Curriculum Vitae di Pierangelo Masarati *(in Italian; English version follows)*

Aggiornato al 21 settembre 2024

Nato a Stradella (PV) il 30/09/1969

- Professore Ordinario dal 2016 presso il Dipartimento di Scienze e Tecnologie Aerospaziali, Politecnico di Milano
- Abilitazione Scientifica Nazionale a Professore di Ia Fascia 09/A1 2012 (dal 3 febbraio 2014)
- Professore Associato dal 2011 presso il Dipartimento di Ingegneria Aerospaziale del Politecnico di Milano
- Idoneità a Professore Associato in ING-IND/04 nel 2010
- Ricercatore dal 2001 presso il Dipartimento di Ingegneria Aerospaziale del Politecnico di Milano
- Dottore di Ricerca in Ingegneria Aerospaziale nel 2000 presso il Politecnico di Milano
- Laureato in Ingegneria Aeronautica nel 1996 presso il Politecnico di Milano

- Dipartimento di Scienze e Tecnologie Aerospaziali, Politecnico di Milano, via La Masa 34, 20156, Milano
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- ORCID: <http://orcid.org/0000-0002-9347-7654>
- Scopus: <http://www.scopus.com/authid/detail.url?authorId=6603564194>
- ResearcherID: <http://www.researcherid.com/rid/I-3898-2012>
- Google Scholar: <http://scholar.google.it/citations?user=MQSSUAwAAAAJ>
- Publons: <https://publons.com/author/479745/>

Didattica:

- Co-organizzatore del simposio “Applications and multidisciplinary methods” di IMSD 2024, International Conference on Multibody System Dynamics, Madison, Wisconsin, USA, 9-13 giugno 2024.
- Guest Editor del numero speciale del CEAS Aeronautical Journal dedicato allo European Rotorcraft Forum 2022
- titolare del corso di Rotorcraft Design (2° anno, 1° semestre Laurea Magistrale) dall’A.A. 2020-2021
- titolare del corso di Multibody System Dynamics (2° anno, 2° semestre Laurea Magistrale) dall’A.A. 2019-2020
- titolare del corso di Dynamics and Control of Flexible Aircraft (1° anno, 2° semestre Laurea Magistrale) dall'A.A. 2016-2017 al 2019-2020
- titolare del corso di Dinamica e Controllo di Strutture e Fondamenti di Aeroelasticità (1° anno, 2° semestre Laurea Magistrale) dall'A.A. 2011-2012 all'A.A. 2015-2016
- titolare del corso di Dinamica dei Sistemi Aerospaziali (3° anno, 1° semestre; inizialmente 2° anno, 2° semestre) dall'A.A. 2003-2004 all'A.A. 2017-2018
- coordinamento del corso di “Dinamica dei Sistemi Multibody” per la Scuola di Dottorato in “Aeromobili a Decollo Verticale”, “Ingegneria Aerospaziale” e “Ingegneria dei Sistemi Meccanici”, in collaborazione con il Professor Federico Cheli dall'A.A. 2001
- titolare del corso “Ethical Aspects of Research on Dual-Use Technologies” per la Scuola di Dottorato del Politecnico di Milano dall'A.A. 2018-2019
- supporto al corso di “Aeroservoelasticità dei Velivoli ad Ala Rotante” per la scuola di dottorato in “Aeromobili a Decollo Verticale” (nel 2008 in collaborazione con il Professor Roberto Celi, University of Maryland, negli anni successivi in collaborazione con il Professor Marco Borri) dall'A.A. 2007-2013
- seminari didattici per il “Postgraduate Course in Rotary Wing Technologies”, Politecnico di Milano dal 2010
- supporto al corso di Progetto di Elicotteri (2° anno, 1° semestre LS) nell'A.A. 2008-2009
- supporto ai corsi di Aeroelasticità Applicata, Progettazione e Sperimentazione Aerospaziale, Dinamica dei Sistemi Aerospaziali in vari periodi a partire dal 1998

Compiti istituzionali:

- Membro della Giunta di Scuola di Dottorato, Politecnico di Milano, dal 2022 al 2024.
- Coordinatore del Dottorato di Ricerca in Ingegneria Aerospaziale, Politecnico di Milano, dal 2018 al 2024.

- Commissario della abilitazione scientifica nazionale ASN 2016 per il settore concorsuale 09/A1 (Ingegneria aeronautica, aerospaziale e navale), 2016-2018.
- Vice-coordinatore del Dottorato di Ricerca in Ingegneria Aerospaziale, Politecnico di Milano, dal 2014 al 2018.
- Coordinatore dei Rotorcraft Research Laboratories (RRL), Dipartimento di Scienze e Tecnologie Aerospaziali, Politecnico di Milano, dal novembre 2014.
- membro della commissione scientifica del Dipartimento di Scienze e Tecnologie Aerospaziali, Politecnico di Milano dal 2013 al 2016.
- membro del collegio dei docenti del Dottorato di Ricerca in Ingegneria Aerospaziale, Politecnico di Milano, dal 2006
- membro del collegio dei docenti del Dottorato di Ricerca in Aeromobili a Decollo Verticale, Politecnico di Milano, dal 2006 al 2012 (quando è confluito in quello di Ingegneria Aerospaziale)

