

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name

ROBERTA PERNETTI

Scopus Link

+<https://www.scopus.com/authid/detail.uri?authorId=54968235100>

Nationality

Italian

CURRENT ROLE

Researcher (RTDA) – Department of Public Health, Experimental and forensic medicine – Università degli Studi di Pavia

MAIN FIELDS OF EXPERTISE

Assessment of indoor air quality on occupational environment, thermal and comfort characterization of built environment through simulation models and monitoring, evaluation of building energy performance, assessment of building renovation technologies and energy-saving strategies (single and building stock level), European energy policies, nearly-Zero and Plus Energy Buildings, energy flexibility, life cycle cost assessment, model calibration protocols,

WORK EXPERIENCE

MARCH 2014 – OCTOBER 2020

**Institute for Renewable Energy, EURAC Research, Bolzano, Italy**  
**Senior researcher and Technical Project Manager**

Senior Researcher: member of the *Energy Efficient Building* group and coordinator of the thematic sub-group *Whole Building Evaluation*. Technical supervision of the activities within the group, project manager and coordination of the contributions within research projects at European and local level, preparation of new project proposals under the framework of Horizon 2020, Interreg (Central Europe and Alpine Space), ERDF (European Regional Development Funds) and local programmes.

Main projects:

(2019-2020) **H2020 project CULTURAL-E** – *Climate and cultural based design and market valuable technology solutions for Plus Energy Houses (PEH)*. Role: Coordinator of WP4 Definition of PEH tailored solution sets and business models

(2017-2020) **H2020 - CRAVEZero** - *Cost Reduction and market Acceleration for Viable nearly zero-Energy buildings. Life cycle cost (LCC) analysis of nZEB and identification of the cost-saving potentials in processes and technologies*. Role: project manager and technical advisor. Coordination of the activities of eurac within the project and responsible of the developments of WP2 dealing with the analysis of the LCC of the sample buildings.

(2016-2020) **H2020 - 4RinEU** - *Robust&Reliable technology concepts and business models for triggering deep Renovation of Residential buildings in EU*. Role: Responsible of WP2 aimed at developing deep renovation technologies according to the renovation needs identified through a building stock analysis of the European Building stock.

(2016-ongoing) **IEA EBC - Annex 67** - *Energy Flexible Buildings*. Role: responsible for SubTask A *Definition and context* of Energy Flexible Buildings and technical contributor.

(2015-2017) **Local project - Saving Public Energy**. Role: Coordinator of the activities and technical advisor. The project aims to define an integrated approach for planning the renovation of the building stock owned by the province of Bolzano, by identifying priorities and renovation scenarios according to the needs and the cost effectiveness of the intervention.

(2015-ongoing) **Local project - Regional Energy Modelling.** Role: technical contributor. The project aims at defining future scenarios (target 2050) for the area of South Tyrol considering the interaction between the implementation of RES, the building renovation and the construction of new NZEBs.

(2015) **EU Tender - Observatory of the building stock and related key policies:** Role: technical contributor. collaboration as external national expert for Italy in the implementation of the EU Building Stock Observatory aimed at monitoring the actual energy consumption of existing building to orient the EU key policies.

(2014-2016) **EU FP7 Bricker:** Role: technical contributor. Technical support in the analysis of the thermal behaviour of the innovative thermal insulation embedding phase change materials through transient simulations

(2014-2016) **Interreg Alpine Space - CABEE Capitalizing Alpine Building Evaluation experiences.** Role: technical contributor and WP responsible. Coordination activities and technical work as policy analysis, training to improve user behaviour in buildings, sustainability assessment protocols.

(2014-2015) **Interreg Alpine Space - AlpBC:** coordination of the activities as external expert on the building stock analysis developed for the Val Passiria Area, involving 3 municipalities (Moso, San Leonardo and San Martino). Technical support in the definition of the typology matrix and supervision of the activities for the energy performance evaluation.

