br/, /10 Jo/, /18 Jo/, /22 Jo/, /10 Ci/, /12 Ci/, 15 Ci/, /16 Ci/, /17 Ci/, /22 Ci/, /19 Cit/, /3 Tp/

4.1.12 RETROFITTING OF MASONRY AND R.C. STRUCTURES

Research programme funded by DPC-ReLUIS on the structural rehabilitation and retrofitting of masonry or r.c. structures in earthquake prone regions.

Journal and Conference Papers, parts of Book, Reports:
/33 Bc/, /34 Bc/, /82 Jo/, /84 Jo/, /85 Jo/

4.2 RESEARCH GRANTS AND CONTRACTS

The main grants, for which prof. Piazza has been responsible, are here reported (only those financed by Public bodies).

- Research of National interest, financed by the Italian Ministry for University and Research MURST, "Strutture di legno, meccanica delle connessioni", with the following participating Universities: Firenze, Milano, Padova, Pavia, Trento; prof. Piazza was responsible for the University of Padova, 1990/93.
- Research on new bolted connection systems for metallic tubular structures, co-funded by CIDECT Comité International pour le Dévelopment et l'Étude de la Construction Tubulaire, 1992/96.
- Research of National interest, financed by the Italian Ministry for University and Research MURST, "Problemi inerenti l'analisi e la conservazione del costruito storico", with the following participating Universities: Ancona, Basilicata, Calabria, Catania, Firenze, Genova, Milano, Napoli, Palermo, Roma, Roma III, Torino, Trento, Venezia, 1994/96.
- Research of National interest, financed by the Italian Ministry for University and Research MURST, "Il progetto di conservazione: linee metodologiche per le analisi preliminari, l'intervento, il controllo di efficacia", with the following participating Universities: Basilicata, Ferrara, Genova, Milano, Napoli, Padova, Trento, 1999/2000.
- Prof. Piazza was responsible for the Department of Mechanical and Structural Engineering of the three-year research Project "Strategies for a Ductile Behaviour of Timber structural components" (CoDuLe), co-funded by the local government institution 'Provincia Autonoma di Trento', with the following participating institutions: Wood Technology Institute, National Research Council (currently Trees and Timber Institute), S. Michele all'Adige (Trento); Department of Mechanical and Structural Engineering, University of Trento; Department of Structural Engineering, Politecnico of Milano; Istituto per la Pioppicoltura, Casale Monferrato (Alessandria).
- Prof. Piazza was responsible, for the Department of Mechanical and Structural Engineering, of the three-year national research Project between *Reluis* Consortium and the Italian Agency for Emergency Management (Dipartimento Protezione Civile), years 2006-2009, on the Strategies for the reduction of seismic risk of existing buildings (budget 245.000,00 €).
- Prof. Piazza has been national responsible and PI for the Research Project of national interest (PRIN), funded by the Italian Ministry for University and Research, "Diagnosis techniques and totally removable low invasive strengthening methods for the structural rehabilitation and the seismic improvement of historical timber structures" (years 2007-2008), involving the Universities of Trento, Bologna, Napoli "Federico II", Seconda Università degli Studi di Napoli, Trieste.
- Prof. Piazza was responsible, for the Department of Civil, Environmental and Mechanical Engineering, of the three-year Research Project of national interest (PRIN 2015), funded by the Italian Ministry for University and Research MiUR, "The short supply chain in the

biomass-based and wood sector: supply, traceability, certification, carbon capture and storage. Innovations for green building and energy efficiency" (years 2017-2020), involving the Universities of Tuscia, L'Aquila, Trento, Molise, Torino, and CNR.

- Prof. Piazza was responsible, for the DICAM UNITN. of the following national research Projects between *Reluis* Consortium and the Italian Agency for Emergency Management (Dipartimento Protezione Civile), years 2010-2013, on the i) Reduction of seismic risk of existing buildings; ii) Direct Displacement Based Design; iii) Timber houses (total budget 207.000,00 €); year 2014, 12.000,00 €; year 2015, 12.000,00 €; year 2016, 48.700,00 €; year 2017, 43.700,00 €; year 2018, 43.700,00 €; years 2019-2021 (total budget, 3 years projects), 130.230,00 €; years 2022-2024 (total budget, 3 years project), 33.400,00 €. The budget values shown are only those assigned to prof. Piazza, they are not related to the total research budget.
- Prof. Piazza was responsible, for the DICAM UNITN., of the research Project between Reluis Consortium, the Italian Agency for Emergency Management (Dipartimento Protezione Civile), and Ministero dell'Interno - Dipartimento della Pubblica Sicurezza, Direzione Centrale dei Servizi Tecnico Logistici e della Gestione Patrimoniale – DPS-DCSTLGP, dealing with the assessment of several buildings (located in Trentino-Alto Adige) of the Dipartimento della Pubblica Sicurezza, budget 40.000,00 €.
- SERIES research project "Timber buildings", funded by EU within the FP7 research framework (http://www.series.upatras.gr/TIMBER_BUILDINGS)
- Prof. Piazza was responsible, for the Department of Mechanical and Structural Engineering, of several research activities for timber industries and companies, in the field of innovative timber connections, timber-based composite structures, housing. Some of those acrivities are reported hereafter:

- 2009-2011	ITEA	Timber houses	approx. € 27.000,00
- 2009-2011	CINETIX	Assessment of timber poles	approx. € 73.000,00
- 2009-2012	PROMOLEGNO	promolegno_risponde tool	approx. € 28.000,00
- 2010-2011	Chi Quadrato	Scientific Committee	approx. € 20.000,00
- 2009-2012	Legno Piùcase	Timber houses & connections	approx. € 200.000,00
- 2011	Sofie Veritas scpa	Timber connections for houses	approx. € 18.000,00
- 2012	Rubner Haus Spa	Connections for timber walls	approx. € 37.000,00
- 2012	Log Engineering	Innovative timber walls	approx. € 4.000,00

5. TEACHING EXPERIENCES

5.1 COURSES

Assistant

- Assistant for *Theory and Design of Structures*, at the University of Padova (A.Y. 1979/80, 1980/81, 1981/82, 1982/83).
- Assistant Professor (Researcher, regular position) for *Theory and Design of Structures*, at the University of Padova (A.Y. 1983/84, 1984/85, 1985/86, 1986/87, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92).
- Assistant Professor (Researcher, regular position) for *Structural Analysis and Design I*, for Civil Engineering, at the University of Padova (A.Y. 1983/84, 1984/85, 1985/86, 1986/87, 1987/88, 1988/89, 1989/90, 1990/91, 1991/92).
- Assistant Professor (Researcher, regular position) for *Structural Analysis and Design*, for Mechanical Engineering, at the University of Padova (A.Y. 1989/90, 1990/91, 1991/92).

Teaching Activity (at UNITN)

- ***Structural Analysis and Design II***, at the Faculty of Engineering, University of Trento (A.Y. 1990/91, 1991/92, 1992/93, and 1999/2000).
  The course deals with the theory and the design of civil buildings, stressing the importance of the technical and economic criteria at the basis of the structural design, and giving some basic information for designing and verifying the main structural elements in civil buildings, pre-fabricated structures, masonry structures, steel-concrete composite structures. Total number of lectures: 80 hours. Total number of classwork sessions: 40 hours.
- ***Design of Reinforced and Prestressed Concrete Structures***, at the Faculty of Engineering, University of Trento (A.Y. 1992/93).
  The course deals with special problems in the design of R.C. structures and pre-stressed R.C. elements. Total number of lectures: 80 hours. Total number of classwork sessions: 40 hours.
- ***Structural Analysis and Design III (Analysis and design of timber structures)***, at the Faculty of Engineering, University of Trento (A.Y. 1992/93, 1993/94, 1994/95, 1995/96, 1996/97, 1997/98, 1998/99, 1999/2000, 2000/01, 2001/02, 2002/03, 2003/04).
  The course deals with the theory and the design of timber structures and it is addressed to the last year course's students of the Civil Engineering education curricula. Total number of lectures: 80 hours. Total number of classwork sessions: 40 hours.
- ***Building Materials: Timber and Wood based Materials***, for Ph.D. students of XVII, XVIII, XIX cycles in "Design, preservation and control of materials and structures" (A.Y. 2001/02, 2002/03, 2003/04).
  Advanced course for Ph.D students, dealing with the theory and the design of timber structures, and timber-concrete composite structures.

- ***Timber: a Material for Structural Engineering***, for Ph.D. students of XX cycle in "Design, preservation and control of materials and structures" (A.Y. 2004/05, June 2005).
  Advanced course for Ph.D students, on theory, design and rehabilitation of timber structures and wood-based materials.

- ***Timber structures*** (since A.Y. 2004/05).
  Properties of wood essential for the design of timber structures. Safety of timber structure in fire. Durability. Standard documents, national codes and European Standards. Structural elements. Structural assemblies. Connections. Design of timber structural systems. Development of the structural form, selection of the materials, design of the connection systems. Design of the bracing systems. Design of the connections. Timber bridges. Detailing for durability. Total number of lectures: 60 hours. Total number of classwork sessions: 20 hours.

- ***Timber and masonry structures*** (A.Y. 2005/06)
  Module I - Timber. Module II - Masonry. Total number of lectures: 120 hours. Total number of classwork sessions: 60 hours.

- ***Structural rehabilitation*** (since A.Y. 2005/06)
  The course deals with the problems of decay of materials and structural damage, and with the different methods of intervention on existing, ancient or old, structures, in order to provide: a basis for assessment of structural state and criteria for rehabilitation; an understanding of the methods of rehabilitation of structural elements and systems; a knowledge of different repair techniques; a perception of the professional responsibility involved in repair and non-repair strategies; a comprehension of problems, with the aim of identifying design and service requirements and relating those needs to monitoring and rehabilitation criteria. Total number of lectures: 60 hours. Total number of classwork sessions: 20 hours.

- ***Advance topics in timber housing design***, for Ph.D. students of XXV cycles in "Design, preservation and control of materials and structures" (A.Y. 2009/10).
  Advanced course for Ph.D students, dealing with the theory and the design of timber structures for houses.

5.2 DIFFERENT TEACHING ACTIVITIES

Different teaching activities in post-graduate courses or advanced courses for engineers and architects are hereafter reported.

