

UNIVERSITA' DEGLI STUDI DI GENOVA - FACOLTA' DI INGEGNERIA **DICCA Dipartimento di Ingegneria Civile, Chimica e Ambientale** 16145 GENOVA - Via Montallegro, 1 - Tel. 39 - 010 3532491 - Fax 39 - 010 35325481

# **CURRICULUM VITAE**

# PERSONAL DATA

Name Maria Pia Repetto Nationality Italian Birth date Address: Email: Mob: Tel:



#### **CURRENT ACADEMIC POSITION**

Qualification/TitleFull ProfessorUniversityUniversità degli Studi di GenovaDepartmentDICCA-Dep. of Civil, Chemical and Environmental EngineeringAcademic DisciplineStructural Engineering

# EDUCATION AND TRAINING

2003 PhD degree in Structural and Geotechnical Engineering, Università degli Studi di Genova

1998 Master of Science's degree summa cum laude in Civil Engineering (Structural Section), Università degli Studi di Genova

# SCIENTIFIC ACTIVITY

#### **Research interests**

The scientific activity of Maria Pia Repetto has been addressed to wind engineering problems. Research lines mainly involves the analysis of wind-induced actions, response and fatigue of structures, adopting analytical and probabilistic approaches to derive closed-form solutions at engineering level. More recent lines involve multidisciplinary problems related to the risk assessment of port infrastructures under wind actions, the wind fields modelling in urban environment, the analysis of thunderstorm wind flow and structural response, the study of vertical axis wind turbines.

#### Scientific publications

Maria Pia Repetto is author or co-author of 125 scientific publications which include: 38 papers published in peer-refereed international journals (ISI and Scopus listed, see Annex I), 1 paper published in national journals, 1 chapter in a book of international relevance, 2 international monograph, 44 papers presented and included in the Proceedings of International Conferences, 20 papers presented and included in the Proceedings of Italian Conferences, 1 PhD Thesis, 17 Internal reports.

Her scientific papers have been cited 1141 times and the corresponding h-index is equal to 21 (based on Scopus database, January 2021).

#### Prizes and awards for scientific activities

Raymond C. Reese Research Prize 2014 from American Society of Civil Engineer (ASCE-SEI), "For the paper, "Closed-Form Prediction of the Alongwind-Induced Fatigue of Structures," as published in the September 2012 issue of Journal of Structural Engineering; the award was presented during the Awards Luncheon ceremony of the Structures Congress 2014 in Boston, MA, USA– April 2014

IAWE Junior Award 2011 from International Association for Wind Engineering (IAWE) for outstanding achievements and original contributions to wind engineering research; the award was presented during the ceremony of the 13th International Conference on Wind Engineering in Amsterdam, The Netherlands– July 2011

Special mention ANIV Award 2008 from Italian Association of Wind Engineering (ANIV) for distinguishing paper: Bimodal alongwind fatigue of structures, Journal of Structural Engineering, ASCE, 2006

#### Coordination and management of a research group

<u>Supervisor of 7 PhD students</u> of the Program in Civil, Chemical and Environmental Engineering at the University of Genoa, Curriculum "Structures, materials and geotechnics":

(a) Alessio Torrielli, XXII cycle, "Simulation of long term and safety analysis of structures subjected to wind action"; dr. Torrielli is actually Advisory Engineer at Siemens Gamesa Renewable Energy, Denmark;

(b) Alessio Ricci, XXVII cycle, "Wind flow modeling in urban areas through experimental and numerical technique"; Double Doctoral Degree Program in Structural and Geotechnical Engineering, University of Genoa and Science and Technology for Engineering, Eindhoven University of Technology, The Netherlands (TU/e supervisor Prof. Bert Blocken);

(c) Alberto Balbi, XXXI cycle; "Seaport Resilience: a framework to measure port resilience against weather natural hazard";

(d) Michela Damele, XXXII cycle, "General Method of Wind-Induced Fatigue Analysis of Slender Structures";

(e) Andrea Orlando, XXXIII cycle, "Full-scale monitoring of the wind excited response of slender structures, with fixed and rotating masses";

(f) Mekdes Tadesse Mengistu, XXXV cycle, "Dynamic analysis of vertical slender structures to thunderstorm winds";

(g) Simone Varni, XXXVI cycle, "Fatigue of steel bridges". Industrial PhD Program in collaboration with Seteco Engineering S.p.A.

