

EUROPEAN
CURRICULUM VITAE
FORMAT

PERSONAL INFORMATION

Name **MANUELA MINETTI**
Address **Via Opera Pia, 16145, Genoa, Italy**
Mobile **3465441190**
E-mail **manuela.minetti@unige.it**

Nationality Italian
Date of Birth 07/06/1995
Gender Female

WORK EXPERIENCE

- Dates October 2023 – Now
Work and position **Assistant Professor/ Research Fellow – ING/IND 33**
• Institution University of Genoa
- Dates September 2022 – September 2023
Work and position **Teacher of Technology**
• Institution Institute “S. Pertini”, Ovada
- Dates September 2021 - June 2022, October 2020 – June 2021, November 2019 – January 2020
Work and position **Teacher of Applied Math**
• Institution Institute “C. Barletti”, Ovada
- Dates October 2021 - December 2021, October 2020 – December 2020
Work and position Lecturer
• Course title Electric Machine Dynamic
• Description Master program of Electrical engineering
• Institution University of Genoa
- Dates November 2019 - October 2022
• Institution IEEE
• Principal area of interest Power and Energy
• Title **Member of IEEE**

STUDIES

- Dates November 2019 - May 2023
• Institution University of Genoa, Italia
• Principal area of interest Smart Grids and Microgrids, power converters, control strategy for primary regulation in islanded Microgrids, Grid stability
• Title **Doctorate in Electric Engineering**
• Degree Phd
• Title of the thesis

The Role of Inverter-based Generation in Future Energy Systems: An Oriented Decentralized Strategy for Reactive Power Sharing in Islanded AC Microgrids and a Techno-Economic Approach to Inertia Requirements Assessment of the Italian Transmission Network.

- Dates January 2020
 - Institution University of Genoa, Italia
 - Degree **National qualification for profession of engineer**
-
- Dates September 2017 - October 2019
 - Institution University of Genoa, Italia
 - Principal area of interest Smart Grids and Microgrids, power converters, control strategy for primary regulation in islanded Microgrids
 - Title **Master Degree in Electric Engineering, 110/110 cum laude**
 - Level MsC
 - Title of the thesis Reactive Power Control in Islanded AC Microgrids: an Oriented Decentralized Strategy for Power Sharing Improvements
-
- Dates September 2014 - October 2017
 - Institution University of Genoa, Italia
 - Principal area of interest Principle of electric engineering
 - Title **Bachelor Degree in Electric Engineering, 110/110**
 - Level BsC
-
- Dates (from - to) September 2009 – June 2014
 - Institution Scientific High School B. Pascal, Ovada (AL), Italy
 - Principal area of interest Math, physic, English, Informatics, Natural Sciences, Chemistry
 - Title **High School degree, 100/100**
 - Level Scientific High school degree

SCIENTIFIC PUBLICATIONS

- [1] A. Rosini, A. Bonfiglio, D. Mestriner, M. Minetti and S. Bracco, "A Simplified Study for Reactive Power Management in Autonomous Microgrids," WSEAS Transactions on Power Systems, vol. 14, pp. 107-112, 2019
- [2] A. Rosini, M. Minetti, G. B. Denegri and M. Invernizzi, "Reactive Power Sharing Analysis in Islanded AC Microgrids," 2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Genova, Italy, 2019, pp. 1-6, doi: 10.1109/EEEIC.2019.8783374.
- [3] M. Minetti, G. B. Denegri and A. Rosini, "New Approaches to Reactive Power Sharing and Voltage Control in Islanded AC Microgrids," 2020 55th International Universities Power Engineering Conference (UPEC), Turin, Italy, 2020, pp. 1-6, doi: 10.1109/UPEC49904.2020.9209864.
- [4] M. Minetti, A. Rosini, G. B. Denegri, A. Bonfiglio and R. Procopio, "An Advanced Droop Control Strategy for Reactive Power Assessment in Islanded Microgrids," in IEEE Transactions on Power Systems, vol. 37, no. 4, pp. 3014-3025, July 2022, doi: 10.1109/TPWRS.2021.3124062.
- [5] M. Minetti and M. Fresia, "Simplified Conditions for the Evaluation of Droop-Controlled Microgrids Stability," 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Bucharest, Romania, 2021, pp. 1-6, doi: 10.1109/ATEE52255.2021.9425145.
- [6] M. Minetti, M. Fresia and D. Mestriner, "An MPC approach for a PV-BESS islanded system primary regulation," 2021 IEEE International Conference on Environment and Electrical Engineering and 2021 IEEE Industrial and Commercial Power Systems Europe (EEEIC/I&CPS Europe), Bari, Italy, 2021, pp. 1-6, doi: 10.1109/EEEIC/ICPSEurope51590.2021.9584533.
- [7] M. Minetti and M. Fresia, "A Review of Primary and Secondary Control for Islanded No-Inertia

