PERSONAL INFORMATION

Stefano Massucco

[redacted]

[redacted]

Sex: Male | *Date of birth:* [redacted] *Nationality* [redacted]

WORK EXPERIENCE

From April 2025 to now	Emeritus Professor at University of Genova appointed my the Ministry of University and Research
From 01.11.2024 to now	Contract Professor at University of Genova.
from September 2000 – to 31.10.2024)	Full Professor in Automation of Electric Energy Systems (ING-IND/33 Electric Energy Systems) at University of Genova, Italy. https://rubrica.unige.it/personale/VUZDWV5g
from Nov. 1993 to Sept. 2000	Associate Professor in Automation of Electric Energy Systems (ING-IND/33 Electric Energy Systems) at University of Genova, Italy
from May 1987 to October 1993	Associate Professor in Automation of Electric Energy Systems (ING-IND/33 Electric Energy Systems) and in Electric Traction at University of Pavia, Italy.
from Sept. 1983 to May 1987	Senior Engineer at Ansaldo SPA, Genova, Italy. Responsible for Electric Power and Automation Systems of thermal and nuclear power plants.
from October 1983 to May 1987	Researcher at the Electric Research Center of ENEL, Milano, Italy. Working in Reliability and Security of Electric Transmission and Distribution Systems.
from 2014 to now	Delegate for Energy, appointed by the Rector – University of Genova.
from 2017 to now	Responsible for the University of Genova of Research and Education Agreements with ABB, IREN and RSE
from 2014 to now	Coordinator of the local Research Unit for ENSIEL (an Organization of public Italian universities operating in the energy, electrical systems and electrical systems sector), appointed by the Rector.
from 2010 to now	Coordinator of the local Research Unit for GUSEE – National Group of Reserchers and Professors in Electric Energy Systems.

Business or sector — Research and Education in Electric Energy Systems and in Control Systems

EDUCATION AND TRAINING

1979	Master Degree in Electrical Engineering – University of Genova, Italy - 5 years degree obtained with 110/110 and laude and publication of the thesis.

1979	Qualification for the Professional Order of Engineer (Industrial and Civil Engineering)
1973	High School degree (Maturità Scientifica) at Liceo Grassi, Savona, Italy

PERSONAL SKILLS

Mother tongue(s)	Italian
Other language(s)	English (C1); Spanish (B1)
Job-related skills	Project management. Team leadership. Organizational skills. Motivating people. Ability in delegating. Research fundings and Research development.

Technology Transfer skills

- Scientific responsible for 2 projects with SIIT (Sistemi Intelligenti Integrati – Integrated Intelligent Systems) and with PSTL (Ligurian Scientific and Technological Park, Genova).
- Setting up, responsibility, management and Chairing for PSCC2016 Conference (Power Systems Computation) held Genova in 2016 with a worldwide participation of over 400 Scientists and Industrial persons.
- Participation to an Academic spin-off at University of Genova.

Higher Education & Training skills

- Coordinator of the Phd Course in Electrical Engineering and in Complex Systems for Mobility for 10 years.
- Coordinator of the BSc and MSc courses in Electrical Engineering for 6 years (both at University of Genova, Italy.
- Professor for several courses in: power system management and control; hospital energy systems; fundamental in control systems for energy systems.
- Lecturer at 2 editions of ENEL Master on Energy Efficiency and at 2 editions of ENI Master on Oil& Gas.
- Tutoring for more than 20 PhD Students and for more than 100 Master and BSc Theses

Project Management skills

- Responsible for over 90 Research Projects with National and International Companies (among which: ABB, Hitachi Grid, TERNA, ENEL, RSE - Ricerca Sistema Energetico, Hitachi Rail, AXPO, etc)

- Responsible for 5 research projects at European level (FP5, FP6 and H20202 related to smartgrids). National and Local Unit coordinator for PRIN (Research project of National interest) with MUR (Ministry of Research) and Research project with MISE (Ministry of Industry and Energy Transition).