<u>Supervisor of 1 PhD students</u> of the Program in Civil, Chemical and Environmental Engineering at the University of Genoa, Curriculum "Wind science and Engineering", funded by Liguria Region, in collaboration with Research & Consultant CETENA S.p.A., VTE-PSA S.p.A, Mooring Company of Genoa Port, Liguria District of Marine Technology DLTM:

(a) Stefano Torre, XXXIV cycle, "Safe management of mooring systems for large ships under strong wind conditions"

Scientific responsible and supervisor of 4 Post-Doctoral researchers at the University of Genoa:

(a) dr. Patrizia De Gaetano, research fellow in "Models and measures of wind and sea waves for the safety of port areas" (2011-2013); dr. De Gaetano is actually employed as marine modeling expert at the Liguria Regional Agency for Environmental Protection (ARPAL);

(b) dr. Marco Tizzi, research fellow in "Wind velocity power spectral density function analysis and models " (2013-2014); dr. Tizzi is actually meteorologist at the Liguria Regional Agency for Environmental Protection (ARPAL);

(c) dr. Marina Pizzo, research fellow in "Models and forecast of wind velocity in ports and coastal areas" (2012-2013); "Numerical modeling of wind fields and wind/waves interaction" (2014-2015);
dr. Pizzo is actually employed at the Liguria Region Research agency (Liguria Ricerche S.p.A);
(d) dr. Li Xiao, research fellow in "Experimental study and structural monitoring of poles and towers subjected to thunderstorm wind" (2020-present).

Scientific responsible and supervisor of 2 research scholarships at the University of Genoa:

(a) dr. Alessio Ricci "CFD simulation of wind flow in urban and port areas" (2015);

(b) dr. Andrea Orlando, "Hot-spot models of structural details for fatigue analysis of vertical axis wind turbine" (2017).

<u>Coordinator of the collaborative research activity</u> with the Dep. of the Built Environment – Building Physics and Services of the Eindhoven University of Technology (The Netherlands) on "wind flow modelling in urban areas adopting numerical and experimental tools". Attached a letter of reference from Prof. Bert Blocken (TU/e) (Annex B) – from 2013 to 2018

# Participation in research groups activity

<u>Member of the Wind Engineering and Structural Dynamics Research Group</u> (WinDyn) of University of Genoa, working in the multidisciplinary field of interactions between wind and structures (<u>http://windyn.dicca.unige.it/</u>). Maria Pia has been participating to the experimental numerical and analytical research activities related to wind engineering, contributing actively to many national and international research projects, with management and administrative roles. Details on the more relevant projects are given below – from 1999 to date

<u>Member of the Research Group of the ERC-THUNDERR</u> (2017-2021) and responsible of the phasing-out (2020-2021) project "Detection, simulation, modelling and loading of thunderstorm outflows to design wind-safer and cost-efficient structures" financed by European Research Council (ERC), Advanced Grant 2016 (code 741273, P.I. Prof. G. Solari, University of Genoa) (2017-2021). The project involves multidisciplinary research activities in the fields of construction technique and atmospheric physics, with relevant international collaborations– from September 2017 to October 2021

<u>Member of the Research Group</u> of the project "Wind monitoring, simulation and forecasting for the smart management and safety of port, urban and territorial systems" (2016-2018), funded by Compagnia di San Paolo. The project has two general objectives: i) strengthening the wind monitoring network for the safe management of the ports of the High Tyrrhenian Sea; ii) generalizing the wind monitoring, simulation and forecasting tools to complex urban and territorial systems – from July 2016 to June 2018

<u>Member of the Advisory Board of 2 European Projects</u> financed by the European Territorial Cooperation Objective, Cross-border program "Italy-France Maritime 2007-2013":

(a) "Wind and Ports: the forecast of wind for the management and the safety of port areas" (from July 2009 to June 2012);

(b) "Wind Ports and Sea: Monitoring and forecasting of weather and sea conditions for safe access to port areas" (from June 2013 to July 2016).

