

University of Florence, Department of Architecture (DIDA),
via della Mattonaia, 14 50121 Florence, Italy
CIRIAF - Interuniversity Research Centre on Pollution and
Environment "Mauro Felli"

Cristina Piselli

PhD in Energy and Sustainable Development

Master of Science, Building Engineering-Architecture

https://www.researchgate.net/profile/Cristina_Piselli

<https://unifi.academia.edu/CristinaPiselli>

<https://it.linkedin.com/in/cristina-piselli-46154ab0/en>



Education

- November 2014 – March 2018
University of Perugia, Italy, Department of Engineering, CIRIAF – Interuniversity Research Centre
PhD in Energy and Sustainable Development
- September – December 2016
University of Lleida, Spain, GREiA – Innovació Concurrent, INSPIRES Research Centre
Erasmus visiting PhD
- September 2007 – February 2014
University of Perugia, Italy, Department of Building and Environmental Engineering
Master degree in Building Engineering and Architecture, with the grade *110/110 e lode*
- September 2012 – March 2013
Graz University of Technology, Austria, Institute for Architecture and Landscape
Erasmus undergraduate internship

Research Experience

- January 2022 – Present (expected 3 years)
Assistant professor in Environmental Applied Physics at Department of Architecture (DIDA),
University of Florence, Italy
- December 2019 – December 2021
Post-doc research fellowship in the topic of dynamic analysis of building energy performance and
occupant behavior, human comfort in the built environment, indoor and outdoor environmental
monitoring, and energy systems at Department of Engineering, University of Perugia, Italy

- November 2018 – October 2019
Post-doc research fellowship in the topic of dynamic analysis of building energy performance and occupant behavior, human comfort in the built environment, and indoor and outdoor environmental monitoring at Department of Engineering, University of Perugia, Italy
- November 2017– October 2018
Post-graduate research fellowship in the topic of dynamic analysis of building energy performance and occupant behavior, renewable energies, and thermal-energy storage at CIRIAF – Inter-university Research Centre, University of Perugia, Italy
- November 2014– October 2017
PhD in Energy and Sustainable Development at CIRIAF – Inter-university Research Centre, University of Perugia, Italy
Supervisors: Prof. Franco Cotana, Prof.ssa Anna Laura Pisello
- September 2016– December 2016
Visiting scholar at GREiA – Innovació Concurrent, INSPIRES Research Centre, University of Lleida, Spain
Supervisor: Prof. Luisa F. Cabeza
- May 2014– October 2014
Post-graduate fellowship for conducting research activities on building thermal-energy dynamic simulation, building energy efficiency and energy efficiency optimization, building envelope and new materials, building performance monitoring, environmental sustainability, global warming mitigation through buildings' improvement strategies at CIRIAF – Inter-university Research Centre, University of Perugia, Italy

Statistics

(Scopus)

<i>H-index</i>	17
<i>Publications (articles)</i>	42
<i>Citations</i>	795
<i>Citations by documents</i>	648

Skills & Activities

Skills Building Energy Efficiency, Building Simulation, Building Monitoring, Energy, Energy Saving, Energy Conservation, Energy Efficiency, Optimization, Occupant Behavior, Occupancy simulation, Occupant-building interaction, Green Building, Sustainable Architecture, Sustainability, Built Environment, Outdoor Environment, Building, Architecture, Sustainable Development, Sustainable Building, Sustainable Design, Sustainable Construction, Building Materials, Solar Radiation, PCM, TES, Thermal Comfort, IAQ, Energy Modeling, Building Automation, Building Technology,

Urban Sustainability, Microclimate monitoring, Renewable Energy, Urban Heat Island, Energy Community

Languages Italian (Mother language)

English (Professional)

Spanish (Intermediate)

French, German (Basic)

Interests Basketball, Travel, Photography, Reading, Design

Publication Highlights

Main Journal Publications

Andrea Meoni, Filippo Vittori, Cristina Piselli, Antonella D'Alessandro, Anna Laura Pisello, Filippo Ubertini: *Integration of structural performance and human-centric comfort monitoring in historical building information modeling*. Automation in Construction 2022; 138. DOI:10.1016/j.autcon.2022.104220