1) *Le strutture composte nel consolidamento*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1991-92, University of Padova, Vicenza, May 16, 1992
2) *Strutture composte e consolidamento*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1992-93, University of Padova, Vicenza, April 2, 1993
3) *Strutture miste acciaio-calcestruzzo: verifica degli elementi bidimensionali*, Course “Le strutture di acciaio nelle costruzioni civili e industriali”, CTA and College of Engineers of Caserta, Caserta, April 7, 1993
4) *Eurocodice 4, strutture miste acciaio-calcestruzzo: verifica degli elementi bidimensionali*, Short course on Eurocodes, CTA and College of Engineers of Bolzano, Bolzano, November 19, 1993
5) *Il fuoco nelle strutture consolidate*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1993-94, University of Padova, Vicenza, March 12, 1994
6) *Strutture composte nel consolidamento*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1993-94, University of Padova, Vicenza, May 14, 1994
7) *Il comportamento al fuoco delle tipologie lignee consolidate*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1994-95, University of Padova, Vicenza, April 7, 1995
8) *Le strutture composte nel consolidamento*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1994-95, University of Padova, Vicenza, May 12, 1995
9) *Tecniche di consolidamento di strutture in legno: esempi di intervento*, Course “Tecniche di analisi non distruttive”, Post-graduate School 'Storia, analisi e valutazione dei beni architettonici e ambientali', Politecnico of Torino, Aosta, October 3, 1995
10) *Il consolidamento delle strutture lignee*, Short course for College of Engineers of Vallagarina, Rovereto (Trento), November 23, 1995
11) *Eurocodice 4, strutture composte acciaio-calcestruzzo: verifica degli elementi bidimensionali*, Short course “Le strutture di acciaio nelle costruzioni civili ed industriali”, CTA and College of Engineers of Cosenza, Cosenza, December 7, 1995
12) *Le strutture lignee: dissesti ed interventi di consolidamento*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1995-96, University of Padova, Vicenza, March 22, 1996
13) *La struttura lignea: conoscenza, analisi dei dissesti, interventi di consolidamento*, advanced course for "Tecnici esperti nel recupero edilizio", Regione Veneto, 1996, Venezia, June 21, 1996

14) *Solaio legno-c.a. e legno-legno. Metodo di calcolo secondo l'Eurocodice 5*, Post-graduate course "Recupero del manufatto in legno nell'architettura", Istituto di Restauro dell'Architettura, Milano, November 22, 1996
15) *Progettazione secondo il metodo semi-probabilistico agli stati limite di edifici in conglomerato cementizio armato,* College of Engineers of Trento, Trento, December 20, 1996
16) *Impiego e recupero del legno nelle costruzioni*, Invited lecturer for the course Structural Analysis and Design, University of Ferrara, Ferrara, May 9, 1997
17) *Dissesti ed interventi di consolidamento nelle strutture lignee*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1996-97, University of Padova, Padova, May 23, 1997
18) *Eurocodice 5 - Progetto di strutture in legno. Verifiche di sicurezza: resistenza, stabilità deformabilità. Verifica in presenza di incendio*, Post-graduate course "Il progettista europeo: gli Eurocodici e la progettazione strutturale", organized by Consorzio CREA and Regione Marche, Pescara, June 4, 1997
19) *Le strutture in legno: degrado, diagnostica, recupero*, Post-graduate School 'Storia, analisi e valutazione dei beni architettonici e ambientali', Politecnico of Torino, May 19, 1998
20) *Il recupero delle strutture lignee*, Lectures for post-graduate course "Esperto del recupero architettonico mediante utilizzazione di tecnologie informatiche", project n. 6969, Regione Lombardia, FSE 1997, Edolo (Brescia), January 29, 1999
21) *Le strutture lignee: dissesti ed interventi di consolidamento*, Post-graduate course "Metodologie e tecniche di recupero e restauro edilizio", A.Y. 1998-99, University of Padova, Vicenza, March 20, 1999
22) *Il legno ed il suo utilizzo nelle costruzioni: 1) Classificazione e caratteristiche generali, 2) L'utilizzo del legno nelle costruzioni*, Post-graduate course F.S.E., project 4 - 2 "Architettura del legno: normativa, tecnologia ed applicazioni", ARES Istituto di ricerca e studi giuridici e ambientali, Udine, February 11 and 18, 2000
23) *Resistenza al fuoco delle strutture di legno*, Post-graduate course F.S.E "Professionalizzazione operatori sicurezza antincendio ", University of Pavia, Department of Structural Mechanics, Pavia, May 17, 2000
24) *Le strutture in legno*, Post-graduate course F.S.E project n. 21952, 3.2.3, "Esperto del recupero architettonico mediante utilizzazione di tecnologie informatiche", Regione Lombardia, Clusane d'Iseo (Brescia), October 3, 2000
25) *Linee guida e raccomandazioni per gli interventi sul costruito. Tecniche di intervento su coperture e solai*, Post-graduate course "Le strutture portanti in legno: conservazione e consolidamento dell'esistente, il lamellare, le verifiche secondo Eurocodice 5", Siracusa, May 24, 2001
26) *Legno massiccio e lamellare*, Lecture for the course on "Materiali strutturali nelle opere di ingegneria civile", College of Engineers of Udine, Udine, June 1, 2001

27) *Le normative di riferimento,* Lecture for the course "Costruire con il legno", Master on Bioecology Architecture, organized by 'ANAB Associazione Nazionale Architettura Bioecologica', Centro Ecologia Alpina, M.te Bondone, Trento, October 28, 2001
28) *Le costruzioni esistenti in legno: tecniche costruttive, patologie, diagnostica, interventi*, Lectures for the course "Tecnico del Recupero Urbano ed Edilizio", co-organized by University of Trento, "Istituto tecnico per geometri A. e P. Delai" (Bolzano), "Scuola per l'artigianato e l'industria L. Einaudi" (Bolzano), College of Engineers of Bolzano, Bolzano, 16.11.2001, 12.01.2002, 18.01.2002, 22.02.2002
29) *Diagnostica, studi ed esperienze su strutture in legno*, Lectures for the Colleges of Engineers of Veneto, Vicenza, Treviso, Trento; 08.03.2002, 09.03.2002, 16.03.2002
30) *Rinforzo delle strutture lignee,* Course "Composite Fiber Reinforced Materials for Structural Rehabilitation", organized by ANIDIS and SIKA-Italia, Roma, January 31, 2003
31) *Tecniche di analisi delle sollecitazioni di solai in legno rinforzati con soletta in calcestruzzo resa collaborante con le travi in legno,* CISM post-graduate course "Strutture composte nelle nuove costruzioni, nel recupero e nei ponti – Tecniche di progetto avanzate", CISM, Udine, March 26, 2003
32) *Il corretto approccio alla progettazione e riabilitazione delle strutture lignee*, Workshop "Il legno: specie, proprietà ed approccio progettuale", for the Colleges of Engineers of Marca Trevigiana, Treviso, April 4, 2003
33) *Rinforzo delle strutture lignee*, Course "Composite Fiber Reinforced Materials for Structural Rehabilitation", organized by ANIDIS and SIKA-Italia, Lecce, May 15, 2003
34) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", May 28, 29, 30, 2003
35) *Rinforzo delle strutture lignee*, Course "Composite Fiber Reinforced Materials for Structural Rehabilitation", organized by ANIDIS and SIKA-Italia, Milano, June 26, 2003
36) *Tipologie di strutture in legno: edifici, coperture, ponti, e Normativa: EC5, DIN*, Lectures for the post-graduate course "Le strutture in legno – Progetto, realizzazione e conservazione", College of Engineers of Milano, Milano, November 26, 27, 28, 2003
37) *Contenuti normativi per il restauro degli elementi strutturali lignei di interesse culturale previsti dalla UNI-Normal GL 20 'Legno e derivati'*, Lecture for the post-graduate course "Corso di aggiornamento professionale sul Restauro Architettonico 2003", College of Architects of Verona, Verona, December 6, 2003
38) *Problematiche relative alla progettazione sismica di strutture lignee*, Lecture for the post-graduate course "La progettazione sismica delle strutture alla luce dei nuovi documenti normativi (Seismic design of structures)", Università degli Studi di Trento, February 27-28, March 5-6, 2004
39) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", May 26, 27, 28, 2004
40) *Legno: metodi e tecniche di costruzione di riferimento*, Lecture for the course "Architettura bioecologica 2004", section A: "Materiali, tecniche costruttive e strutturali", Master on

Bioecology Architecture, organized by 'ANAB Associazione Nazionale Architettura Bioecologica', Ordine Architetti Varese, Varese, June 26, 2004

41) *Strutture in legno per edifici e coperture*, Lectures for Engineers & Architects, Altipiani Folgaria, Lavarone, Luserna (Trento), January 17, 2005
42) *Collegamenti nelle strutture di legno. Il legno e il fuoco.* School of Riwega, Bozen, January 21, 2005 & March 18, 2005
43) *Statica e calcolo strutturale: a) Principi di calcolo per il dimensionamento. b) Sistemi di connessione e connessioni di carpenteria*, Lectures for Engineers & Architects, Reggio Emilia, March 11-12, 2005
44) *Le costruzioni in legno tradizionale e lamellare in zona sismica*, Lecture for the post-graduate course "Corso di aggiornamento sulla Normativa Sismica Nazionale (Seismic design of structures)", College of Engineers of Livorno, June 24, 2005
45) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", June 13 - 14, 2005.
46) *Limit States Design - Timber Structures*, Lectures for Engineers, Trento, July 8-9, 2005
47) *La resistenza al fuoco delle strutture in legno: normativa e progetto (Fire resistance of timber structures)*, College of Engineers of Padova, September 22, 2005
48) *Stabilità strutturale e resistenza al fuoco degli elementi strutturali in legno (Strctural stability and fire resistance of timber elements)*, Master on BioArchitecture, University of Padova and BioArchitecture Association, Padova, February 18, 2006
49) *Recupero statico. Caso studio: ricostruzione della Pieve di Cavalese*, within the II degree Master Program "Progettazione architettonica degli edifici per il culto", Trento, March 17, 2006
50) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", June 26 - 27, 2006
51) *La progettazione strutturale delle costruzioni in legno*, within the post-graduate course on "Structural design in seismic areas", Dipartimento di S.A.V.A. – Sezione Ingegneria & Ambiente, Università del Molise, Termoli, Feb 20, 2007
52) *Connessioni metalliche - Tipologie di connessione e principi di progettazione*, Lectures for the Master "Master Universitario di II livello *CasaClima*", School of Economics and Management, Free University of Bozen, May 4-5, 2007
53) *Eurocodice 5 e norme correlate - Progettare la sicurezza e la durabilità delle strutture di legno*, Corso di formazione, UNI, Milano June 1, 2007
54) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", July 2-3, 2007
55) *Normative applicabili (NTC, EC5, Istruzioni CNR), disegni, rilievi in cantiere, dettagli esecutivi*, Course for "Direttore tecnico della produzione" di legno strutturale" (D.M. 14/09/05) for Assolegno - Federlegno Arredo; March 29, 2007, Padova; April 19, 2007,

Trento; May 10, 2007, Sondrio; Jul 11, 2007, Torino; Jul 18, 2007, Trento; Sept 19, 2007, Venezia; Nov 12, 2007, Belluno

56) *Connessioni metalliche - Tipologie di connessione e principi di progettazione*, Lectures for the Master "Master Universitario di II livello *CasaClima*", School of Economics and Management, Free University of Bozen, Dec 10-11, 2007

57) *Le strutture di legno*, lectures for "Tecnologie costruttive, materiali innovativi alla luce della nuova normativa tecnica dell'architettura sostenibile", rivolto ai dipendenti della Regione Umbria, Ufficio Opere Pubbliche, Scuola di Amministrazione Pubblica, Villa Umbra, Perugia, Feb 6, 2008

58) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", July 7 - 8, 2008

59) *Connessioni tradizionali e metalliche*, Lectures for the Master "Master Universitario di II livello *CasaClima*", Faculty of Science and Technology, Free University of Bozen, Nov 03-04, 2008

60) *Design of timber structures*, Post-graduate course for College of Engineers, Parma, 2009 (Jan 13-14, Feb 20-21, Feb 27-28, Mar 13-14, Mar 27-28, Apr 3-4), University of Parma, Faculty of Engineering, Parma, 2009

61) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", June 30 - July 1, 2009

62) *Connessioni tradizionali e metalliche*, Lectures for the Master "Master Universitario di II livello *CasaClima*", School of Economics and Management, Free University of Bozen, Nov 30-Dec 1, 2009

63) *Design of timber structures*, Post-graduate course for College of Engineers, Bergamo, 2010 (Feb 12-13, Feb 19-20), Casa del Giovane, Bergamo, 2010

64) *Rehabilitation of timber structures*, Doctoral School Conservation of Architectural Heritage, Politecnico of Milano, May 24, 2010

65) *Strutture miste legno - calcestruzzo*, Lectures for the Master "MICA Innovazione nella progettazione, riabilitazione e controllo delle strutture in cemento armato", University of Roma "La Sapienza", June 17 - 18, 2010

66) *Heavy reconstruction for L'Aquila. Timber floors and timber roofs*, Lecture for the College of Engineers, L'Aquila, Jul 8, 2010

67) *Seismic strengthening of traditional carpentry joints* and *Seismic vulnerability assessment for timber roof structures*, 4 hour lectures within the doctoral course "Recent research progress in timber engineering and in refurbishment of historical wood construction" (Jorge Branco, Roberto Crocetti, Maurizio Piazza, Roberto Tomasi), Trento, June 24-25 and July 8-9, 2010

