

Mario Luigi Ferrari

Associate Professor

EDUCATION AND TRAINING

2006

PhD in Mechanical Engineering

Transient Analysis of Solid Oxide Fuel Cell Hybrid Plants and Control System Development
Università degli Studi di Genova - Genova – IT

2003

Master Degree in Mechanical Engineering (five year curriculum)

Dynamic Model of the Anodic Side Recirculation Circuit of Solid Oxide Fuel Cells in Hybrid Systems – Mark: 110/110 with honours
Università degli Studi di Genova - Genova – IT

PROFESSIONAL HISTORY

2015 - ongoing

Associate Professor (qualified for the Full Professor position since 2017)

Sector: IIND-06/B – Sistemi per l'energia e l'ambiente; Department: DIME
Università degli Studi di Genova - Genova – IT

2021 - ongoing

Adjunct Professor

Course: Machines; Department: Ingegneria Industriale e dell'Informazione
Università degli Studi di Pavia - Pavia – IT

2010 - 2015

Researcher (permanent position)

Sector: ING-IND/09 – Sistemi per l'energia e l'ambiente; Department: DIME/DIMSET
Università degli Studi di Genova - Genova – IT

2008 - 2010

Associate Researcher

Sector: ING-IND/09 – Sistemi per l'energia e l'ambiente; Department: DIMSET
Università degli Studi di Genova - Genova – IT

2006 - 2007

Associate Researcher

Sector: ING-IND/08 – Macchine a fluido; Department: DIMSET
Università degli Studi di Genova - Genova – IT

ACADEMIC APPOINTMENTS

2024 - ongoing

Vice-Coordinator of the Energy Engineering (bachelor course)

Università degli Studi di Genova - Genova – IT

2018 - ongoing

Coordinator of the Operating Commission of the MASET Section (DIME)

Università degli Studi di Genova - Genova - IT

EXPERIENCE

MAIN SEMINARS

09/05/2025 Ottimizzazione di rete poligenerativa con produzione di acqua atmosferica e gestione di sistemi di accumulo

Presentation in the seminar "Sistemi energetici e risorse idriche: integrazione sostenibile, strumenti di valutazione e casi studio"

Università degli Studi di Pavia - Pavia - IT

13/05/2024 Gestione ottimizzata di sistemi energetici poligenerativi integrati con fonti rinnovabili e sistemi di accumulo

Presentation in the seminar "Sostenibilità energetica ed estrazione di acqua dall'aria: ricerche, progetti ed applicazioni"

Università degli Studi di Pavia - Pavia - IT

13/09/2018 SOFC-based hybrid systems

Activity in the Italy-Sweden project "Sustainable bio-fuelled SOFC hybrid plants for zero-emissions dispatchable power generation"

Mälardalen University (MDH) - Västerås - Sweden

SCIENTIFIC RESPONSIBILITY FOR RESEARCH PROJECTS ACCEPTED FOR FUNDING ON THE BASIS OF COMPETITIVE CALLS INVOLVING PEER REVIEW

01/01/2024 - ongoing Future enabling technologies for hydrogen-powered Electrified aero engine for Clean aviation (FlyECO)

Horizon Europe project

European Climate, Infrastructure and Environment Executive Agency (CINEA)

28/09/2023 - ongoing WISHeR - Water-collection and Improvement of Sustainability in the HVAC Retrofitting

PRIN2022 project

Ministero dell'Università e della Ricerca (MUR)

01/10/2020 - 30/06/2025 Smart integration Of local energy sources and innovative storage for flexible, secure and cost-efficient energy Supply ON industrialized islands (ROBINSON)

H2020 project

Innovation and Networks Executive Agency (INEA)

01/01/2020 - 31/12/2024 Next Generation of Micro Gas Turbines for High Efficiency, Low Emissions and Fuel Flexibility (NextMGT)

H2020 project - Marie Skłodowska-Curie - ITN

Research Executive Agency (REA)

01/01/2018 - 31/12/2020 Sustainable bio-fuelled SOFC hybrid plants for zero-emissions dispatchable power generation

