

PERSONAL INFORMATION

Domenico Villacci



📍 University of Sannio - Consorzio ENSIEL

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Nationality: Italian

WORK EXPERIENCE

Teaching, scientific and professionals tasks

- Full Professor of the Energy Electrical Power Systems Università del Sannio Benevento - Italy
- Chair of **the National Interuniversity Consortium for Energy and Electrical Systems – ENSIEL**
- President of the **Mediterranean Energy Academy MEA**
- Co-founder and board member of **ITALIAN TECHNOLOGY CLUSTER on ENERGY**
- National Scientific Advisor of **GUSEE (National University Group of Electrical Systems for Energy)**
- Member of the extended Board **MIUR H2020/energy sector**
- Co-founder and Director of **TEDASS**, the Interdepartmental Research Centre on Technology, Diagnostics, Environment and Sustainable Development at Sannio University.
- Co-founder and Scientific Director of **MARSEC** (Mediterranean Agency for Remote Sensing and Environmental Control) for the satellite applications in Power Systems;
- Co-founder and board member of **CMCC “Euro Mediterranean Foundation for Climate Change”** international centre for the studies on the climate change impacts.

His leading scientific activities focused on generation, transmission, distribution and enduse of electrical energy, with theoretical and experimental studies carried out in cooperation with relevant national and international scientific and industrial organizations.

30 years of experience in the various sectors of the electrical power systems: Generation, Transmission, Distribution and Utilization, with theoretical and experimental studies carried out in collaboration with university research groups, both national and international, and with the most important scientific and industrial realities operating in the field of electricity.

Institutional Roles

- Pro - Chancellor of the University of Sannio.
- University of Sannio Board Member;
- Chair of the National Interuniversity Consortium for Energy and Electrical Systems – ENSIEL
- ENSIEL Consortium
- President of the Mediterranean Energy Academy MEA
- Board member of **ITALIAN TECHNOLOGICAL CLUSTER on ENERGY**
- ASEA (Benevento Agency for Energy and environment) Board member;
- Chairman of Consortium for Development of Culture and University Studies
- Chairman of **AEIT** (Italian federation for electrical engineering, electronics, automation, information technology and telecommunications) in Benevento.
- Board Member of the Regional Centre for new technologies related to manufacturing activities.
- Member of Energy Management Body of the Region of Campania

- Teaching Experience**
- Electrical Power Systems Analysis
 - Electrical Energy Systems
 - Planning and management of Electrical Power Systems
 - Power Systems Automation
 - Reliability and Diagnostics in Electrical Power Systems
 - Electrotechnics
 - Electronic Power Systems
 - Electrical Communication.

MAIN SCIENTIFIC ACTIVITIES The research activities are carried out in cooperation with research groups both at national and international level and they can be summarized in more than 140 scientific publications focused on generation, transmission, distribution and use of electrical energy.
 The main research themes refer to:
 - Electric Power System analysis - Energy planning - Electric systems automation - Power Energy Quality - Electromagnetic Compatibility - Power distributed generation plants - Renewable sources - Hydrogen as energy vector and fuel cells, Smart Grids - Grid management in a state of emergency and in the presence of production plants from renewable sources. - Free Electric power market - Use of satellite technologies for energy system control on a large scale. - Real Dynamic Transmission Lines Current Rating - WAMS, WACS, WAPS - Energy Forecasting.

EDUCATION AND TRAINING

Graduated in "Electrical Engineering from the University of Naples Federico II"

PERSONAL SKILLS

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|----------------|---------------|---------|--------------------|-------------------|---------|
| Mother tongue | Italian | | | | |
| Other language | UNDERSTANDING | | SPEAKING | | WRITING |
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | B2 | B2 | B2 | B2 |

Awards

Selection Publications

- Pepiciello A., Coletta G., Vaccaro A., Villacci D., The role of learning techniques in synchrophasor-based Dynamic Thermal Rating. 2020 International Journal of Electrical Power and Energy Systems 115, 105435;
- De Caro F., Vaccaro A., Villacci D., Spatial and temporal wind power forecasting by case-based reasoning using big-data, 2017 Energies 10(2), 252
- Carlini E.M., Giannuzzi G.M., Mercogliano P., Vaccaro A., Villacci D., A Decentralized and Proactive Architecture based on the Cyber Physical System Paradigm for Smart Transmission Grids Modelling, Monitoring and Control, 2016 Technology and Economics of Smart Grids and Sustainable Energy 1(1), 5
- Pepiciello A., Villacci D., Vaccaro A., Wide Area Monitoring Protection and Control Systems: The enablers for enhancing renewable energy hosting capacity, 2019 Proceedings of 2019 IEEE PES Innovative Smart Grid Technologies Europe, ISGT-Europe 2019
- Pisani C., Vaccaro A., Villacci D., Conceptualization and Experimental Deployment of an Adaptive Synchronized Sensing System for Power Line Thermal Monitoring, 2016 IEEE Transactions on Industrial Informatics 12(6), pp. 2158-2165

He published more than 140 papers in International Journals and Conferences.

Research coordination projects

- Local scientific officer within the framework of the national research project "Hybrid Propulsion Systems for motor vehicles" and "Energy Management, ancillary services and drive, catalytic reformer modelling;
- Local coordinator, within the framework of the "National plans for developing scientific and technological networks", of the project : "Study on innovative converter for electric drive: compatibility models, development environments, multimedia architecture following CALS standard", in cooperation with Ansaldo Transport;
- Local scientific coordinator of the national research project "Distributed electric power generation with low environmental impact and local strategies for sustainable development" in cooperation with Edison, Atos, Edison Energie Speciali;

- Local scientific coordinator of the national research project: "Information and Communication Technologies in the electric infrastructure network" and of the local project: "Satellite Technologies and UMTS use for developing remote control systems and for remote diagnostics of distribution electric grids;
- Co-founder and scientific officer of MARSEC S.p.A. (Mediterranean Agency for Remote Sensing and Environmental Control), the satellite station, established through the cooperation among the University of Sannio with region of Campania.
- General manager of MARSEC Agency (Mediterranean Agency for Remote Sensing and Environmental Control)
- Scientific officer within the framework of the agreement between the University of Sannio and CIRA (Italian centre for aerospace research): "Study for optimizing and reducing electricity consumption, through free market access, and analysis of the risks related to the specificities of the plants and to their electric and power charges, suggesting supply procedures;
- Scientific officer within the framework of the agreement between the University of Sannio and CESI: "Adaptive and Robust Protection of the transmission grid components;
- Local scientific coordinator of the national project "Methods and satellite control architectures for smart electrical systems".
- National and European activities coordinator within the FP7 Project "E-Highways 2050".
- FP7 E-Highway 2050 project, the "European Pan-European Supergrid", for the implementation of the European Electricity Market - National Coordinator and European Task Coordinator
- H2020 MIGRATE "Massive InteGRATION of power Electronic devices" National coordinator;
- H2020 n. OSMOSE "Optimal System-Mix of flexibility Solutions for European electricity". – National coordinator

PROTECTION OF PERSONAL DATA

For the protection of the recipient, with respect to the treatment of personal data, the provisions of D.Lgs 30 June 2003, n. 196 and the current Regulations for the Processing of Sensitive and Judicial Data in the Implementation of D.Lgs 196/2003 will be observed.