68) *Rehabilitation and retrofitting of existing buildings. Timber structures*, 12 hours teaching within the post-graduation Master "Design, execution, control of constructions in earthquake prone regions", University Pisa, Jul 29-30, 2011

69) *Timber and fire: design suggestions*, within the symposium "Evaluation of Accidental Actions on Buildings: fire and explosions" organized by PRO-FIRE, ACAI, ASSOBETON, ASSOLEGNO, ASSOPREM, MADE Expo, Milano, Oct 6, 2011
70) *Design of timber structures in Italy*, 1° Forum edilizia in legno Italia (FLI 2011), Verona, Mar 18, 2011
71) *The design of timber structures between engineering constraints and architectural freedoms*, Accademia dei Georgofili (Sezione NordEst), School of Agricultural Sciences, University of Padova, Nov 10, 2011
72) *Timber structures for rehabilitation of existing buildings*, Lecture for the College of Engineers (12 hours), Gorizia, Feb 11, 17, 18, 2012
73) *Seismic behaviour of timber buildings*, Lecture for Agorà Smart Village, Trento, Apr 4, 2013
74) *Timber constructions and technical Standards*, 2° Forum LegnoArredo, Milano Congressi, Jun 13, 2013
75) *Technical Standards and building site Manager*, course for engineers, FLA, Milano, May 28, 2014
76) *Timber structures (connections, fire design, seismic design)*, continuing education courses for engineers and architects offered to Engineering Associations: Macerata, March 2015; Sondrio, May 2015; Bergamo, October 2015; Torino, Oct-Nov 2015; Firenze, May 2016; Parma, September 2016; Verona, October 2016; Arezzo, November 2016; Bergamo, April 2017; Rieti, April 2017; Savona, May 2017; Verbania, May 2017; Como, September 2017; Sondrio, October 2017; Sanremo, June 2018; Treviso, June 2019
77) *Timber Structures and Fire*, 6 hours course on Timber structures and Fire resistance of timber structures offers to Master students, University of Padova: Nov.-Dec. 2016; May 2018
78) *Certification and acceptance of wood products on construction sites*, Lecture for the College of Engineers of Verona, Oct 14, 2018
79) *NTC 2018 – Timber buildings*, Scuola Umbra di Amministrazione Pubblica, Villa Umbra (PG), Dec 14, 2018
80) *Rehabilitation of timber structures*, several courses for the TSM Trentino School of Management, Trento: April 21, 2016; Dec 10, 2018; Feb 22, 2019
81) *Design of timber structures*, several lectures for Politecnico Milano, course of Building Engineering, Milano: May 26, 2020; May 17, 2021; May 23, 2022; May 23, 2023
82) *Rehabilitation of ancient timber structures. A case study*, lecture ROTHOschool, Cortaccia (BZ), May 26, 2023
83) *HO_LZ: Corso sull'uso strutturale del legno*, several lectures on the topics of earthquake resistant timber strucures and fire resistance of timber buildings, within courses addressed to Engineers and Architects, co-organized by Promo_legno, University of Graz & University of Trento:
    - Monastier (TV), Nov 28, 2003
    - Milano, Feb 27, 2004
    - Firenze, Sept 24, 2004
    - Cosenza, Nov 19, 2004

- Milano, November 25-26, 2004 & January 27-28, 2005
- Udine, March 3-4, 2005
- Paestum (Salerno), Jun 10, 2005
- Roma, October 20-21, 2005
- Torino, December 1-2, 2005
- Napoli, March 2-3, 2006
- Trento, May 5, 2006
- Perugia, May 25-26, 2006
- Pesaro, July 6-7, 2006
- Firenze, October 19-20, 2006
- Pisa, November 17, 2006
- Venezia, Nov 30-Dec 1, 2006 & Jan 25-26, 2007
- Genova, Feb 23, 2007
- Palermo, Mar 1-2, 2007
- Bologna, May 17-18, 2007
- Udine, May 25, 2007
- Trento, Jun 7-8, 2007
- Lanciano (CH), Sept 21, 2007
- Udine, Oct 4-5, 2007
- Napoli, Nov 23, 2007
- Bologna, Nov 29-30, 2007
- Francavilla al mare (CH), Jan 24-25, 2008
- Genova, Apr 10-11,2008
- Napoli, May 8-9, 2008
- Potenza, Sept 26, 2008
- Milano, Oct 16-17, 2008
- Padova, Nov 27-28, 2008
- Roma, Jan 29-30, 2009
- Aosta, Mar 5-6, 2009
- Padova, May 15, 2009
- Pescara, Oct 15-16, 2009
- Padova, Nov 27, 2009
- Milano, Politecnico (Bovisa), Oct 9-1 0, 2014
- Milano, Mar 3-4, 2016
- Torino, Mar 17-18, 2016
- Napoli, Oct 12, 2016
- Palermo, Mar 22, 2017
- Catania, Mar 24, 2017
- Milano, Oct 27, 2017
- Firenze, Nov 17, 2017
- Milano, Nov 22, 2018
- Firenze, Apr 4, 2019
- Padova, Oct 16, 2020

5.3 GRADUATION THESES

Prof. Maurizio Piazza has been tutor or co-tutor of about 40 thesis works at the University of Padova (period 1980/1991) and more than 220 at the University of Trento (1992/2017), in the fields of structural analysis and design, and repairing and strengthening of existing structures (not reported here).

From 1991 to 2023, he has been tutor of over 280 thesis works at the University of Trento. The complete list can be found at the following link:

https://webapps.unitn.it/du/it/Persona/PER0004432/Tesi

5.4 PH. D. THESES

Prof. Piazza was member of the Committee of the three-year Ph.D. program in "Engineering of Civil and Mechanical Structural Systems", since 1998, and previously of the Committee of the three-year Ph.D. program in "Engineering of Materials". Since 2013, he is member of the School of "Civil, Environmental and Mechanical Engineering". He was tutor of 10 PhD thesis works in the period 2003-2015.

- Year XVI 2001-2003 (tutor): Roberto Tomasi, *Elementi lignei a duttilità concentrata, a duttilità diffusa e pseudo-duttili: stato dell'arte, ricerca e sviluppo di tecnologie innovative*
- Year XIX 2004-2006 (tutor): Maria Paola Riggio, *Application of morphological modelling for the mechanical characterization of timber elements*
- Year 2004-2007: Jorge Manuel Gonçalves Branco, *Análise Estática e Dinâmica de Coberturas de Madeira. Avaliação da Eficácia de Diferentes Técnicas de Reforço das Ligações*, (tutors prof. Paulo Jorge de Sousa Cruz, Universidade do Minho, PT; prof. Maurizio Piazza, University of Trento)
- Year 2008-2010 (tutor): Christian Baldessari, *In plane behaviour of differently refurbished timber floors* (Comportamento nel piano di solai lignei diversamente rinforzati)
- Year 2008-2010 (tutor): Andrea Polastri, *Mechanical behaviour of semirigid joints for earthquake resistant timber joints* (Caratterizzazione del comportamento di giunti semirigidi per strutture lignee in zona sismica)
- Year 2011 (co-tutor): Cristiano Loss, *Displacement-Based Seismic Design of Timber Structures*
- Year 2011 (tutor): Mauro Andreolli, *Giunti semirigidi con barre incollate per strutture lignee - Ductile moment-resistant steel-timber connections with glued-in bars*
- Year 2013 (tutor, co-tutor Jason Ingham, NZ): Ivan Giongo, *Role of Timber Diaphragms in the Seismic Response of Unreinforced Masonry (URM) Buildings*
- Year 2014 (tutor): Daniele Casagrande, *Study of timber-frame building seismic behaviour by means of numerical modelling and fulls-cale shake table testing*
- Year 2015 (tutor): Simone Rossi, *Sesimic behaviour and ductility evaluation of multi-storey light timber-frame buildings by means of analytical formulations and numerical modelling*

6. ORGANIZATION OF SYMPOSIA AND SEMINARS / ATTENDANCE AT CONGRESSES

6.1 ORGANIZATION OF SYMPOSIA AND SEMINARS

Prof. Piazza has organized or has been in the Scientific Committee of the following congresses.

- *"Il progettista europeo: gli Eurocodici e la progettazione strutturale"* (Eurocodes and European Designers), Session on Timber Structures, Pescara, June 1997.
- International Workshop *"Timber structures: diagnosis and experimental analysis on elements, connections and joints"*, Faculty of Engineering, July 27, 1998, with the contribution of Italian and German researchers.
- International Congress *"Tecnologie avanzate nell'impiego strutturale del legno"* (Advanced technologies for timber structures), February 22, 1999, IX Bauschau-Lignomec, Bozen Messe, with the participation of researchers and engineers from Italy and Germany.
- Workshop *"Costruzione e recupero dei tetti in legno - Tecnologie e materiali innovativi"*, Sirmione (Verona), May 2000.
- Course *"Tecnico di recupero urbano ed edilizio"*, financed by FSE and Provincia Autonoma di Bolzano, Year 2000.
- International Congress *"Progettare la durabilità - Il legno dalla materia prima al manufatto"*, X Bauschau-Lignomec, Bozen Messe, February 2001.
- Workshop *"Progettare con il legno"* (Design with Timber), for the professional exhibition "Legno & Edilizia", Verona, June 2001.
- Workshops and Seminars *"Struttura legno"* (Timber structure), co-organized with Assolegno and Federlegno-Arredo, SAIE 2001 (Bologna International Building Fair, October 2001).
- Workshops and Seminars *"Struttura legno"* (Timber structure), co-organized with Assolegno and Federlegno-Arredo, SAIE 2002 (Bologna International Building Fair, October 2002); responsible for the exhibition *Technologic Focus: Wood*.
- Workshops and Seminars "Struttura legno" (Timber structure), co-organized with Assolegno and Federlegno-Arredo, SAIE 2003 (Bologna International Building Fair, October 2003).
- Workshops and Seminars "Legno e architettura sostenibile" (Wood & sustainable Architecture), co-organized with Assolegno and Federlegno-Arredo, SAIE 2004 (Bologna International Building Fair, October 2004).
- Chairman of the session 3EC "Historical timber structures", IV International Seminar, 'SAHC Structural Analysis of Historical Constructions', Padova, Nov. 10-13, 2004.
- Chairman of the session "FRP-Materials in Timber Structures", 2.nd National Symposium 'Mechanics of Masonry Structures Strengthened with FRP– Materials', Venezia, Dec. 6-8, 2004.
- Member of Scientific Committee of the V International Conference on Structural Analysis of Historical Constructions, SAHC, New Delhi, November 2006.

