
Silvia Brunoro is Associated Professor of Architectural Technology at the Department of Architecture of the University of Ferrara. She is member of the LEM (Laboratory of research on Estate & environment Management) and of AE (Architecture Energy) Centre at the Department of Architecture of Ferrara.

She is graduated at the Faculty of Architecture of Ferrara in 1999, taking a PhD in Architectural Technology in 2003.

She has carried out several teaching experiences mainly oriented in the field of technological disciplines, in particular deepening the aspects of the sustainable design and the reduction of energy consumption by the design of the building envelope.

Actually she is professor of two courses: Environmental Design and Buildings and materials design at the Department of Architecture - University of Ferrara.

She has also carried out several experiences of teaching in Master and post - graduation Classes, among them the training and further education "*Architecture and Energy*" for obtaining the Energy label qualification – mandatory in Italy.

She was – and still is - involved in several national and international research activities. The main research activities concern building renovation, energy efficiency and technological innovation of building systems, materials and components.

- From 2003 to 2007, she was member of the Action COST C16 "*Improving the quality of existing urban building envelopes*" which objective was the refurbishment of buildings envelopes built in second World War (1960/80) in European countries COST, through the use of technologies that can increase the technological and architectural quality.
- From 2004 to 2006 sh was involved in the project INTERREG IIIB "*Villas- stately homes and castles*" on the restoration, adaption and valorization of the Cultura heritage in Europe;
- From 2008 to 2012, she was Management Committee member and supported all the Coordination Activities of Action COST TU0701 "*Improving the quality of Suburban building stock*" on the architectural, technical and energetically efficient upgrading of urban areas not historicized (Dept. of Architecture of Ferrara was the Research Coordinator) ;
- From 2008 to 2010 she was involved in the scientific research of national interest PRIN "*Renovation, regeneration and valorisation of social housing settlements built in the suburban areas in the second half of last century*";
- From 2013 to 2017 was a member of the research Proficient "*SME network business model for collective self-organized processes in the construction and retrofit of energy-efficient residential districts*" (EU 7th Framework program 2012-2016) on the promotion, definition and disclosure of the cohousing process and models.
- From 2015 to 2019 she was involved in the Horizon 2020 Research Project INCEPTION "*Inclusive Cultural Heritage in Europe through 3D semantic modelling*" that focuses on new uses of digital three-dimensional models for the enhancement and preservation of cultural heritage (Dept. of Architecture of Ferrara is the Research Coordinator).
- She is actually involved in a national project called Safe & Save - Integrated technologies for safe, resilient, efficient, sustainable, durable and uninterrupted building renovation (2024-26)

She is official reviewer of the following Journals:

- Energy – the International Journal (Elsevier)

- Energy Research and Social Science (Elsevier)
- Journal of Civil Engineering and Architecture
- MDPI Journals (Energies, Sustainability, Design)

She is author of several publication concerning energy efficiency and sustainable design, mainly related to the envelope of the building.

List of the most significant publications:

Monographs:

Brunoro Silvia, *Efficienza energetica delle facciate. Standard, requisiti, esempi per l'adeguamento e la riqualificazione architettonica*, Maggioli, Rimini, 2006 (ISBN: 88.387.3651.0) (Ingl. *Energy efficiency of façades. Standards, needs and examples for the refurbishment*)

Andeweg Marie Therese, Brunoro Silvia,. Verohef Leo G. W (edited by), *COST C16 Improving the quality of existing urban building envelopes. State of the Art*, Volume 2, IOS Press, Amsterdam, 2007 (ISBN: 978-1-58603-734-5)

Potenza D.A, Brunoro S., Tunzi P., *Nuove forme dell'abitare, New Forms of Living Space. Letture e trascrizioni intorno alla Scuola di Architettura di Sarasota in Florida / Readings and Transcripts from Florida's Sarasota School of Architecture*, Aracne Editrice, Roma, 2017 ISBN 978-88-255-0175-9