Altro:

- Co-organizzatore del 51° European Rotorcraft Forum, Venezia, 9-11 settembre 2025.
- Membro dell'International Advisory Committee del congresso NODYCON 2025, Hoboken, NJ, USA, 22-25 giugno 2025.
- Membro dello Scientific Committee della ECCOMAS Thematic Conference Multibody Dynamics 2025, Innsbruck, Austria, 13-18 luglio 2025.
- Seminario "Rotorcraft Pilot Biomechanics for Pilot-Vehicle Interface Design and Verification" alla sessione plenaria del 7o International Conference on Multibody System Dynamics - IMSD 2024, Madison, WI, USA, 9-13 giugno 2024.
- Co-organizzatore del simposio "Applications and multidisciplinary methods" a IMSD 2024, International Conference on Multibody System Dynamics, Madison, Wisconsin, USA, 9-13 giugno 2024.
- Seminario "Rotorcraft-Pilot Interaction: How to Keep Pilot Biomechanics Out of the Control Loop" alla sessione plenaria del 9o Asian Rotorcraft Forum (ARF) / 5o International Basic Research Conference on Rotorcraft Technology (IBRCRT), Nanjing, Cina, 6-8 novembre 2023.
- Membro dell'International Advisory Committee del congresso NODYCON 2023, Roma, 18-22 giugno 2023.
- Membro dello Scientific Committee della ECCOMAS Thematic Conference Multibody Dynamics 2023, Lisbon, Portugal, 24-28 luglio 2023.
- Guest Editor del numero speciale del CEAS Aeronautical Journal dedicato allo European Rotorcraft Forum 2022
- Seminario online "Rotorcraft-Pilot Couplings" per la Nanjing University of Aeronautics and Astronautics (NUAA), 19 dicembre 2022.
- Seminario online "Stability Analysis of Nonlinear Rotating Systems Using Lyapunov Characteristic Exponents Estimated From Multibody Dynamics" per la Nanjing University of Aeronautics and Astronautics (NUAA), 15 dicembre 2022.
- Presentazione a invito su "Pilot-vehicle interaction from a multibody dynamics and experimental perspective" al Machine-Ground Interaction Consortium (MaGIC) meeting 2022, University of Wisconsin, Madison, 20-21 settembre 2022.
- Co-organizzatore del simposio "MSNDC-13 Nonlinear Rotordynamics and Rotating Systems" nella ASME IDETC 2022 18th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), St Louis, Missouri, USA, 14-17 agosto 2022.
- Corso estivo "Multibody System Dynamics with Applications" online per la Nanjing University of Aeronautics and Astronautics (NUAA), 11-22 luglio 2022.
- Seminario online "Multibody System Dynamics: a Hands-On Approach" per Xi'an JaoTong University (XJTU), 29 giugno 2022.
- Seminario online "Rotorcraft Aeroelasticity and Pilot-Vehicle Interaction Towards the Advanced Air Mobility Revolution" per Xi'an JaoTong University (XJTU), 28 giugno 2022.
- Membro dello Scientific Committee della First International Conference on Mechanical System Dynamics, Nanjing, Cina, 23-29 novembre 2021.
- Membro del Programme Committee della Aerospace Europe Conference 2021, organizzata da CEAS a Varsavia, 23-26 novembre 2021.
- Associate Editor della rivista International Journal of Mechanical System Dynamics dal 2021.
- Associate Editor della rivista ASME Journal of Computational and Nonlinear Dynamics dal 2021 al 2024.
- Associate Editor della rivista Multibody System Dynamics dal 2021.
- Co-organizzatore del "Multibody Dynamics Workshop 2021", una Summer School internazionale per