- Advanced Course "Problematiche avanzate nella progettazione delle strutture lignee", CISM 'Centre International des Sciences Mécaniques', Udine, 21-22 June & 5-6 July 2007
- International Seminar on Timber Construction “Il legno e la costruzione: architettura, struttura, cultura”, Trento, May 17, 2008
- Member of Scientific Committee of the VI International Conference on Structural Analysis of Historical Constructions, SAHC, Bath, July 2008
- Member of Scientific and Organizing Committees of the RILEM International Conference *SACoMaTis 2008*, Varenna (Como Lake, Italy), September, 2008
- Member of Scientific Committee of Prohitech Conference 2009 “Protection of Historical Buildings”, Rome (Italy), June 21-24, 2009
- Member of Scientific Committee of REMO 2009 “repair, Conservation and Strengthening of tradidionally erected Buildings and Histirical Buildings”, Wroclaw (Poland), December 2-4, 2009
- Member of Scientific Committee of the World Conference on Timber Engineering WCTE 2010, Riva del Garda (Italy), June 20-24, 2010
- Member of Scientific Committee of the International Conference on Structures & Architecture ICSA 2010 (July 21-23, 2010)
- Member of Scientific Committee of the Structural Analysis of Historical Constructions SAHC 2010 (Oct 6-8, 2010)
- Member of Scientific Committee of the International Conference on Structural Health Assessment of Timber Structures, SHATIS’11, June 16-17, 2011, Lisbon, Portugal
- Member of the Scientific Committee of the International Congress “Domes in the World” (Florence, Mar 19-23, 2012)
- Member of Scientific Committee of XXIII Italian Steel Conference 2011 (Ischia, Oct 9-12, 2011)
- Member of Scientific Committee of the Structural Analysis of Historical Constructions SAHC 2012 (Oct 15-17, 2012)
- Member of Scientific Committee of the 1st Chinese-Italian Workshop “ADVANCE IN TIMBER ENGINEERING”, Nov. 9-10, 2012, Tonji University, Shanghai, China
- Member of Scientific Committee of XV Italian Conference ANIDIS, Seismic Engineering in Italy, Padova, Jun 30-Jul 4, 2013
- Member of Scientific Committee of the International Conference on Structures & Architecture ICSA 2013 (July 24-26, 2013)
- Organizer and Chair of the 2nd International Conference on Structural Health Assessment of Timber Structures, SHATIS’13, September 5-6, 2013, Trento, Italy
- Member of Scientific Committee of XXIV Italian Steel Conference 2013 (Torino, Sep 30-Oct 2, 2013)
- Workshop "Le possibilità del legno nell’edilizia residenziale multipiano. Esempi, normative e i nuovi orizzonti", 17 Ott 2014, Trieste
- Conference "CONOSCERE E RICOSTRUIRE-Edifici in legno: dalle palafitte all’età contemporanea", 17-18 Ott 2014, Museo delle Palafitte di Fiavé (Trento)
- Member of Scientific Committee of the 3rd International Conference on Structural Health Assessment of Timber Structures, SHATIS’15, September 9-11, 2015, Wroclaw, Poland
- Member of Scientific Committee of the World Conference on Timber Engineering WCTE 2016, Wien (Austria), August 22-25, 2016

- Member of Scientific Committee of XVII Italian Conference ANIDIS, Seismic Engineering in Italy, Pistoia, Sept 17-21, 2017
- Member of Scientific Committee of the 4th International Conference on Structural Health Assessment of Timber Structures, SHATIS'17, September 20-22, 2017, Istanbul, Turkey
- Member of Scientific Committee of the World Conference on Timber Engineering WCTE 2018, August 20-23, 2018, Seoul, Rep. of Korea
- Member of Scientific Committee of the 11th International Conference on Structural Analysis of Historical Constructions (SAHC 2018), Cusco, Peru, September 11-13, 2018
- Member of Scientific Committee of XVIII Italian Conference ANIDIS, Seismic Engineering in Italy, Ascoli Piceno, Sept 15-19, 2019
- Member of Scientific Committee of the 5th International Conference on Structural Health Assessment of Timber Structures, SHATIS'19, September 25-27, 2019, Guimaraes, Portugal
- Member of Scientific Committee of the 6th International Conference on Structural Health Assessment of Timber Structures, SHATIS'22, September 7-9, Prague, Czechia
- Member of Scientific Committee of the World Conference on Timber Engineering WCTE 2023, June 2023, Oslo, Norway
- Member of Scientific Committee of the 18th World Conference Earthquake Engineering WCEE 2024, 30th June - 5th July 2024, Milano, Italy

- Scientific organisation of HFI (Holz_forum-Italy) conference series, Verona & Lazise sul Garda (VR), Italy, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2021, 2022, 2023

6.2 CONGRESSES. INVITED SPEAKER

1) *Recupero delle strutture lignee dei solai*, College of Engineers of Mantova, Oct 1983
2) *Problemi di restauro e recupero delle strutture lignee*, Colleges of Engineers and Architects of Verona, Dec 1984
3) *Analisi delle strutture composte*, Workshop co-organized by College of Engineers of Padova and CTA, Abano Terme (Padova), Nov 1985
4) *Teoria e tecnica del restauro*, Congress organized by the College of Engineers of Verona, Apr-Jun 1988
5) *Protezione antincendio e correzione acustica*, Congress organized by the College of Engineers of Padova, novembre 1990
6) *Le strutture in legno lamellare e l'Eurocodice 5*, Congress "Costruzioni in legno: tecniche realizzative, comportamento statico, sperimentazione, restauro", organized by the College of Engineers of Vicenza and C.I.A.S. (Bolzano), Vicenza, May 13-14-15 1992
7) *Resistenza al fuoco delle strutture*, Congress "Protezione antincendio", organized by the Colleges of Engineers and Architects of Venezia and VIC-Italiana, Venezia, Oct 16, 1992
8) *Metodologie di verifiche strutturali agli stati limite: strutture in legno*, Workshop "Verifiche strutturali agli stati limite", organized by Faculty of Engineering of University of Padova and College of Engineers of Padova, Dec 4 - 11, 1992
9) *Orientamenti attuali nel campo della resistenza al fuoco delle strutture*, Congress "Protezione antincendio e correzione acustica", organized by the Colleges of Engineers and Architects of Mantova and VIC-Italiana, Mantova, May 7, 1993
10) *Aspetti progettuali alla luce dell' Eurocodice 5*, International workshop "Impiego del legno in edilizia: aspetti progettuali", organized by C.N.R.-I.T.L. (S.Michele all'Adige), for the Bauschau/Lignomec 93, Bolzano, May 14, 1993
11) *Progetto e verifica delle strutture di legno secondo la normativa europea EC.5*, post-graduate course "Costruire con il legno", COMETT II, ATTAC, Istituto di Scienza e Tecnica delle Costruzioni of University of Padova, Padova and Bressanone, Apr 8, 1994
12) *Consolidamento di solai in legno con soluzioni a struttura composta legno-legno*, International Workshop RILEM "Timber: a Structural Material from the Past to the Future", organized by Gruppo Italiano RILEM and Department of Mechanical and Structural Engineering of University of Trento, Trento, Sept 28, 1994
13) *Comportamento sperimentale di solai in legno*, Workshop "Solai in legno: diagnosi del comportamento ed operazioni di ripristino", organized by the College of Engineers of Trento and C.I.A.S. (Bolzano), Trento, Oct 21, 1994
14) *Strutture, materiali ed azioni sulle costruzioni*, Post-graduate course "Problemi di ingegneria civile in alta montagna", organized by CISM (Udine), Tresivio (Sondrio), Nov 14, 1995
15) *Il comportamento al fuoco delle strutture lignee e dei solai lignei consolidati*, Workshop "Solai in legno: diagnosi del comportamento ed operazioni di ripristino", organized by the College of Engineers of Treviso and C.I.A.S. (Bolzano), Treviso, Dec 1, 1995

16) *Eurocodice 5: progetto e verifica delle strutture in legno secondo la normativa europea*, 14° Congress of ATE (Association of Technicians and Designers of Civil and Industrial Buildings) “Strutture in legno lamellare: Eurocodice 5 e nuove tecnologie”, Politecnico of Milano, Mar 5, 1996
17) *Strutture in legno: sistemi innovativi avanzati e rispetto della qualità*, M.E.C.I. 96 (Civil and Industrial Building Fair), Erba (Como), Mar 8, 1996
18) *Eurocodice 5: classificazione del legno strutturale, metodologia di verifica*, Workshop “Progettare e costruire in legno”, organized by C.N.R.-I.T.L. (S.Michele all’Adige) and Colleges of Engineers and Architects of Reggio Emilia and Modena, Albinea (Reggio Emilia), Apr 12, 1996
19) *Formulati epossidici per il consolidamento strutturale dei solai lignei*, Workshop "Il recupero dei solai in legno - Tecnologie ed esempi applicativi", SAIE 1997, Bologna, Oct 17, 1997
20) *Tecniche di consolidamento: solai in legno*, III Congress "Tecniche del restauro di monumenti e di edifici antichi - I consolidamenti strutturali", Sopritendenza per i Beni Ambientali e Architettonici del Piemonte and Comune di Ghemme (Novara), Ghemme, Apr 1, 1998
21) *Attività di ricerca in corso sul legno presso l'Università di Trento*, International Workshop "Timber structures: diagnosis and experimental analysis on elements, connections and joints", Faculty of Engineering, Jul 27, 1998
22) *Tecniche di realizzazione di solai composti in legno e calcestruzzo*, IX Bauschau-Lignomec, International Congress “Tecnologie avanzate nell'impiego strutturale del legno”, Bolzano, Feb 22, 1999
23) *Solai misti in legno-calcestruzzo*, CISM course "Le strutture in legno nelle nuove costruzioni e nel recupero", Udine, Jun 10, 1999
24) *Legno e calcolo. Eurocodice 5*, Congress "Tradizione ed innovazione nelle costruzioni: legno come protagonista del prossimo millennio", 51^ Industrial Fair of Trieste, Trieste, Jun 25, 1999
25) *Ricerche sulle strutture in legno presso l'Università di Trento*, II Colloquium of the 'German - Italian Comittee for Science' on "Sviluppo tecnologico, dialogo ricerca-industria e competitività del sistema ricerca", WG "Wood: renaissance of a raw material", Trento, Jun 26, 1999
26) *Il progetto delle strutture in legno con l'Eurocodice 5*, I Italian Conference "Legno lamellare – Norma e progetto", IUAV, Venezia, Oct 8, 1999
27) *Il progetto delle strutture in legno con l'Eurocodice 5*, SAIE 99, Bologna, Oct 16, 1999
28) *Solai lignei composti: confronto sperimentale tra le diverse tipologie di connessione*, Workshop "Concretezza nell'architettura del legno", ELMEPE 2000, (Civil and Industrial Building Fair), Erba (Como), Mar 24, 2000
29) *Sperimentazione su travi lignee rinforzate con FRP: primi risultati*, Workshop "I materiali compositi nel restauro", RESTAURO 2000, VII Edition, Ferrara, Mar 27, 2000
30) *Solai lignei composti: confronti sperimentali*, Congress "Costruzione e recupero dei tetti in legno - Tecnologie e materiali innovativi", Sirmione (Verona), May 13, 2000

31) *Tecnologia nell'impiego strutturale del legno*, Congress "Problema tetto – Aspetti tecnici e normativi negli interventi di manutenzione, recupero e rifacimento ", Trento, Nov 10, 2000

32) *Linee guida e raccomandazioni per gli interventi sul costruito. Tecniche di intervento su coperture e solai*, Post-graduate Course "Le strutture portanti in legno: conservazione e consolidamento dell'esistente, il lamellare, le verifiche secondo Eurocodice 5", Politecnico of Milano, Feb 5, 2001

33) *I dettagli costruttivi nel progetto della durabilità*, X Bauschau-Lignomec, Int. Congress "Progettare la durabilità. Il legno dalla materia prima al manufatto", Bolzano, Feb 17, 2001

34) *Proposals and criteria for the preliminary evaluation, the design and the execution of works on ancient load bearing timber structures*, European Project 'Culture 2000', International Workshop "Wooden handwork/wooden carpentry: european restoration sites", Torino/Trento, Feb 19 and 21, 2001

35) *L'uso del legno in edilizia. Problemi di durabilità,* Lecture for the 5th 'Convegno nazionale delle segherie e del commercio del legno', Rolo (Reggio Emilia), Mar 23, 2001

36) *I ponti in legno. Il problema della durabilità*, International Congress "The world of bridges", IUAV, Venezia, Apr 5, 2001

37) *Criteri di intervento sul costruito*, Workshop "Progettare con il legno", Building Fair 'Legno & Edilizia', Verona, Jun 15, 2001

38) *La normativa sul legno. Tecniche di realizzazione di solai composti*, Workshop "Progettare con il legno", Building Fair 'Legno & Edilizia', Verona, Jun 15, 2001

39) *Progettare la durabilità. I dettagli costruttivi nel progetto della durabilità*, International Congress "Sicurezza e comfort nelle abitazioni con strutture di legno", Building Fair 'Legno & Edilizia', Verona, Jun 16, 2001

