

CURRICULUM VITAE OF MARTA CALZOLARI

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PERSONAL INFORMATION

Name and Surname	Marta Calzolari
Place and birth date	Ferrara, July 07 th , 1984
Nationality	Italian
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BRIEF PROFILE

Marta Calzolari is an Architect, Ph.D., and Associate Professor at the Department of Architecture of the University of Ferrara.

From June 2021 to May 2024, she held the position of Assistant Professor (type b) at the Department of Architecture of the University of Ferrara.

From April 2019 to June 2021, she served as Assistant Professor (type a) at the Department of Engineering and Architecture of the University of Parma. Since November 2018, she has obtained the National Scientific Qualification for the role of Associate Professor in the CEAR-08/C (ex08/C1) sector "Design and Technological Planning of Architecture." Since 2020, she has been a member of the Academic Board for the Innovative PhD Programme in Environmental Sustainability and Wellbeing at the University of Ferrara, an inter-university and interdepartmental doctoral program. Since 2009, she has been a member of the "Architecture" section of the Architecture>Energy Research Center of the Department of Architecture at the University of Ferrara, contributing to research activities and operational coordination.

Over the years, she has worked on numerous research projects in the fields of new construction and the energy, environmental, and functional retrofit of existing building heritage, with a particular focus on historical buildings. In April 2013, she earned a Ph.D. in Architectural Technology (final evaluation: excellent). During her Ph.D., she was a visiting scholar at the University of Nottingham, Department of the Built Environment (United Kingdom). Her doctoral thesis received three first-place awards in scientific competitions.

She was awarded the "Nicolò Copernico" Recognition for innovative theses in scientific and technological disciplines in the field of Architectural Technology, promoted by the Nicolò Copernico Founding Committee and the Lions Club Portomaggiore-San Giorgio, with management by Basell R&D (now LyondellBasell), operator of the Giulio Natta Research Center in Ferrara.

Her thesis was also recognized as the Best Thesis of the XXV Cycle for the Doctoral School in Architectural Technology at the University of Ferrara (IUSS DAY) and won first place in the University and Sustainability competition, Unife Sustainable Academic Year 2012/2013, in the "energy-environmental" section.

From 2015 to 2019, she held research grants at the Department of Architecture of the University of Ferrara for the operational coordination of a research project analyzing the energy-environmental aspects of the entire architectural heritage of the University of Ferrara.

Since 2011, she has been registered as an energy certifier for the Emilia-Romagna Region.

Since the 2021/2022 academic year, she has been teaching Architectural Technology at the Department of Architecture of the University of Ferrara. From the 2018/2019 to 2020/2021 academic years, she taught Architectural Technology at the Department of Engineering and Architecture of the University of Parma. From the 2012/2013 academic year, she served as a contract professor in Environmental Design, and from 2013/2014 to 2018/2019, she taught Materials and Design of Construction Elements and Architectural Technology at the Department of Architecture of the University of Ferrara. She also teaches in various post-graduate training courses.

Since 2015, she has been a member of SITdA – the Italian Society of Architectural Technology – contributing to the thematic cluster "Nearly Zero Energy Building – nZEB."

Since 2018, she has been a reviewer for Class A journals (Area 08), such as *Territorio* (Franco Angeli Editore, Double Blind Review), *Techné – Journal of Technology for Architecture and Environment*, and other journals published by MDPI. Since 2017, she has been on the Editorial Board of the book series "Progettare per costruire sostenibile" (Planning for Sustainable Construction) by Maggioli Editore (double blind review). She served as a reviewer for the **SER4SC Conference** (Seismic and Energy Renovation for Sustainable Cities, International Conference, Catania, Italy, February 1–3, 2018). Since 2016, she has been a Peer Reviewer for the scientific journal *Energy Research & Social Science*, Elsevier Editorial System.

Since 2017, she has been a member of the Scientific Committee and, since 2009, the Editor of the "Energy Efficiency" column for the magazine *Recupero e Conservazione Magazine*, published by De Lettera Editore.

She won a scholarship in the competitive call for grants for international stays for Ph.D. students at the University of Ferrara (2010).

1. NATIONAL SCIENTIFIC QUALIFICATION

National Scientific Qualification, Second Level, Competitive Sector 08/C1 – Design and Technological Planning of Architecture (Call D.D. 1532/2016), obtained on November 5, 2018.

EVALUATION:

The candidate, Marta Calzolari (b. 1984), is a Contract Lecturer (SSD ICAR/12) at the University of Ferrara. The candidate's contribution to research and development activities is overall positive and sufficiently substantial, consistent with the topics of the competitive sector and interdisciplinary themes relevant to it. Her research interests primarily focus on the energy and performance retrofit of the building heritage.

Impact of scientific output
The candidate is positively evaluated with reference to Title 1 of Annex A to Ministerial Decree 120/2016, as the indicators related to the impact of her scientific output meet all 3 threshold values required by Ministerial Decree 602/2016.

Scientific publications
The candidate has submitted a total of 10 scientific publications, including a monograph, in accordance with Article 7 of Ministerial Decree 120/2016. For the purposes of the indicators, she has presented a total of 18/3/1 publications. Evaluating these publications according to the criteria outlined in Article 4 of Ministerial Decree 120/2016, they are deemed consistent with the topics of the competitive sector and relevant interdisciplinary themes.

The scientific output demonstrates good national and international editorial placement and is continuous over time. The candidate's contribution is identifiable both in single-authored publications and in collaborative works, which exhibit consistency in the topics addressed.

Among the submitted publications, of particular interest are the 2016 monograph titled *"Prestazione energetica delle architetture storiche: sfide e soluzioni"* (Energy Performance of Historic Architecture: Challenges and Solutions), Milano: FrancoAngeli. Three Class A journal articles: *"A parametric method to assess the energy performance of historical urban settlements. Evaluation of the current energy performance and simulation of retrofit strategies for an Italian case study,"* JOURNAL OF CULTURAL HERITAGE, vol. 30 (2018). *"Innovative methods for a sustainable retrofit of the existing building stock. A cross-path from social housing to the listed heritage,"* TECHNE (2014). *"New interventions in historical and consolidated urban contexts: low renovation processes for the valorization of the patina of the time,"* TECHNE (2016).

The submitted publications, taken as a whole, are of high quality, reaching a level of originality and methodological rigor that has achieved significant impact within the scientific community. They contribute to advancing the research themes addressed in relation to the competitive sector.

In light of the above evaluations and after a thorough review of the candidate's scientific profile, the commission unanimously concludes that she possesses titles and publications that demonstrate a recognized position in the research landscape. This is evidenced by the positive research outcomes in terms of quality and originality for the competitive sector and the scientific themes addressed.

Consequently, the commission believes that the candidate has achieved the scientific maturity required for the role of Associate Professor (Second Level).

2. PhD

PhD in Architectural Technology (SSD: ICAR/12), obtained on April 8, 2013. University of Ferrara, Department of Architecture

Ranked first in the admission exam (September 2009) with a score of 60/60, Marta Calzolari was awarded the ministerial scholarship. From 2010 to 2013, she attended the 25th Cycle of the PhD Program in Architectural Technology at the Department of Architecture, University of Ferrara (a consortium PhD program involving IUAV Venice and the University of Bologna – Cesena campus).

On April 8, 2013, she successfully completed her PhD with an "excellent" evaluation, defending a thesis titled "Evaluation of the Energy Performance of Historic Architecture. Analysis of Methods for Calculating Current Energy States and Corrective Proposals" (Supervisor: Prof. Pietromaria Davoli; Co-supervisors: Eng. G. Bizzarri and Dr. M. Andreotti).

During her PhD, she focused on studying existing methods for calculating the energy performance of buildings, evaluating their applicability to historic monumental buildings.

Her research was conducted both at the Department of Architecture, University of Ferrara, and the Department of Built Environment, University of Nottingham (UK). At both institutions, her work alternated between theoretical study, software simulations, and experimental measurement campaigns.

During the same period, Marta Calzolari coordinated research activities leading to the development of the document "Doctoral Theses in Architectural Technology at the Faculties of Ferrara, Venice, and Cesena. Data and Reflections on the First Ten Years of Research."

3. EDUCATION AND TRAINING

- July 8, 2018 **“GHS and OSHA Hazardous Communication” 10 hourse Construction Safety Certification**
Osha Course (360training.com)
- March 28, 2018 **Webinar "Open Access in H2020"**
APRE (Agency for the promotion of Europeann research)
- March 24, 2017 **Course level 100 Introduction to Green Building and LEED/GBC energy-environmental certification systems**
Green Building Council Italia
- November 2015 **CasaClima basic course**
- January 2010 – December 2012 **PhD in Architectural Technology (SSD:ICAR/12)**
University of Ferrara, Department of Architecture, Italy
- April 2011 **Energy certifier in building construction**
- July 2009 **Qualification for architect profession**
Registered in the Order of Architects, Planners, Landscape Architects and Conservators of the Province of Ferrara since 03/31/2010 #610.
- September 2003 - November 2008 **Master of Science in Architecture**
University of Ferrara, Department of Architecture, Italy
Thesis's title: “Energy, environmental and functional retrofit of the second cloister in the S. Antonio in Polesine complex - A new cultural center in the historic city of Ferrara”, 7th of November 2008. Mark: 110/110 cum laude.

4. TEACHING ACTIVITIES AT UNIVERSITY LEVEL IN ITALY AND ABROAD

2.1. Teaching activities in the field of Architectural Technology

At the University of Ferrara, Department of Architecture, Italy:

- A.Y. 2024/2025 **Architectural Technology**, (84 hours, SSD ICAR 12, 7 CFU), within the laboratory "Final Laboratory in Architectural Technology", fifth year course in "Architectural Science".
- A.Y. 2024/2025 **Architectural Technology**, (84 hours, SSD ICAR 12, 7 CFU), within the laboratory "Construction of Architecture 1", second year course in "Architectural Science".
- A.Y. 2023/2024 **Architectural Technology**, (84 hours, SSD ICAR 12, 7 CFU), within the laboratory "Construction of Architecture 1", second year course in "Architectural Science".
- A.Y. 2022/2023 **Materials and design of construction elements** (48 hours, ICAR12 SSD, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".
- A.Y. 2021/2022 **Materials and design of construction elements** (48 hours, ICAR12 SSD, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".
- A.Y. 2018/2019 **Materials and technological solutions** (20 hours, ICAR 12 SSD, 2 CFU), within the final laboratory "Building recovery and energy requalification", third year of the course of study in "Architectural Science".
- A.Y. 2018/2019 **Architectural Technology**, (84 hours, SSD ICAR 12, 7 CFU), within the laboratory "Construction of Architecture 1", second year course in "Architectural Science".
- A.Y. 2017/2018 **Materials and design of construction elements** (24 hours, ICAR12 SSD, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".
- A.Y. 2017/2018 **Architectural Technology**, (84 hours, SSD ICAR 12, 7 CFU), within the laboratory "Construction of Architecture 1", second year course in "Architectural Science".
- A.Y. 2016/2017 **Materials and design of construction elements** (24 hours, ICAR12 SSD, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".
- A.Y. 2015/2016 **Materials and design of construction elements** (24 hours, ICAR12 SSD, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".
- A.Y. 2014/2015 **Materials and design of construction elements** (24 hours, ICAR12 SSD, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".
- A.Y. 2012/2013 **Environmental Design** (36 hours, SSD ICAR12, 2 CFU) within the Laboratory "Design 2", second year course of study in "Architectural Science".