dottorandi, virtuale in questa edizione, il 13-17 settembre 2019.
- Membro del technical program committee dell'International Workshop on Engineering for Rotorcraft Safety, Milano, 7-9 aprile 2021.
- Guest editor del numero speciale su "Co-Simulation" della rivista Multibody System Dynamics, novembre 2020.
- Associate Editor della rivista CEAS Aeronautical Journal dal 2020.
- Membro dell'International Advisory Committee del congresso NODYCON 2021, Roma.
- Guest Editor del numero speciale "Vibration Analysis and Control of Time-Varying Systems" della rivista Shock and Vibration, con Lead Guest Editor il professor Xiaoting Rui, 2021.
- Guest Editor del numero speciale "Vibration Dynamics and Control of Vehicle and Rotor Systems" della rivista Shock and Vibration, con Lead Guest Editor il professor Xiaoting Rui, 2021.
- Co-organizzatore di "16th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC)", ASME IDETC/CIE 2020, St. Louis, MO, 16-19 agosto 2020.
- Membro del comitato scientifico di COSIM 2020, International Symposium on Co-Simulation and Solver Coupling in Dynamics, 28 giugno – 1 luglio 2020, Ferrol, Spagna.
- Partecipazione a Google Summer of Code 2020 come amministratore di organizzazione e mentor.
- Membro della commissione giudicatrice della procedura "ARCA_2018_113 fornitura di un servizio di elisoccorso", ARIA (Regione Lombardia), ottobre-dicembre 2019.
- Coordinatore del CEAS Rotorcraft Technical Committee dal settembre 2019
- Co-organizzatore del "Multibody Dynamics Workshop 2019", una Summer School internazionale per dottorandi, presso l'Università degli Studi di Parma, il 20-24 maggio 2019.
- Invitato a tavola rotonda organizzata da EuroGNC 2019 a Milano il 3 aprile 2019 su tecnologie dual-use.
- Seminario a invito "Rotorcraft-Pilot Couplings (RPCs): adding "Bio" to "Aero-Servo-Elasticity" (BASE)" presso la University of Southampton, UK, 27 febbraio 2019.
- Partecipazione a Google Summer of Code 2019 come amministratore di organizzazione e mentor.
- Invitato a tavola rotonda organizzata da Esercito Italiano a Milano il 13 dicembre 2018 su tecnologie dual-use.
- Membro dell'editorial board della rivista "Multibody System Dynamics" dal 2018
- Membro del Rotorcraft Committee di CEAS dal 2018.
- Membro dell'editorial board della rivista "Aerotecnica, Missili & Spazio" dal 2018.
- Co-organizzatore del simposio "Efficient Methods and Real-Time Simulation" nella ASME IDETC 2018 14th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Quebec City, Canada, 26-29 agosto 2018.
- Invitato a tavola rotonda organizzata da Baker McKenzie a Milano il 22 marzo 2018 su tecnologie dual-use.
- Invitato a tavola rotonda organizzata da Baker McKenzie a Roma il 15 febbraio 2018 su tecnologie dual-use.
- Membro del comitato scientifico della XXIV Conferenza Internazionale AIDAA, Palermo-Enna, 18-22 settembre 2017.
- Co-organizzatore del 43° European Rotorcraft Forum, Milano, 12-15 settembre 2017.
- Co-organizzatore dei simposi "Fluid-Structure Interaction" e "Nonlinear Rotordynamics and Rotating Systems" nella ASME IDETC 2017 13th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Cleveland, Ohio, USA, 6-9 agosto 2017.
- Membro di ASME Technical Committee on Multibody Systems and Nonlinear Dynamics dal 1 luglio 2017.
- Partecipazione a Google Summer of Code 2017 come amministratore di organizzazione e mentor.
- Associate Editor della rivista "The Aeronautical Journal" dal gennaio 2017.
- Perito del Giudice per le Indagini Preliminari (Tribunale di Vercelli) in procedimento penale relativo a incidente di volo a elicottero, novembre 2016 – maggio 2017.
- Membro dell'European Rotorcraft Forum International Committee dal settembre 2016
- Co-organizzatore della sessione su "Nonlinear Rotordynamics and Rotating Systems" nella ASME IDETC 2016 12th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Charlotte, North Carolina, USA, 21-24 agosto 2016.
- Membro del Conference Working Group del congresso "Rotorcraft Virtual Engineering", The University of Liverpool, UK, 8-10 novembre 2016.
- Partecipazione a Google Summer of Code 2016 come amministratore di organizzazione e mentor.
- Organizzatore della sessione su "Computational Methods in Multibody Systems" nella ASME IDETC 2015 11th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC),

