

Curriculum vitae

PERSONAL INFORMATION

Family name, First name: **Rosso, Federica**

BIBLIOMETRICS (Scopus)

Documents on Scopus (articles): **37**

Citations: **627**

H-index: **17**

• EDUCATION

- 2017 *PhD in Architectural and Urban Engineering*
Department of Civil, Construction and Environmental Engineering (DICEA), Sapienza University of Rome, Italy
PhD Supervisor: prof. Marco Ferrero
- 2017 *Advanced Certificate in Project Management*
New York University Tandon School of Engineering, USA
- 2013 *Master of Science in Construction and Architectural Engineering (cum laude)*
Department of Civil, Construction and Environmental Engineering (DICEA), Sapienza University of Rome, Italy

• CURRENT POSITION(S)

- 2021 – 2022 *Postdoctoral Research Fellow*
Department of Civil and Environmental Engineering (DICA), University of Perugia, Italy
- 2021 – now *Lecturer*
Department of Civil, Construction and Environmental Engineering (DICEA), Sapienza University of Rome, Italy

• PREVIOUS POSITIONS

- 2017 – 2020 *Postdoctoral Research Fellow*
Department of Civil, Construction and Environmental Engineering (DICEA), Sapienza University of Rome, Italy
- 2014-2015 *Visiting research Scholar*
Department of Civil and Urban Engineering, New York University Tandon School of Engineering, USA

• FELLOWSHIPS AND AWARDS

- 2018-2021 Scholarship, Ermenegildo Zegna Founder's Scholarship Ermenegildo Zegna (Italy)
- 2018 Award, National Scientific Abilitation as Associate Professor, Italy
- 2013-2016 Scholarship, Doctoral School "Doctorate in *Architectural and Urban Engineering*" full scholarship winner, Department of Civil, Construction and Environmental Engineering (DICEA), Sapienza University of Rome, Italy
- 2018 Award, "Outstanding Contribution in Reviewing", Sustainable Cities and Society, Elsevier
- 2018 Award, "Outstanding Contribution in Reviewing", Tunnelling and underground Space Technology, Elsevier
- 2016 Award, "Outstanding UHI Group of Researchers Award" 4th International Conference on Countermeasures to Urban Heat Islands awarded to Italy, Singapore 2016
- 2012 Scholarship, "Scholarship for developing M.Sc. thesis abroad", Fondazione Sapienza, Italy

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2019 – now 4 Master Students, Dept. of Civil, Construction and Environmental Engineering, Sapienza University of Rome, Italy
- 2015-2016 Mentor for New York University Tandon School of Engineering students

• TEACHING ACTIVITIES

- 2021 – now Lecturer, Architectural Engineering for Sustainable Buildings and Environment, Sapienza University of Rome, Italy

- 2021 – now Lecturer, Design Laboratory for Architectural Technology, Sapienza University of Rome, Italy
- 2019 Lecturer, “Urban resilience in a changing world: energy, safety and wellbeing challenges”, Interuniversity Summer School “World Heritage Studies 2019”. Organizing institution: H2CU Sapienza University of Rome, Italy. Host Institution: New York University Tandon School of Engineering, USA
- 2018 Lecturer, Solar Barriers and insulation: natural and innovative materials for energy efficiency in buildings, Doctoral School of Energy and Sustainable Development, University of Perugia, Italy
- 2016 – 2018 Seminars, Doctoral School of Architecture and Urban Engineering, Sapienza University of Rome, Italy
- 2021 – now Teaching assistant, Architectural technology II, University of Perugia, Italy
- 2017 – now Teaching assistant, Architectural technology II, Sapienza University of Rome, Italy
- 2019 – 2020 Teaching assistant, Stone architecture and technology, Sapienza University of Rome, Italy
- 2015 – 2019 Teaching assistant, Construction elements design, Sapienza University of Rome, Italy

- **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2020 Conference Chair for AREQ 2020 “Alternative and Renewable Energy Quest – Towards Environmental Development” / Online

- **INSTITUTIONAL RESPONSIBILITIES**

- 2017, ‘18, ‘19 Member of the organizing committee for the International Summer School “World Heritage Studies” / Interuniversity Center H2CU, Sapienza University of Rome, Italy
- 2016 Member of the organizing committee for STONETALES Congress / Sapienza University of Rome, Italy

- **REVIEWING ACTIVITIES**

Currently *Reviewer* for the following international scientific journals: Building and Environment, Construction and Building Materials, Sustainable Cities and Society, Journal of Cleaner Production, Energy, Journal of Building Engineering, Energy Reports, Tunneling and Underground Space Technology, Energy and Buildings, Solar Energy, Journal of Cultural Heritage, Journal of Environmental Management, Sustainable Energy Technologies and Assessments, Urban Climate (*all Elsevier*); Sustainability, Energies, Sensors, Buildings, Coatings (*all MDPI*); Building Simulation, International Journal of Biometeorology, Environmental Science and Pollution Research, Journal of Ambient Intelligence and Humanized Computing (*all Springer*); Intelligent Buildings International (*Taylor & Francis*)

