

Curriculum Vitae – Vittorio GUSELLA

PERSONAL WEB PAGE:

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NUMBER OF PUBLICATIONS AND DISSEMINATION:

126 Publications on International Refereed Journals

H-INDEX 27 in SCOPUS, 1957 SCOPUS citations, 119 citations for the most cited paper.

CURRENT ACADEMIC POSITION AND AFFILIATIONS:

2004-present Full Professor of Mechanics of Solids and Structures - Scienza delle Costruzioni - CEAR-06/A (ex SSD ICAR/08), Department of Civil and Environmental Engineering, University of Perugia

PROFESSIONAL EXPERIENCE:

1992-2004 Associate Professor of Structural Mechanics, University of Perugia

1989-1992 Technician at Department of Civil and Environmental Engineering, University of Florence

2021 – Member of examining commission for Abilitazione Scientifica Nazionale (ASN) – Sector: Mechanics of Solids and Structures - Scienza delle Costruzioni 08/B2 (CEAR-06/A)

EDUCATION:

1976-1982 Degree in Civil Engineering, University of Florence.

1983-1986 PhD degree in Structural Engineering (12-12-1987)

COMMITTEES AND PROFESSIONAL ACTIVITIES (selected):

2012-2020 President of the Civil Engineering Board of the Department of Civil and Environmental Engineering of the University of Perugia,

2007-2015 President of the Italian Association of Wind Engineering - ANIV (2007-2015) and member of the Steering Committee,

1992-present Member of the Scientific Council and Management Committee of the Intra – Universities Research Center in Construction Aerodynamic and Wind Engineering (CRIACIV) (associated Italian universities: Firenze, Roma "La Sapienza", Perugia, Trento, Chieti-Pescara, IUAV Venezia.

2011- 2013 Director of the master "Management of the urban requalification: restoration activities, administration and development".

2013-present Member of the Scientific Committee of the AID Monuments series (ARCNE - Editor),

Further activities:

He was member of the "Centro Studi Mastrodicasa" di Perugia (Study centre for the diagnosis and therapy of structural damage of historic buildings).

He was Member of the Working Group on the "Wind Actions" of Standard Code Commission of the National Research Council (CNR).

ACTIVITY IN PHD SCHOOLS

He was member of several Board of Teachers of several PhD Schools:

- Civil Engineering and Innovative Materials of the Univ. of Perugia,
- International PhD Course in "Mitigation of Risk due to natural Hazards on Structures and Infrastructures" (associated Italian universities: Firenze, Roma "La Sapienza", Perugia, IUAV Venezia, Trieste, Chieti-Pescara "G. D'Annunzio" partner: Technische Universität Carolo-Wilhelmina di Braunschweig, Germany),
- International in Civil and Environmental Engineering (associated Italian universities: Firenze, Perugia, Pisa - partner: Technische Universität Carolo-Wilhelmina di Braunschweig, Germany).

Currently he is member of the Board of Teachers of the International Doctoral Program in Civil and Environmental Engineering of the University of Perugia.

FUNDINGS FOR THE RESEARCH (selection):

"Wind, structures and environment: design, control and codes" – Project PRIN 95,
"Research and experimental activity on building aerodynamics and wind engineering" (RESACIV)" - Project PRIN 97,
"Analysis, control and wind hazard mitigation on buildings and urban environment (ACME CUE)" - Project PRIN 99,
"Wind and Infrastructures: Dominating Eolian Risk For Utilities and Lifelines" (Winderful)" - Project PRIN 2001
"Life-cycle Performance, Innovation and Design Criteria for Structures and Infrastructures Facing Aeolian and Other Natural Hazards (PERBACCO)" – Project 2003
"Wind effects on slender structures: Performance-based Optimal Design (Wi-POD)" - Project PRIN 2007
Advanced mechanical modelling of new materials and structures for the solution of 2020 Horizon challenges PRIN 2015 (Coordinator of Research Unit Perugia)
"Modelling of constitutive laws for traditional and innovative building materials" - PRIN 2017 (Coordinator of Research Unit Perugia)
"Composite and Bio-Inspired material Design for Engineering Applications" COB IDEA - PRIN 2022 - Principal Investigator
"Multi-Scale fractional Analysis of Non-local response of advanced materials and structures in stochastic setting" MS-FANS - PRIN 2022 PNRR - (Research Unit Perugia)
"Terre proiettate per un'industria delle costruzioni eco-sostenibile e a misura di uomo FIRS2019-00245 – Italian Ministry of Research MUR
"VITALITY – ecosystem of Innovation, Digitalisation and Sustainability for the widespread economy in Central Italy" – Project financed with the Mission "From Research to Business" of the PNRR (Mission 4, Component 2, Investment 1.5)

