
Gianluigi Lo Basso

Contacts:

E - mail:

Current Address:

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SKILLS

Keywords: Renewable Energy, Hybrid Systems, Smart Grid, Hydrogen end-uses, H₂NG blends, CHP plants, CCHP plants, Gas and Steam Turbines, Combined Cycles, USC power plants, Energy Planing; Dynamic models development, Energy management, Electrical Market mechanisms, Techno-economic feasibility analysis, HVAC plants designer; Budgeting for national and international research project proposals, Teaching, Public speaking.

Technical: Adobe Photoshop CS3/CS4; FileMaker 8. Pro; Minitab 14; Mathcad 13; Madonna 8; Solidworks 2008 ; Cosmos Works 2008; Cosmos Flow Works 2008; Cosmos Motion 2008; GATE cycle; Termus 16.0 ; DOCET; X CLIMA ; Solarius-PV 5.0; Tsol Pro 4.5; Hybrid 2; HOMER Pro; Matlab Simulink; Energy Plan; Master Clima 11300; BlueMatica; AutoCad Autodesk 2-D.

Other:

Adjunct Professor of Technical Systems - Sapienza University of Rome- Faculty of Architecture.

International conferences chairing:

IEEE-Energy Sustainability in Small Islands- Milan (Italy) 2017

Scientific reviewer for international journals:

Renewable and Sustainable Energy Reviews - Ed. Elsevier

Energy and Buildings- International Journal - Ed. Elsevier

International Journal of Hydrogen Energy - Ed. Elsevier

Energy -International Journal - Ed. Elsevier

Sustainability- Ed. MDPI AG

Energies- Ed. MDPI AG

Energy Efficiency Journal-Ed.Springer

Renewable Energy Journal - Ed. Elsevier

Linguistic: Italian (mother tongue), English (Advanced).

CERTIFICATION

2011 Building Energy Auditor License, Regional Specialisation course (160 hours)

2010 Italian Professional Engineer License

EXPERIENCE

Current Position:

Research Fellowship, DIAEE
(Department of Astronautics Electric
and Energy Engineering) Sapienza
University of Rome;
*Adjunct Professor of Technical
Systems* - Faculty of Architecture -
Sapienza University of Rome

April 2017 – May 2018	<i>Sapienza University of Rome (Italy)</i> Italian work-package Technical coordinator of PRISMI Project (Penetration of Renewables in Smart Mediterranean Islands) funded by EU
Since March 2016	- INTERREG Program <i>HyDEP s.r.l. Lodi (Italy)</i> Process Engineer for Mass and heat balances for alkaline electrolyzers design, Hydrogen piping and purifying systems
April–July 2014:	<i>H2 Nitidor s.r.l. Milan (Italy)</i> – Technical advisor for energy–economic feasibility analysis for off–grid hydrogen–based dwellings in different climate areas
April 15–September 15, 2010:	<i>ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development)</i> - Technical Advisor for CCHP plant design and techno–economic feasibility.
September 19, 2009–March 21, 2010:	<i>SAE (Energy services for athenaeum) Sapienza, University of Rome</i> - Internship in Central Technical Division for the University Smart Grid development.
January 2009–February 2011:	<i>E–ON Energy (Italy)</i> –Sales account for Business Customers. Contractor for electricity and natural gas supply.
May 2008–December 2008:	<i>Acea Electrabel</i> – Sales account for Business Customers. Contractor for electricity, energy services, data monitoring software, renewables supply.
June 1995–May 2008:	Other activities (non–technical)

EDUCATION

October 2014:	Ph.D. in “Energy Saving and Distributed Micro Generation” . DIAEE (Department of Astronautics, Electrical and Energy Engineering) Sapienza, University of Rome. Thesis: <i>Hybrid system for renewable hydrogen end use: experimental analysis for performance assessment on the integrated CHP reciprocating engine fuelled with H₂NG</i>
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blends.