- 2019-ongoing *Guest-Editor* for the Special Issue “Sustainable “Passive” Strategies to Improve Resilience and Comfort in Urban Areas: The Role of Construction Materials and Citizens Involvement”/ Sustainability (MDPI)
- 2017 - now *Member of the Editorial Board* of ASTI Springer book series
- 2020 *External examiner* for PhD thesis, The University of Melbourne, Australia

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2015 – now Member, Research Network “ARTEC” scientific society of Architectural Engineering
- 2018 – now Member, Research Network “IBPSA” International Building Performance Simulation Association
- 2016 – now Member, Research Network “KES” scientific society

- **PATENTS**

- 2019 Italian Patent N.102016000127043. Colored cement-based mortars with optimized thermal-optic properties

- **PUBLICATIONS**

- Rosso, F., Peduzzi, A., Diana, L., Cascone, S., & Cecere, C. (2021). A sustainable approach towards the retrofit of the public housing building stock: Energy-architectural experimental and numerical analysis. *Sustainability*, 13(5), 2881.
- Bernabei, L., Vaiano, G., Rosso, F., & Mochi, G. (2021). A novel seismic vulnerability assessment of masonry façades: framing and validation on Caldarola case study after 2016 Central Italy Earthquake. *TEMA, Technologies Engineering Materials Architecture (in press, DOI: 10.30682/tema0702i)*.

- Chiatti, C., **Rosso, F.**, Fabiani, C., & Pisello, A. L. (2021). Integrated energy performance of an innovative translucent photoluminescent building envelope for lighting energy storage. *Sustainable Cities and Society*, 103234.
- Ciardiello, A., **Rosso, F.**, Dell'Olmo, J., Ciancio, V., Ferrero, M., & Salata, F. (2020). Multi-objective approach to the optimization of shape and envelope in building energy design. *Applied Energy*, 280, 115984.
- **Rosso, F.**, Mannucci, S., Ferrero, M., & Cecere, C. (2020). Adapting towards resilience: analysis of the construction features and dynamic energy performance of amphibious and floating houses. *TEMA, Technologies Engineering Materials Architecture*, 6, 1.
- Cappa, F., **Rosso, F.**, Giustiniano, L., & Porfiri, M. (2020). Nudging and citizen science: The effectiveness of feedback in energy-demand management. *Journal of Environmental Management*, 269, 110759.
- **Rosso, F.**, Ciancio, V., Dell'Olmo, J., & Salata, F. (2020). Multi-objective optimization of building retrofit in the Mediterranean climate by means of genetic algorithm application. *Energy and Buildings*, 109945.
- **Rosso, F.**, Pisello, A. L., Pigliautile, I., Cavalaglio, G., & Coccia, V. (2020). Natural, bio-based, colored linoleum: Design, preparation, characteristics and preliminary life cycle assessment. *Journal of Cleaner Production*, 122202.
- Cappa, F., **Rosso, F.**, & Capaldo, A. (2020). Visitor-Sensing: Involving the Crowd in Cultural Heritage Organizations. *Sustainability*, 12(4), 1445.
- Falasca, S., Ciancio, V., Salata, F., Golasi, I., **Rosso, F.**, & Curci, G. (2019). High albedo materials to counteract heat waves in cities: An assessment of meteorology, buildings energy needs and pedestrian thermal comfort. *Building and Environment*, 163, 106242.
- Cappa, F., **Rosso, F.**, & Hayes, D. (2019). Monetary and Social Rewards for Crowdsourcing. *Sustainability*, 11(10), 2834.
- Salata, F., Golasi, I., Ciancio, V., & **Rosso, F.** (2018). Dressed for the season: Clothing and outdoor thermal comfort in the Mediterranean population. *Building and Environment*, 146, 50-63.
- Castaldo, V. L., Pigliautile, I., **Rosso, F.**, Cotana, F., De Giorgio, F., & Pisello, A. L. (2018). How subjective and non-physical parameters affect occupants' environmental comfort perception. *Energy and Buildings*, 178, 107-129.
- **Rosso, F.**, Golasi, I., Castaldo, V. L., Piselli, C., Pisello, A. L., Salata, F., ... & de Lieto Vollaro, A. (2018). On the impact of innovative materials on outdoor thermal comfort of pedestrians in historical urban canyons. *Renewable Energy*, 118, 825-839.
- **Rosso, F.**, Pisello, A. L., Castaldo, V. L., Ferrero, M., & Cotana, F. (2017). On Innovative Cool-Colored Materials for Building Envelopes: Balancing the Architectural Appearance and the Thermal-Energy Performance in Historical Districts. *Sustainability*, 9(12), 2319.
- **Rosso, F.**, Pisello, A. L., Castaldo, V. L., Fabiani, C., Cotana, F., Ferrero, M., & Jin, W. (2017). New cool concrete for building envelopes and urban paving: Optics-energy and thermal assessment in dynamic conditions. *Energy and Buildings*, 151, 381-392.
- Pisello, A. L., **Rosso, F.**, Castaldo, V. L., Piselli, C., Fabiani, C., & Cotana, F. (2017). The role of building occupants' education in their resilience to climate-change related events. *Energy and Buildings*, 154, 217-231.
- **Rosso, F.**, Pisello, A. L., Cotana, F., & Ferrero, M. (2016). On the thermal and visual pedestrians' perception about cool natural stones for urban paving: A field survey in summer conditions. *Building and Environment*, 107, 198-214.
- Cappa, F., Del Sette, F., Hayes, D., & **Rosso, F.** (2016). How to deliver open sustainable innovation: An integrated approach for a sustainable marketable product. *Sustainability*, 8(12), 1341.
- **Rosso, F.**, Pisello, A. L., Jin, W., Ghandehari, M., Cotana, F., & Ferrero, M. (2016). Cool Marble Building Envelopes: The Effect of Aging on Energy Performance and Aesthetics. *Sustainability*, 8(8), 753.

