

Mariapaola Riggio
Wood Science and Engineering Department
Oregon State University
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1. EDUCATION (degree, year awarded, institution, primary focus/major)

- 2007 Ph.D. in Modelling, Conservation and Control of Materials and Structures, Faculty of Engineering, Dep. of Mechanical and Structural Engineering, University of Trento, Italy. PhD dissertation “Morphological modelling of timber elements. An application of digital technologies for the assessment of timber structures.”
- 1997 M.S. magna cum laude in Architecture. Faculty of Architecture, University of Florence, Italy. MS thesis “Analysis and Restoration of Historical Timber Vaults”

2. EMPLOYMENT EXPERIENCE

- (2020 Sept - Present) Associate Professor, Oregon State University (OSU), Wood Science and Engineering Department (WSE)
- (2018-present) Adjunct Faculty, Oregon State University, School of Civil and Construction Engineering (CCE)
- (2017-present) Courtesy Faculty, University of Oregon, Department of Architecture
- (2015 Sept – 2020 Sept) Assistant Professor. Oregon State University, Department of Wood Science and Engineering
- (2012 - 2015) Senior Researcher National Research Council of Italy, Trees and Timber Institute. San Michele all’Adige (TN), Italy
- (2008 - 2011) Post-Doctoral Research Associate. University of Trento, Mechanical and Structural Engineering Dept. Trento, Italy
- (2004 - 2008) Graduate Teaching & Research Assistant – Ph.D. University of Trento, Mechanical and Structural Engineering Dept. Trento, Italy
- (2000 - 2002) Professional staff - Architect designer. Arch. Kern. Frankfurt am Main, Germany
- (2000) Researcher (grant holder). Fraunhofer Institute for Computer Graphics IGD. Darmstadt, Germany
- (1998 - 1999) Professional staff - Architect designer. Arch. Morcavallo. Cosenza, Italy

3. STUDENTS MENTORED (past four years)

- PhD students: Namhyuck Ahn expected (date of completion 2024), Esther Baas (2024); Sujit Bhandari (2022); Sina Jahedi (2022); Ignace Mugabo (2019).
- MS students: Jacob Gesh (2023); Alberto Dalle Vedove (2022); Ryan Longman (2021); Esther Baas (2020); Bahar Abir (2020); Morvarid Dilmaghani (2019); Kendall J. Conroy (2018); Evan L. Schmidt (2018)
- Undergraduate students: Nada Albader (2021); Emily Davis (2019-2020); Hanna Girod (2020); Felicia Luo (2019); Nolwenn Charon (2019); Chloe Ericksen (2019); Stump Joshua (2019); Christopher Gamboa (2019); Noura Alhariri (2018); Matthias Kleissl (2018); Adam Chavez (2018); Hunter Rada (2018)

4. PRIMARY RESEARCH AREA WITH UP TO FOUR CURRENT RESEARCH PROJECTS

Research areas: Timber structural assessment and monitoring, life cycle management

- 1) Muszyński, L. Nairn, J. Riggio, M. (2021). Long-term Response of Wood-based Composites In Variable Climate Conditions. WBC- NSF
- 2) Riggio, M., Barbosa, A., Muszyński, L. (2019). Design, construction and maintenance of mass timber PT shear walls: data, models and recommendations. USDA ARS
- 3) Riggio, M., Muszyński, L. (2018), "Demonstrating use and performance of a CLT modular building utilizing low-value pine lumber from logs harvested in Pacific NW forest restoration programs." USDA FS 2018 Wood Innovation Program
- 4) Muszyński, L., Riggio, M., Morrell, J., Gupta, R. (2017), "Defining project-specific custom CLT grade utilizing low-value Ponderosa pine lumber from logs harvested in SW Oregon and Northern California forest restoration programs". USDA FS 2017 Wood Innovation Program

5. PROFESSIONAL ACTIVITIES AND ACHIEVEMENTS (Memberships, Editorial boards, professional society leadership roles, awards, honors)

2019- present. Member of the Editorial Board of the International Journal of Architectural Heritage
2019 Member of the Scientific Committee of 12th International Conference on Structural Analysis of Historical Constructions (SAHC 2020)

2021 – 2017 – 2015 - 2013 Member of the Scientific Committee of the SHATIS conference "Structural Health Assessment of Timber Structures" (Chair of the Organizing Committee of Shatis 2013)

2018 – present. Member of the International Association of Structures and Architecture.

2017-present. Member of the SWST (International Society of Wood Science and Technology

2017 - present. Member and vice-Chair of the Council of Experts of InnoRenew CoE - Renewable Materials and Healthy Environments Research and Innovation Centre of Excellence (elected)

2015- present. ISCARSAH-ICOMOS (International Scientific Committee on the Analysis and Restoration of Structures of Architectural Heritage). Expert member

2011- present. RILEM (The International Union of Laboratories and Experts in Construction Materials, Systems and Structures) 245-RTE - TC (Reinforcement of Timber Elements in Existing Structures). TC member

6. PUBLICATIONS (3-5 most important contributions (publications, seminars, graduates, etc.)

Riggio, M., Anthony, R.W., Augelli, F., Kasal, B., Lechner, T., Muller, W. and Tannert, T., 2014. In situ assessment of structural timber using non-destructive techniques. *Materials and structures*, 47(5), pp.749-766.

Riggio, M., D' Ayala, D., Parisi, M.A. and Tardini, C., 2018. Assessment of heritage timber structures: Review of standards, guidelines and procedures. *Journal of Cultural Heritage*, 31, pp.220-235.

Riggio, M., Sandak, J. and Franke, S., 2015. Application of imaging techniques for detection of defects, damage and decay in timber structures on-site. *Construction and Building Materials*, 101, pp.1241-1252.

Schmidt, E.L., Riggio, M., Barbosa, A.R. and Mugabo, I., 2019. Environmental response of a CLT floor panel: Lessons for moisture management and monitoring of mass timber buildings. *Building and Environment*, 148, pp.609-622.

Baas, E.J., Riggio, M. and Barbosa, A.R., (2021). A methodological approach for structural health monitoring of mass-timber buildings under construction. *Construction and Building Materials*, 268, p.121153.