The two projects involved a joint co-operation between the main commercial seaports authorities in the High Tyrrhenian Sea and the University of Genova, realizing an integrated system including a wide in situ monitoring network, numerical codes for the multi-scale simulation of wind and wave fields, wind and wave forecasting algorithms, statistical analyses and wind climatological mapping. All these results are made directly available in continuous mode to the port operators through a web-based GIS platform – from 2009 to 2016

<u>Coordinator of the collaborative research activity</u> with the Dep. of the Built Environment – Building Physics and Services of the Eindhoven University of Technology (The Netherlands) on "wind flow modelling in urban areas adopting numerical and experimental tools". – from 2013 to date

<u>Member of the Research Group of 4 PRIN projects</u> financed by the Italian Ministry of University and Research (National P.I. Prof. Fabrizio Vestroni, University of Rome "La Sapienza", Local Coordinator Prof. Giovanni Solari):

(a) PRIN 1999: "Dynamic response of flexible structures under natural and artificial actions";

(b) PRIN 2001: "Dynamic behavior of structures: analytical and experimental studies";

(c) PRIN 2009: "Dynamic behavior of linear and non-linear structures: modelling, experimentation and identification analyses";

(d) PRIN 2015 "Measurement and representation of wind actions and effects on structures"

- from 2000 to date

<u>Member of the Research Group of PRIN project</u> financed by the Italian Ministry of University and Research (National P.I. Prof. Giorgio Diana, Milan Polytechnic, Local Coordinator Prof. Giuseppe Piccardo):

(a) PRIN 2002: "Basic research on fluid-induced vibrations of slender structures"

<u>Member of the Research Group of Strategic Project</u> <u>MIUR-CNR</u> (National P.I. Prof. Francesco Petrini, Milan Polytechnic, Local Coordinator Prof. Giovanni Solari):"Residual life modelling of structures in safe conditions – Evaluation of Atmospheric Hazard" – from 2002 to 2007

# Scientific responsibility of research projects ruled through partnership agreements with companies and/or public private bodies

(the total amount of all these research contracts is about 470.000 euro excluding vat)

Safety of S. Agostino Museum windows under extreme wind events; financed by Comune di Genova, July-September 2021

<u>Study of the design wind speed for the new Valpolcevera Bridge</u> (substituting the Morandi Bridge); financed by Italferr S.p.A. – from March 2019 to date

<u>CFD analysis and wind tunnel test for the optimization design of the Genova Bridge deck;</u> financed by Spea Engineering S.p.A. – from March 2019 to date

<u>Analysis of the resilience of maritime-port cluster</u>; co-operative research agreement with PSA International Group, Voltri Terminal Europa (VTE) S.p.A – from February 2018 to date

<u>Web-GIS Meteorological system for North Tyrrhenian Port areas</u>: improvement and integration of the Web-GIS developed in the framework of the European Projects "Wind and Port" (2009-2012) and "Wind, Port and Sea" (2013-2016); financed by the Port Authorities of Eastern Liguria Sea, Western Liguria Sea and Livorno – from 2013 to 2021

<u>Structural monitoring of a vertical axis wind turbine</u> installed in Savona port area; co-operative research agreement with SV Port Service S.r.L. – from February 2016 to date

<u>Study of the wind induced response of the cable-stayed Genova Bridge:</u> Statistical analysis of wind velocity, wind tunnel tests and equivalent static loading of desk and piles; financed by Spea Engineering S.p.A. – from April 2018 to December 2018

<u>Study of the design wind speed for the new Metro Station in Riyadh</u> (Saudi Arabia); financed by Seteco Ingegneria s.r.l. – from April to December 2018

<u>Study of the containers stability in port areas under wind actions:</u> evaluation of critical wind condition for instability through experimental evaluation of the friction coefficient and aerodynamic pressure by wind tunnel test; financed by PSA International Group, Voltri Terminal Europa (VTE) S.p.A - from July 2016 to January 2018

<u>Thermodynamic study of Hadid Tower ventilated facade (Milan)</u>: statistical analysis and numerical simulation of wind velocity field, with particular attention to wind calms distribution; financed by MZA Structural Engineering s.r.l. – from July 2015 to October 2015

<u>Short term forecasting system and statistical analysis of wind velocity</u> outside the La Spezia port breakwater; financed by the La Spezia Port Authority – from January 2015 to September 2015

<u>Rotor optimization of the of vertical axis wind turbine</u> through CFD simulation and wind tunnel tests of a flux conveyor system; financed by Elkrom S.r.l. in the framework of the funding POR-FESR 2007-2013, Axis 1 "Innovation and competitiveness ", Action 1.2.2 "Industrial research and experimental development" - from February 2013 to June 2013