Boston, MA, USA, 2-5 agosto 2015.
- Membro del comitato di valutazione del “Premio Innovazione AgustaWestland 2015”.
- Seminario a invito “Membrane Shape and Transverse Load Reconstruction Using Inverse FEM” presso 2015 Flow Interactions & Control Program Review, Air Force Office of Scientific Research (AFOSR), Arlington, VA, 21-23 luglio 2015.
- Organizzatore della sessione “Aerospace and Maritime Applications” per la conferenza ECCOMAS Multibody Dynamics 2015.
- Partecipazione a Google Summer of Code 2015 come amministratore di organizzazione e mentor.
- Seminario a invito “Flexible Body Simulation in MBDyn” presso MAGIC 2014, University of Wisconsin, Madison, 9 dicembre 2014.
- Coordinatore dei Rotorcraft Research Laboratories (RRL), Dipartimento di Scienze e Tecnologie Aerospaziali, Politecnico di Milano, dal novembre 2014.
- Seminario “Trajectory Stability Estimation Using Lyapunov Characteristic Exponents” presso l'University of Southampton, 4 settembre 2014.
- Organizzatore della sessione “Software Tools for Computational Dynamics in Industry and Academia” nella ASME IDETC 2014 10th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Buffalo, NY, USA, 17-20 agosto 2014.
- Associate Editor della rivista “Journal of Aeroelasticity and Structural Dynamics”, <https://www.asdjournal.org/>
- Guest editor del numero speciale “Application of Multibody Dynamics to Biomechanics” di “Part K, Journal of Multi-body Dynamics”, dicembre 2013.
- Membro della Commissione Scientifica del Dipartimento di Scienze e Tecnologie Aerospaziali dal gennaio 2013.
- Co-organizzatore della sessione “Software Tools for Computational Dynamics in Industry and Academia” nella ASME IDETC 2013 9th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Portland, Oregon, USA, 4-7 agosto 2013.
- Membro del comitato scientifico e co-organizzatore della Invited Session “Aerospace Applications” nella conferenza Multibody Dynamics 2013, Zagreb, Hroatia, 1-4 luglio 2013.
- Membro del comitato organizzativo della Pegasus Student Conference 2013, Milano, Italy, 3-5 aprile 2013
- Invited lecturer al workshop “Logiciels de simulation Open Source pour la conception automobile: exemples et perspectives”, Société des Ingénieurs de l'Automobile (SIA), Suresnes (Paris), France, 2 ottobre 2012.
- Visiting researcher presso University of Wyoming per ricerca inerente l'energia eolica, 16-27 agosto 2011.
- Seminario “Multibody Analysis of Flapping Wing Micro-Aerial Vehicles” presso lo Army Research Laboratory (ARL), Aberdeen Proving Ground (APG), Maryland, 15 agosto 2011.
- GARTEUR Award of Excellence per il 2010/2011 per l'attività nel GARTEUR HC AG-16 su Rotorcraft-Pilot Coupling (RPC)
- presidente di commissione di dottorato presso l'Università de la Coruña, 3 maggio 2010. Discussione della tesi di dottorato di Francisco Javier González Varela.
- Seminario “Multibody Dynamics: Introduction and Aeroservoelastic Applications” presso il Wind Energy Research Center del College of Engineering and Applied Science, University of Wyoming, 29 aprile 2010.
- Corso "Multibody Dynamics for Wind Turbines", REpower Systems AG, Büdelsdorf, Germania, 22-26 febbraio 2010.
- Invited Lecturer presso il Cymer Center for Control Systems and Dynamics, University of California San Diego, su “Overview of Multibody System Dynamics”, 4 settembre 2009.
- Minicorso su “Multibody Dynamics” presso Hutchinson CdR, 6-8 luglio 2009.
- Membro del comitato organizzatore del XX congresso nazionale AIDAA, 29 giugno-3 luglio 2009, Milano.
- Membro dell'Editorial Board di “Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics” (JMBD) dal 2009 al 2021
- Lecturer presso Alfred Gessow Rotorcraft Center dell'University of Maryland su Multibody Dynamics, 12-16 gennaio 2009
- Coordinatore nazionale PRIN 2007 “Modellazione dell'interazione biomeccanica uomo-macchina nei veicoli”, in cooperazione con le Università “La Sapienza”, “Tor Vergata” e “Roma Tre”.
- visiting researcher presso LaMSID (EDF R&D - French CNRS Joint Laboratory), 24 luglio - 7 agosto

2008.
- invited Lecturer al Seminario “Real-Time Multibody Simulation” presso l'Universidad Pública de Navarra, Dipartimento di Ingegneria Meccanica, 5-7 maggio 2008.
- invited lecturer al “Séminaire Simulation Numérique”, Hutchinson, 28 giugno 2007: “MBDyn, a Free Multibody Dynamics Solver”.
- Membro del comitato organizzatore e co-editor di “Multibody Dynamics 2007”, Milano, 25-28 giugno 2007.

Revisore per: vedi Publons: <https://publons.com/author/479745/>

Esperienze Professionali:
- Marzo-settembre 2010: visiting assistant professor presso la School of Energy Resources della University of Wyoming
- dal 2001 al 2015: membro del core-team di sviluppo OpenLDAP
- Giugno-luglio 1999: visiting researcher presso l'Army Research Laboratory (ARL) di NASA Langley, Virginia
- Aprile-agosto 1998: visiting researcher presso l'Army Research Laboratory (ARL) di NASA Langley, Virginia

Associazioni:
- Membro della Vertical Flight Society (VFS), già American Helicopter Society (AHS) International
- Membro dell'Associazione Italiana di Aeronautica e Astronautica (AIDAA)
- Membro dell'American Society of Mechanical Engineers (ASME)

Ricerca:
- sviluppo di algoritmi e metodi per lo studio della dinamica di sistemi multicorpo e multidisciplinari, inclusi aspetti legati alla deformabilità, al controllo, alla stabilità, alla modellazione di forze di interazione, alla simulazione in tempo reale
- studio della dinamica e dell'aeroservoelasticità con particolare attenzione ai velivoli ed alle macchine ad ala rotante
- dinamica e controllo attivo delle vibrazioni, sia mediante tecniche classiche sia con materiali intelligenti

- Partecipazione a numerosi progetti di ricerca nazionali ed internazionali in collaborazione con industrie e centri di ricerca, tra i quali:
  - HEMS+ – Regione Sardegna (REACT-EU, 2021-2023)
  - ATTILA – Tiltrotor Wind-Tunnel Model Design and Testing (Clean Sky 2 project, 2019-2024)
  - RoCS – Rotorcraft Certification by Simulation (Clean Sky 2 project on tiltrotor simulation, 2019-2022)
  - NITROS - Network for innovative training on rotorcraft safety (Marie Skłodowska-Curie Action Joint European Doctorate on rotorcraft safety, 2016-2020)
  - CROP (Cycloidal Rotor Optimized for Propulsion, responsabile unità di ricerca, FP7, 2013-2014)
  - “Real-time wing-vortex and pressure distribution estimation on wings via displacement and strains in unsteady and transitional flight conditions” (USAF/EOARD, 2012-2016, responsabile unità di ricerca, coordinatore)
  - GARTEUR HC EG-31 (conceptual design of helicopters, 2012-2013, responsabile unità di ricerca, coordinatore)
  - Progetto di rilevanza nazionale “Aeroelastic Analysis of Wind-Turbines by Coupled Computational Fluid Dynamics/Multibody System Dynamics”, Ministero degli Affari Esteri, 2011 (responsabile unità di ricerca , coordinatore).
  - ARISTOTEL (rotorcraft-pilot coupling, responsabile unità di ricerca, FP7, 2010-2013)
  - MAST/CTA (Micro-aerial vehicles, responsabile unità di ricerca, con University of Maryland, since 2009)
  - PRIN 2007 (interazione uomo-macchina, coordinatore nazionale, 2008-2010)
  - NICETRIP (aeroelasticità di convertiplani, FP6, 2006-2011)
  - GARTEUR HC AG-16 (rotorcraft-pilot coupling, coordinatore unità di ricerca, 2005-2008)
  - FRIENDCOPTER (controllo attivo di pale di elicottero, FP6, 2003-2008)
  - ADYN (whirl flutter di convertiplani, FP6, 2002-2006)
  - collaborazioni con REpower System AG (aeroelasticità di generatori eolici)
  - collaborazioni con Leonardo Helicopter Division (già AgustaWestland, già Agusta; dinamica e