At the University of Parma, Department of Engineering and Architecture, Italy:

- A.Y. 2020/2021 **Sustainable Technologies for Architecture (60 hours, ICAR SSD 12, 6 CFU), within the "Sustainable Architectural Design + Workshop" Laboratory, second year of the "Architecture Regeneration Sustainability" course.**
- A.Y. 2019/2020 **Innovative technologies for sustainable design (40 hours, SSD ICAR 12, 4 CFU), within the Laboratory "Architectural and urban design studio for the sustainable city + workshop", first year of the study course in "Architecture and city sustainability".**
- A.Y. 2019/2020 **Sustainable Technologies for Architecture (60 hours, ICAR SSD 12, 6 CFU), within the "Sustainable Architectural Design + Workshop" Laboratory, second year of the "Architecture Regeneration Sustainability" course.**

2.1. Master's thesis supervisions

- A.Y. 2024/2025 **Master's Co-supervisor (on-going)**
- University of Ferrara, Department of Architecture, Italy
 Niccolò Marchini
 Supervisor: Marta Calzolari
 Co-supervisors: Paolo Iotti
- A.Y. 2023/2024 **Master's Co-supervisor**
- University of Ferrara, Department of Architecture, Italy
 Serena Ferracuti
 Supervisor: Marta Calzolari
- A.Y. 2023/2024 **Master's Co-supervisor (on-going)**
- University of Ferrara, Department of Architecture, Italy
 Nicola Parmeggiani
 Supervisor: Pietromaria Davoli
 Co-supervisors: Marta Calzolari
- A.Y. 2021/2022 **Master's Co-supervisor**
- Università degli studi di Ferrara, Dipartimento di Architettura
 Caterina Gallegati, Vanessa Marchetti
 Supervisor: Roberto di Giulio
 Co-supervisors: Sante Mazzacane e Marta Calzolari
- A.Y. 2021/2022 **Master's supervisor**
- University of Ferrara, Department of Architecture, Italy
 Francesca Renato
 Supervisor: Marta Calzolari
 Co-supervisors: Pietromaria Davoli
- A.Y. 2019/2020 **Master's Co - supervisor**
- University of Parma, Department of Engineering and Architecture, Italy
- Thesis's title: GBC Historic Building: proposta di riqualificazione ambientale di Palazzo Cavriani (MN).
 Nicolas Bosi.
 Supervisors: Barbara Gherri and Marta Calzolari

A.Y. 2019/2020 Master's Co - supervisor

University of Parma, Department of Engineering and Architecture, Italy

Thesis topic: design of a neighborhood of highly efficient residential buildings in a Mediterranean climate.

Cherrie Cabrera

Supervisors: Marco Maretto, Barbara Gherri and Marta Calzolari

A.Y. 2019/2020 Master's Co - supervisor

University of Parma, Department of Engineering and Architecture, Italy

Tema della tesi: Progetto di un polo dell'infanzia e centro ricerche sull'educazione al campus.

Federico Tommasini and Niccolò Ridolfi

Supervisors: Enrico Prandi and Marta Calzolari

4.4. Teaching activities as assistant

University of Ferrara, Department of Architecture, Italy

A.Y. 2016/2017 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2015/2016 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2014/2015 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2013/2014 Assistant within the laboratory "Construction of Architecture 2", fourth year course in "Architectural Science". (Proff. G. Zannoni, M. Toni, E. Piaia)

A.Y. 2012/2013 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2011/2012 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2010/2011 Assistant within the laboratory "Buildings' energy control", optional course fifth year course in "Architectural Science". (Proff. G. Bizzarri, S. Brunoro)

A.Y. 2010/2011 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2009/2010 Assistant within the laboratory "Buildings' energy control", optional course fifth year course in "Architectural Science". (Proff. G. Bizzarri, S. Brunoro)

A.Y. 2009/2010 Assistant within the laboratory "Construction of Architecture 1", second year course in "Architectural Science". (Prof. P. Davoli)

A.Y. 2008/2009 Assistant within the laboratory "Buildings' energy control", optional course fifth year course in "Architectural Science". (Proff. G. Bizzarri, S. Brunoro)

4.5. Teaching activities abroad

A.Y. INTERNATIONAL COLLABORATIVE COURSE: Intervenção em edificação

202572026 **histórica: eficiência ambiental e modernização/Intervento in edifici storici: riqualificazione ed efficienza ambientale. 4 ETC (60HR), PONTIFÍCIA UNIVERSIDADE CATÓLICA DO PARANÁ - PUCPR, SCHOOL OF FINE ARTS, COURSE OF ARCHITECTURE AND URBANISM, Brasil**
Discipline global Classes 3

February 13 2018 **External Lecturer at Seminar "Advanced Construction for Energy Efficiency, Spring 2018" with the Online seminar "Wood constructions. Main principles and case studies" to the Elective Course "Special topics in Construction: Advanced Construction of Energy Efficiency"**

University of Sharjah, Architectural Engineering Department, (UAE). February 13, 2018

4.6. Teaching activities for post graduated courses

March/June 2015 - **Professional training for innovation and redevelopment of the building stock**

March/June 2019 Fondazione ITS Territorio Energia Costruire, Emilia Romagna Region.
Lessons' topics: control of rainwater and wastewater, timber constructions, use of vegetation in architecture.

May 19, 2017 **II Level Master in "Redevelopment and management of Minor Historic Centres", AmbienteCulturaTerritorio. ACT – Integrated Actions**

Roma La Sapienza, Department of Architecture, Italy

Lesson title: "Operational example of a survey on the building stock widespread in Ferrara and assesment of analysis and energy retrofit in historic buildings".

May 2014 **Post graduated course "Architecture>energy: design and energy retrofit of historic buildings**

C.S.I. La Cremeria, Cavriago (RE) , Italy

Lessons: Energy and environmental requalification of the historic heritage. Methods of analyzing the state of the art at the building and urban scale and strategies for increasing energy performance.

4.7. Teaching activities at doctoral schools

February 2020 **Member of the scientific board for the Innovative PhD Program in Environmental Sustainability and Wellbeing**

University of Ferrara, Interdisciplinary, intersectoral and international PhD course.

November 21, 2019 **Teaching at I.D.A.U.P. - International Doctorate in Architecture and Urban Planning**

University of Ferrara, Department of Architecture, Italy

Lesson: "Energy assessment of historic buildings: criticalities and scenarios of intervention", within the 6th international workshop "Innovative studies and processes for achieving high standards of energy-environmental efficiency for the historical heritage".

March 11, 2019 **Teaching at I.D.A.U.P. - International Doctorate in Architecture and Urban Planning**

University of Ferrara, Department of Architecture, Italy

Lessons: 1) "Part 1: Assessment of diagnosis tools for the energy retrofit of historic heritage. Part 2: A

strategy for the planning of deep renovation policies of public buildings”,

2) “How to build a successful MSC – IF proposal. Criticalities, strategies and evaluation of the project “hello - Heritage Energy Living Lab onsite”, within the 5th international workshop “Energy efficiency and environmental sustainability scenarios: from intervention on the historic heritage to innovative solutions for the living future. Research methodologies, case-studies application, experimental activities”.

February 12,
2018

Teaching at I.D.A.U.P. - International Doctorate in Architecture and Urban Planning

University of Ferrara, Department of Architecture, Italy

Lesson: “Part 1: Weakness and potentiality of the energy diagnosis tools for the enhancement of historic heritage. Part 2: Deep renovation of wide buildings stock: assistance tool for public Administrations in the intervention planning phase”, within the 4th International Workshop “Innovative doctoral training strategies for excellence in outcomes”.

November 18,
2016

Teaching at I.D.A.U.P. - International Doctorate in Architecture and Urban Planning

University of Ferrara, Department of Architecture, Italy

Lesson: “UniFe_Historical Building - Energy Efficiency Tools for Historical Buildings Heritage”, within the Third International Workshop “Architectural technology design & research seminars”.

June 23, 2014

Teaching at I.D.A.U.P. - International Doctorate in Architecture and Urban Planning

University of Ferrara, Department of Architecture, Italy

Lesson: “Analysis of calculation method of residual energetic performance and corrective proposals” within the International Workshop “Sustainability & Conservation toward a tangible future. A case of Ferrara’s Future Sustainability. A workshop experience in Ferrara”.

December 9,
2013

Teaching at PhD course “Technology of Architecture and Survey and Representation of Architecture and the Environment”

University of Napoli Federico II, Department of Architecture, Italy

Lesson: “ Evaluation of methods for calculating the energy performance of historic heritage”.

4.9. Management activity in the teaching field

June 2019 –
on-going

Member of the Committee for the Double Degree (Course of Studies in Architecture) between the University of Parma and the Ecole D’Architecture de L’Université Internationale de Rabat (Morocco)

University of Parma, Department of Engineering and Architecture, Italy

5. RESEARCH ACTIVITIES AT ITALIAN AND FOREIGN INSTITUTIONS

5.1. Previous position

July
2021-
May
2024

Winner of the call for applications for the role of fixed-term researcher (art. 24, paragraph 3, letter b) of law no. 240/2010 - SC 08 / C1 - SSD ICAR / 12)

University of Ferrara, Department of Architecture, Italy.

April 2019 –
June 2021

Winner of the call for applications for the role of fixed-term researcher (art. 24, paragraph 3, letter a) of law no. 240/2010 - SC 08 / C1 - SSD ICAR / 12)

University of Parma, Department of Engineering and Architecture, Italy.