(2014) **Local project - Acceleratore di Innovazione** (ed. 2014-2015). Role: Support in the organization, lecturer and tutor. Teaching activities in the field of building simulations and technical tutoring for a group of students working in the company Karl Pichler about the development of an innovative reflective coating for internal thermal insulation.

(2014) **Interreg Alpine Space - ViSiBLE.** Role: technical contributor. Support in the development of the technical activities of the project

**JANUARY 2013 – FEBRUARY  
2014**

**Post-Doctoral Research fellow**

Department of Civil Engineering and Architecture  
University of Pavia

Energy performance assessment of existing buildings with steady-state and transient modelling. Scientific coordinator: Prof. A. Magrini

**APRIL 2012 – SEPTEMBER 2012**

**Post-Doctoral Research fellow**

Department of Civil Engineering  
University of Trento

Technical collaboration for the definition of Guidelines for calibrated energy simulation models for existing buildings. Scientific coordinator: Prof. P. Baggio

**OCTOBER 2009 - DECEMBER  
2012**

**PhD Research fellow**

Department of Civil Engineering and Architecture  
University of Pavia

*National funded project PRIN 2008 Energy performance of existing buildings and refurbishment criteria for increasing energy performance, thermal comfort and sustainability. National Scientific coordinator: Prof. Anna Magrini, Role: technical collaborator*

*Regional funded project for the definition of Guide Lines for the energy efficiency of traditional constructions in Cinque Terre National Park. Scientific coordinator: Prof. Giovanna Franco (University of Genova), Prof. Magrini (University of Pavia). Role: technical collaborator*

*Course of Applied Building Physics. Role: lecturer and technical supervision of master theses.*

**APRIL 2009-OCTOBER 2009**

**Research assistant**

Department Architecture  
University of Pavia

Collaboration in the local funded project for the definition of Refurbishment criteria for social housing in Pavia. Scientific coordinator: Prof. Francesca Turri (University of Pavia)

**EDUCATION AND TRAINING**

**OCTOBER 2009-DECEMBER 2012**

**University of Pavia, Italy**

PhD in Civil Engineering

PhD thesis title: "On the definition and the use of building energy performance simulations"

Grade: excellent

**OCTOBER 2004 – APRIL 2009**

**University of Pavia, Italy**

Master of Science in Building Engineering

Thesis title "Refurbishment strategy for social housing in Pavia"

Grade: 110/110 cum laude

**OCTOBER 2004-JANUARY 2009**

**Institute for Advanced Study of Pavia, Italy**

Division of Science and technology - University Diploma - Thesis title: "Analysis of quasi steady state method for Energy performance assessment"

MOTHER TONGUE

**ITALIAN**

OTHER LANGUAGES

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
ENGLISH	C2	C2	C2	C2	C2

ORGANIZATIONAL SKILLS AND COMPETENCES

Technical capacity to develop data analysis and to produce technical reports with the synthesis of the information from several sources. Capacity of organizing and moderating technical workshops and meeting developed within EU-funded project.

TECHNICAL SKILLS AND COMPETENCES

Document elaboration and editing programs: Microsoft Office Package (Word, Excel, Power Point, Project), Adobe Photoshop, Autocad 2D, Energy simulation programs: TRNSYS, Therm, Wufi, hermus

DRIVING LICENSE

I hold driving license. Category B vehicles

## **Scientific publications**

*Bibliometric indices Scopus (Jan. 2022): 25 Documents, 241 citations by 272 documents, h-index 10*

