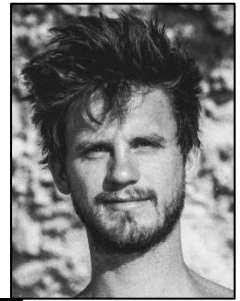


## Eng. Lorenzo Badini

Building Engineer/Architect



### PERSONAL INFORMATION

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**Address:** Via G. Sani 29, 45037, Melara (RO)

**Phone:** +39 340 5941519

**E-mail:** lorenzo.badini3@unibo.it, bado91@hotmail.it

**Date of birth:** 07/12/1991 **Place of birth:** Ostiglia (MN)

**Nationality:** Italian

### RESEARCH & ACADEMIC EXPERIENCE

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#### 01/11/2017 – PRESENT

Name and address of employer

**Department of Architecture, Alma Mater Studiorium University of Bologna (UniBO)**  
Viale Risorgimento 2, 40126 Bologna

**Double Degree Doctorate - Department of Civil, Geo and Environmental Engineering, Technical University of Munich (TUM)**

Arcisstraße 21 – 80333, Munich, Germany

Occupation or position held

Doctoral Candidate in Architecture and Design Cultures (UniBO)

Doctoral Candidate at the Chair of Timber Construction and Structural Design (TUM)

Main activities

The research deals with the fields of technological architecture and reconstruction and conservation of buildings in seismic zone. The main research interests are aimed at the development of new integrated technologies of seismic and energy improvement on existing buildings.

*Thesis: On the use of the exoskeleton for seismic improvement and integrated efficient technologies in existing buildings.*

Supervisor: Prof. A. Ferrante (UniBO), Prof. S. Winter (TUM)

Co-supervisor: Prof. G. Mochi, Eng. S. Ott

**Collaboration and support on European projects**  
(coordinator: Prof. A. Ferrante)

ProGETonE: Proactive synergy of inteGrated Efficient Technologies on buildings' Envelopes (This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723747)

### TEACHING ACTIVITIES

#### 2017/2018, 2018/2019

Name and address of employer

**University of Bologna, School of Engineering and Architecture**

Viale Risorgimento 2, 40126 Bologna. (Prof. L. Guardigli & Prof. A. Ferrante)

Occupation or position held

Tutoring: Technical Architecture II, Single cycle degree programs (LMCU) in Architecture and Building Engineering

Main activities

Teaching assistance and organization of the laboratory

## OTHER RESEARCH EXPERIENCE

**2017/2018 – 2018/2019**

Name and address of employer

**University of Bologna, School of Engineering and Architecture**  
Viale Risorgimento 2, 40126 Bologna. (Prof. G. Mochi)

Occupation or position held

Co-supervisor: Technical Architecture, Master Thesis in the Single cycle degree programs (LMCU) in Architecture and Building Engineering

Main activities

The research deals with:

- Vulnerability assessment of reinforced concrete buildings and related strengthening strategies  
Thesis: *“Analisi della vulnerabilità sismica di un edificio in cemento armato prima e dopo l'applicazione di un esoscheletro in acciaio: il caso del GET-system nell'ambito del progetto H2020 Pro-GET-onE”* – Mg. F. Celli  
Thesis: *“L'utilizzo del BIM nel recupero delle costruzioni esistenti. Una sperimentazione con Robot® nell'ambito di interventi di miglioramento delle prestazioni strutturali”* – Mg. N. Ferraresi
- Dynamic characterization of reinforced concrete (RC) structures through the use of Tromino® (it monitors modal frequencies, shape and damping of structures and soils)  
Thesis: *“Caratterizzazione dinamica passiva di strutture in calcestruzzo armato per la calibrazione di modelli numerici. Il caso studio del blocco laboratori della facoltà di chimica industriale”* – Mg. G. Fusco
- Fast overall assessment of seismic vulnerability of existing RC buildings through generation and training of neural networks  
Thesis: *“Metodi speditivi per la valutazione del comportamento strutturale di edifici intelaiati in c.a. mediante l'applicazione di reti neurali. Studio dell'influenza delle caratteristiche meccaniche e geometriche: (1) scelta dei parametri di analisi; (2) analisi e valutazione dei risultati”* – (1) Mg V. Gnucci, (2) Mg. G. Russo