5.3. Research Fellow

October 2015
- March 2019

Winner of the call for applications for a annual fellowship in Architectural Technology, renovated for 3 years

University of Ferrara, Department of Architecture, Italy

Research title: *Sustainable Unife. Energy screening of the building stock of the University of Ferrara and preliminary proposals for the planning phase of the retrofit interventions.*

M. Calzolari was responsible for data collection, energy simulation in quasi-steady state and dynamic conditions of the University buildings, definition of retrofit strategies and results' analyses. M. Calzolari also coordinated the research activities and the work of the other researchers involved with a scholarship.

5.4. Affiliations to research networks and scientific societies

January 2020
– June 2021

Member of CIDEA - Centro Interdipartimentale per l'energia e l'ambiente

University of Parma, Italy

The CIDEA accredited centre provides support regarding renewable energy sources, the processes of generation, conversion, transport, management and use of energy and the impact on the environment and living beings.

August 2015
– on-going

Member of SITdA – Italian Society of Architectural Technology, with activities in the “Nearly Zero Energy Building – nZEB” cluster

The final aim of the "n-ZEB - Nearly Energy Building" cluster is to address research activities on issues relating to process and design aspects in order to achieve the highest energy efficiency standards of new or existing buildings.

5.5. Participation in editorial committees of scientific essays and journals

February
2020 - on-
going

Reviewer for the international journal *Techne - Journal of Technology for Architecture and Environment*

Class A (Area 08) journal, FUP Firenze University Press

- April 2019 **Member of the Scientific board and reviewer for papers of ISES SWC 2019/SHC 2019: “Solar World Congress” and “International Conference on Solar Heating and Cooling for Buildings and Industry**
- International conference with double blind peer reviews of papers.
- December 2011 – on-going **Reviewer for the international journal "Territorio"**
- Class A (Area 08) journal, Franco Angeli Edizioni
- November 6 – 15, 2017 **Reviewer for the International Conference on Seismic and Energy Renovation for Sustainable Cities (SER4SC 2018)**
- International Conference in Catania, Italy 1st to 3rd February 2018.
- January 2017 – on-going **Member of the Editorial Committee of the Series of Volumes "Designing for sustainable construction"**
- Maggioli Editore, Santarcangelo di Romagna (RN), double blind peer review.
- January 2017 – on-going **Member of the Scientific Committee of the Scientific Journal "Recupero e conservazione Magazine".**
- Scientific journal (Area 08), Milano DeLettera Editore
- September 2016 – on-going **Reviewer for the scientific international journal Energy Research & Social Science**
- Elsevier Editorial System
- April 2009 – on-going **Curator in name of the Architettura>Energia Research Centre of the “Energy efficiency” column of the Scientific journal "Recupero e conservazione" (later "Recupero e conservazione Magazine").**
- Scientific journal (Area 08), Milano DeLettera Editore

5.6. Visiting fellowship in foreign institutions

- November - December 2011 **Visiting scholar at the University of Nottingham, Department of the Built Environment**
- University of Nottingham, Department of Built Environment (England)
- During the visiting scholar period she participated in the research and development of scientific experimentation methods for the direct energy survey of newly and recently built residential buildings carried out in collaboration with the group directed by prof. Mark Gillot (Research name: Creative Energy Homes). For the research activity, mostly of field experimentation, Marta Calzolari collaborated in the installation and start of the first tests (co-heating test) on a sample building in the Nottingham University campus and in the first phases of monitoring of results. The results of the research allowed to design and a new phase of field experimentation carried out at the Department of Architecture of Ferrara.

6. THIRD MISSION ACTIVITIES

September
25-26, 2019

Participation in “Science is Wonderful! 2019 - Marie Skłodowska-Curie Actions”

European Commission, Tour & Taxis - Avenue du Port 86C, 1000 Bruxelles

"Science is wonderful!" is an exhibition that opens the world of science to the public. The main research topics funded by the European Community through the projects are presented to schools, families and young people in a popular way. M. Calzolari participated in the writing of the proposal to participate in the event, in the design of the stand and then in the event itself together with her colleague Marie Curie Fellow L. Dias Pereira presenting the H2020 project "HeLLo - Heritage energy Living Lab onsite".

October 26,
2019

Lesson at Unijunior Parma – University for children

University of Parma, Department of Engineering and Architecture, Italy.

Lesson Title: " There are architects also in Zootropolis. The architecture of animation: what do comics and cartoons teach us about characters and the role of architecture?"

February 18,
2017

Lesson at Unijunior Ferrara – University for children

University of Ferrara, Department of Architecture, Italy.

Lesson Title: " There are architects also in Zootropolis. The architecture of animation: what do comics and cartoons teach us about characters and the role of architecture?"

7. PROFESSIONAL ACTIVITY

September
2013 -
September
2015

Professional collaboration with the Engineering Company AZ srl Consulting & Commercial Engineering, Ferrara, Italy, as an expert in energy efficiency and environmental sustainability. Preliminary, executive and final design in projects for private and public clients.

Collaboration activities in the following projects:

Private clients:

- Coordinator of the architectural aspects in the design of an industrial complex for the glass production in Angola;
- Preparation of practices relating to the request for regional contributions following the damage caused by the earthquake of May 2012 (MUDE and SFINGE platform) for the integration of energy efficiency strategies (increase of the regional contribution to reconstruction);
- Preliminary, definitive and executive design of a single-family house in San Felice sul Panaro (Modena, Italy) in energy class A;
- Preliminary, definitive and executive design of a portion of a single-family house in Bondeno (Ferrara, Italy) in energy class A;
- Design and preparation of practices for seismic restoration and improvement of several farm buildings in the provinces of Ferrara, Modena and Mantua;
- Preparation of technical documentation for competition;

Public clients:

- Preliminary design for the restoration and seismic improvement of the Social Theater of Finale Emilia (Modena, Italy), control of the aspects of seismic improvement in a listed building and enhancement of the building's original climate control elements.

July 2010 -
May 2013

Member of the research group for the definition of architectural lighting principles with LED technology for historic buildings, with experimentations for a lighting system in Palazzo Tassoni in Ferrara, Italy

Rover Atelier, Bologna and Architettura>Energia Research centre, University of Ferrara, Department of Architecture, Italy.

Principal investigator: prof. Pietromaria Davoli

M. Calzolari has actively participated in the development of an innovative approach for the design of night lighting to be applied in historic architectural contexts, also through field tests. The project won the first prize at the "Transformed by Light" ideas competition, held in the occasion of the "Notti di Luce" Festival, Bergamo, Italy (August 2011).

October 2012
- September
2013

Professional collaboration with Studio Del Boca Studio, Milano, Italy

Architectural and interior design. Member of the design group for:

- a residential building in Fidenza (Parma, Italy);
- Outdoor swimming pool with related services and bar for the Hotel "Le Querce" in Salsomaggiore Terme (Parma, Italy);
- Refurbishment of an attic for residential use in Fidenza (Parma, Italy);
- Design proposal for the Italian pavilion for Expo 2015 in Milan.
- Several architectural competitions in collaboration with the Barcelona architecture studio MDM Arquitectos.

March 2012

**Member of the winning group of the Design Competition art. 99 of Legislative Decree 163/2006 concerning the presentation of the preliminary project for the new school complex in via Piave in Castello di Godego (Treviso, Italy).
First place project**

Design team: arch. G. Inglese, prof. arch. P. Davoli, arch. V. Belpoliti, arch. M. Calzolari, arch. S. Fabbri, arch. S. Mezzogori, ing. A. Domenicali.

March 2011

**Member of the winning group of the competition of ideas for enhancement interventions of the Cossar archaeological area (Udine, Italy).
Third place project**

Design team: Prof. Arch. Pietromaria Davoli, arch. Gaspare Inglese, arch. Vittorino Belpoliti, arch. Marta

Calzolari, arch. Stefano Mezzogori.

The project has been published in: AA.VV., "Enhancement of the Cossar Area, The projects of the Competition of ideas ", Aquileia Foundation, Udine, Italy, 2012, pp. 25-29.

June 2011

**Member of the winning group of the competition of ideas "Enhancement of the San Pietro Centre in Arco" (Trento, Italy).
First place project**

Design team: Prof. Arch. Pietromaria Davoli, arch. Gaspare Inglese, arch. Vittorino Belpoliti, arch. Marta Calzolari, arch. Sara Fabbri, arch. Stefano Mezzogori.

8. PARTICIPATION, ORGANIZATION, DIRECTION AND COORDINATION OF NATIONAL AND INTERNATIONAL RESEARCH GROUPS

The scientific activity has been carried out since 2008 mainly in the field of technological innovation for new construction, timber construction systems and, with particular attention, in the context of environmental, functional and energy requalification of existing buildings. Since the graduation thesis and since 2010, having obtained admission with a ministerial scholarship to the 25th cycle of the PhD in Architectural Technology, the research has focused on the energy efficiency of historic heritage. During the first phase, the application of the main technological solutions for increasing energy performance of historic buildings was examined. Then, Marta Calzolari assessed a critical evaluation of the current methods for the calculation of energy performance, developed for new buildings, when applied to historic ones, with the aim of developing specific calculation tools for this building's typology. She has also focused its research interest to define intervention guidelines for the recovery of historic villages or existing buildings' stocks. She is author and co-author of over 70 scientific products, published in national and international journals/volumes of the field.

8.1. Direction or participation in a research group characterized by collaborations at national or international level

2019 - 2021 **Holder of the FIL fund - research products 2019**

University of Parma, Department of Engineering and Architecture, Italy.

The FIL fund is attributed following evaluation procedures of research products based on Scientific Areas.

2018- on-going **Member of the group of the Research Unit of the University of Ferrara and coordinator of the working group for the Department of Engineering and Architecture of the University of Parma for the PRIN 2017 project**

University of Parma, Department of Engineering and Architecture, Italy and University of Ferrara, Department of Architecture, Italy

PRIN 2017 - Research projects of relevant national interest - Call 2017 (Prot. 20177JHMLA).

Title of the research project: "TECH-START - key enabling TECHNOlogies and Smart environment in the Age of gReen economy. Convergent innovations in the open space / building system for climate mitigation". Principal Investigator: prof. Mario Rosario Losasso (University of Napoli Federico II).

Research Units: University of Napoli Federico II, Politecnico di Torino, University of Roma "La Sapienza", University of Roma 3, University of Ferrara, CNR - Consiglio Nazionale delle Ricerche.