- **Rosso, F.**, Jin, W., Pisello, A. L., Ferrero, M., & Ghandehari, M. (2016). Translucent marbles for building envelope applications: Weathering effects on surface lightness and finishing when exposed to simulated acid rain. *Construction and Building Materials*, 108, 146-153.
- **Rosso F.**, Pisello, A. L., Cotana, F., & Ferrero, M. (2014). Integrated thermal-energy analysis of innovative translucent white marble for building envelope application. *Sustainability*, 6(8), 5439-5462.
- **Rosso, F.** (2018). *Involucro lapideo: innovazione, sfide e valorizzazione del materiale per il risparmio di energia e risorse*. FrancoAngeli. (Monografia). ISBN: 978-8891768797, (published after blind peer revision process). Disponibilità: nelle maggiori librerie (Amazon, ibs, Feltrinelli, Mondadori, FrancoAngeli, libreria universitaria, et al.)
- Cappa, F., **Rosso, F.** (2019). *Coinvolgimento delle crowd per ricerche, innovazioni e ambiente costruito sostenibili*. McGrawHill. (Monografia). ISBN: 978-8838695964, (published after blind peer revision process). Disponibilità: nelle maggiori librerie (Amazon, ibs, Feltrinelli, Mondadori, McGrawHill, libreria universitaria, et al.)
- Hawkes, D., Bougdah, H., **Rosso, F.**, Cavalagli, N., Yousef M. Ghoneem, M., Alalouch, C., Mohareb, N. (Eds.) (2019). *Conservation of Architectural Heritage. Advances in Science, technology & Innovation Series*. Springer International Publishing. ISBN 978-3-030-10871-7.
- Salata, F., **Rosso, F.**, (2021) *Thermal comfort in the outdoor built environment: the role of clothing*, in *Urban Heat Stress and Mitigation Solutions – An Engineering Perspective*, section 1 “Physical processes and outdoor comfort in urban areas”, Chapter 4, Routledge, Taylor and Francis Group, ISBN 978-0-367-49363-9 (paperback), 978-1-003-04592-2 (ebook).
- **Rosso, F.**, Peduzzi, A., & Cecere, C., (2020) *Lo scarto come risorsa: potenzialità del riciclo per l'autorecupero a Tor Bella Monaca*. In *Periferia – Abitare Tor Bella Monaca* (di Cellamare, C., Montillo, F.), Parte quarta “Ripensare le progettualità e le modalità di intervento”, Capitolo IV. Donzelli Editore, ISBN 978-88-5522-032-3.
- Morganti, M., & **Rosso, F.** (2020). *Urban Microclimate and Thermal Comfort in the Social Housing Districts of Rome: The Combined Effect of Built Form and Urban Materials*. In *Renewable Energy and Sustainable Buildings* (pp. 293-302). Springer, Cham. ISBN 978-3-030-18487-2
- Cabeza, L., F., Pisello, A.L., **Rosso, F.**, (2018) *Innovative and advanced insulation materials*. In *Handbook of Energy and Buildings*, Section “Building Envelope”, Paperback ISBN: 9780128128176, eBook ISBN: 9780128128183, Butterworth-Heinemann Elsevier
- **Rosso, F.**, Jin, W., Pisello, A. L., Ferrero, M., & Ghandehari, M. (2018). *Optical Characterization of Translucent Stone Subject to Degradation*. In *Optical Phenomenology and Applications* (pp. 233-240). May 2018, Springer, Cham. ISBN: 978-3-319-70714-3.
- Ferrero, M., **Rosso, F.**, (2015) *Progettazione tecnica e calcolo statico dei sistemi voltati in pietra da taglio*. In: Fallacara G.; Ferrero M.; Minenna V. (Eds). *Nuovi sistemi voltati stereotomici: progetto, calcolo e costruzione*. Ed. Gioffreda, ISBN: 9788894022889
- Corgnati, S.P., Cotana, F., D’Oca, S., Pisello, A.L., **Rosso, F.** (2017), “A Cost-Effective Human-Based Energy-Retrofitting Approach”. In: F. Pacheco-Torgal, C. Goeran Granqvist, B. P. Jelle, G. P. Vanoli, N. Bianco, J. Kurnitski (Eds). *Cost-Effective Energy-Efficient Building Retrofitting*. Chapter 8, Pp. 219-250, Woodhead Publishing, Elsevier, ISBN 978-0-08-101128-7.
- Pisello, A. L., Castaldo, V. L., **Rosso, F.**, Piselli, C., Ferrero, M., & Cotana, F. (2016). *Traditional and innovative materials for Energy efficiency in buildings*. In Book Series “*Key Engineering Materials*” *Key Engineering Materials* (Vol. 678, pp. 14-34). Trans Tech Publications. ISSN 1013-9826
- Pisello, A. L., & **Rosso, F.** (2015). *Natural Materials for Thermal Insulation and Passive Cooling Application*. In Book Series “*Key Engineering Materials*” (Vol. 666, pp. 1-16). Trans Tech Publications. ISSN 1013-9826
- Ferrero, M., **Rosso, F.**, Arena, G., & Vannucchi, N. (2021). *Application of a digital framework towards the comprehension and restoration of the thin marble envelope of the Casa delle Armi built cultural heritage*. *International Journal of Digital Culture and Electronic Tourism*, 3(3-4), 338-355.
- **Rosso, F.**, & Franco, S. (2021). *Environmental, social and economic sustainability in urban areas: a cool materials' perspective*. *TeMA-Journal of Land Use, Mobility and Environment*, 14(2), 293-298.

