

Francesco Frontini

Head of Building System Sector Department for Environment Construction and Design (DACD),
University of Applied Sciences and Arts of Southern Switzerland (SUPSI)

Nationality

Italian

Career History

Prof. Dr. Francesco Frontini since 2011 is the head of the Building Sector and of the Swiss BIPV competence Center at the University of Applied Sciences and Arts of Southern Switzerland (SUPSI). He is co-Manager of the IEA PVPS Task 15 on BIPV.

He graduated in Building Engineering and Architecture from Politecnico di Milano (Italy). In 2009 he got a PhD cum laude in Building Engineering where he developed a new multifunctional BIPV façade for solar control and glare control. He worked as researcher in the Solar façades group at Fraunhofer Institute for Solar Energy Systems (in Germany), one of the largest Research institute in the World, where he gathered extensive experience in Building simulation and in Building Integrated Photovoltaic (BIPV) solution. Research activity are always supported by experimental work on the design of actual buildings and solar envelopes. He is a member of the CENELEC CLC/TC 82 standardization body which develop new international BIPV standards.

Awards / Publications

Mr. Frontini is author of different publication in the field of Energy in buildings, Daylighting and Building Integrated Photovoltaic system.

P. Corti, P. Bonomo, F. FRONTINI, Paper Review of External Integrated Systems as Photovoltaic Shading Devices. *Energies* 2023, 16, 5542. <https://doi.org/10.3390/en16145542>

P. Bonomo, F. Parolini, P. Corti, F. FRONTINI, G. Bellenda, M. Caccivio, Impact resistance of BIPV

systems: new testing procedure for performance assessment of multifunctional products. *Energy Sci Eng.* 2023; 11: 22-47. doi:10.1002/ese3.1364”

A. Gok, E. Ozkalay, G. Friesen and F. FRONTINI, "Power Loss Modes of Building-Integrated Photovoltaic Modules: An Analytical Approach Using Outdoor I–V Curves," in *IEEE Journal of Photovoltaics*, vol. 11, no. 3, pp. 789-796, May 2021, doi: 10.1109/JPHOTOV.2021.3060719.

A. Gok, E. Ozkalay, G. Friesen and F. FRONTINI, "The Influence of Operating Temperature on the Performance of BIPV Modules," in *IEEE Journal of Photovoltaics*, vol. 10, no. 5, pp. 1371-1378, Sept. 2020, doi: 10.1109/JPHOTOV.2020.3001181.

E. Saretta, P. Caputo & F. FRONTINI. (2018). A review study about energy renovation of building facades with BIPV in urban environment. *Sustainable Cities and Society*, 44; <http://doi.org/10.1016/j.scs.2018.10.002>

Areas of expertise

BIPV, Sustainable architecture, Building Physic, Daylighting, Photovoltaic