Abstract del progetto presentato:

The research focuses on the relationship between "open space – building" systems and KETs (Key Enabling Technologies), to design smart environments oriented to climate mitigation. Smart dimension of outdoor and indoor spaces, supported by digital technologies and low-cost microelectronic devices, can play a key role in reducing climate impacts. By the managing of data knowledge, scenarios simulation, strategies and models, pilot projects experimentation, the research aims to prefigure and elaborate new life styles and low-tech retrofitting processes, for reducing greenhouse gas emissions. Through huge quantities of data coming from observation and simulation models, the study focuses on the refurbishment of existing building stock, on dwellings and open spaces, on construction material and energy fluxes. Technological and environmental retrofitting allows to reduce energy demand and improves performance of the open space-building systems integration (greening, insulation, HVAC systems efficiency). The rising of new behaviours shapes innovative living spaces and new conception of adaptive comfort in dwelling. Low cost retrofitting technologies, "0 km" processes and open access to digital innovations are further elements of the circular economy that the study aims to address.

October 1, 2018 – September 30, 2020 **Co-Supervisor and team member for the project "HeLLo - Heritage energy Living Lab on site" H2020 – MSCA-IF-2017-EF Marie Curie Individual Fellowships Standard**

University of Ferrara, Department of Architecture, Italy

M. Calzolari has played a primary role in the writing of the winning proposal and she has supported prof. P. Davoli in supervising the activities of the Portuguese researcher (dr. Luisa Dias Pereira).

Project details: Call: H2020 - MSCA-IF-2017-EF – Marie Skłodowska-Curie Individual Fellowships (IF-EF). Start date: 1/10/2018 - End date: 30/09/2020, EU contribution to UniFe: 168.277 €

Abstract del progetto:

The energy refurbishment of heritage, field of the HeLLo proposal, is a priority of the EU policies to reduce fuel consumption. Historic buildings constitute a great amount of the EU existing stock, whose richness, coupled with a social and cultural value, especially in the Italian context, justifies the fellowship location. However, the lack of

specific tools for the intervention on this kind of buildings and the scarcity of data about their energy state-of-the-art, make them mostly excluded from core strategic plans of the Member States, losing a great chance towards a net zero-energy future. **OBJECTIVE OF THE PROPOSAL** HeLlo aims at spreading awareness about the most common energy retrofit solutions and increase knowledge of their application in historic buildings, hoping to contribute in the EU refurbishments strategies issues related to the historic heritage. There are two specific objectives: to check the compatibility of technologies already certified and applied to new buildings on historic constructions and, to create a structured dissemination programme that opens the doors of laboratory life to the outside of the academic boundaries. **HOW THE OBJECTIVE WILL BE ACHIEVED** Results will be achieved through a twofold strategy: 1) the creation of a true experimental laboratory in which to test such technologies and quantifying their real performance; 2) a project of 'dissemination laboratories' that offers an 'experimental experience' that makes known the world of investigation by the practice of the living lab. **RELEVANCE TO THE WORK PROGRAMME** The achievements of the research are directed to overcome the criticalities related to energy retrofit of historic buildings towards a deep enhancement of EU heritage performance, and to ensure that the EU reaches the objectives stated in the H2020 work programme. HeLlo is an important step in my career to fulfil the ambition to become an independent technology and energy expert and getting a tenure track position within EU.

September
2017 – on-
going

Member of the international research group for the project “Task 59: Renovating Historic Buildings Towards Zero Energy”

IEA International Energy Agency (Leader), Eurac Research Bolzano, UCL, BBRI (BE), Fraunhofer ISE & IBP (DE), SBI (DK), POLIMI (IT), Carrig/ICOMOS (IE), Tecnalia, Cupa innovacion (ES), PSU (US), Auckland and Victoria University (NZ), SUPSI (CH) University of Ferrara, Department of Architecture, Italy

The international working group aims to develop solutions for energy recovery for the reduction of consumption, respect the cultural character and contribute to safeguarding the cultural and architectural value of these buildings.

M. Calzolari participated in the Task 59 / Annex 76 Kick-off meeting among the members of the working group, bringing the experience of the research group to which she belongs, at Edinburgh on 23-25 October 2017. M. Calzolari is actively taking part in the activities of the group in particular as regards the preliminary work of subtask B.1 "Compiling existing documentation on tools, methods and guidelines".

January -
November
2016

Member of the design research group for the "Definition of design methods for the construction of buildings with timber construction systems in the city of Beijing, China and on the island of Malta".

Research promoted by XLAM DOLOMITI s.r.l., Castel Ivano, through CONSORZIO FUTURO in RICERCA, Ferrara, Italy, and carried on at the Architettura>Energia research centre of the University of Ferrara, Department of Architecture, Italy

The project concerns an architectural elevation destined to host a center for the promotion of the made in Italy building chain ("Technological innovation dissemination center") in the city center of Beijing (Beijin, People's Republic of China), as an expansion of the "arch- harmony" and a residential settlement of about 70 residential units near the coast (Qalet Marku) on the island of Malta. M. Calzolari participated in the development of the project for the promotion center in Beijing.

November
2015 -
February
2017

Change leader in the core group of stakeholders 2015-2017 of GBC Italia for the European project BUILD UPON (HORIZON 2020), Europe Regional Network, World Green Building Council.

Green Building Council Italia - GBC Italia

The Horizon 2020 BUILD UPON project, which involved a consortium of 14 partners (13 European GBCs and the World GBC), aims to create the conditions to favor the implementation of effective large-scale strategies for the energy requalification of the building stock in Member States of the Union.

Marta Calzolari, as a member of the Architettura>Energia Research centre, collaborated with her know-how acquired in the field of energy and environmental requalification of the existing building heritage. She participated in the preparatory meetings for the identification of the stakeholders and the topics to be treated during the national workshops foreseen by the project for the implementation of the strategies and participated in some of the workshops, both as a speaker and as a member of the working group.

September
2015 – on-
going

Member of the research group “n-ZEB - Nearly Energy Building”, thematic research clusters

SITdA – Italian Society of Architectural Technology

The objective of the "n-ZEB - Nearly Energy Building" cluster is to address research activities on issues relating to procedural and design aspects in order to achieve the highest energy efficiency standards of

new or existing buildings, for the enhancement of the passive bioclimatic aspects of the building, for the reduction, rationalization and optimization of primary energy consumption by acting on the technological and environmental system of the building. Coordinator: Prof. Fabrizio Tucci, University Roma "La Sapienza".

November
2014 -
December
2016

Member of the research group for the project "INNO-ZEB / INNOvative active and passive technologies for nearly Zero Energy Buildings" (2014-2016). Funded (first place) by the University of Ferrara as part of the "University Internationalization Initiatives - Year 2014".

University of Ferrara, Department of Architecture, Italy (principal investigator prof. P. Davoli), University of Auckland - National Institute of Creative Arts and Industries, School of Architecture and Planning (New Zealand), Tianjin University – School of Architecture (People's Republic of China), University of Minho – School of Architecture (Portugal).

The project has initiated new teaching and research processes in the field of new technologies and methods for the design of appropriate and affordable "Nearly zero energy buildings" ("NZEB"), even in the case of retrofitting the existing building stock, in order to significantly reduce energy consumption. Marta Calzolari has carried out both research activities in the analysis of the theme declined according to the different countries involved in the project, and coordination of the organizational aspects of the exchange moments (meetings and conferences) and for the definition of new agreements with the universities involved.

February
2014 -
February
2018

Member of the research group FAR – Fondo di Ateneo per la ricerca (University Fund for Research) – Year 2014

University of Ferrara, Department of Architecture, Italy

Research topic: designing sustainable low-cost housing. Design, technology, materials, systems, safety. Project leader: Andrea Rinaldi

February
2013 -
February
2016

Member of the research group FAR – Fondo di Ateneo per la ricerca (University Fund for Research) – Year 2013

University of Ferrara, Department of Architecture, Italy

Research topic: architecture and design of wooden buildings in the Mediterranean area: sustainability_security_durability. Project manager: prof. Pietromaria Davoli

February
2012 -
February
2015

Member of the research group FAR – Fondo di Ateneo per la ricerca (University Fund for Research) – Year 2012

University of Ferrara, Department of Architecture, Italy

Research topic: Smart & Quali(ci)ty. Regeneration and energy efficiency for a sustainable quality of life. Project leader: prof. Pietromaria Davoli

October 2012

Member of the research group for the design study for the functional and energy-environmental redevelopment of the industrial area C.A.P. and M.A.P.R.E. in Reggio Emilia (Italy) and tutor at the design workshop "Quali (ci) ty. Redesign and energy efficiency for a sustainable quality of life" at the Made Expo Milano Architecture Design Building, October 17-20, 2012.

University of Ferrara, Department of Architecture, Italy

Proposals for energy and environmental recovery strategies for the redevelopment of the Agricultural Consortium of Reggio Emilia, with a view to raising the quality of life and creating a Smart City. M. Calzolari participated in the working groups as a tutor to direct and stimulate the activities of the involved students.

January 2011
- September
2014

Member of the Scientific Technical Committee "Materials and Resources" for LEED Italy (Green Building Council).

Green Building Council Italia - GBC Italia

M. Calzolari participated in the adaptation to the new Italian building context of the corresponding US LEED certification system and in the drafting of the user manual in Italian for sustainable certification with the LEED system (GBC Home Residential Building Manual. To design, build and renovate residential buildings - 2011 edition)

February
2011 -
February
2014

Member of the research group FAR – Fondo di Ateneo per la ricerca (University Fund for Research) – Year 2011

University of Ferrara, Department of Architecture, Italy

Research topic: Compact cities and eco-districts with high energy efficiency and environmental sustainability.

Project leader: prof. Pietromaria Davoli

June 2010 -
July 2015

Member of the research group for the "Study of design strategies for energy and environmental efficiency of the historic village of Caporciano"

University of Ferrara, Department of Architecture, Italy

Project leader: prof. Pietromaria Davoli

M. Calzolari has actively participated in the energy in-situ survey of the data necessary for the calculation of the energy performance of the village's buildings through a fast analysis system. It also contributed to the development of the expeditious tool, useful for assessing the state of art and defining energy requalification strategies.

January 2009
- December
2012

Member of the research group "British-Italian partnership for young researcher", in collaboration with the University of Nottingham, Department of the Built Environment (United Kingdom)

University of Ferrara, Department of Architecture, Italy - University of Nottingham, Department of Built Environment, United Kingdom.

The main objective of the program, born from the joint collaboration between the Ministry of University and Research and the British Council, is to encourage research, both by public bodies and university institutions, in Italy and the United Kingdom. Marta Calzolari collaborated with the Department of the Built Environment group for the development of sustainable design and energy saving techniques.