aeroservoelasticità di elicotteri e convertiplani)
- collaborazione con NASA Langley e Army Research Laboratory (aeroelasticità di convertiplani)
- collaborazioni con Hutchinson CRC (dinamica di sistemi multicorpo)
- collaborazioni con SysNet (sviluppo di sistemi di informazione e comunicazione distribuita)

Pierangelo Masarati's Curriculum Vitae *(versione in inglese; versione italiana all'inizio)*

Last update Sep 21, 2024

Born in Stradella (PV) on September 30th, 1969

- Full Professor since 2016 at the Department of Aerospace Science and Technology of Politecnico di Milano
- Associate Professor since 2011 at the Department of Aerospace Engineering of Politecnico di Milano
- "Ricercatore" (Assistant Professor) since 2001 at the Department of Aerospace Engineering of Politecnico di Milano
- "Dottore di Ricerca" (Ph.D.) in "Ingegneria Aerospaziale" (Aerospace Engineering) in 2000 from Politecnico di Milano
- "Laurea" degree in "Ingegneria Aeronautica" (Aeronautical Engineering) in 1996 from Politecnico di Milano

- Department of Aerospace Science and Technology, Politecnico di Milano, via La Masa 34, 20156, Milano, Italy
- Tel.: +39 02 2399 8309
- mail: pierangelo.masarati@polimi.it

- personal page: <https://home.aero.polimi.it/masarati/>
- ORCID: <http://orcid.org/0000-0002-9347-7654>
- Scopus: <http://www.scopus.com/authid/detail.url?authorId=6603564194>
- ResearcherID: <http://www.researcherid.com/rid/I-3898-2012>
- Google Scholar: <http://scholar.google.it/citations?user=MQSSUAwAAAAJ>
- Publons: <https://publons.com/author/479745/>

Teaching activity:

- teaching the "Rotorcraft Design" class (2nd year, 1st semester MSc degree) since 2020
- teaching the "Multibody System Dynamics" class (2nd year, 2nd semester MSc degree) since 2019
- teaching the "Dynamics and Control of Flexible Aircraft" class (1st year, 2nd semester MSc degree) from 2016 to 2020
- teaching the "Dynamics, Control of Structures and Fundamentals of Aeroelasticity" class (1st year, 2nd semester MSc degree) from 2011 to 2016
- teaching the "Dynamics of Aerospace Systems" class (3rd year, 1st semester; was 2nd year, 2nd semester) from 2003 to 2017
- teaching the "Ethical Aspects of Research on Dual-Use Technologies" class for the PhD School of Politecnico di Milano since 2018
- coordinating the class of "Multibody Systems Dynamics" for the Ph.D. Schools of "Aerospace Engineering", "Mechanical Systems Engineering", and "Rotary Wing Aircraft", in collaboration with Professor Federico Cheli since 2001
- lecturing for the "Postgraduate Course in Rotary Wing Technologies", Politecnico di Milano, since 2010
- supporting the class of "Aeroservoelasticity of Rotary Wing Aircraft" for the Ph.D. school of "Rotary Wing Aircraft" (in 2008 in collaboration with Professor Roberto Celi, University of Maryland, later with Professor Marco Borri) from 2008 to 2012
- assisting the class of Rotorcraft Design in 2008
- assisting the classes of "Applied Aeroelasticity", "Aerospace Design and Testing", "Dynamics of Aerospace Systems" over many years

Institutional duties:

- Member of the Ph.D. School Executive Board of Politecnico di Milano, 2022-2024.
- Coordinator of the Ph.D. program in Aerospace Engineering of Politecnico di Milano, 2018-2024.
- Committee member of "Abilitazione Scientifica Nazionale" (National Scientific Qualification) 2016 for sector 09/A1 (Aeronautical and aerospace engineering and naval architecture), 2016-2018.
- Vice-coordinator of the Ph.D. program in Aerospace Engineering of Politecnico di Milano, 2014-2018.
- Coordinator of the Rotorcraft Research Laboratories (RRL), Aerospace Science and Technology Department, Politecnico di Milano, since November 2014.