- October 31, 2014 Ph.D. graduation with honour.
- September, 2014 Selected Researcher for ENERSTORE 2014, International Grant Winner for attending specialist summer school on energy storage systems at TU–Dresden (Technische Universität of Dresden) , Germany
- November 2010–2014: Ph.D. Student, Scholarship Winner, first place with a score 100/120 in “ Energy Saving and Distributed Micro Generation” . DIAEE (Department of Astronautical, Electrical and Energy Engineering) - Sapienza, University of Rome.
- February 27, 2009: Master’ s Degree in “ Energy and Nuclear Engineering” , 105/110 at Tor Vergata University of Rome.
Thesis: *Energy rationalization of INDESIT manufacturing plant located in Melano (Italy).*
- April 27, 2005: Bachelor’ s Degree in “Mechanical Engineering” , 101/110 at Tor Vergata University of Rome.
Thesis: *USC (Ultra Super Critical) steam power plants for energy production.*
- July 1994: Scientific Studies Degree 46/60, at Liceo Scientifico San Leone Magno, Rome (Italy).

LIST OF INTERNATIONAL PUBLICATIONS

1. DE SANTOLI, L., **LO BASSO, G.**, BRUSCHI, D., (2014), A small scale H₂NG production plant in Italy: techno–economic feasibility analysis and costs associated with carbon avoidance. International Journal of Hydrogen Energy, ed. Elsevier.
 2. DE SANTOLI, L., **LO BASSO, G.**, BRUSCHI, D., (2013), Hybrid system with an integrated CHP plant fuelled by H₂NG blends: theoretical energy–environmental analysis and foreseeable optimizations. Energy and Building, ed. Elsevier.
 3. DE SANTOLI, L., **LO BASSO, G.**, BRUSCHI, D., (2013), Energy characterization of CHP fuelled with hydrogen enriched natural gas blends. Energy, ed. Elsevier.
 4. DE SANTOLI, L., **LO BASSO, G.**, BRUSCHI, D., (2013), Hydro methane blends use in a CHP plant: an energy–environmental analysis. In: CLIMA 2013 – 11th REHVA World Congress and the 8th International Conference on IAQVEC, 16 - 19 June, Prague, Czech Republic.
 5. DE SANTOLI, L., **LO BASSO, G.**, BRUSCHI, D., (2013), Preliminary experimental analysis of a CHP hydromethane system. Journal of Energy and Power Engineering, ed. David Publishing.
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6. L. DE SANTOLI, **LO BASSO G.** (2011) Preliminary experimental analysis of a CHP hydromethane system. 6th Dubrovnik conference on sustainable development of energy, water and environment systems, September 25th - 29th 2011, Dubrovnik, Croatia.
 7. DE SANTOLI L., ALBO A., BRUSCHI D., **LO BASSO G.**, NASTASI B. (2014) RES (Renewable Energy Sources) availability assessments for Ecofuels production at local scale: carbon avoidance costs associated to a hybrid biomass/H2NG-based energy scenario. *Energy Procedia*. In press
 8. DE SANTOLI L., **LO BASSO G.**, ALBO A., BRUSCHI D., NASTASI B. (2015) Single cylinder internal combustion engine fuelled with H2NG operating as micro-CHP for residential use: preliminary experimental analysis on energy performances and numerical simulations for LCOE assessment. *Energy Procedia*.
 9. **LO BASSO G.**, DE SANTOLI L., ALBO A., NASTASI B. (2015) Hydrogen-Natural Gas mixtures (H2NG) effects on energy performances of a condensing micro-CHP for residential applications: an expeditious assessment of water condensation and experimental analysis. *Energy*, Ed. Elsevier
 10. DE SANTOLI L., **LO BASSO G.**, NASTASI B. (2015) Sapienza Distributed Generation Lab for Smart Energy Systems: research activities outline. 10th Conference on Sustainable Development of Energy, Water and Environment Systems - SDEWES 2015, Dubrovnik, 27th Sep. - 2nd Oct. 2015
 11. NASTASI B., **LO BASSO G.** (2016) Hydrogen to link heat and electricity in the transition towards future Smart Energy Systems. *Energy*, Ed. Elsevier
