

Curriculum Vitae Europass

General information

Name/Surname **Federico Santi**

Education

- 2016 Certified Energy Management Expert (EGE) - international standard UNI EN ISO 11339
- 2004 Ph.D. Energy Engineering, University of Rome "Sapienza"
- 1999 Scholarship ENEA (Italian Agency for Energy, Environment and New Technologies)
Casaccia Research Center, Rome, Italy
- 1999 Engineers National Examination (Registrar of Professional Engineers of Rome N. 20930)
- 1999 M.Sc. Electrical Engineering, University of Rome "Sapienza"

Academic experience

Period	2006 - up to now (18 academic years)
Employer	University of Rome "Sapienza" DIAEE - Department of Astronautics, Electrical and Energy Engineering M.Sc. Energy Engineering
Role	<i>(Ext.) Prof. of "Energy System Analysis and Modeling"</i>
Main activities	<p>About 80 M.Sc. students per year. Supervisor of more than 80 M.Sc. thesis researches in energy engineering and of 3 Ph.D. thesis researches in energy engineering.</p> <p><i>Visiting Professor at the University of Dar Es Salaam – College of Engineering and Technology (UDSM-CoET) – Department of Electrical Engineering, 2022 – up to now.</i></p> <p><i>Research Associate at COSTECH – Tanzanian Commission for Science and Technology, 2021/22.</i></p> <p><i>Lecturer at Nanjing Southeast Technical University (China) and Lund University – IIIIEE (Sweden).</i></p> <p><i>External Editor of Tanzania Journal of Engineering and Technology.</i></p> <p><i>Guest Editor of Renewables Integration special issue of Renewable & Sustainable Energy Reviews.</i></p> <p><i>Author of more than 60 publications.</i></p> <p><i>Chairman / Invited Speaker at 26 international conferences in 9 Countries / 4 Continents. Invited to hold the opening speech for the opening ceremony of Rosen Innovation Center in Lingen, (Germany) about: "Adiabatic CAES Systems", in front of the Prime Minister of Low-Saxony.</i></p> <p><i>Board Member and scientific advisor of AIEE, the Italian branch of IAEE (International Association for Energy Economics). Responsible of AIEE's Italian Energy Outlook.</i></p> <p><i>Board member of Francesco Illiceto Association for the promotion of studies on electric energy.</i></p>

Professional Experience

Short Description

Energy Engineering (Consulting)

- Energy manager and energy engineering designer for Italian Government-owned companies like: *ENAV – Italian National Air Traffic Management Company* (2005-2011), *SOGEL – Italian National Company for Information Technology* (2012-2018), *GNAM – Italian National Gallery of Modern Art* (2019-today)
- Technical advisor for energy efficiency loans at the Italian bank UniCredit - Project Finance Department.
- Since 1999, registered professional engineer (Engineers Registrar of Rome – N. 20930) with an experience of >20 years as a consultant, designer, work manager, commissioning/test authority for energy engineering works as:
 - >1.4 GW renewable energy sources power plants and grid connections (>700 MW solar PV, 190 MW wind, 160 MW biomass, 40 MW biogas, 140 MW hydro)
 - Energy efficiency projects on more than 3 million cubic meters of buildings of different kinds (offices, data-centers, airport terminals, supermarkets/malls, historic buildings among which the headquarter Bank of Italy in Rome, Galleria Borghese, Galleria Nazionale di Arte Moderna, academies and research centers like ENEA Casaccia, etc.)
 - Inventor/coordinator of the first-in-Europe bank Project Financing initiative for energy efficiency in food distribution sector (more than 60 million EUR invested in 35 supermarkets in Italy)
 - Owner energy engineering at Rome Fiumicino international airport (40 million passengers/year) dynamic energy modeling of the new terminals (near-zero energy buildings); energy system design; HV and MV internal grids reconfiguration (4 x 40 MVA), substation and emergency generation/CHP; Energy System Design of the new airport development plan, 80 million passengers per year (+200 GWh/year) air-side 110 MWp new solar storage systems; glare studies; engineering design; engineering design of 80 MW plug-in electric vehicles recharge infrastructure (MV grid)
 - Coordinator of energy engineering for large works characterized by innovation: *in-situ cleaning and coating* off-shore oil pipelines affected by internal bacteria corrosion (MIC; published on World Pipeline Feb. 2011: “*The Italian Job*”); new innovative Bulk Handling System for coal fired large thermal power plants TVN (*PowerGen International Prize awarded*), TVS, Vado Ligure; innovative off-shore LNG-RV terminal
 - Winner (first prize) of the international design tender “*NexTower*” to design the new control towers for the Italian airports, thanks to innovative energy solutions.
- Scientific advisor for assessment/development of new energy technologies, like:
 - A new Cogenerating Heat and Power (CHP) Concentrated Photovoltaic system (Solergy), for the Italian National Authority of Air Transportation (ENAC)
 - A new Thermal Energy Storage system using fluidized-bed silicon sand, for Magaldi Power
 - Concept design of a new Adiabatic Compressed Air Energy Storage system (A-CAES)
- Independent verification of European Space Agency (ESA-ESRIN) sustainability pathway “20-20-20”. Energy analysis and modeling of ESA’s facilities.
- *Principal investigator e steering committee* member of the European project SAVE “*White & Green Certificates*” (to prepare ECU Directive 2006/32/CE on energy efficiency)
- Since 2017 director of an engineering team in charge for verifying - on behalf of the Italian Government owned company GSE – the requests for incentives for renewable thermal energies. Up to now the team has evaluated more than 100.000 requests for incentives.

Main customers