- member of the scientific committee of the Department of Aerospace Science and Technology, Politecnico di Milano 2013-2016.
- member of the committee of the Ph.D. program in Aerospace Engineering of Politecnico di Milano since 2006.
- member of the committee of the Ph.D. program in Rotary Wing Aircraft of Politecnico di Milano from 2006 to 2012 (when it was merged with Aerospace Engineering).

Other:

- Co-organizer of 51st European Rotorcraft Forum, Venice, Italy, September 9-11, 2025.
- Member of the International Advisory Committee of the conference NODYCON 2025, Hoboken, NJ, USA, June 22-25, 2025
- Member of the Scientific Committee of the ECCOMAS Thematic Conference Multibody Dynamics 2025, Innsbruck, Austria, July 13-18, 2025.
- Invited lecture “Rotorcraft Pilot Biomechanics for Pilot-Vehicle Interface Design and Verification” at 7th International Conference on Multibody System Dynamics - IMSD 2024, Madison, WI, USA, June 9-13, 2024.
- Co-organizer of the “Applications and multidisciplinary methods” symposium of IMSD 2024, International Conference on Multibody System Dynamics, Madison, Wisconsin, USA, June 9-13, 2024.
- Invited lecture “Rotorcraft-Pilot Interaction: How to Keep Pilot Biomechanics Out of the Control Loop” at 9th Asian Rotorcraft Forum (ARF) / 5th International Basic Research Conference on Rotorcraft Technology (IBRCRT), Nanjing, China, November 6-8, 2023.
- Guest Editor of the Special Issue of the CEAS Aeronautical Journal dedicated to the European Rotorcraft Forum 2022
- Member of the International Advisory Committee of the conference NODYCON 2023, Rome, Italy, June 18-22, 2023.
- Member of the Scientific Committee of the ECCOMAS Thematic Conference Multibody Dynamics 2023, Lisbon, Portugal July 24-28, 2023.
- Seminar “Rotorcraft-Pilot Couplings” online, Nanjing University of Aeronautics and Astronautics (NUAA), December 19, 2022.
- Seminar “Stability Analysis of Nonlinear Rotating Systems Using Lyapunov Characteristic Exponents Estimated From Multibody Dynamics” online, Nanjing University of Aeronautics and Astronautics (NUAA), December 15, 2022.
- Invited speaker on “Pilot-vehicle interaction from a multibody dynamics and experimental perspective” at Machine-Ground Interaction Consortium (MaGIC) meeting 2022, University of Wisconsin, Madison, September 20-21, 2022.
- Summer School “Multibody System Dynamics with Applications” online, Nanjing University of Aeronautics and Astronautics (NUAA), July 11-22, 2022.
- Seminar “Multibody System Dynamics: a Hands-On Approach” online, Xi’an JaoTong University (XJTU), June 29, 2022.
- Seminar “Rotorcraft Aeroelasticity and Pilot-Vehicle Interaction Towards the Advanced Air Mobility Revolution” online, Xi’an JaoTong University (XJTU), June 28, 2022.
- Co-organizer of the symposium “MSNDC-13 Nonlinear Rotordynamics and Rotating Systems” in ASME IDETC 2022 18th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), St Louis, Missouri, USA, August 14-17 2022.
- Member of the Scientific Committee of the First International Conference on Mechanical System Dynamics, Nanjing, China, 23-29 november 2021.
- Programme Committee Member of the Aerospace Europe Conference 2021, organized by CEAS in Warsaw, 23-26 November 2021.
- Associate Editor of the International Journal of Mechanical System Dynamics since 2021.
- Associate Editor of the ASME Journal of Computational and Nonlinear Dynamics for 2021-2024.
- Associate Editor of the journal Multibody System Dynamics since 2021.
- Co-organizer of the “Multibody Dynamics Workshop 2021”, an international Summer School for PhD students, online in this edition, September 13-17, 2021.
- Member of the technical program committee of the International Workshop on Engineering for Rotorcraft Safety, Milan, Italy, April 7-9, 2021.
- Guest editor of the special issue on “Co-Simulation” of the journal Multibody System Dynamics, November 2020.
- Associate Editor of the CEAS Aeronautical Journal since 2020.