Francesco Asdrubali, Claudia Guattari, Marta Roncone, Giorgio Baldinelli, Eid Gul, Cristina Piselli, Anna Laura Pisello, Andrea Presciutti, Francesco Bianchi, Laura Pompei, Benedetta Mattoni, Fabio Bisegna, Dionysia-Denia Kolokotsa, Elisavet Tsekeri, Maragarita Niki Assimakopoulos, Chrysanthi Efthymiou, Nikolaos Barmparesos, Agnieszka A. Lechowska, Jacek A. Schnotale, Francesco Aletta, Umberto Berardi: *A Round Robin Test on the dynamic simulation and the LEED protocol evaluation of a green building*. Sustainable Cities and Society 2022; 78. DOI:10.1016/j.scs.2021.103654

Cristina Piselli, Giacomo Salvadori, Lorenzo Diciotti, Fabio Fantozzi, Anna Laura Pisello: *Assessing users' willingness-to-engagement towards Net Zero Energy communities in Italy*. Renewable and Sustainable Energy Reviews 2021; 152. DOI:10.1016/j.rser.2021.111627

Cristina Piselli, Alessio Guastaveglia, Jessica Romanelli, Franco Cotana, Anna Laura Pisello: *Facility Energy Management Application of HBIM for Historical Low-Carbon Communities: Design, Modelling and Operation Control of Geothermal Energy Retrofit in a Real Italian Case Study*. Energies 2020; 13(23). DOI:10.3390/en13236338

Cristina Piselli, Mohit Prabhakar, Alvaro de Gracia, Mohammad Saffari, Anna Laura Pisello, Luisa F. Cabeza: *Optimal control of natural ventilation as passive cooling strategy for improving the energy performance of building envelope with PCM integration*. Renewable Energy 2020; 162. DOI:10.1016/j.renene.2020.07.043

Angeliki Mavrigiannaki, Konstantinos Gobakis, Dionysia-Denia Kolokotsa, Kostas Kalaitzakis, Anna Laura Pisello, Cristina Piselli, Rajat Gupta, Matt Gregg, Marina Laskari, Maria Saliari, Maragarita Niki Assimakopoulos, Afroditi Synnefa: *Measurement and verification of zero energy settlements: Lessons learned from four pilot cases in Europe*. Sustainability (Switzerland) 2020; 12(22). DOI:10.3390/su12229783