October 2009

Member of the project research group for the urban, functional and energy-environmental redevelopment of a social housing district: the Barca district in Bologna.

Ottagono Journal (Compositori Editore, Bologna, Italy), University of Ferrara, Department of Architecture (Architettura>Energia research centre and D.I.A.P.R.E.M) and University of Bologna, Department of Architecture, Italy

The project has been developed during the Workshop "The future of the Building. Energy requalification and House Plan" held at the SAIE 2009 Bologna International Exhibition, as part of the SAIEnergy 2009 initiative (October, 28-31 2009).

June 2009

Member of the design research group and tutor at the workshop "From the water to the walls: curtains and connections from S. Antonio to S. Pietro" (project leader prof. P. Davoli).

University of Ferrara, Department of Architecture; Italy

Studies and project proposals relating to the energy and environmental requalification of historic centre (both building and landscape).

M. Calzolari participated in the organization and preparation of the workshop and then at the workingtables as a tutor directing the students' activities.

January 2009
– on-going

Member of the Architettura>Energia research centre, of the Department of Architecture of the University of Ferrara (Coordinator: prof. A. Rinaldi e then prof. P. Davoli).

University of Ferrara, Department of Architecture; Italy

M. Calzolari has actively participated, since its establishment, in all the research activities of the centre, in particular with regard to the theme of the energy requalification of existing buildings, of recent (social housing) and historical, with testimonial value. Furthermore, M. Calzolari deals with all organizational matters relating to the activities of the centre (conferences, courses, dissemination).

8.2. Responsibility and Co - responsibility for scientific studies and researches

November
2016 – 2017

Co-project leader of the project “#HeLivingLabs – Heritage’s energy Living Labs”

University of Ferrara, Department of Architecture and Eurac Research Bolzano, Italy

Project leaders: M. Calzolari, P. Davoli, E. Lucchi.

The project has created a real experimental laboratory in which testing and verifying the compatibility of some building insulation technologies, already certified and applied to new buildings, on the historic building, quantifying its real energy performance. Sponsor partner of the project ROCKWOOL Italia.

October 2016
- November
2018

Member of the steering committee, responsible for the "Architectural Design Task" for the University of Ferrara and project architect of the team selected for the Solar Decathlon Middle East 2018 international competition.

University of Ferrara, Department of Architecture, Architettura>Energia Research Centre and University of Sharjah, Architectural Engineering Department, University City, Sharjah, United Arab Emirates

Solar Decathlon is an international competition in which universities coming from all over the world work to design, build and manage a grid-connected and energy self-sufficient house. M. Calzolari was responsible for coordinating the activities of the Architettura>Energia research center for the project. Among the numerous activities carried out:

- Participation in the 1st International “Know-howse” Workshop, Sharjah University (United Arab Emirates). Architectural Engineering Department - University of Sharjah (online), October 27, 2016.
- Organization and participation in the 2nd International Team Know-Howse Workshop, University of Ferrara (IT) and University of Sharjah with the speech entitled "Wood construction: design, technological system, and XLAM production", Ferrara June 28, 2017.
- Participation in the final contest at the Mohammed bin Rashid Al Maktoum Solar Park in Dubai (United Arab Emirates) November 10-20, 2018: construction of the building prototype and opening of the expo to the public. M. Calzolari took part in all the activities planned during the event as a leader together with fellow members of the group of students.

October 2015
- March 2019

Operative coordinator of the research "Sustainable Unife. Energy screening of the building heritage of the University of Ferrara and preliminary proposals for the planning phase of retrofit interventions" (project leaders: proff. P. Davoli, A. Rinaldi, G. Bizzarri)

The project started from the university administration's need to have suitable tools for an effective energy audit of its real estate assets. The result of the work is the development of a rapid analysis system of the state of the university building heritage to plan the retrofit interventions, preliminary evaluating both the effects of energy improvement and the cost/benefit ratio of the intervention strategies, thanks to a simplified system. M. Calzolari was the operational coordinator of the project and managed the research activities and the involved personnel, as well as she was responsible for the energy analyses conducted in a dynamic regime of the case studies.

July 2015 –
April 2019

Coordinator, within the Architettura>Energia Research Centre, of the placements of the international research program Pioneers into Practice (PiP)

Aster – Rete Alta Tecnologia Emilia Romagna and University of Ferrara, Department of Architecture; Italy

Pioneers into Practice (PiP) is a mobility program coordinated by Aster together with partners from the Universities of Hessen (Germany), West Midlands (United Kingdom), Comunidad Valenciana (Spain), Central Hungary (Hungary) and Lower Silesia (Poland). The activities take place as part of the Climate KIC (Knowledge and Innovation Communities) program. Marta Calzolari took care, in the name of the architettura>energia research centre, of selecting the most suitable candidates to guide them in the research path during the placement.

May - July
2012

Co-coordinator for the aspects of energy simulation for the integrated study of design strategies for energy efficiency, the integration of systems for the production of energy from renewable sources and the preliminary geological investigations of the historic village of Apice Vecchia (Benevento, Italy)

Municipality of Apice Vecchia, University of Ferrara, Department of Architecture, Italy

Project leaders: prof. Pietromaria Davoli, prof. Andrea Rinaldi, prof. Giacomo Bizzarri, prof. Riccardo Caputo.

The integrated study was carried out as technical support for the feasibility study pursuant to Article 14, paragraph 2, of the Presidential Decree n. 207/2010, to be placed at the basis of the competition (art. 153 of D.L.vo 163/2006) for the Project Financing of the urban redevelopment of Apice Vecchia historic centre.

April 2011 -
February
2012

Operative coordinator of the research "Diagnosis of a Real Housing Envelope (DrHouseE)" for the development of an instrumental system of energy measurement in the field specific for historic buildings, Department of Architecture and Physics Department of the University of Ferrara (Project leader: prof. Pietromaria Davoli).

University of Ferrara, Department of Architecture and Department of Physics and Earth Science, Italy

M. Calzolari designed and developed the experimental procedure for defining the survey system and coordinated the activities between the Department of Architecture and the Department of Physics.

9. NATIONAL AND INTERNATIONAL CONFERENCES, ORGANIZATION OF CONFERENCES, SEMINARS AND WORKSHOPS

9.1. Speaker at national and international conferences

1. Participation as speaker in the International Webconference 2020 "HeLLO project final event" within the project MSCA IF Horizon2020 "HeLLO – Heritage energy Living Lab onsite", University of Ferrara, Department of Architecture, September 28, 2020. Speeches title: "The HeLLO project – Framework and objectives" and "The HeLLO project – Main results".
2. Participation as speaker in the Conference 2019 "I sistemi per l'isolamento dall'interno nell'architettura storica monumentale: criticità, soluzioni e l'Onsite Lab Tour del progetto HeLLO" [Internal insulation systems in monumental historic architecture: critical issues, solutions and the Onsite Lab Tour of the HeLLO project], organised by University of Ferrara, Department of Architecture, Architettura>Energia research centre, Ferrara December 12, 2019. Speech title: "Le simulazioni termiche degli edifici storici" [Thermal simulations of historic buildings].
3. Participation as speaker (invited) in the seminar "Il restuaro dell'architettura moderna: il cantiere di restauro. Il restauro dell'architettura moderna: teoria e prassi" [The restoration of modern architecture: the restoration site. The restoration of modern architecture: theory and practices], organised by Ordine degli architetti di Modena, Modena October 18, 2019. Speech title: "Alle radici della sostenibilità: valutazione energetica del patrimonio esistente; criteri e scenari di intervento" [At the roots of sustainability: energy assessment of existing buildings; intervention criteria and scenarios].
4. Participation as speaker (invited) in the "National Conference Impulse MED Project" organized by the Municipality of Ravenna (Italy) within the project "Interegg Mediterranean Impulse", Rimini Maggio 30, 2019. Speech title: "Protocollo per l'elaborazione speditiva e semplificata di scenari di riqualificazione energetica a supporto delle Pubbliche Amministrazioni" [Protocol for the rapid and simplified processing of energy requalification scenarios to support Public Administrations].
5. Participation as speaker (invited) in the seminar "Efficienza energetica nel patrimonio culturale. Linee di indirizzo, programmi, esperienze" [Energy efficiency in cultural heritage. Guidelines, programs, experiences], organised by Ministero per i Beni e le Attività Culturali, Segretariato Regionale per la Liguria, Palazzo Reale, Genova, October 2, 2018. Speech title: "Protocolli speditivi per il supporto alle Pubbliche Amministrazioni nella fase di programmazione e comparazione preliminare di scenari per la riqualificazione energetica del patrimonio storico monumentale" [Simplified protocols to support Public Administrations in the planning phase and preliminary comparison of scenarios for the energy requalification of the historic monumental heritage].
6. Participation as speaker (invited) in the international kick-off meeting "C2 Intensive course on Building Information Modelling (BIM), and communication and socio-psychological skills" within the Erasmus + project "DIAGNOSIS Project 2017-1-ES01-KA203-038254" (Universitat Politècnica de Catalunya - Barcelona Tech, Politechnika Warszawska, Rehabimed, University of Ferrara), Ferrara Italy 19-23 March 2018. Speech title: "Experimental models for the energy performance evaluation of historical buildings".
7. Participation as speaker in Kick-off meeting of international project Task 59/Annex 76 "Renovating Historic Buildings Towards Zero Energy" organised by IEA International Energy Agency, Eurac Research Bolzano, UCL, BBRI (BE), Fraunhofer ISE & IBP (DE), SBI (DK), POLIMI (IT), Carrig/ICOMOS (IE), Tecnalia, Cupa innovacion (ES), PSU (US), Auckland and Victoria University (NZ), SUPSI (CH), University of Ferrara (IT), Edinburgh, October 23-25, 2017. Speech title: "Parametric energy assessment tool to ease the planning of retrofit actions. The Case study of the University of Ferrara".
8. Participation as speaker (invited) in the roundtable coordinated by prof. Perriccioli within VII national conference SITdA (Italian Society of Architectural technology) "Nuovi ambienti della ricerca per la Tecnologia dell'Architettura" [New research fields for Architectural Technology], Casa dell'Architettura, Roma, July 7, 2017.
9. Participation as speaker in international seminar of "2nd International Team Know Howse Workshop", University of Ferrara (IT) and University of Sharjah (United Arab Emirates): Speech title: "Wood construction: design, technological system, and XLAM production", Ferrara June 28, 2017.