Italy-Sweden project

Ministero degli Affari Esteri e della Cooperazione Internazionale (MAECI)

01/05/2015 – 31/12/2019 Biogas-fired Combined Hybrid Heat and Power Plant
H2020 project (responsibility received from Prof. Traverso Alberto on the 23rd May 2017)
Innovation and Networks Executive Agency (INEA)

TEACHING OR RESEARCH POSITIONS (FELLOWSHIPS) AT FOREIGN UNIVERSITIES AND RESEARCH INSTITUTES

01/03/2007 – 29/02/2008 Researcher
Project: Marie-Curie Transfer of Knowledge (MTK 1-CT-2006-042298)
Rolls-Royce Fuel Cell Systems Limited – Loughborough – UK

20/10/2005 – 15/12/2005 Research experience
Experimental emulation of high-temperature hybrid systems and validation of computational models
U.S. Department of Energy (NETL) – Morgantown – WV (USA)

EDITORSHIP OR PARTICIPATION IN EDITORIAL BOARDS OF JOURNALS, PUBLISHING SERIES, ENCYCLOPAEDIAS AND TREATISES

Ongoing Associate Editor of the Fluid Mechanics Research International Journal (MedCrave) and member of the Editorial Board of the following journals: Electricity (MDPI), The Scientific World Journal (Hindawi), Current Alternative Energy (Bentham Science), Global Journal of Energy Technology Research Updates (Avanti)
Open access journals in several cases
MDPI, MedCrave, Hindawi, Bentham Science, Avanti

2017-2021 Committee Chair (2019-2021), Committee Vice-Chair (2017-2019), Point of Contact (2015-2017)
Leadership in organizing committee (ASME Turbo Expo)
ASME

PRIZES AND ACCOLADES FOR SCIENTIFIC ACTIVITY, INCLUDING MEMBERSHIP OF ACADEMIES

2021 Outstanding Service Award
Award regarding the activities for the Cycle Innovations Committee
ASME (Cycle Innovations Committee)

2018 Best Paper Award
Best paper award of the “Cycle Innovations” committee (ASME Turbo Expo 2017, Charlotte).
Paper title: “Experimental Dynamic Analysis on a T100 Microturbine Connected With Different Volumes”
ASME (Cycle Innovations Committee)

2015 Best Paper Award
Paper presented at the International Conference on Applied Energy 2013, Pretoria, and published on Applied Energy. Final paper title: “Real time tool for management of smart polygeneration grids including thermal energy storage”
ICAE

2007 Best Paper Award
Best paper award of the “Cycle Innovations” committee (ASME Turbo Expo 2006, Barcellona).
Paper title: “Experimental Validation of an Unsteady Ejector Model for Hybrid Systems”
ASME (Cycle Innovations Committee)

PARTICIPATION IN THE CREATION OF NEW BUSINESS ENTITIES (SPIN-OFFS), DEVELOPMENT, USE AND COMMERCIALISATION OF ACADEMIC PATENTS

21/12/2018 – ongoing Funding member of the SIT Technologies s.r.l. (UNIGE spin off)

SIT is committed to provide smart and intelligent solutions for improving energy efficiency, power plant reliability and environmental awareness, through a multi-cultural and highly skilled team of people

SIT Technologies s.r.l.

21/12/2018 – 05/06/2025 Member of the Board of Directors of the UNIGE spin off SIT Technologies s.r.l.

Management activity of the spin off

SIT Technologies s.r.l.

2009 Italian patent

“Riscaldatore non intrusivo per fluidi”, Ferrari M. L., Massardo A. F., Pascenti M., Traverso A., N° TO2005A000912

Ministero dello Sviluppo Economico – Direzione Generale per la Proprietà Industriale – Ufficio Italiano Brevetti e Marchi

2009 Italian patent

“Turbovir: dispositivo per la rappresentazione fisica di macchine a fluido simulate virtualmente con modelli in tempo reale”, Traverso A., Pascenti M., Ferrari M. L., Massardo A.F., N° GE2005A00092

Ministero dello Sviluppo Economico – Direzione Generale per la Proprietà Industriale – Ufficio Italiano Brevetti e Marchi