<u>Models for the structural response under extreme events of wind speed associated with thunderstorms</u>; financed by University of Genoa (PRA 2011) – from January 2012 to December 2012

<u>Study of wind effects on terraces of Building 12 tower</u> (143 m high) in Milan: wind tunnel tests and statistical analysis of wind velocity for the evaluation of wind comfort and safety on open terraces; financed by Hines Italia S.r.l. – from May 2011 to February 2013

<u>Models for description and forecast of wind speed in coastal sites;</u> financed by University of Genoa (PRA 2011) – from January 2011 to December 2011

<u>Responsible of the Web-GIS Meteorological system</u> realized in the framework of the "Wind and Port" and "Wind, Ports and Sea" European Projects and operatively running in the main High Tyrrenian Sea Port Authorities (http://webgis.ventoeporti.net) – from 2009 to date

<u>Participation to the development of the OS-IS®</u> (Ocean Seismic - Integrated Solution) for remote monitoring of sea waves heights through the micro-seismic noise measurement. The system is based on the Longuet-Higgins (1950), has been developed in the framework of the Wind, Ports and Sea" European Project and has been patented (registration n. 012963245 http://www.agi-tech.com/progettimenu.html) –2013.

# Other professional experiences characterized by research activities related to the sector of Structural Engineering:

<u>Collaboration with Genova High Tech S.p.A</u>. with the task of studying the design wind speed and comfort analysis of the new Erzelli Technology District. The specific engagement was addressed to wind tunnel tests and wind comfort analysis - from 2010 to 2011

<u>Collaboration with CityLife S.p.A.</u> with the task of studying the statistical analysis of wind induces effects on the Isozaki tower (210 m high), in Milan. The specific engagement was addressed to the statistical analysis of wind induced forces and moments at the base of the tower - from 2009 to 2010

<u>Collaboration with Seteco Engineering S.p.A.</u> with the task of studying the design wind speed for the Reggio Emilia HHVV Railway Station. The specific engagement was addressed to the statistical analysis of current and extreme wind velocity in the area -2009

<u>Consulting engagement from La Tecnocasa Energie Alternative S.r.L.</u> with the task of anemological study of Brevenna Valley for Wind Farm design – from 2008 to 2009

<u>Consulting engagement from Spark S.a.S.</u> with the task of designing a steel chimney (70 m high) in Hungary, Hot Strip Mill. The specific engagement was addressed to the wind induced fatigue verification of the chimney -2007

<u>Consulting engagement from Spark S.a.S.</u> with the task of designing an industrial Freon Crystallizator. The specific engagement was addressed to the FEM analysis and structural design of the steel shell, taking into account temperature and corrosion effects – from 2003 to 2004

<u>Collaboration with Società Stretto di Messina S.p.A.</u> with the task of studying the design wind speed for the Messina Strait Bridge; in the framework of a research project the specific engagement was addressed to the statistical analysis of current and extreme wind velocity from anemometric stations – from 2003 to 2004

<u>Consulting engagements from LD&B Associated Engineers</u> with the task of design of two steel chimneys (50 m high) in Enelpower Electric Plant of Cutro and Ostiglia. The specific engagement was addressed to the ultimate limit state and fatigue analyses of the chimneys under wind actions – 2001 and 2003

<u>Consulting engagement from Bianchi, Bucci, Viganò Associated</u> with the task of wind pressure analysis of Hertziana Library, Max Plank Institut, Roma – 2002

<u>Collaboration with Enelpower S.p.A.</u> with the task of studying the design wind speed for the Electri Plants of La Casella, Piacenza e La Spezia; in the framework of a research project, the specific engagement was addressed to the statistical analysis of current and extreme wind velocity in the areas -2002

# **Editorship of Journals and book series**

Member of Editorial Board of "Frontiers in Wind Engineering and Science" journal, from April 2021 to date

<u>Guest Editor of "Building Simulation"</u> (Springer), Special Section on Urban comfort and Environmental Quality, Volume 12, Issue 2, pp. 157-194, April 2019, ISSN: 1996-8744

<u>Guest Editor of "Journal of Wind Engineering and Industrial Aerodynamics</u>" (Elsevier), Special Section on "13<sup>th</sup> Conference of the Italian Association for Wind Engineering (IN-VENTO 2014)" Vol. 147, December 2015, ISSN: 01676105; DOI: 10.1016/j.jweia.2015.11.003