10. Participation as speaker in the conference "La riqualificazione energetica profonda del patrimonio edilizio pubblico: panorama normativo, criticità e opportunità, metodi e strumenti operativi" [The deep energy requalification of the public building heritage: regulatory framework, critical issues and opportunities, methods and operational tools], within the Salone dell'Economia, della Conservazione, delle Tecnologie e della Valorizzazione dei Beni Culturali e Ambientali 2017, March 22-24, 2017, Ferrara. Organised by University of Ferrara, Department of Architecture, Architettura>Energia Research centre, Eurac Research Bolzano and Teknehub - Technopole of the University of Ferrara. Speech title: "Strumenti di supporto alla programmazione delle strategie di riqualificazione energetica di ampi patrimoni immobiliari" [Support tools for planning energy strategies for large real estate assets].
11. Participation, as member of the "investigating community", in the debate and works of the Future Search Conference "Progettare Resiliente_Resilient Design", organised by SITdA (Italian Society of Architectural technology) at Made Expo 2017, Milano, March 9-10, 2017. During the presentation of the results of the working days, M. Calzolari was the spokesperson in name of the group.
12. Participation as speaker (invited) in the Build Upon Italian workshop #4 "La riqualificazione del patrimonio in Social Housing" [The redevelopment of assets in Social Housing], Napoli, January 20, 2017, organised by GBC Italia within the Build Upon project (Horizon 2020). Speech title: "Metodologie speditive per la programmazione preliminare e l'implementazione di strategie di riqualificazione dei patrimoni immobiliari" [Simplified methodologies for the preliminary planning and implementation of redevelopment strategies for real estate assets].
13. Participation as speaker (invited) in the conference "Innovazione nell'isolamento interno" [Innovation in internal insulation], Bolzano, November 25, 2016, organised by IDM Sudtirol Alto Adige. Speech title: "L'importanza di valutare correttamente lo stato di fatto energetico degli edifici storici. Errori comuni e possibili soluzioni per una corretta progettazione degli interventi di retrofit" [The importance of correctly energy assessing of historic buildings. Common mistakes and possible solutions for a correct design of retrofit interventions].
14. Participation as speaker (invited) in the conference "Parola d'ordine: risanare l'edilizia esistente, case history e strategie d'intervento" [Codeword: renovate existing buildings, case histories and intervention strategies], within "Settimana della Bioarchitettura e della Domotica" [Week of bio-architecture and home automation], November 14-18, 2016, Modena, organised by AESS – Agency for Energy and Sustainable Development in Modena, Fondazione Cassa di Risparmio di Modena and Fondazione Cassa di Risparmio di Mirandola. Speech title: "Verso un campus sostenibile: screening energetico e proposte preliminari di interventi di retrofit sul patrimonio edilizio dell'università" [Towards a sustainable campus: energy screening and preliminary proposals for retrofit interventions of the university's building stock].
15. Participation as speaker in the 41st IAHS World Congress on Housing "Sustainability and Innovation for the Future", Albufeira, Algarve, Portugal, September 13-16, 2016, organised by ITECONS. Speech title: "Energy screening of wide building stock".
16. Participation as speaker in the SITdA (Italian Society of Architectural technology) international conference "Nuove prospettive di efficienza energetica e qualità ambientale per il patrimonio edilizio esistente. Riflessioni e strumenti per il raggiungimento degli standard NZEB nell'up-cycling degli edifici" [New perspectives of energy efficiency and environmental quality for the existing building stock. Reflections and tools for achieving NZEB standards in building up-cycling], Ferrara, July 4-5, 2016, organised by University of Ferrara, Department of Architecture, Architettura>Energia Research centre and Ordine e Fondazione Architetti Ferrara, with the patronage of IUSS Ferrara and Camera di Commercio di Ferrara. Speech title: "Dai protocolli speditivi alle indagini di dettaglio. Unife sostenibile: screening energetico del patrimonio di Ateneo" [From simplified protocols to detailed investigations. Sustainable Unife: energy screening of the University buildings stock].
17. Participation as speaker (invited) in the conference "Nuove opportunità e procedure per l'edilizia sostenibile: Conto termico, Fondi Kyoto e CAM Edilizia" [New opportunities and procedures for sustainable construction: Conto termico, Kyoto Funds and CAM Edilizia], organised by GBC Green Building Council Italia, Bologna, with the patronage of Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Enea, Consiglio Nazionale degli Ingegneri, CNA Costruzioni, Legambiente e Kyoto Club. May 24, 2016. Speech title: "Metodi e strumenti di indagine speditiva per indirizzi preliminari di retrofit su ampi parchi edilizi" [Simplified investigation methods and tools for preliminary retrofit strategies on large building assets].
18. Participation as speaker in the conference "L'energia dell'edificio storico. Riqualificazione energetica e ambientale del patrimonio culturale: scenari di intervento, strumenti e casi studio" [The energy of

- the historic building. Energy and environmental requalification of cultural heritage: intervention scenarios, tools and case studies], within Salone dell'Economia, della Conservazione, delle Tecnologie e della Valorizzazione dei Beni Culturali e Ambientali 2016, Ferrara, April 6, 2016. Scientific coordination and organisation by University of Ferrara, Department of Architecture, Architettura>Energia Research centre, Eurac Research Bolzano and Teknehub - Technopole of the University of Ferrara. Speech title: "Protocolli speditivi per lo studio e il miglioramento dell'efficienza energetica nei cluster storici" [Simplified protocols for the study and improvement of energy efficiency in historical clusters].
19. Participation as speaker in the international conference Living the future. Living together, Napoli, October 1-2, 2015, organised by DIARC – Department of Architecture, University of Napoli Federico II. Speech title: "Towards a systemic sustainability. An approach for the development and refurbishment at urban scale".
 20. Participation as speaker (invited) in the international conference Climate KIC – Summer School The Journey "Transforming the Built Environment" organised by Eit Climate KIC, Aster and Regione Emilia Romagna, Ferrara, July 28, 2015. Speech title: "Energy efficiency in historical buildings".
 21. Participation as speaker in the Kick-off Meeting International Research project "Innovative Active and Passive Technologies for Nearly Zero Energy Buildings (Inno-Zeb), Ferrara", Ferrara, April 21-22, 2015, by University of Ferrara, Department of Architecture, Architettura>Energia Research centre in collaboration with National Institute of Creative Arts and Industries della University of Auckland (Nuova Zelanda), School of Architecture of University of Minho (Portogallo), School of Architecture of Tianjin University (PRC). Speech title: "Evaluation of energy behaviour of historical architecture".
 22. Participation as speaker (invited) at the conference "Ri/Vivere Castel Ruggero Workshop di co/progettazione per paesaggi in abbandono" [Relive Castel Ruggero. Workshop of co/design for abandoned landscapes], Napoli December 9-10, 2013, organised by University of Napoli Federico II, Department of Architecture and Interdepartmental Centre for Research in Urban Planning "Alberto Calza Bini" with Cilento Labscape – An integrated model for the activation of a living Lab in the Cilento and Vallo di Diano Park. Speech title: "Caporciano, un'esperienza di riqualificazione ecosostenibile dell'edilizia minore" [Caporciano, an experience of eco-sustainable redevelopment of minor historic buildings].
 23. Participation as speaker in the conference OFArch "Quali(cit)y. Redesign and energy efficiency for sustainable quality of life" at Made Expo 2012 Milano Architettura Design Edilizia, Milano October 17-20, 2012, organised by OfArch - International magazine of architecture and design and University of Ferrara, Department of Architecture, Architettura>Energia Research centre and Material Design, in collaboration with Federlegnoarredo and MadeExpo Milano. Speech title: "Recupero energetico e ambientale del patrimonio edilizio esistente. Il caso studio del borgo storico di Caporciano, L'Aquila" [Energy and environmental recovery of the existing building heritage. The case study of the historic village of Caporciano, L'Aquila].
 24. Participation as speaker and PhD's tutor in the VIII Summer seminar of National grid of PhD courses in Architectural Technology "Sul costruito/sul costruibile. Teorie e sperimentalismo per la ricerca in Tecnologia dell'Architettura. Il ruolo della sperimentazione progettuale nella definizione dell'ambiente costruito" [On built heritage/to be built heritage. Theories and experimentalism for research in architectural technology. The role of design experimentation in defining the built environment], University of Camerino (Ascoli Piceno), School of Architecture and Design, September 20-22, 2012. Speech title: "Un modello sperimentale per la valutazione delle prestazioni energetiche dell'edilizia storica" [An experimental model for evaluating the energy performance of historic buildings].
 25. Participation as speaker in the VI national conference AIGE, Ferrara June 11-12, 2012. Speech title: "Diagnosis of a real Housing Envelope (DRHouse). Metodi per la valutazione dello stato di fatto energetico negli edifici storici" [Diagnosis of a real Housing Envelope (DRHouse).Methods for evaluating the energy status of historic buildings].
 26. Participation as speaker in the conference "Nuovi volti dell'illuminazione. Tecnologia Led e scenari evolutivi per l'architettura" [New faces of lighting. Led technology and evolutionary scenarios for architecture], Ferrara, May 3, 2012. organised by University of Ferrara, Department of Architecture, Architettura>Energia Research centre and Rover Divisione Atelier Bologna in collaboration with L&L Luce&Light srl, Povolaro di Dueville, Vicenza. Speech title: "Principi di illuminazione architeturale per le fabbriche storiche. Sperimentazione e progetto" [Principles of architectural lighting for historic buildings. Experimentation and design].
 27. Participation in VII Summer seminar of National grid of PhD courses in Architectural Technology "La ricerca tra Innovazione, creatività e Progetto" [Research between Innovation, Creativity and Project],