Other skills

Research activity covers issues regarding:

- electrical transmission and distribution systems (smart grids, microgrids, virtual power utilities),
- power system automation by means of artificial intelligence techniques (reinforcement learning, neural networks, intelligent forecasting),
- demand response
- load shedding strategies to face emergency conditions and blackouts in power systems, distribution automation, distributed generation, storage systems

- liberalized energy market, definition of ancillary service technical and economical features, role of load in power system security and economics,
- Author of more than 250 International and National publications in Journals and at International Conferences.
- Reviewer for several Research Projects at national and EU level like EU Smartgrids Projects: Pegase, ITesla e Umbrella (2011-2015)
- Reviewer for CSEA – Cassa per i servizi energetici e ambientali (Energy and Environmental Services) Operative branch for the Italian Ministry of Industry.

ADDITIONAL INFORMATION

Most significant Projects

PNRR RAISE SPOKE 3 - *Environmental Caring and Protection Technologies, towards a Zero Emission Environment -* PR.8 - *AI-powered Management Systems for Resilient Networks with Coordination and Integration of Distributed Energy Resources (2022-now)*

- **Project PODCAST –** (A Platform for electrical distribution system optimization by use of smart meter data and with distributed storage systems. (2017-2021), supported by the Italian Ministry of Industry [value 2M€]. Overall Project Coordinator.
- **Progetto EU OSMOSE (2018-2022):** The OSMOSE project aims to identify and develop the optimal mix of flexibilities for the European power system to enable the Energy Transition with 4 large scale demonstrators. https://www.osmose-h2020.eu/project-overview/#consortium. Affiliate Partner UNIGE, Coordinator.
- **A 3 year contract with HITACHI Power Grid (past-ABB Power System Division) – Genova** on Optimal management and control of conventional, renewable generation and storage systems in the context of energy system evolution (2019-2022) [value 150k€]. Overall Project Coordinator.
- **Project SmartGen** with SOFTECO (now AlgoWatt) Genova**,** ENEL University of Bologna: "Study, development and validation of innovative methods and tools for active distribution networks management with renewable energy sources", briefly SmartGen supported by the Italian Ministry for Industry (2010-2014) [value 1.8M€]. Overall Project Coordinator.
- **Project EU FP7 AFTER "A Framework for electrical power sysTems vulnerability identification, dEfense and Restoration",** with RSE and several EU TSOs (2011-2014) [value 5M€]. Partner UNIGE Coordinator.
- **DISPOWER** - Contract N. ENK5-CT-2001-00522 "*Distributed generation with high penetration of renewable energy sources*", 2001-2005. Partner UNIGE Coordinator.
- **OMASES -** *Open Market Access and Security Assessment System*, EU Contract N. ENK6-CT2000-00064, 2000-2003, (with ENEL, EDF, REE -, HTSO - Ente Elettrico Greco, University of Liegi, Alstom ESCA, ecc.). Partner UNIGE Coordinator.

Recent Publications

[1] P. Almaleck, P. Serra, G. Mosaico, S. Massucco, M. Saviozzi, F. Silvestro, "Electrical Consumption Forecasting in Sports Venues: A Proposed Approach Based on Neural Networks and ARIMAX Models", Sustainable Cities and Society, vol. 100, 2024, 105019, doi: 10.1016/j.scs.2023.105019

[2] F. Conte, S. Massucco, G. Natrella, M. Saviozzi, F. Silvestro, "Day-Ahead Programming of Energy Communities Participating in Pay-as-Bid Service Markets," in: 2024 IEEE Power & Energy

Society General Meeting (PESGM), Seattle, WG, US, July 2024, pp. 1-5, doi: 10.1109/PESGM51994.2024.10688872.

[3] F. Conte, F. D'Agostino, S. Massucco, M. Saviozzi, M. Rapizza, C. Gandolfi, "Optimal Control of a Wind Farm-BESS Unit to Combine Synthetic Inertia and Fast Reserve," in: 2024 IEEE International Conference on Environment and Electrical Engineering and 2024 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Rome, Italy, June 2024, pp. 1-6, doi: 10.1109/EEEIC/ICPSEurope61470.2024.10751006.

