

Giovanni Pernigotto

University academic curriculum vitae

[1] Name: Giovanni Pernigotto
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[2] **[2.1]** **2007 - Bachelor Degree in Management Engineering, University of Padova**
Education since leaving school

BSc Thesis title: "Analisi delle metodologie di calcolo delle prestazioni dei sistemi solari termici ai fini della certificazione energetica degli edifici" (ENG title: "*Analysis of the calculation methodologies of the performance of the solar thermal systems for buildings energy certification*").

Final mark: 107/110.

Supervisors:

- (1) Prof. A. Gasparella (University of Padova, now Free University of Bozen-Bolzano),
- (2) Mr. M. Pagani (freelance professional).

SSD: IIND-07/B – Building Physics and Building Energy Systems.

[2.2] **2009 - Master Degree in Management Engineering - curriculum of Logistics and Production, University of Padova**

MSc Thesis title: "Analisi del comportamento dinamico dell'involucro edilizio: metodologie di calcolo e determinazione delle prestazioni estive" (ENG title: "*Analysis of the building envelope dynamic behaviour: calculation methodologies and summer performance evaluation*").

Final mark: 110/110 cum laude.

Supervisors:

- (1) Prof. A. Gasparella (University of Padova, now Free University of Bozen-Bolzano),
- (2) Prof. P. Baggio (University of Trento)
- (3) Prof. M. Baratieri (Free University of Bozen-Bolzano).

SSD: IIND-07/B – Building Physics and Building Energy Systems.

[2.3] **2013 - Doctor of Philosophy in Industrial Engineering Awarded with the "Doctor Europaeus" honour label, Doctoral School in Industrial Engineering, University of Padova**

PhD Thesis title: "Evaluation of building envelope energy performance through extensive simulation and parametrical analysis".

Supervisors:

- (1) Prof. A. Gasparella (Free University of Bozen-Bolzano),
- (2) Prof. J.L.M. Hensen (Eindhoven University of Technology, Eindhoven, The Netherlands).

SSD: IIND-07/B – Building Physics and Building Energy Systems.

[2.4] Habilitations:

- 2009 - Admitted to the industrial engineering profession.
- 2017 - Italian National Habilitation as Associate Professor in SSD ING-IND/11 (now IIND-07/B, received in April 2017).

[3]

Present position

Associate Professor in Building Physics and Building Energy Systems at the Free University of Bozen-Bolzano (unibz), Faculty of Engineering

Period: since 01.07.2023.

Employer: Free University of Bozen-Bolzano, Faculty of Engineering.

SSD: ING-IND/11 – Building Physics and Building Energy Systems.

Description of main research topics and activities:

1. Building envelope components:

- Numerical and experimental characterization of steady-state and dynamic thermal behaviour of the opaque components of the building envelope, in particular assessing the impact of different moisture content in timber structures
- Experimental characterization of thermal and visual behaviour of simple and complex fenestration systems

2. Building-systems and indoor built environment:

- Optimization of energy efficiency measures in the framework of building refurbishment
- Assessment of indoor environmental quality conditions, especially in schools and office buildings, in particular related to thermal-hygrometric comfort, visual comfort and indoor air quality IAQ, as well as to the impact on occupants' performance and productivity

3. Urban scale analysis and simulation:

- Analysis of the energy performance of the existing building stock, study of historical data of final uses, and identification of reference case-studies
- Building simulation at district / urban scale, energy policies definition
- Study of climatic boundary conditions for building energy simulation analyses - modelling of solar irradiance, analysis of multi-year weather data series, climatic classification.

Awards:

- Paper "*Typical and extreme weather files for building performance assessment in Brazil*" received the Maurício Roriz award for the topic of Energy Efficiency and an award from IBPSA Brazil in the topic of Computational Simulation at the XVIII Encontro Nacional de Conforto no Ambiente Construído | XIV Encontro Latino-Americano de Conforto no Ambiente Construído, São Paulo, Brazil, 1-4 September 2025.
- Paper "*Smart Energy Retrofit of Historical Buildings: Preliminary Assessment of Its Potential for a Case Study in South Tyrol, Italy*" awarded as best paper at the "International Building Physics Conference" IBPC 2024, Toronto, Canada, 25-27 July 2024.

[4]

Academic and Professional experience

[4.1] Assistant Professor in Building Physics and Building Energy Systems (Senior researcher with a fixed-term contract RTD-B) at the Free University of Bozen-Bolzano (unibz), Faculty of Engineering (after March 1st, 2023) & Faculty of Science and Technology (before March 1st, 2023)

Period: from 01.07.2020 to 30.06.2023.

Employer: Free University of Bozen-Bolzano, Faculty of Engineering (after March 1st, 2023) & Faculty of Science and Technology (before March 1st, 2023).

Supervisor: Prof. A. Gasparella.

SSD: IIND-07/B – Building Physics and Building Energy Systems.

Awards:

• Paper “*Development of a shoeboxing approach for Urban Building Energy Modeling*” awarded as II best paper at the “High Performance Buildings Student Paper Competition” at VI International High Performance Buildings Conference at Purdue (2021).

[4.2] Assistant Professor in Building Physics and Building Energy Systems (Junior researcher with a fixed-term contract RTD-A) at the Free University of Bozen-Bolzano (unibz), Faculty of Science and Technology

Period: from 01.07.2017 to 30.06.2020.

Employer: Free University of Bozen-Bolzano, Faculty of Science and Technology.

Supervisor: Prof. A. Gasparella.

SSD: IIND-07/B – Building Physics and Building Energy Systems.

[4.3] Assistant Professor in Building Physics and Building Energy Systems (Junior Researcher with a fixed-term contract RTD-A without teaching appointment) at the Free University of Bozen-Bolzano (unibz), Faculty of Science and Technology

Period: from 15.02.2016 to 30.06.2017.

Employer: Free University of Bozen-Bolzano, Faculty of Science and Technology.

Supervisor: Prof. A. Gasparella.

SSD: IIND-07/B – Building Physics and Building Energy Systems.

Main activities:

Development of the building physics research laboratories at the NOI Technology Park funded by the Autonomous Province of Bozen-Bolzano (section: Klimahouse and Energy Production, main coordinator: prof. A. Gasparella):

- “**Building Envelope Lab**” (LAB 1) - a laboratory for the thermal physical characterization of building envelope components in transient conditions
- “**HVAC System Lab**” (LAB 2) - a laboratory for the study of handling and distribution of thermal fluids in air-conditioning systems
- “**Built Environment Simulator Lab**” (LAB 3) - an external laboratory for the analysis of the response of the building systems under real climatic solicitations.

Awards:

• Paper “*From energy signature to cluster analysis: an integrated approach*” awarded as III best paper at the “High Performance Buildings Student Paper Competition” at IV International High Performance Buildings Conference at Purdue (2016).

[4.4] Research fellow at the University of Padova, Department of Management and Engineering

Period: from 15.02.2014 to 14.02.2016.

Employer: University of Padova, Department of Management and Engineering.

Supervisor: Prof. C. Zilio.