**2018/2019**

Name and address of employer

**University of Bologna, School of Engineering and Architecture**  
Viale Risorgimento 2, 40126 Bologna.

Occupation or position held

Active member of the organising committee

Main activities

Co-coordination and organization of the international conference “Increasing the quality and the value of existing buildings: energy, seismic and architectural retrofit practices” (22 May 2019)  
International Conference with keynote speakers  
Chances 2019: practices, spaces and buildings in cities' transformation (24 October 2019)  
International conference with keynote speakers and papers publication on scientific journal (SCIRES-IT)

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## PROFESSIONAL EXPERIENCE

**08/2017 – 11/2017**

Name and address of employer

**University of Bologna, School of Engineering and Architecture**

Viale Risorgimento 2, 40126 Bologna. (Prof. A. Ferrante)

Occupation or position held

External collaboration

Main activities and responsibilities

Collaboration with the Department of Architecture in the theme of the European project Pro-GET-onE (Proactive synergy of inteGrated Efficient Technologies on buildings' Envelopes), conducting a survey of seismic retrofitting systems on different types of buildings both from literature and projects. Realizing a report in English containing cases of Italian and European buildings (The Netherlands, Romania and Greece)

**04/2017 – 08/2017**

Name and address of employer

**MMP Architetti S.r.l.** – [www.mmparchitetti.it](http://www.mmparchitetti.it),  
Via delle Moline 4, 40126 Bologna

Occupation or position held

External collaboration

Main activities and responsibilities

Drafting of implementation urban plans (piani urbanistici attuativi – PUA) and building permits in the localities of Zola Predosa and Casalecchio di Reno

## **OTHER PROFESSIONAL EXPERIENCE**

**2004/2013**

Name and address of employer

**B&B Le Tortore** (family business) – [www.letortore.it](http://www.letortore.it),  
Via G. Sani, 27, 45037 Melara (RO)

Occupation or position held

Help in management

**2013/PRESENT**

Name and address of employer

**B&B Il Giardino**  
Via G. Sani, 29, 45037 Melara (RO)

Occupation or position held

Manager

**2016/2017**

Name and address of employer

**Compass Italia srl – Manpower Group**

Occupation or position held

Promoter, cash desk service and control

## **EDUCATION**

**2017 – PRESENT**

**Doctoral Candidate**

University of Bologna, Faculty of Engineering and architecture

Viale Risorgimento 2, 40126 Bologna

Technical University of Munich, Chair of Timber Construction and Structural Design

Arcisstraße 21 – 80333, Munich, Germany

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Thesis: *On the use of the exoskeleton for seismic improvement and integrated efficient technologies in existing buildings.*

Supervisor: Prof. A. Ferrante (UniBO), Prof. S. Winter (TUM)

Co-supervisor: Prof. G. Mochi, Eng. S. Ott

2010/11 – 2015/16

**Single Cycle Degree/Combined Bachelor and Master in Architecture and Building Engineering**

School of Engineering and Architecture – Alma Mater Studiorum University of Bologna

Classes: <https://corsi.unibo.it/singlecycle/ArchitectureBuildingEngineering>

Optional courses: *Restoration and Preservation of Building and Design in Seismic Zone*

Master Thesis: *“Pro-GET-onE: analisi sismica coputazionale volta a massimizzare i benefici su tipologie strutturali esistenti in cemento armato con sviluppo longitudinale e applicazione ad un caso esistente”*

Supervisor: Prof. G. Mochi

04/2016 – 05/2016

**Curriculum training in “Studio Simone Staccioli Ingegnere”**

Via Baccio da Montelupo 90, Florence

2005 – 2010

**Scientific high school diploma**

Istituto statale Giovanni Cotta, Legnago (VR)

2009 – 2010

**ECDL – European Computer Driving License**

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## LANGUAGES

Mother tongue: **Italian**

Other languages: **English** (Listening: Good, Reading: good, Writing: good, Verbal: good)