<u>Co-Editor of the book</u> "Vento e Porti - La previsione del vento per la gestione e la sicurezza delle aree portuali /Vent et Ports - La prévision du vent pour la gestion et la sécurité des zones portuaires - ISBN 9788890124648 - 2012

<u>Peer Reviewer of International Journals "ISI Web of knowledge"</u>: (a) Applied energy (Elsevier); (b) Building and Environment (Elsevier); (c) Building simulation (Springer); (d) Energies, MDPI; (e) Engineering Structures (Elsevier); (f) International Journal of Nonlinear Mechanics (Elsevier); (g) Journal of Building Engineering (Elsevier); (h) Journal of Structural Engineering (ASCE); (j) Journal of Wind Engineering and Industrial Aerodynamics (Elsevier); (k) Wind & Structures (Techno-Press) – from 2009 to date

# Chairmanship of international and national Conferences

Organizer and Chairman of the Shipping 4.0 Round table Ports and meteorological catastrophic events, on-line streaming, February 11-12 2021

<u>President of the organizing committee and co-Chairman</u> (co-Chairman Prof. Adriano Magliocco) of the "International Conference on Urban Comfort and Environmental Quality" (Urban-CEQ), Genova (Italy), September, 28-29 2017

<u>President of the organizing committee and co-Chairman</u> (co-Chairman Prof. Luigi Carassale) of the 13<sup>th</sup> International Conference of the Italian Association for Wind Engineering (IN-VENTO 2014), Genova (Italy), June 22-25 2014

<u>Organizer and co-Chairman of the Special Session</u> (co-Chairman Prof. John Holmes) "Wind – induced fatigue" at the 13th International Conference on Wind Engineering (13 ICWE), Amsterdam (The Netherlands), July 10-15 2011

# Participation to Advisory Board of international and national Conferences

9<sup>th</sup> edition of the International conference on fatigue design (Fatigue Design 2021), Senlis (France), November 17-18 2021

XVI International Conference of the Italian National Association for Wind Engineering (Lecco, Italy, September 2020)

8<sup>th</sup> edition of the International conference on fatigue design (Fatigue Design 2019), Senlis (France), November 20-21 2019

2<sup>nd</sup> National (Romanian) Conference on Wind Engineering (2NCWE 2019), Bucharest (Romania), June 6-7 2019

7<sup>th</sup> edition of the International conference on fatigue design (Fatigue Design 2017), Senlis (France), November 29-30 2017

XV International Conference of the Italian National Association for Wind Engineering (Naples, Italy, September 2018)

XIV International Conference of the Italian National Association for Wind Engineering (Terni, Italy, September 2016)

#### Invited speaker in national and international Conferences, Seminars and Lectures

<u>General lecture "The effect of thunderstorm extreme winds on lightweight structures"</u>, XXVII Conference of Lightweight Structures in Civil Engineering, (LSCE 2021), Lods (Poland), December 2-3 2021

<u>Invited lecture "Genova e l'energia: la centrale termoelettrica del porto – La Struttura",</u> Workshop "Memoria identitaria tra conservazione e riuso" – AIPAI and Fondazione Ducale, Genova, January 20 2021

Invited lecture "Structural/infrastructural field monitoring of wind and wind-wave induced response, MsRI-EW Meeting: Conference to identify research infrastructure concepts for a national full-scale 200 mph wind and wind-water testing facility, Online Event, Florida Interantional University (USA), August 20-21 2020

<u>Invited lecture "Wind-induced fatigue on steel structures</u>", National Conference of Association of Industrial Plant– Construction section (ANIMP 2016) Milan (Italy), May 20 2016

Invited lecture "Fatigue analysis of slender structures under turbulent wind actions", International Colloquium on Lightweight Structures in Civil Engineering (LSCE 2014), Warsaw (Poland), September 25-28 2014

Invited lecture "Wind-induced fatigue", Technical Meeting of the Wind Engineering Society (WES) London (UK), March 12 2014

Invited lecture "The wind monitoring and forecast systems for risk assessment of complex areas", International Workshop on "wind disaster problems - challenges ahead", Royal school of Engineering & Technology, Guwahati (India), February 21-22 2013

<u>Invited lecture "Wind engineering: a multidisciplinary science"</u>, International Workshop on "Wind engineering prospects and challenges", Assam Engineering College, Guwahati (India), February 23 2013