SSD: IIND-07/A – Thermal engineering and industrial energy systems.

Activities:

- Main project: European Research Project TOICA - “Thermal Overall Integrated Conception of Aircraft”

[4.5] Research fellow at the Free University of Bozen-Bolzano (unibz), Faculty of Science and Technology

Period: from 15.01.2013 to 14.01.2014.

Employer: Free University of Bozen-Bolzano, Faculty of Science and Technology.

Supervisor: prof. A. Gasparella.

SSD: IIND-07/B – Building Physics and Building Energy Systems.

Activities:

- Main project: “Air-to-air heat recovery in HVAC systems”

[4.6] PhD Student at the University of Padova, Department of Management and Engineering

Period: 3-year contract as PhD Student, from 01.01.2010 till 31.12.2012.

Employer: University of Padova, PhD School of Industrial Engineering.

Funded by: Fondazione Studi Universitari di Vicenza (FSU).

Supervisors: Prof. A. Gasparella, Prof. J.L.M. Hensen.

SSD: IIND-07/B – Building Physics and Building Energy Systems.

Activities:

- Main research topic: “*Evaluation of building envelope energy performance through extensive simulation and parametrical analysis*”.

[4.7] Guest PhD Student at TU/E (Eindhoven University of Technology), Department of the Built Environment, Research Group of Building Physics and Services

Period: from 03.09.2012 till 21.12.2012.

Supervisor: Prof. J.L.M. Hensen.

SSD: IIND-07/B – Building Physics and Building Energy Systems.

Main topic: “*Long term evaluation of building energy performance: comparison of the test reference year and historical data series in the North Italy climates*”.

[5]

Experience
in academic
teaching

CURRENT TEACHING APPOINTMENTS AT THE FREE UNIVERSITY OF BOZEN-BOLZANO (Academic Year: 2025 – 2026):

- **Special Issues of Building Physics** (Lecture hours: **60 h**; Master Degree in Energy Engineering (LM-30), II yr, I semester; Language: English; SSD: IIND-07/B).
- **Solar Energy Systems** (Lecture hours: **15 h** out of 60 h; Master Degree in Energy Engineering (LM-30), II yr, I semester; Language: English; SSD: IIND-07/B).
- **High-Performance Buildings: Comfort, Energy Efficiency & Laboratory of High-Performance Buildings: Comfort, Energy Efficiency** (Lecture hours: **30 h** out of 60 h; Professional Bachelor in Wood Technology (L-P03); III yr, I semester; Language: English; SSD: IIND-07/B).
- **Le sfide dell’Unione europea: teoria e pratica / Europe's challenges: between theory and practice** (Lecture hours: **6 h** out of 18 h; Studium Generale unibz; Language: Italian; SSD: IIND-07/B).
- **Engineering Thermodynamics and Heat Transfer for Mechatronics** (Lecture hours: **42 h** out of 60 h; Bachelor in Industrial Mechanical Engineering (L-9), II yr, II semester; Language: English; SSD: IIND-07/B).

- **Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency** (Lecture hours: **30 h**; Bachelor in Industrial Mechanical Engineering (L-9) and Professional Bachelor in Wood Technology (L-P03), optional course, II semester; Language: Italian; SSD: IIND-07/B).
- **Elementi di progettazione dell'edificio (materiali e impianti, prestazione e comportamento dell'edificio) / Building design concepts (Materials and Systems, Building performance and behavior)** (Lecture hours: **14 h**; Master in Fire Safety Engineering; Language: Italian; SSD: IIND-07/B).

LIST OF TEACHING EXPERIENCES IN PREVIOUS ACADEMIC YEARS, STARTING FROM THE MOST RECENT ONES.

Academic Year: 2024 – 2025

- [5.1] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.2] Le sfide dell'Unione europea: teoria e pratica / Europe's challenges: between theory and practice)**
Lecture hours: **6 h** out of 18 h.
University, study programme & language: unibz; Studium Generale; Italian.
SSD: IIND-07/B.
- [5.3] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **30 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.
- [5.4] Engineering Thermodynamics and Heat Transfer for Mechatronics**
Lecture hours: **60 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); English.
SSD: IIND-07/B.
- [5.5] Elementi di progettazione dell'edificio (materiali e impianti, prestazione e comportamento dell'edificio) / Building design concepts (Materials and Systems, Building performance and behavior)**
Lecture hours: **10 h** out of 28 h.
University, study programme & language: unibz; Master in Fire Safety Engineering; Italian.
SSD: IIND-07/B.

Academic Year: 2023 – 2024

- [5.6] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.

- [5.7] High-Performance Buildings: Comfort, Energy Efficiency**
Lecture hours: **30 h** out of 60 h.
University, study programme & language: unibz; Professional Bachelor in Wood Technology (L-P03); English.
SSD: IIND-07/B.
- [5.8] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **30 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.
- [5.9] Elementi di progettazione dell'edificio (materiali e impianti, prestazione e comportamento dell'edificio) / Building design concepts (Materials and Systems, Building performance and behavior)**
Lecture hours: **10 h** out of 28 h.
University, study programme & language: unibz; Master in Fire Safety Engineering; Italian.
SSD: IIND-07/B.

Academic Year: 2022 – 2023

- [5.10] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.11] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **30 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.
- [5.12] Elementi di progettazione dell'edificio (materiali e impianti, prestazione e comportamento dell'edificio) / Building design concepts (Materials and Systems, Building performance and behavior)**
Lecture hours: **10 h** out of 30 h.
University, study programme & language: unibz; Master in Fire Safety Engineering; Italian.
SSD: IIND-07/B.

Academic Years: 2021 – 2022

- [5.13] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.14] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **25 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian. SSD: IIND-07/B.

- [5.15] High-Performance Buildings: Comfort, Energy Efficiency**
Lecture hours: **10 h** out of 60 h.
University, study programme & language: unibz; Professional Bachelor in Wood Technology (L-P03); English.
SSD: IIND-07/B.

Academic Years: 2020 – 2021

- [5.16] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.17] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **25 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.

Academic Years: 2019 – 2020

- [5.18] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.19] High-Performance Buildings: Comfort, Energy Efficiency**
Lecture hours: **10 h** out of 60 h.
University, study programme & language: unibz; Professional Bachelor in Wood Technology (L-P03); English.
SSD: IIND-07/B.
- [5.20] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **25 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.

Academic Years: 2018 – 2019

- [5.21] Special Issues of Building Physics**
Lecture hours: **60 h**.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.22] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **25 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.

