

Curriculum Vitae

LAVINIA CHIARA TAGLIABUE

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EDUCATION

- 2002 – 2005 Politecnico di Milano, Italy
PhD in Architecture (Technology and Design for Environmental Quality at Building and Urban Scale)
Thesis Title: Sustainability in architecture between performance and language: Analysis and evaluation of the actual compliance with energy-environmental specifications of sustainable buildings
- 1994 – 2001 Politecnico di Milano, Italy
BSc. Architecture
Thesis Title: Hybrid Photovoltaic-Thermal Technology: design analysis of an integral system and preparation for the experimental phase of the component

EMPLOYMENT

- 2021 Feb – present University of Turin, Computer Science Department
Associate Professor in Construction Production
- 2018-2021 University of Brescia, Department of Civil, Environmental, Architectural engineering and Mathematics
Researcher and Steering Committee of the Interdepartmental eLUX Lab University of Brescia (<https://elux.unibs.it/>) responsible for BUILDING O&M MANAGEMENT section
- 2005-2021 Politecnico di Milano, Department of Architecture, Built environment and Construction Engineering
Adjunct Professor

The primary research focus is sustainability, assessment of energy requirements, energy saving measures and renewable energy integration in the built environment, nearly Zero Energy Buildings and LCA-NZEB, energy simulation and interoperability between Building Information Modeling and Building Energy Modeling to provide an interrupted chain of Information between disciplines and support the design process. The research on Cognitive Buildings is ongoing since 2015, introducing the building smart connection with a user-centered design approach (Behavioral design) able to promote a new vision of the building as a service provider to enhance and improve user experience. Recently, the sensorized objects and the BIM-based Digital Twins are declined towards the concept of Green Digital Twin to implement a dynamic sustainability assessment by means monitoring systems beyond the checklists.

EDITORIAL AND REFEREEING ACTIVITIES

- April 2020-Present Guest Editor, Applied Sciences MDPI Journal. Special Issue "Cognitive Buildings".
- April 2020 Guest Editor, Electronics MDPI Journal. Special Issue "Advancement in Smart building Technologies: From Project to Operation and Management of Buildings".
- July 2018 Member of the Scientific Committee of ISARC 2018 ISARC 2018 35th International Symposium on Automation and Robotics in Construction (ISARC) and International AEC/FM Hackathon
- November 2018 Member of the Scientific Committee of the International Workshop: NEW FRONTIERS OF CONSTRUCTION MANAGEMENT, 8-9 November 2018, University of Bologna.

RESEARCH PROJECTS

- 2019 Member of the PRIN 2017 - A Distributed Digital Collaboration Framework for Small and Medium-Sized Engineering and Construction Enterprises - prot. 2017EY3ESB_006, Research Unit of the University of Brescia
- 2018-2020 Participation in the Steering Committee of the Interdepartmental eLUX Lab University of Brescia (<https://elux.unibs.it/>) responsible for the BUILDING O&M MANAGEMENT section
- 2019-2020 Member of ASLERD Association for Smart Learning Ecosystems and Regional Developments
- 2017-2019 Coordination of the national project Elisir (Energy, Life Styled & Seismic Innovation For Regenerated Build-ings) Bando Regionale Smart Living, Regione Lombardia in implementation of l.r. 26/2015 "Manifattura diffusa, creativa e tecnologica 4.0" n develops the strategy "LOMBARDIA 5.0".
- 2016-2017 Study of Environments for Smart Living, University of Brescia, Department of Information Engineering.
- 2015-2016 School Building in the era of circular and digital economy, University of Brescia
- 2014-2015 Technical-economic optimization of the thermo-energetic performance of the envelope of near-zero energy buildings, within smart energy networks, Smart Campus as Urban Open Labs (SCUOLA) Project, University of Brescia, Department DICATAM

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EDUCATIONAL ACTIVITIES

- 2020-2021 Lecturer at the course BIM to BEM in Green Procurement, PhD in Law and Institutions, Department of Law, University of Turin.
- 2020-2021 Lecturer at the European Master BIM A+ for the module BIM-Based Rehabilitation And Sustainability Analysis, Universidade de Minho, Univerza v Ljubiani, Politecnico di Milano, Unit Coordinator Prof. Pietro Crespi
- 2019-2021 Invited lecturer at the course "Intesive knowledge in BIM Sustainable Building Information Management Masters Programme", University of Jonkoping, Prof. Ibrahim Yitmen
- 2018-2021 Lecturer in the Building Performance Engineering course, University of Brescia, Civil and Environmental Engineering.
- 2018-2020 Lecturer of the module Technology and Design in BIM environment for the integrated course Architectural Design For Complex Constructions Studio, School of Architecture Urban Planning Construction Engineering, Politecnico di Milano
- 2012-2021 Lecturer of Environmental Physics module for the integrated course: Laboratory of Architectural Constructions 1, Course of study in Environmental Architecture, Politecnico di Milano

