



Stefano Avesani

EURAC Research
Institute for Renewable Energy
Senior Researcher
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Main fields of activity

- Envelope solutions for comfortable and energy efficient buildings: adaptive façade, plug&play solutions, integration of solar systems, of ventilation units and of shading devices.
- Main tools: integrated design process, comfort and energy performance calculation through steady-state and dynamic tools, FEM analyses, indoor and outdoor lab test
- Project proposal elaboration

Personal data

- Surname / First name: Avesani Stefano
- Nationality: Italian
- Date of birth: November 14, 1982

Professional experience

- Since July 2016: Senior researcher at Eurac Research, Institute for Renewable Energy, Bolzano – Italy. Main projects:
 - H2020, BuildHEAT: development of a façade system for renovation integrating insulation system, heat recovery ventilation unit, solar thermal collector and PV.
 - COST ACTION 1403, Adaptive façade network: Definition of performance indicators, Modelling approaches, Testing methodologies.
 - FP7, Sinfonia: assessment of prefabricated multifunctional façade solution for the retrofit of existing residential buildings.
 - FP7, CommONEnergy: Modeling and testing of an adaptive BIPV façade.
- Since March 2010: PhD student at Eurac Research, Institute for Renewable Energy, Bolzano – Italy. Main projects:
 - FP7, Inspire: development of a façade system for high-rise office building renovation integrating a sorption collector.
- Since July 2008: Eurac Research, Institute for Renewable Energy, Bolzano - Italy. Researcher in the field of energy in buildings, focusing in particular on dynamic energy simulation of buildings and single components, energy monitoring systems and data assessment, project development. Main projects:
 - Bolzano CO2 null: data collection and analysis for the assessment of CO2 zero land.
 - Hafner tower DSF modeling

- Anstz Kofler: retrofitted historic building monitoring and modeling.
- Clima Concrete: development, simulation and lab test of a prefabricated radiant slab.
- Eurac Junior workshop on energy: educational activities with primary and secondary school.
- Since November 2007: Eurac Research, Institute for Renewable Energy, Bolzano - Italy. Master thesis elaboration in the field of energy optimization of a trigeneration plant with solar integration. Main projects:
 - Eurac Head Quarter energy monitoring.

Education and training

- Institute of Bauphysik, University of Innsbruck, Innsbruck - Austria. Doctor of Technical Science in the field of envelope system for energy retrofitting of existing buildings with the dissertation “Design of a solar façade solution with an integrated sorption collector for the systemic retrofit of the existing office buildings”.
- Faculty of Engineering, University of Trento, Trento - Italy. Environmental Engineering Master (July 2008) and Bachelor (October 2004)
- Internship in Mozambique. Management of water resources (July 2006)
- University of Aberdeen, Aberdeen - Scotland (January-June 2005)
- Scientific high school (Liceo Scientifico), Verona - Italy (2001)

Personal skills and competences

- Language skills: Italian (mother tongue), English (fluent), German (intermediate) and Spanish (basic)
- International experience: two months volunteer activities in Lima - Perú (2009)
- Social activities: project board of Ingegneria Senza Frontiere, Trento / Engineering Without Borders, Trento (2007-2009); Scout educator (2002-2007)

Conference contributions (with publication in the conference proceedings)

- S. Lindig, D. Moser, S. Avesani, R. Lollini, Performance evaluation towards improved BiPV-Systems – Simulation of BiPV-systems installed on existing building facades using TRNSYS, Building Simulation Application BSA 2015, 2nd IBPSA-Italy conference, Bozen-Bolzano, Italy, 4th–6th February 2015
- S. Avesani, O. Hallström, G. Földner, Integration Of Sorption Collector In Office Curtain Wall: Simulation Based Comparison Of Different System Configurations, International Conference on Solar Energy and Buildings, Aix-les-Bains, France, 16-19 September 2014
- M. Giuliani, S. Avesani, U. Filippi Oberegger, Quantitative comparison of massive walls thermal response among commercial software, 13th International Conference of the International Building Performance Simulation Association, Chambéry, 25-28 August 2013, France
- F. Guarino, S. Avesani, L. Karim, Reaching net zero energy: overcoming climate challenges with a ‘solution sets’ design approach from Copenhagen to La Reunion

Island, 13th International Conference of the International Building Performance Simulation Association, Chambéry, 25-28 August 2013, France

- S. Avesani, D. Neyer, P. Baldracchi, U. Filippi, R. Lollini, Active slab design by lab tests and modeling, 1st IBPSA Italy conference, Free University of Bozen-Bolzano, 30 January-1 February 2013
- M. Rametta, H. Mahlknecht, S. Avesani, R. Lollini, Valutazione ed ottimizzazione delle prestazioni energetiche dell'edificio storico Ansitz Kofler, AICARR - 48th international congress, Il recupero energetico degli edifici esistenti: quali soluzioni per un sistema integrato, l'involucro, gli impianti e la regolazione, Baveno, September 22 to 23, 2011
- G. Paoletti, S. Avesani, D. Exner, R. Lollini, Designing low energy buildings: application of a parametric tool and case studies, PLEA 2011 - 27th International Conference on Passive and Low Energy Architecture, Louvain La Neuve, Belgium, 13-15 July 2011
- S. Avesani, D. Exner, R. Lollini, A parametric study of a Passive House under different climate conditions. 14th Passivehaus Tagung, Dresden, 28-29 May 2010
- A. Napolitano, R. Lollini, S. Avesani, Un caso studio del concetto "Net Zero Energy Building". Tivoli (Rome – Italy), 08-09 October 2009
- H. Mahlknecht, S. Avesani, D. Exner, R. Lollini, Refurbishment and monitoring of an historic building: a case study. AICARR International Conference, Tivoli (Rome – Italy), 08-09 October 2009
- S. Avesani, R. Lollini, A. Costa, Passive and active solutions for a net zero Energy office. CISBAT, Lausanne (Switzerland), 02-03 September 2009
- A. Troi, S. Avesani, J. Vonmetzer, Solar active school in Laion (Italy). Aktivesolarhaus Symposium, Krems (Austria), 29-30 June 2009