Academic Year: 2017 – 2018

- [5.23] Special Issues of Building Physics**
Lecture hours: **36 h** out of 60 h.
University, study programme & language: unibz; MSc in Energy Engineering (LM-30); English.
SSD: IIND-07/B.
- [5.24] Applicazioni delle norme sull'efficienza energetica in edilizia / Application of technical standards for building energy efficiency**
Lecture hours: **25 h**.
University, study programme & language: unibz; Bachelor in Industrial Mechanical Engineering (L-9); Italian.
SSD: IIND-07/B.
- [5.25] Comportamento dell'involucro edilizio (invernale ed estivo) / Winter and summer behavior of the building envelope**
Lecture hours: **8 h**.
University, study programme & language: unibz; II Level Master "BEE - Building, Energy and Environment. CasaClima" (BEE); Italian.
SSD: IIND-07/B.
- [5.26] Metodi di calcolo semplificati per la certificazione energetica della prestazione energetica / Simplified calculation methods for the energy performance certification**
Lecture hours: **8 h**.
University, study programme & language: unibz; II Level Master "BEE - Building, Energy and Environment. CasaClima" (BEE); Italian.
SSD: IIND-07/B.
- [5.27] Simulazione, monitoraggio e diagnosi energetica / Simulation, monitoring and energy auditing**
Lecture hours: **20 h**.
University, study programme & language: unibz; II Level Master "BEE - Building, Energy and Environment. CasaClima" (BEE); Italian.
SSD: IIND-07/B.
- [5.28] Bilancio energetico dell'edificio / Building energy balance**
Lecture hours: **12 h**.
University, study programme & language: IUAV of Venezia; II level Master "BEAM" ("Master in Processi Costruttivi Sostenibili BEAM - Building Environmental Assessment and Modeling"); Italian.
SSD: IIND-07/B.
- [5.29] Simulazione energetica dinamica degli edifici / Dynamic building energy simulation**
Lecture hours: **46 h**.
University, study programme & language: IUAV of Venezia; II level Master "BEAM" ("Master in Processi Costruttivi Sostenibili BEAM - Building Environmental Assessment and Modeling"); Italian.
SSD: IIND-07/B.

Academic Year: 2016 – 2017

- [5.30] Tools for empirical and numerical assessment of energy systems**
Lecture hours: **6 h**.
University, study programme & language: unibz; PhD Programme in Sustainable Energy and Technologies; English. SSD: IIND-07/B.

Academic Year: 2015 – 2016

- [5.31] Bilancio energetico dell'edificio / Building energy balance**
Contract Professor (“Professore a contratto”).
Lecture hours: **20 h**.
University, study programme & language: IUAV of Venezia; II level Master “BEAM” (“Master in Processi Costruttivi Sostenibili BEAM - Building Environmental Assessment and Modeling”); Italian.
SSD: IIND-07/B.
- [5.32] Simulazione energetica dinamica degli edifici / Dynamic building energy simulation**
Contract Professor (“Professore a contratto”).
Lecture hours: **42 h**.
University, study programme & language: IUAV of Venezia; II level Master “BEAM” (“Master in Processi Costruttivi Sostenibili BEAM - Building Environmental Assessment and Modeling”); Italian.
SSD: IIND-07/B.

Academic Year: 2014 – 2015

- [5.33] Comportamento dell'involucro edilizio (invernale ed estivo) / Winter and summer behavior of the building envelope**
Contract Professor (“Professore a contratto”).
Lecture hours: **24 h**.
University, study programme & language: unibz; II level Master “Casaclima” (“Master CasaClima – La prestazione energetica degli edifici. Progettazione, ottimizzazione e utilizzo”); Italian.
SSD: IIND-07/B.
- [5.34] Bilancio energetico dell'edificio / Building energy balance**
Contract Professor (“Professore a contratto”).
Lecture hours: **14 h**.
University, study programme & language: IUAV of Venezia; II level Master “BEAM” (“Master in Processi Costruttivi Sostenibili BEAM - Building Environmental Assessment and Modeling”); Italian.
SSD: IIND-07/B.
- [5.35] Fisica tecnica / Technical Physics**
Teaching assistant.
Teaching assistance hours: **20 h**.
Class exercise hours: **20 h**.
University, study programme & language: University of Trento; Bachelor in Civil Engineering (L-07) and Bachelor in Engineering for the Environment and the Territory (L-07); Italian.
SSD: IIND-07/B.
- [5.36] Tecnica del controllo ambientale / Environment control techniques**
Teaching assistant.
Teaching assistance hours: **15 h**.
Class exercise hours: **15 h**.
University, study programme & language: University of Trento; Master Degree in Civil Engineering (LM-23); Italian.
SSD: IIND-07/B.

Academic Year: 2011 – 2012

[5.37] Renewable energies

Teaching assistant.

Teaching assistance hours: **16 h**.

Class exercise hours: **20 h**.

University, study programme & language: unibz; Bachelor in Logistics and Production Engineering (L-9) and Bachelor in Agricultural Science and Agricultural Technology (L-25); English.

SSD: IIND-07/B.

Academic Year: 2010 – 2011

[5.38] Sistemi energetici / Energy systems

Teaching assistant.

Teaching assistance hours: **50 h**.

Class exercise hours: **30 h**.

University, study programme & language: unibz; Bachelor in Logistics and Production Engineering (L-9); Italian.

SSD: IIND-07/B.

TEACHING EXPERIENCE AT INTERNATIONAL LEVEL

2024 (11-15.03.2024), **2023** (13-17.03.2023) and **2022** (14-18.03.2022): “International week ‘Sustainable Cities and Communities’” (<https://www.ucll.be/en/programmes/short-programmes/international-weeks/sustainable-cities-and-communities>) at UCLL (University of Applied Science), Hasselt, Belgium, organized by the the network Euclides (<http://www.euclidesnet.eu/>):

- Lecture: “*Application of Energy Efficiency Measures for Building Retrofitting: An Introduction to Building Performance Analysis and Simulation*”
- Project Assignment and Tutorial: “*Building Performance Simulation*” (https://kuleuven.mediaspace.kaltura.com/media/Teaser+Energy+Efficiency/1_ykokxl40)

THESIS AND INTERNSHIP TUTOR

Supervisor and co-supervisor of 80 defended theses

(1) Supervisor of 30 defended theses:

- **Free University of Bozen-Bolzano:**
 - 3 II level Master theses
 - 15 Master Degree theses
 - 10 Bachelor Degree theses
- **University IUAV of Venice:**
 - 2 II level Master theses

(2) Co-supervisor of 50 defended theses:

- **Free University of Bozen-Bolzano:**
 - 7 PhD Theses
 - Riccardo Albertin, “*Airflow Networks in Building Simulations: Applications to Model Calibration and Assessment of IAQ and COVID-19 Contagion Risk*”
 - Federico Battini, “*Development of a novel shoeboxing algorithm for urban and building energy modeling*”
 - Maja Danovska, thesis title: “*Heat and moisture transfer in timber building components*”
 - Aleksandr Gevorgian, “*Solar Radiation Models for Building Performance Simulation in Mountain Areas: Development and Empirical Validation*”

- Fahad Haneef, “Multi-objective optimization for retrofitting on a district scale towards the development of near-zero energy districts”
 - Ritesh Narendra Wankhade, “Effects of air displacement around buildings in urban street canyons on natural ventilation potential”
 - Luca Zaniboni, “Investigation on the indoor environmental comfort perceived by employees and patients of physiotherapy centers through experimental subjective and objective surveys”
- 2 II level Master theses
- 15 Master Degree theses
- 5 Bachelor Degree thesis
- **University of Padova:**
 - 9 Master Degree theses
 - 6 Bachelor Degree theses
- **University of Trento:**
 - 1 Master Degree thesis
- **University IUAV of Venice:**
 - 1 II level Master thesis
 - 2 Master Degree theses
- **University of Bologna:**
 - 1 Bachelor Degree thesis
- **Universidade Federal de Viçosa, Brazil:**
 - 1 PhD thesis:
 - Mario Alves da Silva, “Multi-scale analysis of weather data for building performance assessment in Brazil”

(3) Academic tutor of 20 internships (11 Bachelor Students, 5 Master Degree Students, 2 post-degree internships, and 2 PhD Candidate PNRR DM 351/2022 at the Free University of Bozen-Bolzano).