- Mariani, S., **Rosso, F.**, & Ferrero, M. (2018). Building in Historical Areas: Identity Values and Energy Performance of Innovative Massive Stone Envelopes with Reference to Traditional Building Solutions. *Buildings*, 8(2), 17.
- **Rosso, F.**, Mannucci, S., Morganti, M., Mariani, S., Cecere, C., Ferrero, M. (2019) The effect of Sustainable Urban Drainage Systems on outdoor comfort and runoff In *Journal of Physics: Conference Series*. Vol. 1343, November 2019. *IOP Science*, doi:10.1088/1742-6596/1343/1/012198
- **Rosso, F.**, Fabiani, C., Chiatti, C., & Pisello, A.L. (2019). Cool, photoluminescent paints towards energy consumption reductions in the built environment in *Journal of Physics: Conference Series*. Vol. 1343, November 2019. *IOP Science*, doi:10.1088/1742-6596/1343/1/012198
- Castaldo, V.L., Pigliautile, I., **Rosso, F.**, Pisello, A.L., Cotana, F. (2017). Investigation of the impact of subjective and physical parameters on the indoor comfort of occupants: a case study in central Italy, *Energy Procedia*, 126, 131-138.
- **Rosso, F.**, Pisello, A.L., Castaldo, V.L., Cotana, F., Ferrero, M. (2017) Smart cool mortar for passive cooling of historical and existing buildings: experimental analysis and dynamic simulation, *Energy Procedia*, 134, 536-544
- Castaldo, V.L., **Rosso, F.**, Golasi, I., Piselli, C., Salata, F., Pisello, A.L., Ferrero, M., Cotana, F., De Lieto Vollaro, A. (2017). Thermal comfort in the historical urban canyon: the effect of innovative materials. *Energy Procedia*, 134, 151-160.
- **Rosso, F.**, Pisello, A. L., Cotana, F., & Ferrero, M. (2017). Cool, Translucent Natural Envelope: Thermal-optics Characteristics Experimental Assessment and Thermal-energy and Day Lighting Analysis. *Energy Procedia*, 111, 578-587.
- **Rosso, F.**, Pisello, A. L., Pignatta, G., Castaldo, V. L., Piselli, C., Cotana, F., & Ferrero, M. (2015). Outdoor Thermal and Visual Perception of Natural Cool Materials for Roof and Urban Paving. *Procedia Engineering*, 118, 1325-1332.