1. R. Perneti, A. Cattenone, E. Bergamaschi, I. Guseva Canu, ML Fiorentino, E. Oddone, M. Imbriani. **Monitoring nano-particle release of metal additive manufacturing (3D printing) to assess working occupational exposures through the printing process phases.** ICOH Conference 2022
2. E. Oddone, R. Perneti, M.L. Fiorentino, E. Grignani, D. Tamborini, G. Alaimo, F. Auricchio, B. Previtali, M. Imbriani. **Particle Measurements of Metal Additive Manufacturing to Assess Working Occupational Exposures: a Comparative Analysis of Selective Laser Melting, Laser Metal Deposition and Hybrid Laser Metal Deposition.** Industrial health (2021), Oct. 29.
3. Vigna, R. Lollini, R. Perneti. **Assessing the energy flexibility of building clusters under different forcing factors** (2021) Journal of Building Engineering, 44
4. R. Perneti, F. Garzia, U. Filippi Oberegger. **Sensitivity analysis as support for reliable life cycle cost evaluation applied to eleven nearly zero-energy buildings in Europe** (2021) Sustainable Cities and Society, 74, 103139
5. R. Perneti, R. Pinotti, R. Lollini. **Repository of deep renovation packages based on industrialized solutions: Definition and application** (2021) Sustainability (Switzerland), 13 (11), 6412
6. Vigna, J. Balest, W. Pasut, R. Perneti. **Office occupants' perspective dealing with energy flexibility: A large-scale survey in the province of Bolzano** (2020). Energies, 13(17), 4312
7. E. Oddone, R. Perneti, G. Malagò, G. Taino. **Cell Phones, Radio Frequencies (RF) and Health: IARC classification and epidemiological updates | Cellulari, Radiofrequenze (RF) e salute: classificazione IARC e aggiornamenti epidemiologici.** Giornale italiano di medicina del lavoro ed ergonomia, 2020, 42(4)
8. E. Vázquez-López, F. Garzia, R. Perneti, J. Solís-Guzmán, M. Marrero. **Assessment model of end-of-life costs and waste quantification in selective demolitions: Case studies of nearly zero-energy buildings** (2020) Sustainability (Switzerland), 12(15), 6255
9. Vigna, R. Perneti, G. Pernigotto, A. Gasparella. **Analysis of the building smart readiness indicator calculation: A comparative case-study with two panels of experts** (2020). Energies, 13(11), 2796
10. U. Filippi Oberegger, R. Perneti, R. Lollini. **Bottom-up building stock retrofit based on leveled cost of saved energy** (2020) Energy and Buildings, 210.
11. E. Mlecnik, J. Parker, Z. Ma, C. Corchero, A. Knotzer, R. Perneti. **Policy challenges for the development of energy flexibility services** (2020) Energy Policy, 137.
12. R. Perneti, F. Garzia, G. Paoletti, T. Weiss. **Towards the definition of a nZEB cost spreadsheet as a support tool for the design** (2019) IOP Conference Series: Earth and Environmental Science, 323 (1).
13. Vigna, I. de Jaeger, D. Saelens, M. Lovati, R. Lollini, R. Perneti **Evaluating energy and flexibility performance of building clusters.** Building Simulation conference, Rome (2019) .
14. R. Pinotti, R. Perneti, F. Babich, R. Lollini. **Towards a systematic approach for supporting design process of deep renovation packages based on prefabricated façade technologies.** Building Simulation conference, Rome (2019).
15. S. D'Oca, A. Ferrante, C. Ferrer, R. Perneti, A. Gralka, p. Veld. **Technical, financial, and social barriers and challenges in deep building renovation: Integration of lessons learned from the H2020 cluster projects** (2018) Buildings, 8 (12), art. no. 174.
16. Vigna, M. Lovati, R. Perneti. **A modelling approach for maximizing energy matching at building cluster and district scale.** BSO Conference – Cambridge (2018).
17. B. Berggren, M. Wall, T. Weiss, F. Garzia, R. Perneti. **LCC analysis of a Swedish Net Zero Energy Building including co-benefits.** ISEC conference, Graz (2018).
18. M. G. Prina, M. Cozzini, G. Garegnani, G. Manzolini, D. Moser, U. Filippi Oberegger, R. Perneti, R.