Book chapters

Brunoro S., Bizzarri G., Ferrari L., Boldrin E., *Building integrated photovoltaic and cool roof passive ventilation strategy in the refurbishment of existing buildings: a Case Study in Italy* in: Dr. Ali M. Memari, Mindy Boffemmyer (Edited by), 2024 RBDCC -Residential Building Design & Construction Conference, Pennsylvania, United States, 27-28- March 2024, Conference Proceedings, Published by the Pennsylvania Housing Research Center (PHRC) at The Pennsylvania State University **ISBN 978-1-62307-010-6**

Brunoro S., Frighi V., *Smart Façades: Technological Innovations in Dynamic and Advanced Glazed Building Skins for Energy Saving*, in: Dr. Chiara Bedon, Dr. Marcin Kozłowski and Dr. Mislav Stepinac (edited by) *Facade Design - Challenges and Future Perspective*, IntechOpen, 30 September 2023, ISBN 978-0-85014-187-0

Brunoro S., *Double-skin ventilated glass façades. An overview of concepts, product, systems, realized examples*, in: 2020 RESIDENTIAL BUILDING DESIGN & CONSTRUCTION CONFERENCE PROCEEDINGS , Edited by Dr. Ali M. Memari, Sarah Klinetob Lowe, Published by the Pennsylvania Housing Research Center (PHRC), Unites States of America, September 2020, pp.619-631, ISBN 978-1-62307-007-6

Brunoro S., Bizzarri G., ***Collective Self-Organized Housing: a research study To Optimize Building Technologies, Improve Efficiency And Reduce Building Consumptions***, in: Sustainable development and planning IX, Vol. 226 of the WIT Transactions on Ecology and the Environment, Wit Press, Southampton, 2017, pp.73- 84 (ISBN: 978-1-78466-231-8) ISSN 1743-3541 e ISBN: 978-1-78466-232-5 <https://www.witpress.com/elibrary/wit-transactions-on-ecology-and-the-environment/226/36280>

Brunoro S., Rinaldi A. , ***Double layer glass façade in the refurbishment and architectural renewal of existing buildings in Italy*** in: *World Renewable Energy Congress 2011 – Sweden* 8-11 May 2011, Linköping, Sweden, Conference Proceedings, pp. 1898 – 1905, ISBN:978-91-7393-070-3

Brunoro S., ***Sustainable strategies and methods for the energetic improvement of social housing stock in Italy*** in: Brebbia C.A. (edited by), *ECO ARCHITECTURE IV – Harmonization between Architecture and Nature*, WIT Transactions on Ecology and The Environment, Vol 165, 2012 WIT Press, ISBN: 978-1-84564-614-1 www.witpress.com, ISSN 1743-3541

Articles on journals:

Silvia Brunoro, Giacomo Bizzarri, Laura Ferrari, ***Process Innovation for Energy Efficient Building Deep Renovation***. International Journal of Architecture and Planning, 2023, 3(1), 1-13. ISSN: 2788-5046
doi: 10.51483/IJARP.3.1.2023.1-13

Brunoro S., Piaia E., ***Improving the quality of Suburbia: techniques and methods for urban regeneration***, in : Journal of Civil Engineering and Architecture (JCEA JOURNAL), Volume 9, Number 5, May 2015, (Serial Number 90), pp.604 – 614, , Davidpublishing, New York, USA, ISSN: 1934-7359

Brunoro Silvia, ***The Sustainable Improvement of Social Housing Stock In Italy: Strategies of Intervention***, in: International Journal of Design & Nature and Ecodynamics, Vol. 8, No. 1, WIT Press, 2013, pp.41-60

<http://www.davidpublisher.com/index.php/Home/Journal/detail?journalid=30&jx=JCEA>

Brunoro S., Di Giulio R.; Luig K., Jansen D. and Bizzarri G., ***Optimizing Energy Efficiency in Collective Self-Organized Housing: Oriented Business Model and Application***, in: Journal of Architecture Engineering, ISSN (print):1076-0431|ISSN (online):1943-5568 DOI: 10.1061/(ASCE)AE.1943-5568.0000317.