40) *Le risorse del materiale legno per costruire*, Workshop "Struttura legno" (Timber structure), SAIE 2001 (Bologna International Building Fair), Bologna, Oct 20, 2001

41) *Normativa di riferimento per le strutture in legno e sue possibili evoluzioni*, Workshop "Costruire in legno con sistemi innovativi", Colleges of Engineers and Architects of Brescia, Darfo Boario Terme (Brescia), Nov 9, 2001

42) *Protezione antincendio, una riflessione critica*, International Workshop "Fire Protection in Alto Adige. Is it really fireproof?", organized by ProLignum, Bolzano, Nov 23, 2001

43) *Les projets de construction bois marquants en Italie*, Lecture as invited speaker at the "Journée de la Construction Bois Epinal", ENSTIB, Feb 1 and 2, 2002

44) *Solai lignei composti. Tecniche di realizzazione, metodologie di verifica, normative di riferimento*, Lecture for the College of Engineers of Catania, Feb 15, 2002

45) *Strutture di legno. Cultura, conservazione, restauro*, RESTAURO 2002, IX Edition, Ferrara, Apr 6, 2002

46) *Il comportamento al fuoco delle strutture in legno lamellare*, Symposium "Legno lamellare e fuoco, le ragioni di una scelta vincente", Building Fair 'Legno & Edilizia', Verona, Jun 21, 2002

47) *Il ruolo della sperimentazione nella definizione dei collegamenti CNP*, Conference "Innovazione nei sistemi strutturali", Building Fair 'Legno & Edilizia', Verona, Jun 22, 2002

48) *Commenti e puntualizzazioni alla nuova normativa*, Conference "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni in legno: contenuti e commenti sulla bozza ministeriale", Building Fair 'Legno & Edilizia', Verona, Jun 22, 2002

49) *L'edilizia in legno in Italia. Problemi tecnici e possibili soluzioni*, Workshop "Strutture di legno. La crescita in Europa, le prospettive in Italia", SAIE 2002 (Bologna International Building Fair), Bologna, Oct 19, 2002

50) *Durabilità del legno, scelta delle specie, progetto del dettaglio*, Congress "Programmare la durabilità", Building Fair 'Legno & Edilizia', Verona, Feb 22, 2003

51) *Stabilità strutturale e resistenza al fuoco degli elementi strutturali in legno*, Congress "La qualità strutturale per la sicurezza in caso di incendio", organized by API, sponsored by Italian Ministry of Industry and Department for Fire Protection and Civil Rescue, Padova, May 16, 2003

52) *Strutture innovative in legno lamellare armato*, Conference "Impieghi edilizi ed energetici del legno", exhibitions 'Vivere il legno' (Living wood), Altopiani di Folgaria, Lavarone, Luserna, Jul 12, 2003

53) *Cultural heritage. load bearing structures. criteria for the preliminary evaluation, the design and the execution of works*, European Project 'Culture 2000', Venezia, Sept 3, 2003

54) *Solai lignei con soletta collaborante nel recupero edilizio e nelle nuove costruzioni*, 18° Congress of ATE (Association of Technicians and Designers of Civil and Industrial Buildings) "Elementi innovativi per orizzontamenti", Politecnico of Milano, Sept 24, 2003

55) *Applicazioni e osservazioni sulla nuova Normativa Italiana per le Costruzioni in Legno*, International Congress "Il legno lamellare: le nuove prospettive della innovazione progettuale" (Brettschichtholz: Ermöglicht neue Perspektiven in der Projektierung), Forum di Bressanone, Sept 26, 2003

56) *Gli interventi sul costruito. Il ruolo della sperimentazione per la conservazione delle strutture lignee*, Conference for SAIE 2003 (Bologna International Building Fair), Bologna, Oct 17, 2003

57) *Solai lignei con soletta collaborante in calcestruzzo. Esempi applicativi*, Workshop organized by HILTI-Italia and University of Padova, Nov 21, 2003

58) *Timber structures in Italy - The new buildings and the problem of ancient structures*, Key-note lecture to be held for the 1st Iberian Conference on Timber Construction (Cimad'04), Guimarães, Portugal, March, 2004

59) *Il quadro normativo italiano per le costruzioni di legno*, Conference for SAIE 2004 (Bologna International Building Fair), Bologna, Oct 15, 2004

60) *Costruire in legno tra prodotto e innovazione tecnologica. Gli interventi sul costruito.* Conference in the occasion of the exhibition of Architect Imre Makovecz, Udine, Dec. 9, 2004

61) *Aspetti normativi negli interventi sulle strutture lignee*, Conference "Lignea Materia", Villa Cambiaso, University of Genova, Jan 22, 2005

62) *Connessioni legno-legno e legno-altri materiali*, Course "Progettare e costruire solai e tetti di legno", Building Fair 'Legno & Edilizia', Verona, Feb 18, 2005

63) *Aspetti normativi negli interventi sulle strutture lignee*, XLIX Workshop ATE "Idoneità statica e recupero del costruito", Politecnico Milano, Feb 24, 2005

64) *La Pieve di Santa Maria Assunta a Cavalese (TN): gli interventi di adeguamento e consolidamento effettuati dopo l'incendio del 29 aprile 2003*, Workshop within 'Restauro 05' Fair, Ferrara, Apr 8, 2005

65) *Progettazione strutturale con latifoglie americane*, Workshop for the presentation of the new technical brochure of AHEC American Hardwood Export Council, SAIE 2, (Bologna International Building Fair), Bologna, March 14, 2006

66) *Strutture di legno negli edifici storici: criteri per la valutazione preventiva, la progettazione e l'esecuzione di interventi*, Workshop on "Edifici storici ed ecclesiali: problematiche relative a diagnosi, consolidamento, recupero", Trento, March 25, 2006

67) *Concezione strutturale e architettura. Il rapporto tra durabilità e robustezza nelle costruzioni in legno*, Distilleria Marzadro, Nogaredo (Trento), September 15, 2006

68) *Il comportamento sismico delle strutture in legno*, Conference "Progettare il futuro in legno lamellare", Milano, October 6, 2006

69) *Proteggere e risanare il patrimonio costruito in legno*, "International Meeting for sustainable architecture & ecobiology", International Committee for Sustainable Architecture & Ecobiology, Schlanders (South Tirol, Italy), October 29, 2006

70) *Robustezza, durabilità, resistenza al fuoco*, Workshop on the Document CNR DT 206 "Istruzioni per il progetto, l'esecuzione ed il controllo delle costruzioni di legno", CNR - University of Firenze, Faculty of Engineering, Firenze, Dec 1, 2006; Udine, Feb 14, 2007; Genova, Feb 29, 2008; Napoli, Apr 16, 2008; Brescia, May 30, 2008; Trento, Jul 17, 2008; Venezia, Sep 26, 2008

71) *Conservare il patrimonio edilizio. Il recupero delle strutture di legno*, Course "Costruzioni di legno: scenari ed innovazione possibile", Building Fair 'Legno & Edilizia', Verona, Feb 16, 2007

72) *Il contributo della sperimentazione alla progettazione degli interventi di restauro su strutture lignee*, Int. Congress "Evoluzione nella sperimentazione per le costruzioni", CIAS Centro Internazionale di Aggiornamento Sperimentale - Scientifico, Ciprus, April 21-28, 2007

73) *Collegamenti di carpenteria. Esperienze storiche e applicazioni moderne*, CISM post-graduate course "Problematiche avanzate nella progettazione delle strutture lignee", Udine, June 21, 2007

74) *Calcolo della resistenza al fuoco del legno e legno lamellare. Solai misti legno-calcestruzzo*, Post-graduate Course on "Ingegneria Sicurezza Antincendio - Fire Engineering", College of Engineers of Venezia, Venezia, June 29-30, 2007

75) *Solai composti. Approcci normativi, esperienze di ricerca*, CISM post-graduate course "Problematiche avanzate nella progettazione delle strutture lignee", Udine, July 5, 2007

76) *Il progetto al fuoco delle strutture lignee*, CISM post-graduate course "Problematiche avanzate nella progettazione delle strutture lignee", Udine, July 5, 2007

77) *Comportamento al fuoco delle strutture in legno*, 60.th Conference ATE "La resistenza al fuoco delle strutture", Milano, Oct 10-11, 2007

78) *Metodologie di rilievo, valutazione e analisi delle strutture lignee*, Course "Il restauro su beni architettonici oggetto di tutela - D. Lgs. 22 gennaio 2004 n. 42, , organized by Fondazione Architetti, Treviso, Nov 09, 2007

79) *Behaviour and Rehabilitation of traditional Timber Structures*, Workshop for "COMET Area-Meeting, Subarea 1.2 – Innovative and Intelligent Connection Systems" and "Structures2. Grazer Holzbau Seminar'08 (2. GraHSE'08)" zum Thema "Verbindungs-technik im Ingenieurholzbau", Technische Universität Graz, Graz (A), Jan 30, 2008

80) *Progettare le strutture in legno in Italia*, Conference within Assolegno LAB, Madeexpo International Building Fair, Milano, Feb 8, 2008

81) *Strutture di legno: EC5-1-2*, Workshop on "Gli eurocodici per la progettazione strutturale antincendio", Istituto Superiore Antincendi, Roma, Sept 18, 2008

82) *Progettare le strutture in legno lamellare in Italia*, Conference "Il cuore naturale del nuovo Gran Teatro Giacomo Puccini di Torre del Lago: quando il legno sostiene il cemento", Ordine Ingegneri di Lucca e di Pisa, Torre del lago Puccini (Lucca), Oct 3, 2008

83) *Behavior and rehabilitation of traditional timber structures*, keynote lecture for ProHitech International Conference, Roma (Italy), June 22, 2009

84) *Progettare le strutture di legno in Italia alla luce delle nuove Norme tecniche*, Italian & Austrian Workshop on "Timber construction: new materials and new standards", College of Engineers of Bolzano, Bolzano, October 23, 2009

85) *Metodologie di rilievo, valutazione e analisi delle strutture lignee. Il percorso metodologico dalla diagnosi alla terapia*, Course "Il restauro su beni architettonici oggetto di tutela - D. Lgs. 22 gennaio 2004 n. 42", organized by Fondazione Architetti, Vicenza, Oct 28, 2009

86) *Problemi di durabilità di strutture in legno*, CISM post-graduate course "Strutture in legno: progettazione e soluzioni innovative", Udine, October 29, 2009

87) *Resistenza al fuoco di elementi in legno*, CISM post-graduate course "Strutture in legno: progettazione e soluzioni innovative", Udine, October 29, 2009

88) *N.T.C. e le strutture in legno*, Workshop "Nuove norme tecniche sulle costruzioni: procedure, doveri e responsabilità", Verona, February 18, 2010

89) *Legno: ricerca e formazione in Trentino*, Meeting "Finlandia/Trentino: esperienze a confronto", Trento, April 15/16, 2010

90) *Strengthening and refurbishment of existing timber structures*, lecture for 1st Chinese-Italian Workshop "ADVANCE IN TIMBER ENGINEERING", Nov. 9-10, 2012, Tonji University, Shanghai, China

91) *The current regulatory framework and future prospects for timber constructions*, Meeting RUBNER Holzbau, Trieste, Oct 17, 2014

92) *Timber structures in earthquake prone regions: the design under current regulatory framework*, ATE Association, Milano, Feb 9, 2015

93) *Optimization in the Use of Wood and Wood-based Materials in Hybrid and Composite Structures* (keynote lecture), World Conference on Timber Engineering WCTE 2016, Wien (Austria), August 22-25, 2016

94) *Building with wood: the Italian and European regulatory framework*, RUBNER Holzbau, Milano, Oct 20, 2017

95) *Italy and new Technical Standards: peculiarities and innovations of the new text*, First International Assolegno Summit, FLA, Milano, Dec 13, 2017

96) *Timber structures in the new NTC 2018*, Conference presenting the new Italian Technical Standards 2018, ATE association and FAST, Milano, May 3, 2018

97) *Timber structures and the new NTC*, Conference "Dialogue with the territory. Buildings with wooden structure. Towards the construction of tomorrow", Maranello (MO), May 7, 2018

98) *Wooden construction techniques: research, technical standards, opportunities for the sector*, Urbanpromo Green, Venezia, IUAV, Sept 9, 2018

99) *Existing building stock. Sustainable and fast-track interventions*, Meeting DPC-ReLUIS "Science for civil protection", Trento, Oct 16, 2019

100) *Wood and housing safety: new constructions and dialogue with existing buildins*, Assolegno Conference Track Tour, Torino, Feb 21, 2020

101) *The sustainability of living in seismic prone regions*, Webinar "Timber Forum: Zero Carbon Conference 2021", Nov 26, 2021

102) *Wooden carpentry: experiences and critical issues encountered in the field*, Wood ARCo, Associazione Recupero del Costruito, Webinar, Feb 7, 2022

7. OTHER ACTIVITIES

7.1 LABORATORY ACTIVITY

Prof. Piazza has taken part continuously to laboratory activities, both in Padova and in Trento laboratories.