- Member of the International Advisory Committee of the conference NODYCON 2021, Rome, Italy.
- Guest Editor of the special issue “Vibration Analysis and Control of Time-Varying Systems” of the Journal Shock and Vibration, with professor Xiaoting Rui as Lead Guest Editor, 2020.
- Guest Editor of the special issue “Vibration Dynamics and Control of Vehicle and Rotor Systems” of the Journal Shock and Vibration, with professor Xiaoting Rui as Lead Guest Editor, 2020.
- Co-chair of the “16th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC)”, ASME IDETC/CIE 2020, St. Louis, MO, August 16-19, 2020.
- Member of the Scientific Committee of COSIM 2020, International Symposium on Co-Simulation and Solver Coupling in Dynamics, June 28 – July 1, 2020, Ferrol, Spain.
- Participation in Google Summer of Code 2020 as organization administrator and mentor.
- Member of the evaluation board “ARCA_2018_113 fornitura di un servizio di elisoccorso” (bid for HEMS service), ARIA (Regione Lombardia), October-December 2019.
- Head of the CEAS Rotorcraft Technical Committee since September 2019
- Co-organizer of the “Multibody Dynamics Workshop 2019”, an international Summer School for PhD students, at “Università degli Studi di Parma”, May 20-24, 2019.
- Invited to round table organized by EuroGNC 2019 in Milano on April 3, 2019 on dual-use technologies.
- Invited seminar on “Rotorcraft-Pilot Couplings (RPCs): adding “Bio” to “Aero-Servo-Elasticity” (BASE)” at la University of Southampton, UK, February 27 2019.
- Participation in Google Summer of Code 2019 as organization administrator and mentor.
- Invited to round table organized by Esercito Italiano (Italian Army) in Milano on December 13, 2018 on dual-use technologies.
- Member of the editorial board of the journal “Multibody System Dynamics” since 2018
- Member of the Rotorcraft Committee of CEAS since 2018.
- Member of the editorial board of the journal “Aerotecnica, Missili & Spazio” since 2018.
- Co-organizer of the symposium “Efficient Methods and Real-Time Simulation” in ASME IDETC 2018 14th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Quebec City, Canada, August 26-29, 2018.
- Invited to round table organized by Baker McKenzie in Milano on March 22, 2018 on dual-use technologies.
- Invited to round table organized by Baker McKenzie in Rome on February 15, 2018 on dual-use technologies.
- Member of the scientific committee of the XXIV AIDAA International Conference, Palermo-Enna, September 18-22, 2017.
- Co-organizer of 43rd European Rotorcraft Forum, Milano, September 12-15, 2017.
- Co-organizer of symposia “Fluid-Structure Interaction” and “Nonlinear Rotordynamics and Rotating Systems” in ASME IDETC 2017 13th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Cleveland, Ohio, USA, August 6-9, 2017.
- Member of ASME Technical Committee on Multibody Systems and Nonlinear Dynamics starting July 1st, 2017
- Participation in Google Summer of Code 2017 as organization administrator and mentor.
- Associate Editor of “The Aeronautical Journal” since January 2017.
- Judge's expert (Court of Vercelli) in trial related to helicopter flight accident, November 2016 - May 2017
- Member of the European Rotorcraft Forum International Committee since September 2016
- Co-organizer of session “Nonlinear Rotordynamics and Rotating Systems” in ASME IDETC 2016 12th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Charlotte, North Carolina, USA, August 21-24, 2016.
- Member of Conference Working Group of “Rotorcraft Virtual Engineering”, The University of Liverpool, UK, November 8-10, 2016.
- Participation in Google Summer of Code 2016 as organization administrator and mentor.
- Co-organizer of session “Computational Methods in Multibody Systems” in ASME IDETC 2015 11th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Boston, MA, USA, August 2-5 2015.
- Member of the “AgustaWestland Innovation Award 2015” evaluation committee.
- Invited seminar “Membrane Shape and Transverse Load Reconstruction Using Inverse FEM” at 2015 Flow Interactions & Control Program Review, Air Force Office of Scientific Research (AFOSR), Arlington, VA, July 21-23, 2015.
- Organizer of session “Aerospace and Maritime Applications” in ECCOMAS Multibody Dynamics 2015.
- Participation in Google Summer of Code 2015 as organization administrator and mentor.

- Invited seminar “Flexible Body Simulation in MBDyn” at MAGIC 2014, University of Wisconsin, Madison, December 9, 2014.
- Coordinator of the Rotorcraft Research Laboratories (RRL), Aerospace Science and Technology Department, Politecnico di Milano, since November 2014.
- Seminar “Trajectory Stability Estimation Using Lyapunov Characteristic Exponents” at University of Southampton, September 4, 2014.
- Organizer of session “Software Tools for Computational Dynamics in Industry and Academia” in ASME IDETC 2014 10th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Buffalo, NY, USA, August 17-20, 2014.
- Associate Editor of “Journal of Aeroelasticity and Structural Dynamics”, <https://www.asdjournal.org/>
- Guest editor of the special issue “Application of Multibody Dynamics to Biomechanics” of “Part K, Journal of Multi-body Dynamics”
- Member of the Scientific Committee of the Department of Aerospace Science and Tecnology since January 2013.
- Co-organizer of session “Software Tools for Computational Dynamics in Industry and Academia” in ASME IDETC 2013 9th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Portland, Oregon, USA, August 4-7, 2013.
- Member of Scientific Committee and co-organizer of Invited Session “Aerospace Applications” in Multibody Dynamics 2013, Zagreb, Hroatia, July 1-4, 2013.
- Pegasus Student Conference 2013, Milano, Italy, April 3-5, 2013 (member of the Organizing Committee)
- Invited lecturer at the workshop “Logiciels de simulation Open Source pour la conception automobile: exemples et perspectives”, Société des Ingénieurs de l'Automobile (SIA), Suresnes (Paris), France, October 2, 2012.
- Visiting University of Wyoming for wind energy related research, August 16-27, 2011.
- Seminar “Multibody Analysis of Flapping Wing Micro-Aerial Vehicles” at the Army Research Laboratory (ARL), Aberdeen Proving Ground (APG), Maryland, August 15, 2011.
- GARTEUR Award of Excellence for 2010/2011 for the activity in GARTEUR HC AG-16 on Rotorcraft-Pilot Coupling (RPC)
- doctoral committee president at Universidade da Coruña, May 3, 2010. Thesis title: “Efficient Implementations and Co-Simulation Techniques in Multibody System Dynamics”, Author: Francisco Javier González Varela.
- Seminar “Multibody Dynamics: Introduction and Aeroservoelastic Applications” at the Wind Energy Research Center of the College of Engineering and Applied Science, University of Wyoming, April 29, 2010.
- Seminar “Multibody Dynamics for Wind Turbines”, REpower Systems AG, Büdelsdorf, Germany, February 22-26 2010.
- Invited Lecturer at Cymer Center for Control Systems and Dynamics, University of California San Diego, on “Overview of Multibody System Dynamics”, September 4, 2009.
- Short course on “Multibody Dynamics” at Hutchinson CdR, July 6-8, 2009.
- Member of the organizing committee of the XX AIDAA conference, June 29-July 3 2009, Milano
- Member of the Editorial Board of “Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics” (JMBD) 2009-2021
- Lecturer at the Alfred Gessow Rotorcraft Center of the University of Maryland on Multibody Dynamics, Jan 12-16, 2009
- Coordinator of national research project PRIN 2007 “Modeling of biomechanical man-machine interaction in vehicles”, in cooperation with “La Sapienza”, “Tor Vergata” and “Roma Tre” Universities.
- visiting researcher at LaMSID (EDF R&D - French CNRS Joint Laboratory), July 24 - August 7, 2008.
- invited Lecturer at the Seminar “Real-Time Multibody Simulation” at Universidad Pública de Navarra, Mechanical Engineering Department, May 5-7, 2008.
- invited lecturer at “Séminaire Simulation Numérique”, Hutchinson, June 29 2007: “MBDyn, a Free Multibody Dynamics Solver”.
- Member of the organizing committee and co-editor of “Multibody Dynamics 2007”, Milano, Italy, June 25-28, 2007.