- Politecnico di Milano, Territorial headquarters of Mantova, Department of Architecture, September 15-17, 2011. M. Calzolari participated in the working groups investigating the issue of energy certification and environmental sustainability in building redevelopment.
28. Participation as speaker (invited) in the conference "Expomeeting – Light Local, Low Energy", Bologna May 27, 2011, organised by Edicom Edizioni. Speech title: "Strategie per la valutazione, valorizzazione e riqualificazione energetica del patrimonio storico" [Strategies for the evaluation, enhancement and energy requalification of the historical heritage].
 29. Participation as speaker (invited) in the conference "Integrazione e compatibilità delle nuove tecnologie edilizie e delle fonti energetiche rinnovabili nel recupero energetico – ambientale del patrimonio storico. Rispetto dell'identità architettonica e linee guida per l'intervento sul costruito ad elevato valore testimoniale" [Integration and compatibility of new building technologies and renewable energy sources in the energy-environmental recovery of historical heritage. Respect for the architectural identity and guidelines for the intervention on the buildings with high testimonial value], at SaiEnergy, Bologna, October 30, 2010, organised by AssoRestauro e Demetra. Speech title: "Retrofit nell'edilizia storica: il caso studio di S. Antonio in Polesine. Studio interdisciplinare per la rifunzionalizzazione di un antico complesso monastico a Ferrara" [Retrofit in historic buildings: the case study of S. Antonio in Polesine. Interdisciplinary study for the re-functionalization of an ancient monastic complex in Ferrara].
 30. Participation as speaker (invited) in the conference "Riqualificazione energetica del patrimonio storico. Le compatibilità possibili, le istanze della sostenibilità" [Energy requalification of the historical heritage. The possible compatibilities, the instances of sustainability] at Salone DNA Italia - Heritage culture techniques from yesterday to tomorrow, Torino, October 2, 2010, organised by Recupero e Conservazione, DeLettera Editore in collaboration with Associazione Prorestauro Italia. Speech title: "Strategie di recupero per l'innalzamento prestazionale dell'edilizia tutelata. Un caso studio" [Recovery strategies for increasing the performance of listed buildings. A case study].
 31. Partecipazione in the VIII Summer seminar of National grid of PhD courses in Architectural Technology "Permanenze e Innovazioni nell'Architettura del Mediterraneo. Ricerca, Interdisciplinarietà e confronto di Metodi" [Permanence and Innovations in Mediterranean Architecture. Research, Interdisciplinarity and Comparison of Methods], University of Palermo, Department of Architecture, September 15-17, 2010. M. Calzolari participated in the round tables investigating the issue of interdisciplinary approaches for the energy and environmental upgrading of the built heritage of the Mediterranean area and she was spokesperson for the group of the Faculty of Architecture of Ferrara.
 32. Participation as speaker in the conference "Edifici a impatto zero. Il sistema LEED. La valutazione della sostenibilità ambientale nell'edilizia" [Zero impact buildings. The LEED system. The assessment of environmental sustainability in buildings], Ferrara May 28, 2010, organised by AssForm - Formazione Ricerca Cultura, University of Ferrara, Department of Architecture, Architettura>Energia research centre, Green Building Council. Speech title: "Riqualificazione energetica del patrimonio storico: strategie di recupero dell'edilizia tutelata per l'innalzamento prestazionale dell'involucro e delle componenti impiantistiche. Un caso studio" [Energy requalification of the historical heritage: recovery strategies for listed buildings for the increase in the performance of the envelope and plant components. A case study].
 33. Participation as speaker in the international conference "Ferrara meets Nottingham: potential of organic polymer – based thin film photovoltaic device" within the British-Italian partnership programme for young researcher. Ferrara June 28 - July 1, 2009. Speech title: "Energy retrofit of historical buildings: case study of Sant'Antonio in Polesine in Ferrara".
 34. Participation as speaker in the conference "Architettura>Energia. Il restauro energetico degli edifici storici" [Architettura>Energia. The energy retrofit of historic buildings], at Fiera del Restauro, Ferrara, March 27, 2009, scientific coordination by University of Ferrara, Department of Architecture, Architettura>Energia and DIAPReM research centres. Media partner: Maggioli Editore. Speech title: "Studio progettuale per la riqualificazione energetico funzionale del secondo chiostro del convento di S. Antonio in Polesine a Ferrara" [Project study for the functional energy requalification of the second cloister of the convent of S. Antonio in Polesine in Ferrara].

9.2. Organization of seminars, conferences and workshops

1. Member of the scientific committee and organisation for the International Webconference 2020 "HeLLO project final event" within the project MSCA IF Horizon2020 "HeLLO – Heritage energy Living Lab onsite", University of Ferrara, Department of Architecture, September 28, 2020
2. Member of the scientific committee and organisation for the Conference 2019 "I sistemi per l'isolamento dall'interno nell'architettura storica monumentale: criticità, soluzioni e l'Onsite Lab Tour del progetto HeLLO" [Internal insulation systems in monumental historic architecture: critical issues, solutions and the Onsite Lab Tour of the HeLLO project], organised by University of Ferrara, Department of Architecture, Architettura>Energia research centre, Ferrara December 12, 2019.
3. Member of the scientific committee and organisation for the conference "La riqualificazione energetica profonda del patrimonio edilizio pubblico: panorama normativo, criticità e opportunità, metodi e strumenti operativi" [The deep energy requalification of the public building heritage: regulatory framework, critical issues and opportunities, methods and operational tools], within the Salone dell'Economia, della Conservazione, delle Tecnologie e della Valorizzazione dei Beni Culturali e Ambientali 2017, March 22-24, 2017, Ferrara. Organised by University of Ferrara, Department of Architecture, Architettura>Energia Research centre, Eurac Research Bolzano and Teknehub - Technopole of the University of Ferrara
4. Coordination of the SITdA (Italian Society of Architectural technology) international conference "Nuove prospettive di efficienza energetica e qualità ambientale per il patrimonio edilizio esistente. Riflessioni e strumenti per il raggiungimento degli standard NZEB nell'up-cycling degli edifici" [New perspectives of energy efficiency and environmental quality for the existing building stock. Reflections and tools for achieving NZEB standards in building up-cycling], Ferrara, July 4-5, 2016, organised by University of Ferrara, Department of Architecture, Architettura>Energia Research centre and Ordine e Fondazione Architetti Ferrara, with the patronage of IUSS Ferrara and Camera di Commercio di Ferrara.
5. Member of the organisation committee for the conference "L'energia dell'edificio storico. Riqualificazione energetica e ambientale del patrimonio culturale: scenari di intervento, strumenti e casi studio" [The energy of the historic building. Energy and environmental requalification of cultural heritage: intervention scenarios, tools and case studies], within Salone dell'Economia, della Conservazione, delle Tecnologie e della Valorizzazione dei Beni Culturali e Ambientali 2016, Ferrara, April 6, 2016. Scientific coordination and organisation by University of Ferrara, Department of Architecture, Architettura>Energia Research centre, Eurac Research Bolzano and Teknehub - Technopole of the University of Ferrara.
6. Member of the organisation committee for Kick-off Meeting International Research project "Innovative Active and Passive Technologies for Nearly Zero Energy Buildings (Inno-Zeb), Ferrara", Ferrara, April 21-22, 2015, by University of Ferrara, Department of Architecture, Architettura>Energia Research centre in collaboration with National Institute of Creative Arts and Industries della University of Auckland (Nuova Zelanda), School of Architecture of University of Minho (Portogallo), School of Architecture of Tianjin University (PRC).
7. Member of the organisation committee for the conference "Nuovi volti dell'illuminazione. Tecnologia Led e scenari evolutivi per l'architettura" [New faces of lighting. Led technology and evolutionary scenarios for architecture], Ferrara, May 3, 2012. organised by University of Ferrara, Department of Architecture, Architettura>Energia Research centre and Rover Divisione Atelier Bologna in collaboration with L&L Luce&Light srl, Povolaro di Dueville, Vicenza.

10. NATIONAL AND INTERNATIONAL AWARDS FOR SCIENTIFIC ACTIVITIES AND PROJECT RESEARCH

10.1. Awards for scientific activity

1. GBC Italia Awards, "Italian Leadership Award" for the Leadership in Green Building category in the public sector: the winner is the Department of Architecture of the University of Ferrara, Architettura>Energia Research centre with the MSCA IF "HeLLO - Heritage energy Living Labs onsite" project. Marta Calzolari is co-supervisor of the project and member of the research group (March 22, 2019).

2. GBC Italia Awards, "Italian Leadership Award" for the Leadership in Green Building category in the public sector: the winner is the Department of Architecture of the University of Ferrara, Architettura>Energia Research centre with the project "UNIFE SOSTENIBILE – Screening energetico del patrimonio edilizio dell'ateneo di Ferrara e proposte preliminari per la fase di programmazione degli interventi di retrofit" [SUSTAINABLE UNIFE - Energy screening of the building stock of the University of Ferrara and preliminary proposals for the planning phase of retrofit interventions]. Marta Calzolari was responsible for the operational coordination of the winning research (October 13, 2016).
3. Winner of "Riconoscimento "Niccolò Copernico 2014 per tesi innovative in discipline scientifiche e tecnologiche" ["Niccolò Copernico 2014 for innovative theses" in scientific and technological disciplines" Award] in the field of Architectural Technology with the PhD thesis "Valutazione del comportamento energetico dell'architettura storica. Analisi dei metodi di calcolo dello stato di fatto energetico e proposte correttive" [Evaluation of the energy behaviour of historic architecture. Analysis of the methods for calculating the energy status and corrective proposals], May 10, 2014.
4. Best doctoral thesis of the 25th cycle for the Doctoral School in Architectural Technology of the University of Ferrara, IUSS DAY - IUSS Ferrara 1391 (April 2, 2014).
5. First place at the "University and sustainability, Sustainable Unife" award Academic year 2012/2013 in the <energy - environmental> section with the PhD research "Evaluation of the energy behavior of historical architecture. Analysis of the methods for calculating the state of affairs energy and corrective proposals "(February 14, 2014).
6. Winner of the competition for the allocation of scholarship for stays abroad for PhD students from the University of Ferrara. University of Ferrara, IUSS 1391 - University of Nottingham, Department of Built Environment (May 25, 2010).

10.2. Awards for project research activities

1. First prize in the "Competition of ideas in memory of the architect Walter Barbero "Transformed by light" 1st edition, 2011. Competition of ideas for the architectural lighting of the facade of the Bergamo Chamber of Commerce. The first classified project is one of the results of the design research for the definition of architectural lighting principles for historic buildings, with application experimentation for a lighting system in the Palazzo Tassoni complex in Ferrara. Team members: Rover_Atelier, Bologna and Department of Architecture of the University of Ferrara, Architettura>Energia Research centre (arch. G. Inglese, prof. P. Davoli, arch V. Belpoliti, arch. M. Calzolari, arch. S. Fabbri, arch. S. Mezzogori).