[4] E. Ciapessoni, D. Cirio, F. Conte, A. Pitto, S. Massucco, M. Saviozzi, "Probabilistic Security-Constrained Preventive Control under Forecast Uncertainties Including Volt/Var Constraints", Energies 2023, 16(4), 1812, doi: 10.3390/en16041812

[5] D. Cirio, F. Conte, B. Gabriele, C. Gandolfi, S. Massucco, M. Rapizza, F. Silvestro, "Fast Frequency Regulation from a Wind Farm-BESS Unit by Model Predictive Control: Method and Hardware-In-the-Loop Validation"; IEEE Transactions on Sustainable Energy, vol. 14, no. 4, pp. 2049-2061, Oct. 2023, doi: 10.1109/TSTE.2023.3265187

[6] F.R. Bianchi, B. Bosio, F. Conte, S. Massucco, G. Mosaico, G. Natrella, M. Saviozzi, "Modelling and optimal management of renewable energy communities using reversible solid oxide cells," APPLIED ENERGY, vol. 334, 120657, Mar. 2023, doi: 10.1016/j.apenergy.2023.120657.

[7] E. Ciapessoni, D. Cirio, F. Conte, A. Pitto, S. Massucco, and M. Saviozzi, "Probabilistic Security-Constrained Preventive Control under Forecast Uncertainties Including Volt/Var Constraints," ENERGIES, vol. 16, no. 4, p. 1812, Feb. 2023, doi: 10.3390/en16041812.

[8] F. Conte, M. C. di Vergagni, S. Massucco, F. Silvestro, E. Ciapessoni, D. Cirio, "Performance analysis of frequency regulation services provided by aggregates of domestic thermostatically controlled loads", INTERNATIONAL JOURNAL OF ELECTRICAL POWER AND ENERGY SYSTEMS, 2021

[9] F. Conte, F. D'Agostino, S. Massucco, F. Silvestro, C. Bossi, M. Cabiati, "Experimental Validation of a Dynamic Equivalent Model for Microgrids", IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, In press, March 2021 doi: 10.1109/TIA.2021.3064522, ISSN: 0093-9994

[10] F. Conte, S. Massucco, G.P. Schiapparelli, and F. Silvestro, "Day-Ahead and Intra-Day Planning of Integrated BESS-PV Systems providing Frequency Regulation", IEEE TRANSACTIONS ON SUSTAINABLE ENERGY, vol. 11, no. 3, pp. 1797-1806, July 2020, doi: 10.1109/TSTE.2019.2941369, ISSN: 1949-3029

[11] M. Saviozzi, S. Massucco, F. Silvestro, "Implementation of Advanced Functionalities for Distribution Management Systems: Load Forecasting and Modeling through Artificial Neural Networks Ensembles", Elsevier Electric Power System Research (EPSR), vol. 167, pp. 230-239, February 2019, doi: 10.1016/j.epsr.2018.10.036

[12] S. Massucco, G. Mosaico, M. Saviozzi, F. Silvestro, "A Hybrid Technique for the Day-ahead PV Generation Forecasting Using Clear Sky Models or Ensemble of Artificial Neural Networks According to a Decision Tree Approach", Energies 2019, 12(7), 1298, doi: 10.3390/en12071298

Collaborations

- Member of the Task Force IEEE-CIGRE (International Council on Large Electric Systems) in Power system operation e Power system security.
- Life Senior Member of IEEE Power & Energy Society.
- past Member of the CIACE – *Comitato interministeriale per gli affari comunitari europei (Italian Committee for European Comunity Affairs) within the* Strategic Energy Technologies Plan (SET Plan)) with the aim of identifying strategic priorities in Italian Research in Energy matters (European Industrial Initiatives-EII).
- **past-Chair of the IEEE Power & Energy Branch - Italy Section**
- **past-Vice-Chair of the IEEE Italy Section**.
- Delegate for Energy appointed by the Rector of the University of Genova [2014-2024]
- Actually, National President of AEE - Society Energia Elettrica – AEIT, **IEEE Syster Society**
- Actually, Member of the Council of FIRE – Federazione Italiana Uso Razionale dell'Energia (Italian Federation for Rational Use of Energy)
- Cooperation with Several Universities and Research Centers in Italy, Europe and USA.

Genova, 17.06.2026