From 1980 to 1992 he collaborated in the Laboratory for Building Materials of University of Padova in the experimental activities, especially for what concerns the instrumentations, the set up of different tests for research and for industries, the automation of some procedures for standard tests on steel and concrete.

From 1991 to 1992 he collaborated in the Laboratory for Building Materials of University of Trento for the automation of some procedures for standard tests on steel and concrete. From 1991 he collaborated in the same Laboratory in the experimental activities, especially for what concerns the set up of all the tests on wood and timber, either for research or for industries.

Finally, he collaborated since 1996 to the constitution of the new Materials and Structures Test Laboratory. More specifically, he designed the civil R.C. pre-stressed structures, the strong floor and the reaction walls and he was involved also during the construction phases.

He devoted himself also to relevant problems concerning the monitoring and the appraisal of timber structures in building of historical interest, see also:
http://www.ing.unitn.it/dims/labs/labs.html.

For the Laboratory for Fire Tests of the Wood Technology Institute, National Research Council (currently Trees and Timber Institute) of S. Michele all'Adige (Trento) he designed the R.C. structure for the new furnace for testing horizontal loaded structures. From 1997 to the end of 2003, he was the vice-director of the same Laboratory of Fire Behaviour of Building Components.

He was Director and responsible of Materials and Structures Test Laboratory from October 2019 to the date of retirement (September 2021).

7.2 FORMAL AND OTHER ACTIVITIES

Committees, Representation, other Organization Activities.

1) From 1983 to 1992, member of Council of Civil Engineering of the University of Padua.
2) Since 1992, member of the Council of the Faculty, the Council of Civil Engineering of the University of Trento.
3) Since 1992, for the Council of Civil Engineering of the University of Trento, member of the Board for the evaluation of the individual programs of studies (Structural Engineering); tutoring activities for Structural Engineering students.
4) From 1995 to 1996, member of the Committee of the Faculty of Engineeering for the Orientation service for the teachers of the secondary schools in the Province of Trento and Bolzano.
5) From 1996 to 1997, member of the Committee of the Faculty of Engineeering for the Evaluation of Teaching Activities.
6) From 2002, in the Council of Civil Engineering, member of the Committee for the stage activities of students.
7) Since 1996, member of the Committee of Buildings and Logistics of the Faculty of Engineeering, representing the Department of Mechanical and Structural Engineering, especially for what concerns the new Laboratories.
8) From 1994 to 1995, member of the Administrative Board of the Department of Mechanical and Structural Engineering, University of Trento.
9) Member of the examination committee for the engineering profession in the Years 1993, 1997, 2002 (official member), and in the Years 1994, 1996 (associated member for Civil Engineer).
10) Since 2003, vice-chairman of the Council of Civil Engineering.
11) Since June 2006, member of the Committee for Buildings, Faculty of Engineering.
12) Since October 2006 (to 2012), Associate Dean of the Civil Engineering course, University Trento.
13) Since October 2018 (to 2021), Associate Dean of the Architecture and Building Engineering course, DICAM, University Trento.

7.3 REVIEW AND PEER REVIEWER ACTIVITIES. BOARD OF EXAMINERS.

1) Prof. Piazza is a peer reviewer of research projects financed by the Italian Ministry of Education, University and Research (MIUR), and of those financed by the University of Padua.
2) Since 1996, prof. Piazza is a peer reviewer of research projects financed by the local government institution "Provincia Autonoma di Trento PAT".
3) Since October 2002, prof. Piazza is member of the Scientific Committee of the Journal "Costruzioni metalliche" (Steel Constructions), responsible and reviewer of research section.
4) Year X (1998), Opponent at Doctoral Thesis Defense "The seismic behaviour of timber structures in monumental buildings", Arch. Edoardo Colonna (tutors proff. Petrini and Parisi), Politecnico of Milano.
5) Year XV (Feb. 2003): member of the examiners board for the examination of Doctoral Theses within the Ph.D. Course "Design, preservation and control of materials and structures", Universities of Brescia, Padova, Trento, Trieste, Udine, Venezia (Architectural Institute).
6) Year XXV (Jan. 21, 2010), Member of the Board for the Final Exams for PhD, Doctoral School "Ingegneria delle costruzioni", Faculty of Engineering, University of Naples Federico II
7) Year XXII, XXIII, XXIV, Member of the Board for the Final Exams for PhD, Doctoral School "Conservazione dei Beni Architettonici", Politecnico di Milano
8) Reviewer for the International Journals, as certified by Publons/WoS (file attached hereafter).

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Web of Science CV
Prepared on July 5th 2023

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Verified reviews

Reviewer Summary

For manuscripts reviewed from date range July 2018 - July 2023

(20) Engineering Structures	(5) Construction and Building Materi...
(4) Earthquake Engineering & Struct...	(3) Wood Material Science and Engi...
(2) Proceedings of the Institution of ...	(1) Journal of Civil Structural Health ...
(1) Bulletin of Earthquake Engineeri...	(1) European Journal of Wood and W...
(1) International Journal of Architect...	(1) Automation in Construction

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Reviewed: Feb 2023 for Journal of Civil Structural Health Monitoring

-
2 rounds from Sep 2022 to Nov 2022 for Earthquake Engineering & Structural Dynamics

-
Reviewed: Aug 2022 for Wood Material Science and Engineering

-
Reviewed: Jul 2022 for Earthquake Engineering & Structural Dynamics

-
2 rounds from Apr 2022 to Jun 2022 for Wood Material Science and Engineering

-
Reviewed: Aug 2021 for Bulletin of Earthquake Engineering

-
2 rounds from Oct 2020 to Feb 2021 for Construction and Building Materials

-
2 rounds from Dec 2020 to Feb 2021 for Engineering Structures

-
2 rounds from Oct 2020 to Jan 2021 for Engineering Structures

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3 rounds from Mar 2020 to Oct 2020 for Engineering Structures

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Reviewed: Jul 2020 for European Journal of Wood and Wood Products

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Reviewed: Jul 2020 for Engineering Structures

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Reviewed: Jul 2020 for International Journal of Architectural Heritage

-
2 rounds from Apr 2020 to Jun 2020 for Engineering Structures

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2 rounds from Jan 2020 to May 2020 for Proceedings of the Institution of Civil Engineers: Structures and Buildings

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Reviewed: Apr 2020 for Engineering Structures

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4 rounds from Jun 2019 to Mar 2020 for Engineering Structures

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Reviewed: Feb 2020 for Engineering Structures

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Reviewed: Feb 2020 for Engineering Structures

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Reviewed: Nov 2019 for Engineering Structures

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Reviewed: Sep 2019 for Engineering Structures

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Reviewed: Jun 2019 for Engineering Structures

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Reviewed: Mar 2019 for Construction and Building Materials

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Reviewed: Dec 2018 for Automation in Construction

-
Reviewed: Nov 2018 for Construction and Building Materials

-
2 rounds from Jun 2018 to Nov 2018 for Construction and Building Materials

-
Reviewed: Jul 2018 for Earthquake Engineering & Structural Dynamics

9) Member of the Editorial Boards of
   Structural Magazine (www.structuralweb.it)
   INGENIO (www.ingenio-web.it)
   Costruzioni Metalliche (www.acaiacs.it)
   Revista portuguesa engenharia estruturas, rpee (http://rpee.lnec.pt/)
   Progettazione sismica (https://bookstore.eucentre.it/progettazione-sismica)

10) 2007, member of the Scientific Board of the Austrian Research Institut Holz.bau Forschungs gmbh della TU-Graz (http://www.holzbauforschung.at/index.php?id=47&L=1)

11) External referee in the scientific evaluation for European Research Council ERC Advanced Grant Calls 2009

12) External referee in the scientific evaluation for European Research Council ERC Starting, Consolidator and Advanced Grant Calls 2016

13) External review for the Swiss National Science Foundation is Switzerland, 2016

14) Reviewer for a research proposal within the framework COST Action TU1406, 2016

15) External reviewer for the Swiss National Science Foundation in Switzerland, 2017

16) Member of the Scientific Committee for the restoration of façades and timber roof structure of Palazzo Farnese (Embassy of France in Italy), 2018-2021

17) External review for the Canada Foundation for Innovation, Ottawa, CA, 2021

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Board of Examiners for Italian National Competition for Assistant Professor, Associate Professor, Full Professor Positions.

18) Year 1996: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Engineering, University of Parma (G.U.- IV, n.66, 29.08.1995; D.R. 499, 18.04.1996).

19) Year 2000/01: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Architecture, Milano (Leonardo) (G.U.- IV, 12.09.2000; D.R. n. 391, 04.08.2000).

20) Year 2001: Member of the Board of Examiner for a National Competition for a position of Associate Professor, group "Structural Analysis and Design", Faculty of Engineering, University of Trieste (G.U.- IV, n. 24, 23.03.2001; D.R. 146, 07.03.2001).

21) Year 2002: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Engineering, Politecnico of Milano (Lecco) (G.U.- IV, n. 64, 13.08.2002; D.R. n. 56, 25.07.2002).

22) Year 2002: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Architecture, Politecnico of Torino, (D.R. n. 751, 03.10.2001).

23) Year 2004: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Engineering, University of Pavia (G.U. – IV, n. 64, 13.08.2004; D.R. n. 429-2004, 30.07.2004).

24) Year 2006: Member of the Board of Examiner for a National Competition for Assistant Professor (1 year position), group "Structural Analysis and Design", Faculty of Engineering, Politecnico Milano (D.R. n. 318, 02.02.2006).

25) Year 2008: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Engineering, University of Trento (D.R. n. 407, 22.07.2008).

26) Year 2010: Member of the Board of Examiner for a National Competition for Associate Professor, group "Structural Analysis and Design", Faculty of Engineering, University of Napoli "PARTHENOPE" (D.R. D.R. n. 886, 29.12.2009).

27) Year 2010: Member of the Board of Examiner for a National Competition for Assistant Professor (regular position), group "Structural Analysis and Design", Faculty of Architecture, University of Genova (D.R. n. 1111, 30.10.2009).

28) Year 2013: Member of the Board of Examiner for a National Competition for Assistant Professor (3 years position), group "Structural Analysis and Design", Department of Engineering, University of Ferrara (D.R. n. 980, 29.08.2013).

29) Year 2014: Member of the Board of Examiner for a National Competition for Associate Professor, group "Structural Analysis and Design", Department DICCA, University of Genova (D.R. n. 1487, 21.11.2014).

30) Year 2015: Member of the Board of Examiner for a National Competition for Full Professor, group "Structural Analysis and Design", Department DICCA, University of Pavia, Dept Civile Engineering and Architecture (D.R. n. 2132/2014, 27/11/2014).

31) Year 2015: Member of the Board of Examiner for the confirmation as Full Professor, group "Structural Analysis and Design", MIUR, Ministero Istruzione, Università e Ricerca, Roma (Prot. n. 1371, 05.02.2015).