- Benedetta Pioppi, Cristina Piselli, Chiara Crisanti, Anna Laura Pisello: *Human-centric green building design: the energy saving potential of occupants' behaviour enhancement in the office environment*. *Journal of Building Performance Simulation* 2020; 13(6). DOI:10.1080/19401493.2020.1810321
- Cristina Piselli, Matteo Di Grazia, Anna Laura Pisello: *Combined effect of outdoor microclimate boundary conditions on air conditioning system's efficiency and building energy demand in net zero energy settlements*. *Sustainability (Switzerland)* 2020; 12(15). DOI:10.3390/su12156056
- Marta Chàfer, Anna Laura Pisello, Cristina Piselli, Luisa F. Cabeza: *Greenery system for cooling down outdoor spaces: Results of an experimental study*. *Sustainability (Switzerland)* 2020; 12(15). DOI:10.3390/SU12155888
- Arsalan Heydarian, Claire McIlvennie, Laura M. Arpan, Siavash Yousefi, Marc Syndicus, Marcel Schweiker, Farrokh Jazizadeh, Romina Risetto, Anna Laura Pisello, Cristina Piselli, Christiane Berger, Zhuxuan Yan, Ardeshir Mahdavi: *What drives our behaviors in buildings? A review on occupant interactions with building systems from the lens of behavioral theories*. *Building and Environment* 2020; 179. DOI:10.1016/j.buildenv.2020.106928
- Julia K. Day, Claire McIlvennie, Connor Brackley, Mariantonietta Tarantini, Cristina Piselli, Jakob Hahn, William O'Brien, Vinu Subashini Rajus, Marilena De Simone, Mikkel Baun Kjærgaard, Marco Pritoni, Arno Schlüter, Yuzhen Peng, Marcel Schweiker, Gianmarco Fajilla, Cristina Becchio, Valentina Fabi, Giorgia Spigliantini, Ghadeer Derbas, Anna Laura Pisello: *A review of select human-building interfaces and their relationship to human behavior, energy use and occupant comfort*. *Building and Environment* 2020; 178. DOI:10.1016/j.buildenv.2020.106920
- Marcel Schweiker, Eleni Ampatzi, Maedot S. Andargie, Rune K. Andersen, Elie Azar, Verena Marie Barthelmes, Christiane Berger, Leonidas Bourikas, Salvatore Carlucci, Giorgia Chinazzo, Lakshmi Prabha Edappilly, Matteo Favero, Stephanie M. Gauthier, Anja Jamrozik, Michael B. Kane, Ardeshir Mahdavi, Cristina Piselli, Anna Laura Pisello, Astrid Roetzel, Adam Martin Rysanek, Kunind Sharma, Shengbo Zhang: *Review of multi-domain approaches to indoor environmental perception and behavior*. *Building and Environment* 2020; 176. DOI:10.1016/j.buildenv.2020.106804
- Cristina Piselli, Jessica Romanelli, Matteo Di Grazia, Augusto Gavagni, Elisa Moretti, Andrea Nicolini, Franco Cotana, Francesco Strangis, Henk J.L. Witte, Anna Laura Pisello: *An integrated HBIM simulation approach for energy retrofit of historical buildings implemented in a case study of a medieval fortress in Italy*. *Energies* 2020; 13(10). DOI:10.3390/en13102601
- Benedetta Pioppi, Iliaria Pigliautile, Cristina Piselli, Anna Laura Pisello: *Cultural heritage microclimate change: Human-centric approach to experimentally investigate intra-urban overheating and numerically assess foreseen future scenarios impact*. *Science of the Total Environment* 2020; 703. DOI:10.1016/j.scitotenv.2019.134448
- Marta Cardinali, Anna Laura Pisello, Cristina Piselli, Iliaria Pigliautile, Franco Cotana: *Microclimate mitigation for enhancing energy and environmental performance of Near Zero Energy Settlements in Italy*. *Sustainable Cities and Society* 2020; 53. DOI:10.1016/j.scs.2019.101964
- Claudia Fabiani, Cristina Piselli, Anna Laura Pisello: *Thermo-optic durability of cool roof membranes: Effect of shape stabilized phase change material inclusion on building energy efficiency*. *Energy and Buildings* 2020; 207. DOI:10.1016/j.enbuild.2019.109592