MSc. THESIS SUPERVISED (Last 2 years)

- 2019-2020 Luigi Costardi "LCA evaluation and Energy performance of a housing building in different technological scenarios", University of Brescia, Master Degree Course in Civil and Environmental Engineering, Supervisor: Lavinia Chiara Tagliabue, Correspondent: Mohamed Hamdy
- 2019-2020 Rigert Seneja "Sensorization of the insulation system for the performance verification in the life cycle; monitoring and certification of the phases of correct installation" University of Brescia, Master Degree Course in Civil and Environmental Engineering - Architecture, Co-supervisor: Lavinia Chiara Tagliabue.
- 2017-2018 Daniele Accardo "Indoor Conditions Assessment In Summer Period Given By Opaque Envelope Elements For Educational Buildings In Different Climate Conditions Compared To Adaptive Thermal Comfort Standard", University of Brescia, Master Degree Course in Building Engineering-Architecture, Co-supervisor: Lavinia Chiara Tagliabue

PHD THESIS SUPERVISED (Last 4 years)

- 2019-2020 Supervisor of the thesis of the European Master BIM A+: Mija Susnik, Interoperability between BIM and CVE for energy and acoustic analysis, Supervisor: Lavinia Chiara Tagliabue
- 2019 Invited Member of the Board of Discussion of Doctoral Research Projects at TU Wein, as part of the conference "Industrial building as Innovation incubator", June 5-7, 2019, with doctoral students from TU Wein and Universitat Stuttgart.
- 2015-2018 Co-supervisor of the doctoral thesis: A. Pasquinelli, The creation of a citywide Building Information System: criticalities and potentialities of public information on buildings

PUBLICATIONS

Articles published in SCI/SSCI Journals and conferences (Research Topic related)

Franz Bittenbinder, Che Liu, Stefano Rinaldi, Paolo Bellagente, Angelo Luigi Camillo Ciribini, Lavinia Chiara Tagliabue (2016) *Bi-Directional Interactions between Users and Cognitive Buildings by means of Smartphone App*, IEEE Second International Smart Cities Conference (ISC2 2016), Improving the citizens quality of life, 12-15 September 2016, Trento, Italy.

Lavinia Chiara Tagliabue, Alice Pasquinelli, Giuseppe Martino Di Giuda, Valentina Villa, Angelo Luigi Camillo Ciribini, Enrico De Angelis (2016) *Cognitive Adaptive Urban Systems for the Living Built Environment*, 2nd Annual International Conference on Urban Planning and Property Development (UPPD 2016), 10-11 Ottobre 2016, Singapore. DOI: 10.5176/0000-0000_UPPD.43

Giuseppe Desogus, Emanuela Quaquero, Antonello Sanna, Gianluca Gatto, Giuseppe Di Giuda, Lavinia Chiara Tagliabue, Stefano Rinaldi, Angelo Luigi Camillo Ciribini, Valentina Villa (2017) *Preliminary Performance Monitoring Plan for energy retrofit: a Cognitive Building The "Mandolesi Pavillon" at the University of Cagliari*, AEIT International Annual Conference, Cagliari, 20/22 September 2017.

International conferences (Last 2 years - Research Topic related)

- 2020 Workshop Blockchain in Construction 2020, ETH Zurich, Innovative and Industrial Construction, "Application of blockchain to enhance traceability of materials and components' performances in the construction life cycle"
- 2020 WDBE – World Summit on Digital Built Environment 2020 "Sensorized ETICS for LCA performance assessment", Helsinki 29-30 September.
- 2019 WDBE – World Summit on Digital Built Environment "The social (digital) citizenship dimension of the district through three key concepts: the shuttle, the home manager and the behavioral contract", Helsinki 24-25 September
- 2018 WDBE – World Summit on Digital Built Environment 2018 "CognitiveBIM – BIM, ETICS & Smart contracting for Cognitive Buildings", Helsinki 11-12 September