Seminar "Structural design and retrofitting: dynamic and seismic issues", Smart Village in Tour, MADE expo – National streaming event- 2013

# INSTITUTIONAL OFFICES AND ROLES

#### Management roles in Universities, as part of Faculty duties

<u>Coordinator of the PhD Curriculum</u> "Structural and Geotechnical Engineering, Mechanics and Materials", PhD program in "Civil, Chemical and Environmental Engineering", DICCA, University of Genoa (Italy)- from January 2019 to date

<u>Member of the Executive Board</u> of the Department of Civil, Chemical and Environmental Engineering, DICCA, University of Genoa (Italy) - from July 2012 to June 2015 and from July 2018 to date

<u>Coordinator of the Architectural Engineering Master of Science's Course</u>, University of Genoa (Italy)- from November 2016 to July 2021

<u>Member of the Research committee</u> of the Department of Civil, Chemical and Environmental Engineering, DICCA, University of Genoa (Italy) - from February 2016 to December 2018

<u>Coordinator of the ISSUGE</u> Curriculum "Engineering solutions for development of sustainable cities", Advanced School of University of Genoa (Italy) - AY 2015-2016

<u>Coordinator of international students mobility</u> and Erasmus program for the Architectural Engineering Course, University of Genoa (Italy) - from November 2011 to November 2016

<u>Responsible of Erasmus agreements for international students mobility</u> between University of Genoa and (a) Universidad de Alcalà (Spain); (b) Universidad de a Coruña (Spain); (c) Université de Liège (Belgium); (d) Universidade do Minho (Portugal); (e) Universitat Politecnica de Valencia (Spain); (f) Bauhaus-Universität Weimar (Germany) - from 2012 to date

<u>Scientific Responsible</u> of the collection of books of the Library "Riccardo Baldacci", DISEG, Faculty of Engineering, University of Genoa – from 2005 to 2006

#### Institutional offices in teaching and research structures of Universities

<u>Member of the Academic Board of the PhD program</u> in "Civil, Chemical and Environmental Engineering", University of Genoa – from 2012 to 2015 (Cod. DOT0511808) and from 2017 to date (Cod. DOT1311880)

<u>Member of the Academic Board of the PhD Curriculum</u> in "Structural and Geotechnical Engineering, Mechanics and Materials", PhD program in "Civil, Chemical and Environmental Engineering", DICCA, University of Genoa (Italy)- from 2011 to date

<u>Member of the Academic Board of the PhD Curriculum</u> in "Wind science and Engineering", PhD program in "Civil, Chemical and Environmental Engineering", DICCA, University of Genoa (Italy)- from 2018 to date

<u>Official Reviewer and Member of the International Doctorate Committee</u> for the title of Doctor of Philosophy at Politecnico di Torino, Italy, defense ceremony of L. Raffaele MSc – 19 March 2019

<u>Official Reviewer and Member of the International Doctorate Committee</u> for the title of Doctor of Philosophy at the Bauhaus-Universität of Weimar, Germany, defense ceremony of M. Milani MSc – 19 October 2018

<u>Member of the International Doctorate Committee</u> for the title of Doctor of Philosophy at the Eindhoven University of Technology, The Netherlands, defense ceremony of A. Ricci MSc - 11 April 2017

Member of Master Degree Boards in Architectural Engineering MSc Course (from AY 2012-2013

to date) and in Civil and Environmental Engineering MSc Course (AY 2017-2018), University of Genoa

#### Offices in public and private institutions, with scientific and/or technology transfer aims:

Member of the Steering Committee of the Italian Institute of Welding (IIS) - from 2020 to date

<u>Member of the executive Board</u> of the Italian Association for Wind Engineering (ANIV) - from 2014 to date

Secretary-Treasurer of the Italian Association for Wind Engineering (ANIV) - from 2014 to 2019

<u>Member of the C.N.R. Working Group (coordinated by Prof. Giovanni Solari) with the task of</u> revising the technical document CNR-DT 2007/2008 "Guidelines for the assessment of wind loads and effects on structures". The specific engagement was addressed to Fatigue verification procedures - from 2018 to 2019

<u>Participation to RELUIS consortium</u> in the activity of seismic damage recognition of public buildings and churches due to the earthquake in Central Italy in 2016 - 2017

Member of the Italian Association for Wind Engineering (ANIV) - from 2009 to date