32) Year 2018: Member of the Board of Examiner for a National Competition for Assistant Professor (rtd.a), group "Structural Analysis and Design", Department DAD, Politecnico Torino (D.R. n. 223, 05.03.2018).

33) Year 2018: Member of the Board of Examiner for a National Competition for Assistant Professor (rtd.b), group "Structural Analysis and Design", Department DICAM, University of Trento (D.R. n. 158, 14.03.2018).

34) Year 2019: Member of the Board of Examiner for a National Competition for Assistant Professor (rtd.b), group "Structural Analysis and Design", Department DICAM, University of Trieste (D.R. n. 291, 29.05.2019)

35) Year 2019: Member of the Board of Examiner for the Competition for yhe position of Full Professor, "Structural Analysis and Design", Department Ingegneria e Architettura, University of Parma (DRD n. 1856/2019 PROT. 164989, 31.07.2019)

7.4 COMMITTEES FOR STANDARDS

Prof. Maurizio Piazza has been member of the Working Group 20 "Wood and wood materials", within the Committee "Beni culturali - NORMAL" of UNI, dealing with standards about diagnostics and conservation of cultural heritage. In this context, he was responsible and rapporteur for the project UNI 11138 " Cultural Heritage. Wooden artworks. Load bearing structures in buildings. Proposals for the preliminary evaluation, the design and the execution of works".

He is member of the CNR Committee for the Italian standard. In this context two projects have been set up with the contribution of prof. Piazza: document DT 201:2005 “Guide for strengthening of timber structures through FRP systems” for the Working Group 20 "Wood and wood materials", document DT 206:2007 (and DT 206/R1) “Istruzioni per il Progetto, l’Esecuzione e il Controllo delle Strutture di Legno”.

He is associate member of the Monitoring Board of the new Italian standards “Norme Tecniche per le Costruzioni” (Year 2005-2006).

He is Italian delegate within the European TC 250 –SC 5 Timber Structures, and Chair of the National mirror Committee for Standard on Timber Structures (since 2010). He is also Italian delegate within the European TC 250 –SC 8 Earhquake Resistant Structures.

He is member of the Monitoring Board “Cabina di regia” of the new Italian standards “Norme Tecniche per le Costruzioni 2008” (Year 2011-2012).

He has been member of

- RILEM Technical Committe on Timber Structures (1989-1993), TC 112 "Creep in timber structures";
- RILEM Technical Committe 215-AST "In-situ assessment of structural timber" (2005-2012);
- RILEM Technical Committe 245-RTE "Reinforcement of Timber Elements in Existing Structures" (2011-2016);
- RILEM Technical Committe TC TPT (Cluster E. Masonry, Timber and Cultural Heritage), “Tests methods for a reliable characterization of resistance, stiffness and deformation properties of timber joints”;
- COST Action C 12 "Improving building structural quality by new technologies";
- Management Committee of COST Action FP1101 “Assessment, Reinforcement and Monitoring of Timber Structures”;
- COST Action FP1004 “Enhance mechanical properties of timber, engineered wood products and timber structures”;
- COST Action FP1402 "Basis of structural timber design - from research to standards".

Prof. Maurizio Piazza is expert member of C.S.ll.pp. *Consiglio Superiore dei lavori pubblici*.

7.5 PATENTS

1) European Patent on a Special Device for the execution of on site hardness test on load bearing timber elements (VR2000A000052 it, 01112073.0 eu)

2) European Patent on a Method of Manufacturing a Reinforced Wooden Beam and Reinforced Beam thus obtained (VR2001A0000034 it, 02005324.5 eu)

3) United States, Patent Application No. US 2011/0218744 A1 (Sep. 8, 2011), priority data VR2008A000116, Oct. 22, 2008, Int. Application No.PCT/IB2009/054608, "Method and device for assessing the structural characteristics of installed supporting poles", Authors: M. Piazza, G.M. Pompermaier, M. Riggio;,
http://www.wipo.int/patentscope/search/en/WO2010046844,
http://ip.com/patapp/US20110218744

4) Italian Patent Application (pending) “System to connect timber-based panels for the construction of seismic resilient buildings; system components and construction process (Sistema di connessione di pannelli a base di legno di un edificio con caratteristiche antisismiche, elementi di connessione del sistema, e procedimento di costruzione dell’edificio con detto sistema di connessione), Authors: I. Giongo, M. Piazza, M. Luchetti; n.102017000110525 (application 03/10/2017, officially admitted 17/12/2019)

8. PROFESSIONAL AND CONSULTING ACTIVITIES

Since 1979, prof. Piazza has had the opportunity to have a concern in professional activities or to be consulting engineer for some interesting works of structural design, either for new buildings and structures (steel, r.c. and timber structures) or for refurbishment and consolidation of existing ones. This activity has revealed advantageous and functional also for interesting on site experimentation for students of the courses of *Theory and Design of Structures*, *Structural Analysis and Design*, *Design of Reinforced and Prestressed Concrete Structures*, *Design of timber structures*. Part of this activity is here reported.
Details and peculiarity of some of the cited works are published, partially at least, in some papers quoted in the references.

8.1 R.C. STRUCTURES FOR CIVIL BUILDINGS

- New 15-storied building for the hospital of Bassano del Grappa (Vicenza, Italy)
- New 6-storied buildings for the hospital of Monselice (Padova, Italy)
- New 8-storied building for the hospital of Valdagno (Vicenza, Italy)
- Fifteen-storied building for the head offices of the Bank of Sardegna (Cagliari, Italy)
- Buildings for the head offices of the Bank 'Cassa di Risparmio VR-VI-BL' (Verona, Italy)
- Buildings for the new Scientific - Technological Centre of Mestre (Venezia, Italy)
- New 14-storied building for the University general hospital of Padova (Italy)
- New Congress Centre 'Gran Guardia' (steel and r.c. structures), Verona (Italy)

8.2 R.C. AND PRE-STRESSED R.C. SPECIAL STRUCTURES

- Special hydraulic works 'Botte del Pigozzo', Battaglia Terme (Padova)
- Water reservoirs at Bassano del Grappa (Vicenza, Italy)
- Underground channel (inner cross section 6×4 m) for the 'Consorzio Lessinio-Euganeo-Veneto'

8.3 STEEL AND STEEL-CONCRETE COMPOSITE STRUCTURES

- Steel and steel-concrete composite structures for the new Law Courts of Padova (Italy)
- Steel structures for the new Sport Hall 'Ghiaie' (ground area 82×66 m^2, audience 5500 people), Trento (Italy)
- Steel structures for the new 15-storied earthquake resistant building of the Hospital of Siena

8.4 STEEL SPECIAL STRUCTURES

- Piping system ∅ 2000 mm (siphon system under the r.c. dam of Vallarsa, Rovereto) for the water power plant of Vallarsa, AGSM, Verona (Ialy)
- Project of the new east side of stadium 'R.Menti' (ground area 104×30 m^2), Vicenza (Italy)

8.5 BRIDGES AND PEDESTRIAN BRIDGES

- Pre-stressed R.C. road bridges and pedestrian bridge on the channel Osellino in Mestre (Venezia, Italy)
- Different bridges for the 3rd lane, Highway 'A4 Brescia - Padova' (Italy)

8.6 REHABILITATION OF MASONRY AND TIMBER STRUCTURES

Masonry structures

- General project and structural design for the refurbishment of Industrial Buildings of the 'Ex-Olcese' cotton-mill, to be used by Faculty of Architecture, Venezia
- General project and structural design for the rehabilitation and refurbishment of various buildings pertaining to the 'Basilica del Santo', Padova (financed for the Jubilee Year 2000)
- Structural rehabilitation of 'Ponte dei Papi', one of the four historical bridges of 'Prato della Valle', Padova

Masonry and timber structures

- General project and structural design for the rehabilitation and refurbishment of S. Zeno Castle, turreted town of Montagnana (Padova)
- Structural design for the rehabilitation of the Gran Guardia Palace, Verona
- General project and structural design for the rehabilitation of the old building 'Molino Vittoria', actually used by the University of Trento (administrative offices), Trento
- General project and structural design for the rehabilitation of the Palace 'Piomarta', Rovereto (Trento)
- General project and structural design for the rehabilitation of the masonry vaults and the reconstruction of the timber roof of the historical church 'Pieve', Cavalese (Trento)

Timber structures

- Structural restoration of one of the domes of the Cathedral of Padova
- Structural restoration of the timber floor structures of the XVI century building "Monastero delle R.R. Madri di S.Maria Delle Grazie" (nunnery), to be used as library by the University of Ferrara (Ferrara)
- Structural restoration of the roof structures (queen - post trusses) of the Cathedral 'S.Marco Evangelista' of Rovereto (Trento)
- Structural restoration of the timber statue of the archangel at the top of the bell-tower of the Cathedral of Belluno (collapsed for a hurricane)

8.7 CONSULTANT ACTIVITIES

- Monolite r.c. pre-fabricated panels and earthquake resistant building system Monolite
- Design of the strong floor for the new Materials and Structures Test Laboratory of the Faculty of Engineering of the University of Ancona
- Dynamic analyses of centrifuges for 'Nuova MAIP Pieralisi', Iesi (Ancona, Italy)
- Dynamic analyses of centrifuges for 'Nuova FRAU', Carrè (Vicenza, Italy)
- Consulting engineer for some Italian Glulam Factories (Holzbau spa, Trentino Legno spa)

9. PUBLICATIONS

9.1 Books and Reports (Br)

1 /1 Br/ M. Piazza, A. Miazzon, G. Turrini, *La giunzione a flangia con bulloni presollecitati nella trave inflessa* (End-plate connection with pre-loaded bolts), (also published in the Proceedings 'Istituto di Scienza delle Costruzioni', University of Padova, vol. IV, 1979: pp. 157-261)

2 /2 Br/ M. Piazza, G. Turrini, *Il complesso strutturale solai-travi-pilastri* (The structural joint floor-beam-column), Cortina, Padova, 1983

3 /3 Br/ M. Piazza, G. Turrini, *Tavole di progetto della struttura mista legno-calcestruzzo* (The design of timber-concrete structure), College of Engineers and Architects of Mantova, 1983

4 /4 Br/ M. Piazza, P. Erbi, S. Cont, *Componenti in legno nella prevenzione incendi* (Wood components for fire prevention), Final report of the research made in collaboration DIMS (Università di Trento) and Istituto per la Tecnologia del Legno - C.N.R., 1999

5 /5 Br/ Berti S., Piazza M., Zanuttini R., *Strutture di legno per un'edilizia sostenibile*, ISBN 88-324-4752-5, Ed. Il Sole 24 ore, 2002

6 /6 Br/ M. Piazza, R. Tomasi, R. Modena, *Strutture in legno. Materiale, calcolo e progetto secondo le nuove normative europee* (Timber structures. Material, calculation and design following the new European Codes), ISBN 88-203-3583-2, Biblioteca Tecnica Hoepli, 2005

7 /7 Br/ Piazza M., del Senno M., Bernasconi A., *Il legno e il fuoco. Nozioni di base e introduzione al calcolo*, Prontuario n. 7, Promo_legno, ISBN 978-3-902320-41-4, Milano, 2007 (2nd edition, June 2012, ISBN 978-3-902320-49-0/2a edizione)

8 /8 Br/ Piazza M. (ed.), *Consolidamento delle strutture in legno. Risultati degli studi condotti nell'ambito della ricerca PRIN 2006 sul recupero delle strutture lignee esistenti*, ISBN 978-88-86977-64-7, Hevelius Edizioni s.r.l., Benevento, 2009

9 /9 Br/ Piazza M., Riggio M. (ed.s), *Structural Health Assessment of Timber Structures*, ISBN 13: 978-3-03785-812-7, (ISSN print 1022-6680, ISSN cd 1022-6680, ISSN web 1662-8985), Copyright 2013, Trans Tech Publications Ltd, CH-8635 Durnten-Zurich, Switzerland, Vol. 778 of *Advanced Materials Research*, p. 1140