Microgrids," 2021 IEEE International Conference on Environment and Electrical Engineering and 2021 IEEE Industrial and Commercial Power Systems Europe (IEEEIC/ICPSEurope), Bari, Italy, 2021, pp. 1-7, doi: 10.1109/IEEEIC/ICPSEurope51590.2021.9584722.

- [8] A. Rosini, M. Minetti, G. B. Denegri, R. Procopio and A. Bonfiglio, "A Contribution to Reactive Power Control in Inverter Based Islanded Microgrids," 2022 IEEE Power & Energy Society General Meeting (PESGM), Denver, CO, USA, 2022, pp. 1-5, doi: 10.1109/PESGM48719.2022.9916941.
- [9] M. Minetti, A. Bonfiglio, I. Benfatto, and Y. Yulong, "Strategies for Real-Time Simulation of Central Solenoid ITER Power Supply Digital Twin," *Energies*, vol. 16, no. 13, 2023, doi: 10.3390/en16135107
- [10] Minetti, M., *The Role of Inverter-based Generation in Future Energy Systems: An Oriented Decentralized Strategy for Reactive Power Sharing in Islanded AC Microgrids and a Techno-Economic Approach to Inertia Requirements Assessment of the Italian Transmission Network*. Phd Thesis.
- [11] Bonfiglio, A., Fresia, M., Minetti, M., Procopio, R., Rosini, A., Lisciandrello, G., & Orrù, L. (2023, June). Inertia Requirements Assessment for the Italian Transmission Network in the Future Network Scenario. In 2023 IEEE Belgrade PowerTech (pp. 1-5). IEEE.
- [12] Fresia, M., Minetti, M., Rosini, A., Procopio, R., Bonfiglio, A., Invernizzi, M., ... & Orrù, L. (2023). A Techno-Economic Assessment to Define Inertia Needs of the Italian Transmission Network in the 2030 Energy Scenario. *IEEE Transactions on Power Systems*.

EDITORIAL ROLES

- Editor for International Conference on Environment and Electrical Engineering (IEEEIC) 2021, 2022 e 2023.
- Editor of IEEE Transaction on Power Systems.

AWARDS

- ABB e-charging challenge award for a project about "EV charging infrastructure", 2019.

SCIENTIFIC COLLABORATIONS

- From 2021 to 2022 she was a member of the NICES Laboratory "Network Infrastructures and Complex Electrical Energy Systems" of the Department of Naval, Electrical, Electronic and Telecommunications Engineering (DITEN) of the University of Genoa for the national collaboration with Terna S.p.a. for the project "Technical-economic evaluation of inverter-based grid forming generation in future scenarios".
- From 2020 to 2022 she was a member of the NICES Laboratory "Network Infrastructures and Complex Electrical Energy Systems" of the Department of Naval, Electrical, Electronic and Telecommunications Engineering (DITEN) of the University of Genoa for the international collaboration with ITER Organization in the context of research contracts stipulated between DITEN and ITER Organization. The topics of the collaboration concern the study of plant and modelling solutions for the real-time simulation of the digital twin of the power supply system of the central plasma confinement solenoid.

TECHNICAL SKILLS

Professional knowledge of Matlab and Simulink tools for the simulation and control of electric energy systems and the implementation of advanced control logics for the optimal operation of grids and smart microgrids;
Professional knowledge of DigSilent software for the modelling and simulation of electric system;
Professional knowledge of Office software for the writing of technical reports, presentations and management of spreadsheets;
Professional knowledge of Windows Operating system (XP, Vista, 7, 8 e 10);
Good knowledge of Autocad software for the development of technical drawings and schemes.

RESEARCH INTERESTS

Her main research interests include power system modelling and control, renewables integration, microgrids control, grids stability, real time simulations and digital twins.

In compliance with the GDPR and the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the treatment of my personal details contained in this document.

Ovada, January 09th 2024

Manuela Minetti