Current supervision of the following PhD Candidates at the PhD Programme in Sustainable Energy and Technologies SET of the Free University of Bozen-Bolzano:

- Angelica El Hokayem, cycle 38 (PNRR DM 351/2022 scholarship), topic “*Analysis of energy performance and IEQ of public school buildings: monitoring, assessment and definition of effective energy performance enhancement strategies*”.
- Gregorio Borelli, cycle 39 (PNRR DM 118/2023 scholarship), topic “*Development of urban building energy models to support the definition of energy policies by municipalities and local public administrations*”.
- Andreas Völser, cycle 41, topic “*Smart buildings, building automation and smart energy retrofit*”.

Current co-supervision of the following PhD Candidates at the PhD Programme in Sustainable Energy and Technologies SET of the Free University of Bozen-Bolzano:

- Riccardo Gazzin, cycle 38 (PNRR DM 352/2022 scholarship), topic “*Façade commissioning, from early design to end of life for a user centered and zero emission building*”.
- Gianfranco Cipolla, cycle 40, topic “*A smart platform for user-centric urban energy flexibility*”.

Awarded supervised theses:

- Federico Battini, “*Urban modelling application to building districts: opportunities and limitations*”, MSc in Energy Engineering at the Free University of Bozen-Bolzano, Thesis Award AIMAG 2020.
- Claudia Fiabane, “*Numerical Characterization of the Thermal Performance of <n Innovative HVAC Emission System*”, MSc in Energy Engineering at the Free University of Bozen-Bolzano, AICARR Thesis Award 2021.
- Joseph A. Roberts, “*Polymer dispersed liquid crystal glazing as a smart façade technology: characterisation, modelling and control*”, MSc in Energy Engineering at the Free University of Bozen-Bolzano, AICARR Thesis Award 2023.

PHD EXAMINER AND REVIEWER:

- 05.03.2025, University of Padova, Doctoral Program in Industrial Engineering (curriculum: Energy Engineering), member of the final examination committee and external reviewer.
- 24.02.2025, Polytechnic University of Turin, Doctoral Program in Urban and Regional Development, member of the final examination committee and external reviewer.
- 13.01.2025, University of Naples Federico II, Doctoral School in Industrial Engineering, member of the final examination committee.
- 19.04.2023, University of Trento, Doctoral School in Civil, Environmental and Mechanical Engineering, member of the final examination committee.
- 31.03.2023, Polytechnic University of Turin, Doctoral Program in Energetics, member of the final examination committee and external reviewer.
- 25.07.2022, Polytechnic University of Milan, Research Doctoral Program in Architecture, Built Environment, and Construction Engineering, member of the final examination committee and external reviewer.
- 2021, Polytechnic University of Marche, PhD in Industrial Engineering, final thesis reviewer.
- 27.03.2020, University of Udine, PhD in Environmental and Energy Engineering Science, member of the final examination committee.

[6]

Other
academic
roles

INSTITUTIONAL ACTIVITY IN UNIBZ:

- **Member of the PhD Council of “Sustainable Energy and Technologies” SET** of the Free University of Bozen-Bolzano (since the academic year 2016-2017) (<https://www.unibz.it/en/faculties/engineering/phd-sustainable-energy-technologies/>).
Main responsibilities:
 - *Reference person for Quality Assurance* (since the academic year 2023-2024)
 - *Substitute Member of the evaluation commission for the selection of the candidates* applying to the PhD Programme SET (from the 35th to the 41st cycle)
- **Co-director of the Master Degree in Energy Engineering (LM-30)** of the Free University of Bozen-Bolzano and of the University of Trento (since the academic year 2024-2025) and, previously, **member of the Council of the Master Degree in Energy Engineering** (since the academic year 2017-2018) (<https://www.unibz.it/en/faculties/engineering/master-energy-engineering/>). Example of responsibilities:
 - *Member of the Committee for EUR-ACE accreditation and periodic audit* (2018, 2022, 2024) of the Master Degree in Energy Engineering (LM-30) (<https://www.quacing.it/sistema-eur-ace/>);
 - *Member of the Quality Assurance Group* of the Master Degree in Energy Engineering (LM-30):
 - Contribution to the preparation of the documentation of the periodic audit with the unibz Evaluation Committee (Nucleo di Valutazione) (2021, 2025);
 - Contribution to the preparation of texts for the SUA-CdS, Scheda di Monitoraggio Annuale SMA, and Rapporto di Riesame Ciclico (2018, 2022, 2025);
 - Control and improvement of *syllabi* for the courses of the study programme;
 - Assessment of requirements for the enrolment to the study programme for non-EU students and of compatibility of students' individual study plans with the study programme requirements;
 - *“Docente di riferimento” for the academic years 2019/2020, 2020/2021, 2021/2022, 2022/2023; 2023/2024; 2024/2025*
 - *Member of the Committee for the Recognition and the Equivalency of Foreign Qualifications;*