- Cristina Piselli, Veronica Lucia Castaldo, Anna Laura Pisello: *How to enhance thermal energy storage effect of PCM in roofs with varying solar reflectance: Experimental and numerical assessment of a new roof system for passive cooling in different climate conditions*. *Solar Energy* 2019; 192. DOI:10.1016/j.solener.2018.06.047
- Cristina Piselli, Anna Laura Pisello, Mohammad Saffari, Alvaro de Gracia, Franco Cotana, Luisa F. Cabeza: *Cool Roof Impact on Building Energy Need: The Role of Thermal Insulation with Varying Climate Conditions*. *Energies* 2019; 12(17). DOI:10.3390/en12173354
- Cristina Piselli, Anna Laura Pisello: *Occupant behavior long-term continuous monitoring integrated to prediction models: Impact on office building energy performance*. *Energy* 2019; 176. DOI:10.1016/j.energy.2019.04.005
- Veronica Lucia Castaldo, Anna Laura Pisello, Cristina Piselli, Claudia Fabiani, Franco Cotana, Mattheos Santamouris: *How outdoor microclimate mitigation affects building thermal-energy performance: A new design-stage method for energy saving in residential near-zero energy settlements in Italy*. *Renewable Energy* 2018; 127. DOI:10.1016/j.renene.2018.04.090
- Anna Laura Pisello, Veronica Lucia Castaldo, Cristina Piselli, Franco Cotana: *Coupling artworks preservation constraints with visitors' environmental satisfaction: Results from an indoor microclimate assessment procedure in a historical museum building in central Italy*. *Indoor and Built Environment* 2018; 27(6). DOI:10.1177/1420326X17694422
- Cristina Piselli, Veronica Lucia Castaldo, Ilaria Pigliautile, Anna Laura Pisello, Franco Cotana: *Outdoor comfort conditions in urban areas: On citizens' perspective about microclimate mitigation of urban transit areas*. *Sustainable Cities and Society* 2018; 39. DOI: 10.1016/j.scs.2018.02.004
- Federica Rosso, Iacopo Golasi, Veronica Lucia Castaldo, Cristina Piselli, Anna Laura Pisello, Ferdinando Salata, Marco Ferrero, Franco Cotana, Andrea de Lieto Vollaro: *On the impact of innovative materials on outdoor thermal comfort of pedestrians in historical urban canyons*. *Renewable Energy* 2017; 118. DOI:10.1016/j.renene.2017.11.074
- Mohammad Saffari, Cristina Piselli, Alvaro de Gracia, Anna Laura Pisello, Franco Cotana, Luisa F. Cabeza: *Thermal stress reduction in cool roof membranes using phase change materials (PCM)*. *Energy and Buildings* 2018; 158. DOI:10.1016/j.enbuild.2017.10.068
- Anna Laura Pisello, Veronica Lucia Castaldo, Cristina Piselli, Claudia Fabiani, Franco Cotana: *Thermal performance of coupled cool roof and cool façade: Experimental monitoring and analytical optimization procedure*. *Energy and Buildings* 2017; 157. DOI:10.1016/j.enbuild.2017.04.054
- Anna Laura Pisello, Federica Rosso, Veronica Lucia Castaldo, Cristina Piselli, Claudia Fabiani, Franco Cotana: *The role of building occupants' education in their resilience to climate-change related events*. *Energy and Buildings* 2017; 154. DOI:10.1016/j.enbuild.2017.08.024
- Cristina Piselli, Mohammad Saffari, Alvaro de Gracia, Anna Laura Pisello, Franco Cotana, Luisa F. Cabeza: *Optimization of roof solar reflectance under different climate conditions, occupancy, building configuration and energy systems*. *Energy and Buildings* 2017; 151. DOI:10.1016/j.enbuild.2017.06.045
- Veronica Lucia Castaldo, Anna Laura Pisello, Ilaria Pigliautile, Cristina Piselli, Franco Cotana: *Microclimate and air quality investigation in historic hilly urban areas: Experimental and numerical investigation in central Italy*. *Sustainable Cities and Society* 2017; 33. DOI:10.1016/j.scs.2017.05.017

Anna Laura Pisello, Veronica Lucia Castaldo, Cristina Piselli, Claudia Fabiani, Franco Cotana: *How peers' personal attitudes affect indoor microclimate and energy need in an institutional building: Results from a continuous monitoring campaign in summer and winter conditions*. *Energy and Buildings* 2016; 126. DOI:10.1016/j.enbuild.2016.05.053

Anna Laura Pisello, Cristina Piselli, Franco Cotana: *Thermal-physics and energy performance of an innovative green roof system: The Cool-Green Roof*. *Solar Energy* 2015; 116. DOI:10.1016/j.solener.2015.03.049

Anna Laura Pisello, Cristina Piselli, Franco Cotana: *Influence of human behavior on cool roof effect for summer cooling*. *Building and Environment* 2015; 88. DOI:10.1016/j.buildenv.2014.09.025

Book Chapters

Anna Laura Pisello, Veronica Lucia Castaldo, Federica Rosso, Cristina Piselli, Marco Ferrero, Franco Cotana: *Traditional and Innovative Materials for Energy Efficiency in Buildings*. *Key Engineering Materials* 2016; 678. DOI:10.4028/www.scientific.net/KEM.678.14

Book Editor

Chaham Alalouch, Cristina Piselli, Marco Ferrero, Francesco Cappa (eds.): *Towards Implementation of Sustainability Concepts in Developing Countries*. *Advances in Science, Technology and Innovation*, Springer Nature 2021, Switzerland.

Current International Projects

- IEA-EBC Annex 79: *Occupant-Centric Building Design and Operation*
WEBSITE of the PROJECT: <http://annex79.iea-ebc.org/>

I authorize the use of my personal data according to Legislative Decree N°196/03.

Florence, 3rd of May 2022