Vaccaro, W. Sparber. **Multi-objective optimization algorithm coupled to EnergyPLAN software: The EPLANopt model.** (2018) Energy, Volume 149.

19. Vigna, R. Perneti, W. Pasut, R. Lollini. **New domain for promoting energy efficiency: Energy Flexible Building Cluster.** (2018) Sustainable Cities and Society, Volume n. 38.
20. R. Pascual, G. Paoletti, R. Perneti, R. Lollini. **Nearly Zero Energy Buildings: An Overview of the Main Construction Features across Europe.** (2017) Buildings, Volume n.43.
21. D. Exner, V. D'Alonzo, G. Paoletti, R. Pascual, R. Perneti. **Building stock analysis for the definition of renovation scenario at urban scale.** (2017) Smart and Sustainable Planning for Cities and Regions. Ed. Springer.
22. W. Pasut, R. Perneti, R. Lollini. **Flessibilità energetica: la sfida per gli edifici di ultima generazione.** (2016) Casa e Clima n. 62 - n. 09/2016.
23. R. Perneti, A. Moro, G. Barbano, R. Lollini. **Limits and potentials for mass certification with sustainability assessment protocols** National Conference AiCARR: I protocolli di sostenibilità ambientale: aspetti energetici ed impiantistici, Bologna (2014).
24. R. Perneti, A. Moro, G. Barbano, R. Lollini. **Protocolli di sostenibilità, pronti al decollo?** (2015) Casa e Clima n.53 - 01/2015.
25. R. Perneti, L. Magnani, A. Magrini. **Energy performance of buildings: A comparison of standard assessment methods.** Springer (2013) Nearly Zero Energy Building Refurbishment: A Multidisciplinary Approach, pp. 177-205 (Capitolo di libro).
26. R. Perneti, A. Prada, P. Baggio. **The calibration process of building energy models. Chapter published in Building Refurbishment for Energy Performance: A Global Approach.** (2014) Green Energy and Technology, pp. 215-252 (Capitolo di libro).
27. R. Perneti, A. Prada, P. Baggio. **Dynamic Simulation as a Tool for Energy Performance Assessment.** 11<sup>th</sup> Rehva World Congress "Energy Efficient, Smart and Healthy Buildings". Praga, (2013).
28. R. Perneti, A. Prada, P. Baggio. **On the influence of several parameters in energy model calibration: the case of an historical building.** Proceedings of BSA Building Simulation Applications - 1st IBPSA-Italy Conference. Bolzano (2013) .
29. Magrini, L. Magnani, R. Perneti. **The effort to bring existing buildings towards the A class: A discussion on the application of calculation methodologies.** (2012) Applied Energy, Elsevier, Volume n. 97.
30. R. Perneti, A. Prada, P. Baggio. **La simulazione dinamica come strumento per la valutazione dello stato di fatto e la preparazione dell'intervento.** Proceedings of ATI National Conference (Associazione Termotecnica Italiana) Trieste (2012) .
31. Magrini, L. Magnani, R. Perneti. **Analysis of the thermal control system incidence on the energy performance in building refurbishment strategies.** 48° AiCARR International Conference - Energy refurbishment of existing Buildings: which solutions for an integrated System, Envelope, Plant. Baveno (2011).
- A. Magrini, L. Magnani, R. Perneti. **Towards the A class: calculation methods of the energy performance in the UNI/TS 11300 Standard.** Proceedings of ICAE 2011 - International Conference on Applied Energy. Perugia (2011).
32. F. Turri, R. Perneti. **Italy, sustainable renewal for social housing.** Proceedings of Sb10Mad - International Sustainable Building Conference. Madrid (2010).
33. F. Turri, R. Perneti, E. Zamperini, V. Cappelletti. **Retraining of social housing in Pavia.** Proceedings of RSF - Rehabilitation and Sustainability. The Future is possible. Barcellona (2010).

*Pavia, 1 March 2022*