- *Substitute Member of evaluation commission for the selection of new applicant students for the academic years 2020-2024 and Member of evaluation commission for the selection of new applicant students (since 2025);*
- *Support for the selection of candidates for the Double Degree programme within Erasmus Mundus Joint Master ME3+.*
- **Member of the Study Council of the I level Master in “Fire Safety Engineering” (Master FSE) of the Free University of Bozen-Bolzano (since the academic year 2021-2022) (<https://www.unibz.it/en/faculties/engineering/master-fire-safety-engineering/>).**
- **Member of the Study Council of the Studium Generale of the Free University of Bozen-Bolzano (since the academic year 2023-2024) (<https://www.unibz.it/en/faculties/further-courses/studium-generale/>).**
- **Participation to the Study Council of the Bachelor in Industrial Mechanical Engineering (L-9) of the Free University of Bozen-Bolzano (since the academic year 2017-2018) (<https://www.unibz.it/en/faculties/engineering/bachelor-industrial-mechanical-engineering/>).**
- **Participation to the Study Council of the Professional Bachelor in Wood Technology (L-P03) of the Free University of Bozen-Bolzano (since the academic year 2018-2019) (<https://www.unibz.it/en/faculties/engineering/bachelor-wood-technology/>):**
 - *“Docente di riferimento” for the academic years 2018/2019 and 2025/2026.*
- **Member of the several commissions for the selection of candidates for research fellow positions in the SSD IIND-07/B, for lecturer / teaching assistant positions, and collaborators**
- **Support to design and development of the Building Physics Labs at the NOI TechPark, financial management, and periodic reporting to the funding agency (Capacity Building Programme “Klimahouse and Energy Production”, funded by the Autonomous Province of Bozen-Bolzano) (2016 - 2022):**
 - **“Building Envelope Lab”** (LAB 1) - a laboratory for the thermal physical characterization of building envelope components in transient conditions
 - **“HVAC System Lab”** (LAB 2) - a laboratory for the study of handling and distribution of thermal fluids in air-conditioning systems
 - **“Built Environment Simulator Lab”** (LAB 3) - an external laboratory for the analysis of the response of the building systems under real climatic solicitations.
- **Participation to the Spoke 1 “Ecosystems for Mountain Innovations” (unibz leader) of the PNRR Interconnected Nord-Est Innovation Ecosystem “iNEST” (2022-2026).** Reference person for the topics related to Building Physics and Building Energy Systems at the Free University of Bozen-Bolzano in the framework of the project. Participation to the following research topics:
 - **RT1 (“Mountain social life and habitat”,** sectors *“Psychosocial aspects in the implementation and multidimensional evaluation of innovative solutions to support well-being and quality of life in the mountain environment”, “Digital and training strategies to support smart villages in mountain environments”, “Implementing actions for monitoring and assessing the effects of external drivers on people's wellbeing, ergonomics, and learning and productive performances in built environments of mountain areas”*),
 - **RT3A (“Energy strategies”,** sector *“Energy performance and renovation of existing building stock in mountain areas”*).
- **Participation to the SUNRISE Alliance (<https://sunrise-alliance.eu/>),** in particular regarding the activities related to lifelong learning training for professionals and technology transfer to companies (since 2025).

- **Member of the working group for the feasibility analysis of a new Master Degree in Safety Engineering LM-26** (since November 2022).
- **Member of the III Mission Board of the Faculty of Engineering** (2023-2025).
- **Assistance activity for the evaluation of space needs of the Faculty of Science and Technology** (2017 – 2019).

ACTIVITIES RELATED TO THIRD MISSION AT UNIBZ:

- Participation in research and commissioned-research projects and related dissemination / communication tasks.
- Activities for local communities in the framework of the study programmes (e.g., cooperation with high schools and other cooperation activities with public administrations, students' projects on public buildings) and for general dissemination.
- Participation to activities and events for unibz, in particular for the communication of the research activities of the Building Physics Labs at NOI TechPark.

PARTICIPATION TO SCIENTIFIC COMMITTEES OF CONFERENCES:

- Member of the Students Tutoring Scientific Committee of BSA 2017 (<http://bsa.events.unibz.it/bsa-2017/committees/>).
- Member of the Students Tutoring Scientific Committee of BSA 2019 (<http://bsa.events.unibz.it/bsa-2019/committees/>).
- Member of the Students Tutoring Scientific Committee of BSA 2022 (<https://bsa.events.unibz.it/bsa-2022/committees/>).
- Member of the evaluation committee for the “High Performance Buildings Student Paper Competition” at the VII International High Performance Buildings Conference at Purdue, West Lafayette, IN, U.S.A., 10th-14th July 2022.
- Member of the Scientific Committee of BSA 2024 (<https://bsa.events.unibz.it/bsa-2024/committees/>).
- Member of the Scientific Committee of CESBP 2025 (<https://cesbp2025.bme.hu/>).

PARTICIPATION TO ORGANIZING COMMITTEES OF CONFERENCES:

- Member of the organizing committee of BSA 2015, II IBPSA-Italy Congress (<http://pro.unibz.it/microsites-export-2016/www.unibz.it/en/sciencetechnology/events/bsa2015/committees/default.html>);
- Member of the organizing committee of microCHP16 (<https://uchp.events.unibz.it/committees/>);
- Member of the organizing committee of BSA 2017, III IBPSA-Italy Congress (<https://bsa.events.unibz.it/bsa-2017/committees/>);
- Member of the organizing committee of BSA 2019, IV IBPSA-Italy Congress (<https://bsa.events.unibz.it/bsa-2019/committees/>);
- Member of the organizing committee of BSA 2022, V IBPSA-Italy Congress (<https://bsa.events.unibz.it/bsa-2022/committees/>);
- Member of the organizing committee of BSA 2024, VI IBPSA-Italy Congress (<https://bsa.events.unibz.it/bsa-2024/committees/>).

SESSION CHAIR AND CO-CHAIR AT INTERNATIONAL SCIENTIFIC CONFERENCES:

- Building Simulation 2019, Rome, Italy – September 4th, 2019, co-chair of session “328: Optimization – 07”.
- Building Simulation 2021, Bruges, Belgium – 1st-3rd September, 2021, co-chair of 5 virtual sessions: “W1.8: Buildings paving the way for the energy transition”, “W2.7: Ensuring high quality building simulations”, “W3.8: The role of occupants”, “F3.6: Ensuring high quality building simulations” and “F4.5: Practice and industry related case studies”.
- Building Simulation Applications BSA 2022, Bolzano, Italy – July 1st, 2022, chair of 2 sessions: “Student Competition” and “Ventilation and IAQ”.

- VII International High Performance Buildings Conference at Purdue, West Lafayette, IN, U.S.A., 12th July 2022, chair of the session “B-03: Smart Sensing, Data Analytics & IEQ”.
- Building Simulation Applications BSA 2024, Bolzano, Italy – June 25th, 2024, chair of 2 sessions: “Student Competition” and “Modelling and simulation of case-studies”.
- IBPC 2024, Toronto, Canada – July 27th, 2024, chair of the session “Building systems and HVAC”.
- CLIMA 2025, Milan, Italy – June 6th, 2025, chair of the session: “HVAC impact on comfort and health of occupants and operators 4”.
- CESBP 2025, Budapest, Hungary – September 13th, 2025, chair of the session: “Energy efficiency and climate 3”.