Reviewer for: see Publons: <https://publons.com/author/479745/>

Professional Experience:

- March-September 2010: visiting assistant professor at the School of Energy Resources of the University

of Wyoming
- 2001-2015: member of the core development team of the OpenLDAP project
- June-July 1999: visiting researcher at the Army Research Laboratory (ARL) at NASA Langley, Virginia
- April-August 1998: visiting researcher at the Army Research Laboratory (ARL) at NASA Langley, Virginia

Societies:
- Member of the Vertical Flight Society (VFS), once the American Helicopter Society (AHS) International
- Member of Associazione Italiana di Aeronautica e Astronautica (AIDAA)
- Member of the American Society of Mechanical Engineers (ASME)

Research:
- development of algorithms and methods for the investigation of the dynamics of multibody/multidisciplinary systems, including aspects related to deformability, control, stability, interactional forces modeling, real-time simulation
- dynamics and aeroelasticity investigations, with specific reference to aircraft and rotorcraft
- dynamics and control of vibrations, by means of classical and smart materials based techniques

- Participation in a number of research projects, national and international, in cooperation with industries and research centers, including:
  - HEMS+ – Regione Sardegna (REACT-EU, 2021-2023)
  - ATTILA – Tiltrotor Wind-Tunnel Model Design and Testing (Clean Sky 2 project, 2019-2024)
  - RoCS – Rotorcraft Certification by Simulation (Clean Sky 2 project on tiltrotor simulation, 2019-2022)
  - NITROS - Network for innovative training on rotorcraft safety (Marie Skłodowska-Curie Action Joint European Doctorate on rotorcraft safety, 2016-2020)
  - CROP (Cycloidal Rotor Optimized for Propulsion, PI, FP7, 2013-2014)
  - “Real-time wing-vortex and pressure distribution estimation on wings via displacement and strains in unsteady and transitional flight conditions” (USAF, 2012-2016, PI, coordinator)
  - GARTEUR HC EG-31 (conceptual design of helicopters, 2012-2013, coordinator)
  - National relevance project “Aeroelastic Analysis of Wind-Turbines by Coupled Computational Fluid Dynamics/Multibody System Dynamics”, Ministry of Foreign Affairs, 2011 (PI, coordinator).
  - ARISTOTEL (rotorcraft-pilot coupling, PI, FP7, 2010-2013)
  - MAST/CTA (Micro-aerial vehicles, PI, with University of Maryland, since 2009)
  - PRIN 2007 (man-machine interaction, PI, national coordinator, 2008-2010)
  - NICETRIP (aeroelasticity of tiltrotors, FP6, 2006-2011)
  - GARTEUR HC AG-16 (rotorcraft-pilot coupling, research unit coordinator, 2005-2008)
  - FRIENDCOPTER (active control of helicopter blades, FP6, 2003-2008)
  - ADYN (whirl flutter of tiltrotors, FP6, 2002-2006)
  - cooperation with REpower System AG (aeroelasticity of wind turbines)
  - cooperation with Leonardo Helicopter Division (formerly AgustaWestland, formerly Agusta; dynamics and aeroservoelasticity of helicopters and tiltrotors)
  - cooperation with NASA Langley and Army Research Laboratory (tiltrotor aeroelasticity)
  - cooperation with Hutchinson CRC (multibody system dynamics)
  - cooperation with Ericsson (development of distributed information systems)
  - cooperation with SysNet (development of distributed information systems)