Research project (coordinator) :

2002 - "Monitoring system and analysis of the Ponte delle Torri in Spoleto", Comune di Spoleto,
2003 - "Wind speed data and structural response, analysis of experimental testing" , Comune di Spoleto,
2006 - "Anchorage devices for steel and composite tie-beam in historic and monumental building restoration", Fondazione Cassa di Risparmio di Perugia,
2007 - "Identification and analysis of the actual damage in the Ponte delle Torri in Spoleto" Società SACEN s.r.l of Napoli e M&G Engineering Spoleto,
2010 - "Development of technologies for the construction of ventilated walls and for the increase of the ductility of the supporting panel", FBM s.p.a. of Marsciano.

CONSULTING ACTIVITIES (selection):

2001 - "Advanced techniques for building and camouflage of mobile phone antennas", CAEL of Massa Martana (PG),
2004 - "Movable broadcasting systems: design under wind loading. Production and management innovative processes" CAEL of Massa Martana (PG),
2006 - "Identification, modelling and analysis of prefabricated support systems for broadcasting apparatus" CAEL of Massa Martana (PG).

TEACHING ACTIVITIES (selection):

From the academic year 2014/15 to present he teaches Mechanics of Solids and Structures (Scienza delle Costruzioni), Civil Engineering, University of Perugia

He taught (selection):

Models and Methods for Structural Engineering, Civil Engineering, University of Perugia
Nonlinear Structural Mechanics and Advance in Mechanics of Solids and Structures, Civil Engineering, University of Perugia
Structural Dynamics, Civil Engineering, University of Perugia
Computational Structural Mechanics, Civil Engineering, University of Perugia

Structural Mechanics, Building Engineering and Architecture, University of Perugia
Fundamentals of Mechanics, Mechanical Engineering, University of Perugia
Advances in Mechanics, Mechanical Engineering, University of Perugia

RESEARCH TOPICS (selection):

- Architectural heritage construction (identification, monitoring, analysis, consolidation, and restoration)
- Composite materials (TPMS – Lattice structures)
- Composite materials for the reinforcement of structures (FRCM)
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- Non-local elasticity - mixed operator approach to peridynamics
- Masonry structures (Homogenization of non-periodic walls, Strength surface, Limit analysis of arches, Effects of the geometrical uncertainties)
- Experimental analysis and structural identification
- Wind engineering (Micrometeorological model of wind speed, Numerical analysis of the structural response, Simulation of correlated wind field, Wind response of antennas and cooling towers, Non-Gaussian pressure field and structural response, Aeroelastic behaviour of bridge, Damage Accumulation in Glass Plates, Active control, Cable dynamics)
 - Structural Reliability (Estimation of extreme winds, Seismic vulnerability, Safety estimation with cumulative damage)
 - Steel structures (Eccentrically X-bracing, Reinforcement of masonry walls by steel X-Bracing)

ORGANIZATION OF CONFERENCES (selection):

1990-2000 Committee of Italian Congress on Wind Engineering, IN-VENTO (every two years)
2001-2004-2008 - Workshop on "Vibration problems on civil structures and mechanical constructions",
1/2001, 2/2004 e 3/2008, Perugia

SCIENTIFIC COMMITTEE OF INTERNATIONAL CONFERENCES (selection):

1996 - Third European Conference on Structural Dynamics, 5-8 June, Firenze,
2009 - 5th European & African Conference on Wind Engineering - Firenze.
2015 - UNCECOMP - 1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering, 25 - 27 May 2015, Crete Island, Greece
2017 - UNCECOMP – 2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering, 15-17 June 2017, Rhodes Island, Greece
2019 - UNCECOMP – 3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering, 24-26 June 2019, Crete, Greece
2021 - UNCECOMP – 4th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, 28-30 June 2021, Streamed from Athens, Greece
2023 - UNCECOMP – 5th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, 12-14 June 2023, Athens, Greece
2025 - UNCECOMP – 6th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, 15-18 June 2025, Rhodes, Greece
2014 - 7th International Conference on Computational Stochastic Mechanics (CSM9) - June 15-18, 2014 – Santorini Greece
2018 - 8th International Conference on Computational Stochastic Mechanics (CSM9) - June 10-13, 2018, Paros, Greece
2026 - 9th International Conference on Computational Stochastic Mechanics (CSM9) - June 21-25, 2026, Corfu, Greece,
2012 - International Congress "AID MONUMENTS", 1st edition, Perugia
2015 - International Congress "AID MONUMENTS", 2nd edition, Perugia
2025 - International Congress "AID MONUMENTS", 3rd edition, Perugia