PARTICIPATION TO EDITORIAL BOARDS:

- Member of the Editorial Board of the journal “Energies”, section “Energy and Buildings” (since 2021).
- Member of the Editorial Board of the journal “Buildings”, section “Building Energy, Physics, Environment, and Systems” (since 2021).
- Member of the Editorial Board of the journal “Indoor Air” (since 2023).
- Pernigotto G. 2021. Energies special issue “Challenges and Research Trends of Building Energy Performance”. ISSN: 1996-1073. Published papers: 17. Weblink: https://www.mdpi.com/journal/energies/special_issues/CRT_BEP
- Pernigotto G., Caniato M., Gasparella A. 2023. Energies special issue “Applications of Building Energy Performance Simulation”. ISSN: 1996-1073. Published papers: 5. Weblink: https://www.mdpi.com/journal/energies/special_issues/A_BEPS
- Pernigotto G., Patuzzi F., Prada A., Corrado V. and Gasparella A. 2018. “Proceedings of Building Simulation Applications BSA 2017”. ISSN: 2531-6702; ISBN: 978-88-6046-136-0. Weblink: <https://bupress.unibz.it/en/produkt/building-simulation-applications-bsa-2017-ebook-2/>
- Pernigotto G., Patuzzi F., Prada A., Corrado V. and Gasparella A. 2020. “Proceedings of Building Simulation Applications BSA 2019”. ISSN: 2531-6702; ISBN: 978-88-6046-176-6. Weblink: <https://bupress.unibz.it/en/produkt/building-simulation-applications-bsa-2019-ebook/>
- Pernigotto G., Patuzzi F., Prada A., Corrado V. and Gasparella A. 2023. “Proceedings of Building Simulation Applications BSA 2022”. ISSN: 2531-6702; ISBN: 978-88-6046-191-9. Weblink: <https://bupress.unibz.it/en/produkt/building-simulation-applications-bsa-2022-ebook/>
- Pernigotto G., Ballarini I., Patuzzi F., Prada A., Corrado V. and Gasparella A. 2025. “Proceedings of Building Simulation Applications BSA 2024”. ISSN: 2531-6702; ISBN: 978-88-6046-202-2. Weblink: <https://bupress.unibz.it/en/produkt/building-simulation-applications-bsa-2024-ebook/>

PEER-REVIEW ACTIVITY FOR INTERNATIONAL JOURNALS.

MAIN JOURNALS (2024 IF):

- “Building and Environment” (Q1 for Construction & Building Technology; IF: 7.6),
- “Buildings” (Q2 for Construction & Building Technology; IF: 3.1),
- “Energy” (Q1 for Energy & Fuels; IF: 9.4),
- “Energies” (Q3 for Energy & Fuels; IF: 3.2),
- “Energy and Buildings” (Q1 for Construction & Building Technology; IF: 7.1),
- “Indoor Air” (Q2 for Construction & Building Technology; IF: 4.3),
- “Journal of Building Engineering” (Q1 for Construction & Building Technology; IF: 7.4),
- “Journal of Building Performance Simulation” (Q2 for Construction & Building Technology; IF: 2.3),
- “Renewable Energy” (Q1 for Energy & Fuels; IF: 9.1),
- “Sustainable Cities and Society” (Q1 for Construction & Building Technology; IF: 12),
- “Science and Technology for the Built Environment” (Q3 for Construction & Building Technology; IF: 1.6).

I have served as a reviewer also for several national and international conferences (e.g., IBPSA and IBPSA-Italy Building Simulation Conferences) in the last years.

REVIEWER FOR INTERNATIONAL PROJECT PROPOSALS

- Project reviewer for the Dutch Research Council (NWO) (since 2019).
- Expert evaluator of proposals submitted under the LIFE-2022-CET (Clean Energy Transition) call (2022).
- Subscribed to the REPRISE database for the revision of research projects (“RICERCA DI BASE”) (since 2022).

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MEMBERSHIPS:

Membership

- Founding member of IBPSA-Italy, the IBPSA Italian affiliate (International Building Performance Simulation Association; <http://www.ibpsa-italy.org/it/>) (since 2011).
 - Member of the Election Commission of IBPSA-Italy (2018 and 2022).
- Member of the Italian Association of Technical Physics (since 2016).

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SUMMARY OF SCHOLARSHIPS AND RESEARCH PROJECTS:

Research and scholarship

• Scholarships

Period	Funding Body	Title
02.2014 to 02.2016	University of Padova	Post-doc position, main project: European Research Project TOICA - “Thermal Overall Integrated Conception of Aircraft”.
01.2013 to 01.2014	Free University of Bozen-Bolzano	Post-doc position, main project: Faculty of Science and Technology project “Air-to-air heat recovery in HVAC systems”.
01.2010 to 12.2012	Fondazione Studi Universitari di Vicenza	PhD student position, research topic: "Evaluation of building envelope energy performance through extensive simulation and parametrical analysis".

• Projects by external private / public companies since 2016

	Period	Funding Body	Title	Role
1	05.2023 – 08.2023	TOFANA srl	Permafrost: Preliminary analysis of the impact on the ground of the geothermal system of the top station of a ski lift and of the potential for radiant free cooling.	CO-I
2	05.2023 - 07.2023	Eurac Research	TheCTIMO: Thermal conductivity tests for 3 series of specimens of 3 insulating materials (polyurethane, EPS, mineral wool; 3 replicas in each case) at different moisture content.	PI
3	01.2023 – 09.2024	PROGRESS SpA	BetonPlus: Development of a new sustainable core-insulated concrete wall/ceiling based on a mineral insulating material.	CO-I
4	01.2023 - 03.2023	Holz Pichler AG	HolzWood: Conditioning test and dimensional verification of 12 wooden specimens.	PI
5	07.2022 - 11.2022	Isopan SpA	Iso-bridge: Analysis of the thermal bridge in the connection node between ISOPAN panels for 2 panel configurations.	PI
6	07.2022 - 08.2022	Eurac Research	Lambda-EURAC-3: Tests of apparent thermal conductivity.	PI
7	06.2022 - 07.2022	PROGRESS SpA	Lambda-PRO: Tests of apparent thermal conductivity.	CO-I
8	09.2021 - 03.2022	Santori Pellami SpA	Leather Wool: Support for the characterization of a leather byproduct as potential acoustic and thermal insulation material.	Member
9	03.2021 - 04.2021	Eurac Research	Lambda-EURAC-2: Tests of apparent thermal conductivity.	PI
10	06.2020 - 07.2020	Holz Pichler AG	Lambda-HolzP: Thermal conductivity test.	CO-I
11	12.2019 - 07.2020	KlimaHaus Agentur	ProCasaClima: Consultancy activity for the validation of the ProCasaClima dynamic simulation module.	CO-I

12	10.2019 - 12.2019	Rotho Blaas Srl	Rotho-bridge: Analysis of thermal bridges for the connection between vertical walls and foundations in timber structures.	CO-I
13	08.2019 - 02.2021	Municipality of Bozen-Bolzano	ReBuild-BZ: Development of strategies for the energy retrofiting of the private building stock in the municipality of Bolzano.	Member
14	08.2019 - 05.2020	Landesagentur für Umwelt (Autonome Provinz Bozen Südtirol)	IndAIR-QAES: Indoor Air Quality in Educational Buildings – QAES.	CO-I
15	08.2019 - 09.2019	Finstral SpA	Lambda-Finstral: Tests of apparent thermal conductivity.	Member
16	03.2019 - 04.2019	Eurac Research	Lambda-EURAC: Tests of apparent thermal conductivity.	CO-I
17	02.2019 - 10.2019	Piron srl	Piron: Experimental and numerical characterization of the thermal behaviour of professional ovens in the framework of the development of a control model.	PI
18	09.2018 - 02.2019	IDM Südtirol - Alto Adige	LignaWalls: Thermal conductance and resistance tests on timber wall specimens.	Member
19	05.2018 - 06.2018	Technology and investment solutions LLC	Lambda: Thermal Conductivity tests (Technology and investment solutions LLC).	Member
20	02.2018 - 09.2018	University of Padova	Cables-ROV: Numerical simulations of thermal performances of the tethering cables for Saipem ROV - Remotely Operated Vehicles.	PI
21	11.2017 - 10.2018	Municipality of Bozen-Bolzano	DH-BZ: Technical and economic analysis of the district heating system in the Municipality of Bozen-Bolzano.	Member
22	12.2016 - 02.2017	eng. Paolo Zilio (IngenioTec)	MuSa: Building energy simulation of a refurbished historical building: the museum "MuSa" of Salò.	Member
23	06.2016 - 09.2016	Holka Genossenschaft	PlanWerkStadt: Steady and periodic thermal conductance tests on an experimental timber wall.	Member