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## OTHER SKILLS

**Computer and software skills:**

Autodesk Autocad 2D/3D (5/5), Autodesk Revit BIM (2/5), Rhinoceros + Grasshopper (4/5), Adobe Photoshop (4/5), Adobe Illustrator (2/5), Rendering Cinema 4D (3/5)  
MS Windows, MS Office (Word, Excel, Power Point, Access)

**Finite Element Analysis software:**

Sap2000 (5/5), Etabs (4/5), Sismicad (3/5)

**Job related skills:**

Excellent organizational skills, ability to work efficiently on a tight schedule, confidentiality, hardworking, flexibility & ability to multitask

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## PUBLICATIONS

**On international peer-review journals**

Anastasia Fotopoulou, Annarita Ferrante, Lorenzo Badini, Giorgia Predari, Giovanni Mochi, Giovanni Semprini, Riccardo Gulli, Riccardo Gulli, Margarita Assimakopoulos, Dimitra Papadaki (2019). *An Integrated System for Façade Additions Combining Safe, Energy Efficient and User-Orientated Solutions*. TEMA, vol. 5, pp. 72-81, ISSN: 2421-4574, doi: 10.17410/tema.v5i1.216 (peer-review journals)

Anastasia Fotopoulou, Lorenzo Badini, Giovanni Mochi, Giorgia Predari, Rudi Roijackers, Ruxandra Cojocar (2018). *Seismic strengthening through external exoskeleton*. TEMA, vol. 4,

Annarita Ferrante, Giovanni Mochi, Giorgia Predari, Lorenzo Badini, Anastasia Fotopoulou, Riccardo Gulli, Giovanni Semprini (2018). *A European Project for Safer and Energy Efficient Buildings: Pro-GET-onE (Proactive Synergy of inteGrated Efficient Technologies on Buildings' Envelopes)*. SUSTAINABILITY, vol. 10, p. 1-26, ISSN: 2071-1050, doi: 10.3390/su10030812 (peer-review journals)

**Contribution in conference proceedings**

Lorenzo Badini, Cosimo A. De Stefano, Alberto Custodi, Giorgia Predari, Annarita Ferrante (2019). *Seismic strengthening of existing RC structure through external exoskeleton*. 2019 IABSE Congress New York City, The Evolving Metropolis. ISBN: 978-3-85748-165-9 doi:10.1080/10168664.2019.1599209 (Contribution in conference proceedings)

Davide Prati, Lorenzo Badini, Giovanni Mochi, Silvia Castellaro (2019). *Approccio alla caratterizzazione dinamica degli edifici in C.A. con l'ausilio di tecniche passive a stazione singola*. COLLOQUIATE 2019: Ingegno e Costruzione nell'Epoca della Complessità, Forma Urbana e Individualità Architettonica (pp. 339-348). Torino: Politecnico di Torino. ISBN: 978-88-85745-31-5. <http://2019.artecweb.org/it/atti/> (accessed 10/11/19) (Contribution in conference proceeding)

Ferrante, A., Fotopoulou, A., Badini, L., Predari, G., Mochi, G., Semprini, G., Gulli, R., Assimakopoulos, M., & Papadaki, D. (2018). *Efficienza energetica, sicurezza sismica e dimensione sociale nelle addizioni di facciata*. COLLOQUIATE 2018: Edilizia Circolare. Costruire nel Terzo Millennio (pp. 561-571). Milano: Edicom Edizioni. ISBN: 978-88-96386-75-0. <http://2018.artecweb.org/it/> (accessed 10/11/19) (Contribution in conference proceeding)

Annarita Ferrante, Giovanni Mochi, Giorgia Predari, Lorenzo Badini, Anastasia Fotopoulou, Riccardo Gulli, Giovanni Semprini (2018). *A European Project for safer and energy efficient buildings: Pro-GET-onE (Proactive synergy of inteGrated Efficient Technologies on buildings' Envelopes)*. In: (a cura di): G. Margani G. Rodonò V. Sapienza, SER4SC: SEISMIC AND ENERGY RENOVATION FOR SUSTAINABLE CITIES CONFERENCE PROCEEDINGS. p. 105-116, MONFALCONE (GORIZIA): EdicomEdizioni, ISBN: 978-88-96386-56-9, Catania, 1-3 Febbraio 2018 (Contribution in conference proceeding)