11. PUBLICATIONS

11.1. Books

1. Belpoliti V., Calzolari M., Davoli P. (2022), *Innovate, build and live sustainable. An energy-positive experimental timber building for the Solar Decathlon Middle East in Dubai*, pubblicato nella collana "Progettare per costruire sostenibile", pp. 1-195, Maggioli Editore, Santarcangelo di Romagna (RN) [ISBN: 978-88-916-59453]. (blind peer review).
2. Calzolari M. (2016), *Prestazione energetica delle architetture storiche: sfide e soluzioni. Analisi dei metodi di calcolo per la definizione del comportamento energetico*, Franco Angeli Editore, Milano [ISBN: 9788891740885]. (blind review);

11.2. Book's Chapter

1. Calzolari M. (2020), *Which invisible technology? Metadata for the retrofit of historic buildings* in Lauria, M.; Mussinelli, E.; Tucci, F. (eds) (2020), *Producing Project*, Maggioli, Santarcangelo di Romagna, 531 pp., è ISBN 978-88-916-43087].
2. Calzolari M., Dalla Valle A., Frighi V., Musarella C., (2019), *Beyond the control of building life cycle. From product to building system*, in Lucarelli M.T., Mussinelli E., Daglio L. (a cura di) "Resilient Design", Santarcangelo di Romagna (RM), Maggioli Editore [ISBN 978-88-916-3598-3]. (blind peer review).
3. Calzolari M. (2019), *Quale tecnologia invisibile? I metadati per il processo di recupero degli edifici storici*, In Mussinelli E., Lauria M., Tucci M. (a cura di), *La PROduzione del PROgetto*, Collana "Studi e Progetti", Maggioli Editore, Santarcangelo di Romagna, [ISBN 978-88-916-3602-7].
4. Calzolari M., Dalla Valle A., Frighi V., Musarella C., (2018), *Oltre il controllo del ciclo di vita dell'edificio. Dal prodotto all'organismo edilizio*, in Lucarelli M.T., Mussinelli E., Daglio L. (a cura di) "Future Search Conference. Progettare Resiliente", Santarcangelo di Romagna (RM), Maggioli Editore [ISBN 978-88-916-2853-4]. (blind peer review).
5. Calzolari M., Gaspari J. (2016), *Riduzione dei fabbisogni, low cost e gestione delle risorse/ Demand savings, low cost and resource management*, in Lucarelli M.T., Mussinelli E., Trombetta C. (a cura di), "Cluster in progress. La Tecnologia dell'architettura in rete per l'innovazione / The Architectural technology network for innovation", pp. 91-96, Santarcangelo di Romagna (RM), Maggioli Editore [ISBN 9788891612496]. (blind review).
6. Belpoliti V., Boarin P., Calzolari M., Davoli P. (2012), *La riqualificazione energetico-ambientale del tessuto storico. Un borgo eco-sensibile per tradurre il sisma in opportunità/ Energy and environmental refurbishment of the historical settlement. A sustainable village to translate earthquake into opportunities*, in Russo Ermolli S., D'Ambrosio V. (a cura di), "The Building Retrofit Challenge. Programmazione, progettazione e gestione degli interventi in Europa" / "Planning, design and management of the interventions in Europe", pp. 49-56, Firenze, Alinea [ISBN 9788860556714]. (double blind review).
7. Calzolari M., Zaffagnini T., Zannoni G. (2011), *Approcci interdisciplinari e problematiche invarianti per la riqualificazione energetica e ambientale del patrimonio costruito nell'area mediterranea. Interdisciplinary approaches and invariant issues for energetic and environmental regeneration of the built heritage in the Mediterranean*, In: Germanà M.L. (Editor). *Permanenze e innovazioni nell'architettura del mediterraneo* Ricerca, Interdisciplinarietà e Confronto di Metodi . vol. 4, pp. 97-100, FIRENZE:FIRENZE UNIVERSITY PRESS (FUP) [ISBN 978-88-6655-003-7].
8. Calzolari M. (2010), *Ricuciture urbane. Proposta di riqualificazione energetico-ambientale del paesaggio ferrarese tra il tessuto storico e l'idrovia sul Po di Volano*, In: Davoli P., "Il recupero energetico ambientale del costruito", pp. 126-128, Sant'Arcangelo di Romagna (RN), Maggioli Editore [ISBN 978-88-387-5756-9].
9. Calzolari M. (2010), *Dalla chiusura del passato all'apertura del moderno. Recupero energetico- ambientale e funzionale del convento di S. Antonio in Polesine per un nuovo polo culturale a Ferrara*, In: Davoli P., "Il recupero energetico ambientale del costruito", pp. 110-117, Sant'Arcangelo di Romagna (RN):Maggioli Editore [ISBN 978-88-387-5756-9].
10. Calzolari M. (2010), *Risparmiare il passato. Il progetto del quartiere Barca a Bologna come esempio di riqualificazione energetica e funzionale dell'edilizia residenziale pubblica*, In: Davoli P., "Il recupero energetico ambientale del costruito", pp. 69-73, Sant'Arcangelo di Romagna (RN):Maggioli Editore [ISBN 978-88-387-5756-9].

11.3. Conference's Proceeding

1. Martinelli L., Calcerano F., Calzolari M., Modugno V., Frighi V., Davoli P., Gigliarelli E. (2023), *Tecnologie abilitanti per lo studio del comportamento bioclimatico degli spazi di transizione degli edifici storici/Key enabling technologies for the analysis of the bioclimatic behaviour of transition spaces in historical buildings*, in Arcangioli C. e Pignattini M. (a cura di) Atti del 3° Convegno annuale del Centro di Eccellenza DTC Lazio "Digital transformation and green deal in Cultural Heritage", Armando Editore, [ISBN 979-12-5984-539-9]
2. Calzolari M., Davoli P., Dias Pereira L. (2020), Internal building insulation systems for historic buildings: hygrothermal performance analysis, in Gli effetti dell'acqua sui beni culturali. Valutazioni, critiche e modalità di verifica, 36° convegno internazionale Scienza e Beni Culturali, Venezia, 17-19 novembre 2020, Collana Scienza e Beni Culturali, Volume 2020, [ISSN 2039-9790, ISBN 978-88-95409-24-5]
3. Belpoliti V., Calzolari M., Davoli P., Altan H., Nassif R. (2020), *Design optimization to enhance passive energy strategies. The KNOW HOWse project for Solar Decathlon Middle East 2018*, Procedia Manufacturing 44 (2020) 302–309, Elsevier. ISSN: 2351-9789.
4. Calzolari M., Gherri B., Maranhao V., Poletti D. (2020), Numerical evaluation of environmental performance of a renaissance building to address a comprehensive retrofit strategy: the case of Palazzo Tassoni Estense in Ferrara (Italy), Proceeding of the International Conference "World Heritage and Contamination", in Architecture Heritage and Design n. 6Gangemi Editore spa International, pp. 160-169, [ISBN 978-88-492-3937-9]
5. Belpoliti V., Calzolari M., Hassan O., Nassif R. (2019), The KNOW HOWse project at the Solar Decathlon Middle East 2018 Dubai: an academia-industry cooperation to train a new generation of professionals for the green-building challenge, International Conference on Academic Research in SCIENCE, TECHNOLOGY and ENGINEERING (ICARSTE), May 2019, Rome
6. Calzolari M., Codarin S., Davoli P. (2017). Innovative technologies for the recovery of the architectural heritage by 3D printing processes. In: THE NEW FRONTIERS OF CONSERVATION. Conveyances, contaminations, crossbreedings. Bressanone, June 27-30, 2017. LE NUOVE FRONTIERE DEL RESTAURO. Trasferimenti, contaminazioni, ibridazioni, p. 669-680, Marghera Venezia: EDIZIONI ARCADIA RICERCHE Srl, [ISBN:978-88-95409-214].
7. Belpoliti V., Bizzarri G., Calzolari M., Cattani E., Davoli P., Pitzianti S., Rinaldi A. (2016), **Energy screening of wide building stock**, Proceedings 41st **IAHS WORLD CONGRESS**, Sustainability and Innovation for the Future, 13-16th September 2016, Albufeira, Algarve, Portugal [ISBN 978-989-98949-4-5]. (blind review)
8. Belpoliti V., Boarin P., Calzolari M., Davoli P. (2015), *Towards a systemic sustainability. An approach for the development and refurbishment at urban scale*, **Atti delle Giornate Internazionali di Studio**, "Abitare Insieme. / Living Together", Napoli, 1-2 Ottobre 2015, Napoli, CLEAN Edizioni [ISBN 978-88-84-97-544-7]. (blind review)
9. Andreotti M., Calzolari M., Davoli P. (2014), *Experimental models for the energy performance evaluation of historical buildings*, atti del 100° Congresso Nazionale della Società Italiana di Fisica, sezione Vb "Fisica per i Beni Culturali", Pisa, 22-26 Settembre 2014 (<http://congresso.sif.it/talk/241>)
10. Andreotti M., Belpoliti V., Bizzarri G., Calzolari M., Cibirnetto G., Davoli P. (2012), *Diagnosis of a Real Housing Envelope (DrHousE) metodi per la valutazione dello stato di fatto energetico negli edifici storici*, in: AIGE Associazione Italiana Gestione Energia. VI Congresso Nazionale Associazione Italiana Gestione Energia Atti del Congresso, pp. 11-15, ferrara: Casa Editrice Tresogni, Ferrara, 11-12 Giugno 2012 [ISBN 978-88-97320-04-3]. (double blind review).
11. Belpoliti V., Boarin P., Calzolari M., Davoli P. (2012), *Metodologie per l'indagine e la riqualificazione energetico-ambientale dei borghi storici appenninici, tra istanze di sostenibilità e salvaguardia dei valori testimoniali*, in **Atti delle Giornate Internazionali di Studio**, "Abitare il Futuro. Abitare il nuovo/abitare di nuovo ai tempi della crisi" / **"Inhabiting the future. Inhabiting the new/inhabiting again in time of crisis"**, Napoli, 12-13 dicembre 2012, pp. 1505-1518, Napoli, CLEAN Edizioni [ISBN 978-88-8497-236-1]. (blind review)
12. Belpoliti V., Calzolari M., Reitano R. (2010), *Un processo di riqualificazione storico ambientale del tessuto storico: la proposta di "Borgo-Clima"*, In: Forlani M.C., "Cultura Tecnologica e Progetto Sostenibile. Idee e Proposte Ecosostenibili per il Territori del Sisma Aquilano", pp. 308- 325, FIRENZE:Alinea Editrice [ISBN 978-88-6055-604-2].
13. Belpoliti V., Bizzarri G., Calzolari M. (2010), *La trasmissione di calore attraverso sistemi fotovoltaici semitrasparenti integrati: valutazioni preliminari in regime dinamico su due casi studio dell'area ferrarese*. In: AIGE Associazione Italiana Gestione Energia. Quarto Congresso Nazionale AIGE. Roma, 26-27 Maggio 2010, Roma:AIGE Associazione Italiana Gestione Energia. (blind review)

11.4. Journal's paper

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