• **Projects funded by Public Authorities or internal UNIBZ funds since 2016 (as team member unless otherwise indicated)**

	Period	Funding Body	Title	Type
1	01.2026 – 12.2028	EU (40 %), national funds (42 %) and provincial funds (18 %).	LocLab: a Real World Laboratory for innovative building - local, circular and low-tech (EFRE1088)	FESR
2	03.2025 – 02.2027	Autonomous Province of Bozen-Bolzano.	CoolST: Adapting to Climate Change Impact: Crafting South Tyrol's Cooling Future for Energy Resilience	Local (role: PI for unibz)
3	02.2025 – 02.2026	National funds.	HYDE: Hydraulic energy recovery strategies for future green water supply systems	PRIN 2022 (role: PI)
4	01.2025 – 12.2028	EU.	SUNRISE: Smaller (strategic) Universities Network for Regional Innovation and Sustainable Evolution	Erasmus+
5	02.2024 – 02.2026	National funds.	EDIH NOI: Digital Innovation Hub South Tyrol (DIS-HUB)	PNRR national funds
6	11.2023 – 03.2026	EU (80 %) and national funds (20 %).	METAWOOD: Metamaterials and training applied to multi-storey timber buildings (ITAT-11-011)	Interreg IT-AT
7	11.2023 – 02.2026	National funds.	CriStAll: Climate Resilient Strategies by Archetype-based Urban Energy Modelling	PRIN 2022 PNRR (role: CO-I)
8	10.2023 – 09.2026	EU (40 %), national funds (42 %) and provincial funds (18 %).	FAIR: Development of new tools and solutions for smart and high performance ventilated double skin façades (EFRE1035)	FESR
9	06.2023 – 05.2024	Stiftung Südtiroler Sparkasse	TeSmES: Smart technologies for sustainable buildings.	Fusion Grant (role: PI)
10	09.2022 – 02.2026	National funds.	iNEST: Interconnected Nord-Est Innovation Ecosystem.	PNRR national funds

11	10.2019 – 01.2022	EU (85 %) and national funds (15 %).	GPP4Build: Green Public Procurement for Buildings (ITAT1079).	Interreg IT-AT
12	10.2019 – 12.2022	EU (75 %) and national funds (25 %).	BIGWOOD: Creating awareness and reduction of prejudices and barriers for high-volume wooden constructions (ITAT1081).	Interreg IT-AT
13	10.2019 – 12.2022	EU (77.6 %) and national funds (22.4 %).	SENSHOME: The SENSitive home: Sensors for special ENvironmentS: the HOME As normal as possible and as special as necessary (ITAT1088).	Interreg IT-AT
14	09.2019 – 05.2022	EU (85 %) and national funds (15 %).	MC4.0: MASS CUSTOMIZATION 4.0 - development and diffusion of Mass Customization and Tailoring (MCT) competences, to provide SMEs with advanced expertise and tools to better adapt products and services to user needs and quicker respond to industry 4.0 changes (ITAT1057).	Interreg IT-AT
15	07.2018 – 02.2022	EU (50 %), national funds (35 %) and provincial funds (15 %).	E2I@NOI: Definition of a System of Laboratories for the development, characterization and the technology transfer for Smart Energy Buildings (FESR1095).	FESR
16	11.2013 - 12.2021	Autonomous Province of Bozen-Bolzano (capacity building)	Klimahaus und Energie Produktion.	Local

	Period	Funding Body	Title	Type & Role
1	10.2021 – 03.2025	Free University of Bozen-Bolzano	VIAO-MI: Ventilation and Indoor Air Quality in Offices: Monitoring and Improvement.	CRC Call 2021 (role: PI)
2	07.2021 – 08.2022	Free University of Bozen-Bolzano	SCORELINE: Special comfort for educational indoor Environment.	RTD Call 2021 (role: CO-I)
3	10.2019 – 03.2022	Free University of Bozen-Bolzano	TESES-Urb: Techno-economic methodologies to investigate sustainable energy scenarios at urban level.	ID Call 2019 (role: member)
4	01.2019 – 01.2023	Free University of Bozen-Bolzano	SOMNE: Bolzano Solar Irradiance Monitoring Network.	CRC Call 2018 (role: member)
5	07.2018 - 06.2020	Free University of Bozen-Bolzano	IndAIR-Edu: Indoor Air Quality and Ventilation Effectiveness in Educational Buildings.	RTD Call 2018 (role: PI)
6	03.2017 - 02.2020	Free University of Bozen-Bolzano	HUCED: Human-Centred Design of the Built Environment: definition of a methodology for the experimental assessment of the overall Indoor Environmental Quality.	CRC Call 2016 (role: member)
7	01.2016 to 03.2018	Free University of Bozen-Bolzano	IBAS: Intelligent Building Automation System for optimization of energy consumptions and indoor environmental quality.	CRC Call 2015 (role: member)

• **Other Projects funded before 2016**

Period	Funding Body	Title
05.2015 - 02.2016	De Rigo Refrigeration srl	Angel - "Sviluppo e ottimizzazione del nuovo banco di refrigerazione Angel".
02.2014 - 06.2016	European Union, FP7-AAT-2013-RTD-1	TOICA – “Thermal Overall Integrated Conception of Aircraft”.
01.2013 – 01.2014	Free University of Bozen-Bolzano	Air-to-air heat recovery in HVAC systems.
04.2013 - 01.2014	Provincia Autonoma di Bozen-Bolzano	TIMBEEST – “Timber building with enhanced energy and structural performance”.
08.2011 - 01.2012	Free University of Bozen-Bolzano	Prestazioni dinamiche delle strutture di involucro edilizio: progettazione di un sistema di controllo.
01.2011 - 08.2011	Network "Chi Quadrato"	Project γ2.

06.2010 - 10.2011	Research program commissioned by Ceccato S.p.A. and admitted to the Regione Veneto financial support (Regional Law 18.05.2007 n.9).	ZEIWS - Zero Environmental Impact Washing System - "Sviluppo di nuova generazione di impianti di lavaggio mezzi a totale compatibilità ambientale".
2008 - 2012	Provincia di Vicenza, Vi.energia srl	Ecodomus.vi.