 12. **LO BASSO G.**, PAIOLO R. (2016) A preliminary energy analysis of a commercial CHP fuelled with H2NG blends chemically supercharged by renewable hydrogen and oxygen. *Energy Procedia*, Ed. Elsevier
 13. **LO BASSO G.**, NASTASI B., ASTIASO GARCIA D., CUMO F. (2017) How to handle the hydrogen enriched natural gas blends in combustion efficiency measurement of conventional and condensing boilers. *Energy*, Ed. Elsevier
 14. SALATA F., GOLASI I., DOMESTICO U., BANDITELLI M., **LO BASSO G.**, NASTASI B., DE LIETO VOLLARO A. (2017) Heading towards the nZEB through CHP + HP systems. A comparison between retrofit solutions able to increase the energy performance for the heating and domestic hot water production in residential buildings. *Energy Conversion and Management*, Ed. Elsevier
 15. DE SANTOLI L., **LO BASSO G.**, NASTASI B. (2017) The Potential of Hydrogen Enriched Natural Gas deriving from Power-to-Gas option in Building Energy Retrofitting. *Energy and Buildings*, Ed. Elsevier
 16. **LO BASSO G.**, NASTASI B., SALATA F., GOLASI I. (2017) Energy retrofitting of residential buildings - how to couple CHP and HP for thermal management and off-design operation. *Energy and Buildings*, Ed. Elsevier
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17. NASTASI B., **LO BASSO G.**, (2017) Power-to-Gas integration in the Transition towards Future Urban Energy Systems
 18. DE SANTOLI L., PAIOLO R., **LO BASSO G.** (2017) An overview on safety issues related to hydrogen and methane blend applications in domestic and industrial use. Energy Procedia, Ed. Elsevier
 19. DE SANTOLI L., **LO BASSO G.**, NASTASI B. (2017) Innovative Hybrid CHP systems for high temperature heating plant in existing buildings, Energy Procedia, Ed. Elsevier
 20. DE SANTOLI L., **LO BASSO G.**, LETTINA F., LIMATOLA A., Energy And Economic Analysis On A Demo Hybrid CCHP (Combined Cooling Heat And Power) Plant For University Lecture Hall Air Conditioning. 12th Conference on Sustainable Development of Energy, Water and Environment Systems - SDEWES 2017, Dubrovnik, 4th Oct. - 8th Oct. 2017
 21. ASTIASO GARCIA D., BERGHI S., BRUSCHI D., GROPPI D., **LO BASSO G.**, On the path to energy independence: hybrid energy systems evaluation towards Favignana smart energy island. 12th Conference on Sustainable Development of Energy, Water and Environment Systems - SDEWES 2017, Dubrovnik, 4th Oct. - 8th Oct. 2017.
 22. DE SANTOLI L., **LO BASSO G.**, PAIOLO R. (2017) An overview on safety issues related to hydrogen and methane blend applications in domestic and industrial use. Energy Procedia, Ed. Elsevier.
 23. **LO BASSO G.**, ROSA F., ASTIASO GARCIA D., CUMO F. (2018) Hybrid systems adoption for lowering historic buildings PFEC (primary fossil energy consumption) – A comparative energy analysis. Renewable Energy, Ed. Elsevier
 24. DE SANTOLI L., **LO BASSO G.**, SPIRIDIGLIOZZI G., ASTIASO GARCIA D., (2018) Innovative hybrid energy systems for heading towards NZEB qualification for existing buildings. 18th IEEE International Conference on Environment and Electrical Engineering, 12–15 June 2018, Palermo, Italy.
 25. D. GROPPI, D. ASTIASO GARCIA, **G. LO BASSO**, F. CUMO, L. DE SANTOLI (2018). Analysing economic and environmental sustainability related to the use of battery and hydrogen energy storages for increasing the energy independence of small islands. ENERGY CONVERSION AND MANAGEMENT, Ed. Elsevier.
 26. NASTASI B., **LO BASSO G.**, ASTIASO GARCIA, D., CUMO F., DE SANTOLI L. (2018). Power-to-gas leverage effect on power-to-heat application for urban renewable thermal energy systems. INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, Ed. Elsevier

LIST OF PUBLICATIONS UNDER REVIEW