9.2 Parts of Book, Articles published in Referred Books (Bc)

10 /1 Bc/ M. Piazza, *Le strutture composte nel restauro statico*, edited for the advanced course on the Theory and Technics of Building Restoration, for the College of Engineers and Architects of Verona, 1988: pp. 43-58

11 /2 Bc/ M. Piazza, *Aspetti progettuali alla luce dell'Eurocodice 5*, VI LIGNOMEC 1993, edited by CNR-ITL, 1993: pp. 57-74

12 /3 Bc/ M. Piazza, *Restoration of timber floors via a composite timber-timber solution*, RILEM 'Timber: a Structural Material from the Past to the Future', Trento, 1994: pp. 167-187

13 /4 Bc/ M. Piazza, M. Ballerini, A. Ferrari, *Plane grid glulam structures: development of moment resistant connections with glued-in steel rods*, volume 'New technologies and structures in civil engineering', edited by Dubina, D., Vagas, I., Editura Orizonturi Universitare Timisoara, ISBN 973-9400-40-X, 1999: pp. 121-144

14 /5 Bc/ M. Piazza, N. Baldassino, *Le strutture in legno: degrado, diagnostica, recupero*, Lectures of the the Post-graduate School 'Storia, analisi e valutazione dei beni architettonici e ambientali', volume "Il cantiere per la conservazione: tecniche, esperienze ed interventi sul costruito", Politecnico of Torino, CELID, 2002: pp. 12-40

15 /6 Bc/ M. Piazza, M. Ballerini, *Tecniche di realizzazione di solai composti in legno e calcestruzzo*, in "Tecnologie avanzate nell'impiego strutturale del legno", IX LIGNOMEC, edited by edited by Delmarco O., CNR-ITL, 1999: pp. 133-151

16 /7 Bc/ N. Baldassino, M. Ballerini, M. Piazza, P. Zanon, *Caratterizzazione di resistenza e rigidezza degli elementi e dei collegamenti nelle strutture lignee antiche*, volume "Problemi inerenti l'analisi e la conservazione del costruito storico", edited by prof. Salvatore Di Pasquale, Libreria Alfani, Firenze, 2001: section 7, pp. 189-214

17 /8 Bc/ M. Piazza, P. Zanon, *Analisi preliminari, controlli, interventi sugli elementi lignei nel progetto di conservazione*, volume "Il progetto di conservazione: linee metodologiche per le analisi preliminari, l'intervento, il controllo di efficacia", edited by S. Pesenti, Alinea, Firenze, 2001: section 10, pp. 459-471

18 /9 Bc/ M. Piazza, M. del Senno, *Proposals and criteria for the preliminary evaluation, the design and the execution of works on ancient load bearing timber structures*, volume "Wooden Handwork/Wooden Carpentry: European Restoration Sites", ISBN: 2-84299-344-6, Elsevier, Paris, 2001: pp. 263-277

19 /10 Bc/ M. Piazza, M. del Senno, *I particolari costruttivi nel progetto della durabilità*, in "Progettare la durabilità" (X LIGNOMEC), edited by Rachello E., Delmarco O., Piazza M., CNR-ITL, 2001: pp. 25-39 (also published in "Tetto & Pareti", n. 6, 2002: pp. 14-19)

20 /11 Bc/ M. Piazza, L. Bonafede, *Le costruzioni in legno*, volume "La concezione strutturale nel progetto di architettura", Editrice Compositori, Bologna (Italy), 2002: section IV, pp. 101-138

21 /12 Bc/ O.S. Bursi, M. Ballerini, M. Piazza, R. Zandonini, E. Fournely, U. Kuhlmann, K. Kürschner, J. Schänzlin, *Shear transfer in composite members: testing, modelling, standards and damage*, Proceedings of International Seminar, Lisbon, 19-20 April, 2002, COST C12, EUR 20728, ISBN 92-894-5684-1, 2003: pp. 21-36

22 /13 Bc/ A. Mandara, P. Perdikaris, M. Piazza, C. Schaur, *Repairing and strengthening for new requirements: use of mixed technologies*, COST C12, Volos (Grecia), 2002 (to be published by COST C12)

23 /14 Bc/ M. Piazza, C. Cattich, L. Gottardi, *Strutture innovative in legno lamellare armato*, volume "Vivere il legno ", Centro Documentazione Luserna, 2003: pp. 59-61

24 /15 Bc/ M. Piazza, P. Lavisci, *Les projets de construction bois marquants en Italie*, volume "JCBE 2002 - Créer dans le créé", Journées de la Construction Bois Epinal, Imprimerie Masson, Nancy, Juillet 2002: pp. 119-129

25 /16 Bc/ M. Piazza, P. Lavisci, *Restauration et renforcement des structures anciennes*, volume "JCBE 2002 - Créer dans le créé", Journées de la Construction Bois Epinal, Imprimerie Masson, Nancy, Juillet 2002: pp.19-35

26 /17 Bc/ M. Piazza, G. Brentari, *Criteri generali per la progettazione degli interventi di restauro di strutture lignee*, volume "Il manuale del legno strutturale, vol. IV: Interventi sulle strutture", Ed. Mancosu, ISBN 88-87017-41-7, 2004: pp. 28 – 51

27 /18 Bc/ M. Piazza, *Interventi di consolidamento con l'uso di elementi meccanici di collegamento: solai misti legno - legno*, volume "Il manuale del legno strutturale, vol. IV: Interventi sulle strutture", Ed. Mancosu, ISBN 88-87017-41-7, 2004: pp. 108 – 127

28 /19 Bc/ M. Piazza, P. Lavisci, *Load bearing timber structures in buildings: criteria for the preliminary evaluation, the design and the execution of works*, volume "Interactions between Science, Technology and Architecture in Timber Construction ", Elsevier, Paris, ISBN 2-84299-605-4, 2004: pp. 301-318

29 /20 Bc/ M. Piazza, M. Ballerini, *Strutture composte legno – calcestruzzo con connettori di calcestruzzo. Indagine sperimentale*, volume "Strutture composte. Nuove costruzioni, recupero, ponti", ed. Dezi L., Gattesco N., International Centre for Mechanical Sciences CISM, Udine, ISBN 88-85137-20-2, 2006: pp. 323-340

30 /21 Bc/ Piazza M., *Introduzione alle tipologie di connessione e classificazione*, Ch. 3, in "Bioarchitettura e costruzioni in legno", ISBN 88-86729-59-6, Monfalcone: Edicom Edizioni, 2006, pp. 303-316

31 /22 Bc/ Piazza M., *Il contributo della sperimentazione alla progettazione degli interventi di restauro su strutture lignee*, Proceedings "Evoluzione nella sperimentazione per le costruzioni", Cipro, April 21-28, 2007, CIAS-Bolzano & Tenochem ItalianaSpa-Bergamo, pp. 215-234

32 /23 Bc/ Tomasi R., Pezzo M. I., Piazza M., *Rehabilitation of an historical theatre in Italy*, Annali Museo Civico Rovereto, ISSN 1720-9161, vol. 23 (2007), 2008. pp. 89-102

33 /24 Bc/ Zanon P., Piazza M., Zonta D., Loss C., *Timber structures*, in "A Model Code for the Displacement-Based Seismic Design of Structures DBD12", T.J.Sullivan, M.J.N. Priestley, G.M. Calvi (ed.s), ISBN 978-88-6198-072-3, 2012, IUSS Press, Pavia, pp. 35-37, 55-56

34 /25 Bc/ Riggio M., Piazza M., *Analisi in situ di elementi lignei in strutture storiche: metodologie, normative e applicazioni di tecniche non distruttive*, "Consolidamento delle strutture in legno (Rehabilitation of timber structures)", Piazza M. (ed.), HEVELIUS Edizioni srl, Benevento, pp. 9-24, ISBN 978-88-86977-64-7, 2009

35 /26 Bc/ Riggio M., Piazza M., *Hardness test*, chp. 9, in: "In Situ Assessment of Structural Timber", Series: RILEM State-of-the-Art Reports, Vol. 7, Kasal, Bohumil; Tannert, Thomas (Eds.), Springer, p. 87-97, Vol.7, 2011, ISBN:978-94-007-0559-3

36 /27 Bc/ Cacciaguerra G., Gatti M.P., Piazza M., Tomasi R., Bortot F., Zonta D., Dalle Vedove M., Rosi M., *Chiesa di Santa Margherita*, "L'Università e la ricerca per l'Abruzzo – Il patrimonio culturale dopo il terremoto del 6 aprile 2009", Milano L., Morisi C., Calderini C., Donatelli A. (ed.s), pp. 157-163, Textus Edizioni, L'Aquila, 2011, ISBN 978-88-87132-80-9

37 /28 Bc/ Loss C., Piazza M., Zonta D., *Timber structures*, "Development in the Field of Displacement-Based Seismic Assessment", T.J. Sullivan, G.M. Calvi (ed.), ISBN 978-88-6198-090-7, IUSS Press, Pavia, 2013, pp. 295-338

38 /29 Bc/ Parisi M.A., Piazza M., *Seismic strengthening of timber structures*, "Reinforcement of Timber Structures A state-of-the-art report ", Harte M.A., Dietsch P. (Ed.s), Shaker Verlag 2015, Aachen, ISBN 978-3-8440-3751-7, pp. 89-109

39 /30 Bc/ Piazza M., *Liimapuu ja palo (Glulam and fire)*, "Liimapuukäsikirja Osa 2", Crocetti R. (Ed.), ISBN 978-952-99868-6-6 (pdf), ISBN 978-952-99868-4-2 (koko teos, pdf), Helsinki: Suomen Liimapuuyhdistys, 2015

40 /31 Bc/ Piazza M., *Limträ och brand (Glulam and fire)*, (Kapitel 16), "Limträhandbok, Projektering av limträkonstruktioner - Del 2", Crocetti R. (Ed.), , ISBN 978-91-980304-6-4, Föreningen Sveriges Skogsindustrier, 2016

41 /32 Bc/ Riccadonna D., Schiro G., Giongo I., Piazza M., *On the use of sound spectral analysis for the in situ assessment of structural timber*, RILEM Bookseries, Volume 18, 2019, Pages 332-341 [10.1007/978-3-319-99441-3_35]

42 /33 Bc/ Rizzi E., Capovilla M., Piazza M., Giongo I., *In-Plane Behavior of Timber Diaphragms Retrofitted with CLT Panels*, RILEM Bookseries, Volume 18, 2019, Pages 1613-1622

43 /34 Bc/ Rizzi E., Giongo I, Riccadonna D., Piazza M., *Testing of Irregular Stone Masonry Strengthened with Cross-Laminated Timber*, in "Protection of Historical Constructions", Springer, 209:(2022), pp. 1008-1017 [10.1007/978-3-030-90788-4_78]

9.3 Articles in International and Italian Journals (Jo)

44 /1 Jo/ M. Piazza, A. Miazzon, G. Turrini, *La giunzione a flangia con bulloni pretesi: comportamento in campo post-elastico*, 'Costruzioni Metalliche', n.6, 1982 (also published in Acciaio, n.7-8, 1982: pp. 336-341)

45 /2 Jo/ M. Piazza, G. Turrini, *Una tecnica di recupero statico dei solai in legno*, 'Recuperare', n. 5, 1983: pp. 224-237

46 /3 Jo/ M. Piazza, G. Turrini, *Il comportamento statico della struttura mista legno-calcestruzzo*, 'Recuperare', n. 6, 1983: pp. 214-225

47 /4 Jo/ M. Piazza, G. Turrini, *Recupero statico dei solai in legno - Esperienze e realizzazioni*, 'Recuperare', n. 7, 1983: pp. 396-407

48 /5 Jo/ M. Piazza, G. Turrini, *Elementi di progetto per giunzioni a flangia a comportamento duttile*, 'Costruzioni Metalliche', n.3, 1986

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