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Publications

BIBLIOMETRIC INDEXES (UPDATED IN FEBRUARY 2026):

- **Scopus Index**

- Number of Papers: **118**
- Citations: **1512**
- H-index: **21**

- **Web of Science Index**

- Number of Papers: **70**
- Citations: **1239**
- H-index: **19**

LIST OF INDEXED PUBLICATIONS

On peer-review international journals

- 1 Gasparella A., **Pernigotto G.**, Cappelletti F., Romagnoni P., Baggio P., 2011. *Analysis and modeling of window and glazing systems energy performance for a well insulated residential building*, Energy and Buildings 43: 1030-1037. DOI: 10.1016/j.enbuild.2010.12.032
- 2 Gasparella A., **Pernigotto G.**, Baratieri M., Baggio P., 2011. *Thermal dynamic transfer properties of the opaque envelope: analytical and numerical tools for the assessment of the response to summer outdoor conditions*, Energy and Buildings 43: 2509-2517. DOI: 10.1016/j.enbuild.2011.06.004
- 3 **Pernigotto G.**, Gasparella A., 2013. *Extensive Comparative Analysis Of Building Energy Simulation Codes: Heating And Cooling Energy Needs and Peak Loads Calculation In TRNSYS And EnergyPlus For Southern Europe Climates*, HVAC&R Research 19(5): 481-492. DOI: 10.1080/10789669.2013.794088
- 4 **Pernigotto G.**, Prada A., Cóstola D., Gasparella A., Hensen J.L.M., 2014. *Multi-year and reference year weather data for building energy labelling in North Italy climates*, Energy and Buildings 72: 62-72. DOI: 10.1016/j.enbuild.2013.12.012
- 5 **Pernigotto G.**, Prada A., Gasparella A., Hensen J.L.M., 2014. *Analysis and improvement of the representativeness of EN ISO 15927-4 reference years for building energy simulation*, Journal of Building Performance Simulation 7(6): 391-410. DOI: 10.1080/19401493.2013.853840
- 6 Prando D., Patuzzi F., **Pernigotto G.**, Gasparella A., Baratieri M., 2014. *Biomass Gasification Systems For Residential Application: An Integrated Simulation Approach*, Applied Thermal Engineering 71(1): 152-160. DOI: 10.1016/j.applthermaleng.2014.06.043
- 7 Arambula Lara R., **Pernigotto G.**, Cappelletti F., Romagnoni P., Gasparella A., 2015. *Energy audit of schools by means of cluster analysis*, Energy and Buildings 95 - Special Issue: "Historic, historical and existing buildings: designing the retrofit. An overview from energy performances to indoor air quality": 160-171. DOI: 10.1016/j.enbuild.2015.03.036

- 8 Pavlin B., **Pernigotto G.**, Cappelletti F., Bison P., Vidoni R., Gasparella A., 2017. *Real-Time Monitoring of Occupants' Thermal Comfort through Infrared Imaging: A Preliminary Study*, Buildings 7(2): 10.
DOI: 11.3390/buildings7010010
Weblink: <http://www.mdpi.com/2075-5309/7/1/10>
- 9 Tafelmeier S., **Pernigotto G.**, Gasparella A., 2017. *Annual Performance of Sensible and Total Heat Recovery in Ventilation Systems: Humidity Control Constraints for European Climates*, Buildings 7(2): 28.
DOI: 10.3390/buildings7020028
Weblink: <http://www.mdpi.com/2075-5309/7/2/28>
- 10 Tarantini M., **Pernigotto G.**, Gasparella A., 2017. *A Co-Citation Analysis on Thermal Comfort and Productivity Aspects in Production and Office Buildings*, Buildings 7(2): 36.
DOI: 10.3390/buildings7020036
Weblink: <http://www.mdpi.com/2075-5309/7/2/36>
- 11 **Pernigotto G.**, Prada A., Cappelletti F., Gasparella A., 2017. *Impact of Reference Years on the Outcome of Multi-Objective Optimization for Building Energy Refurbishment*, Energies 10(11): 1925.
DOI: 10.3390/en10111925
Weblink: <http://www.mdpi.com/1996-1073/10/11/1925>
- 12 Prada A., **Pernigotto G.**, Baggio P., Gasparella A., 2018. *Uncertainty propagation of material properties in energy simulation of existing residential buildings: The role of buildings features*, Building Simulation 11(3): 449-464.
DOI: 10.1007/s12273-017-0418-4
- 13 Torresin S., **Pernigotto G.**, Cappelletti F., Gasparella A., 2018. *Combined effects of environmental factors on human perception and objective performance: a review of experimental laboratory works*, Indoor Air 28(4): 525-538. DOI: 10.1111/ina.12457
- 14 Luddeni G., Krarti M., **Pernigotto G.**, Gasparella A., 2018. *An analysis methodology for large-scale deep energy retrofits of existing building stocks: Case study of the Italian office building*, Sustainable Cities and Society 41: 296-311. DOI: 10.1016/j.scs.2018.05.038
- 15 Zilio C., Righetti G., **Pernigotto G.**, Longo GA., 2018 *Analysis of the freezing time of chicken breast finite cylinders [Analyse du temps de congélation des cylindres de poitrine poulet]*, International Journal of Refrigeration 95: 38-50. DOI: 10.1016/j.ijrefrig.2018.08.013
- 16 Pistore L., **Pernigotto G.**, Cappelletti F., Gasparella A., Romagnoni P., 2019. *A stepwise approach integrating feature selection, regression techniques and cluster analysis to identify primary retrofit interventions on large stocks of buildings*, Sustainable Cities and Society 47.
DOI: 10.1016/j.scs.2019.101438
- 17 **Pernigotto G.**, Prada A., Gasparella A. 2020. *Extreme reference years for building energy performance simulation*, Journal of Building Performance Simulation 13 – Special Issues on “Microclimatic Boundary Conditions in Building Simulation Models”: 152-166.
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[10]
Statement
of
research
interest

Research interests:

- Characterization of the thermal behaviour of building envelope components through numerical simulations and laboratory experimental tests.
- Evaluation of building energy performances by means of analytical and detailed dynamic simulation approaches.
- Statistical analysis of building energy consumption data, evaluation of energy saving measures and development of optimized scenarios of building energy refurbishment. Analysis of the energy performance of the existing building stock and simulation at urban scale.
- Assessment of the capabilities of calculation methods for building energy performance evaluations and analysis of the sensitivity to the boundary conditions (i.e., weather data and building use).

[11]

Language
skills

Mother tongue: Italian

Other languages (Self-assessment according to Common European Reference Framework for Languages):

Comprehension		Spoken production		Written production
Listening	Reading	Oral interaction	Oral production	
English				
C1 Proficient user				
German				
B2 Independent user				
French				
A2 Basic user				

Certifications:

- English:
 - **UNIBZ internal certifications organized by the UNIBZ language Center: C1 (05.06.2018)**
- German:
 - **B2 Goethe Zertifikat (12.01.2022)**

Exams

Language Requirements

Exams

Language Levels

Your current language levels achieved with certificates and exams

Language	Level
English	C1
German	B2
Italian	---
Ladino	---

Bolzano, 07.02.2026

Giovanni Pernigotto