Member of the Italian Society of Engineers Province of Genoa - from 2001 to date

<u>Invited member of the ANAS</u> <u>Working Group</u> with the task of revising the technical document CNR-DT 2007/2008 preparing a new technical document "Guidelines for the design of roadway bridges and viaducts". The specific engagement was addressed to fatigue verification procedures - from 2010 to 2011

# **TEACHING ACTIVITY**

#### Formal responsibility of Bachelor's and Master of Science's degree courses

<u>Professor of "Wind engineering</u>", Civil Engineering MSc Course (LM23), University of Genoa - AY 2007-2008 and 2020-21- to date

<u>Professor of "Steel structures"</u>, Civil and Environmental Engineering MSc Course (LM23), University of Genoa. - from AY 2016-2017 to date

<u>Professor of "Structural Design"</u>, Architectural Engineering MSc Course (LM4), University of Genoa. - from AY 2012-2013 to date

<u>Professor of "Special and advanced structures"</u>, Civil and Environmental Engineering MSc Course (LM23), University of Genoa – from AY 2015-2016 to AY 2016-2017

<u>Responsible of the experimental educational laboratory</u> funded by University of Genoa for experimental tests for the elastic-plastic behaviour analysis and ultimate resistance measure on steel specimens of typical moment resistant connections, Civil and Environmental Engineering MSc Course and Architectural Engineering MSc Course (LM4) - from AY 2016-2017 to date

<u>Professor of "Structural materials and elements"</u>, Architectural Engineering MSc Course (LM4), University of Genoa - from AY 2013-2014 to AY 2014-2015

<u>Professor of "Advanced Structural Design"</u>, Architectural Engineering MSc Course (LM4), University of Genoa - from AY 2006-2007 to AY 2012-2013

Professor of "Earthquake Engineering", Civil Engineering MSc Course (LM23), University of Genoa - AY 2005-2006

Assistant professor of "Reinforced concrete and Pre-stressed reinforced concrete structures" Civil

Engineering MSc Course (LM23), University of Genoa, and member of Examination Committee – from AY 2000-2001 to - AY 2004-2005

<u>Assistant professor of "Wind engineering</u>" Civil Engineering MSc Course (LM23), University of Genoa, and member of Examination Committee – from AY 2000-2001 to AY 2004-2005

Formal responsibility of PhD courses, Specializing Master's courses and Life Learning courses

<u>PhD course "Monitoring and analysis of downburst events and their effects on structural response"</u>, PhD Program in program in Safety, Risk and Vulnerability, University of Genoa (12 hours) - from AY 2017-2018 to date

<u>PhD course "Fatigue of steel structures"</u>, PhD Program in Civil, Chemical and Environmental Engineering, University of Genoa (30 hours) - from AY 2017-2018 to date

<u>PhD course "Fatigue in welded joints"</u>, PhD Program in Engineering Science and Technologies, University of Genoa (bi-annual course, 30 hours) - from AY 2009-2010 to AY 2016-2017

<u>Short course "Wind flow modelling and climate analyses</u>", Bauhaus Summer School "Forecast Engineering: Global Climate Change and the Challenges for Built Environment", Bauhaus-Universität Weimar, Germany – 2014 and 2016

Course "Sustainable City", Advanced School ISSUGE - IAS, University of Genoa - AY 2015-2016

<u>Assistant professor of the course "Wind effects on buildings</u>", 2<sup>nd</sup> Level University Master's Degree in "Wind Engineering", funded by the European Social Fund - Lombardy Region, inter-university Milan Polytechnic and University of Genoa – AY 2004-2005

Short Course "Wind-induced fatigue of buildings: modelling and and real cases analysis", in the framework of the "Wind-induced effects on buildings" organized by Italian Society of Engineers, Province of Genoa - 2018

# Tutoring

<u>Supervisor of 65 MSc Thesis</u> at Polytechnic School, University of Genoa, carried out on the issues of structural engineering, steel construction and wind engineering, of which 11 in collaboration with Public and Private companies, 2 in the framework of Erasmus Program of international mobility – from 2008 to date

<u>Supervisor for 28 students international mobility</u>: (a) 1 student with Erasmus Mundus grant (KTH, Brazil); (b) 13 students with Erasmus grant for study in European Universities; (c) 14 students with Erasmus Placement grant for traineeship in European Companies – from 2011 to date

Genova, 06/07/2021

Prof. Maria Pia Repetto