

Prof. Dr. Massimo Fragiaco (Italy)

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COST FP1402, MC Member, WG3 Member



Personal

Years of experience in relevant field: 15
Expertise: Seismic resistance of timber structures; Timber-concrete composites; Fire resistance of timber structures; FE modelling; Use of low-grade timber.

Degree: PhD. (08.02.2001)

Organisation

Architecture, Design and Urban Planning
(<http://www.architettura.uniss.it/>)

Focus: theoretical research / innovation and education / training

Facilities: -

No. of staff	PhD students	MSc/year
4	3	1

Research projects

1. "RELUIS-Research line: Timber Structures – WP4: Timber buildings with special systems and/or protective devices (Log-haus buildings)", 2014-2016, 1 Fixed Term Assistant Professor (Chiara Bedon).
2. "FE modelling of cross-lam multi-storey timber buildings for earthquake resistance", 2014-2016, 1 Postdoc (Giovanni Rinaldin) and 1 PhD student (Matteo Izzi).
3. "Revision of the Section 8 - Timber Structures - of the Eurocode 8 - Design for earthquake resistance", 2015-2016, 1 Postdoc (Maurizio Follesa).
4. "Sustainable use of Sardinia forests for production of timber panels and bio-energy", 2014-2016, 1 PhD student (Riccardo Riu).
5. "Determination of a procedure for seismic design of log house timber buildings with 'Blockbau' system", 2012-2014, 1 Postdoc (Chiara Bedon).
6. "Numerical modelling of timber elements and timber structures as part of the Cornet project OptimberQuake", 2011-2013, 1 PhD student (Herve Pohsie) and 1 postdoc (Giovanni Rinaldin).

Publications

1. Bedon, C., Rinaldin, G., and Fragiaco, M. (2015). "Non-linear modelling of the seismic behaviour of 'Blockhaus' structures." *Engineering Structures*, Vol. 91, pp. 112-124.
 2. Gavric, I., Fragiaco, M., and Ceccotti, A. (2015). "Cyclic behaviour of typical screwed connections for cross-laminated (CLT) structures." *European Journal of Wood and Wood Products*, 73(2), 179-191.
 3. Gavric, I., Fragiaco, M., and Ceccotti, A. (2015). "Cyclic behavior of cross-laminated timber (CLT) wall systems: Experimental tests and analytical prediction models." *ASCE Journal of Structural Engineering*, 14 pp., 04015034.
 4. Bedon, C., and Fragiaco, M. (2015). "Numerical and analytical assessment of the buckling behaviour of Blockhaus log-walls under in-plane compression." *Engineering Structures*, Vol. 82, pp. 134-150.
 5. Fragiaco, M., and Lukaszewksa, E. (2015). "Influence of the construction method on the long-term behavior of timber-concrete composite beams." *ASCE Journal of Structural Engineering*, 15 pp., 04015013.
 6. Gavric, I., Fragiaco, M., and Ceccotti, A. (2014). "Cyclic behaviour of typical metal connectors for cross-laminated (CLT) structures". *RILEM Materials and Structures*, published online.
 7. Fragiaco, M., Balogh, J., To, L., and Gutkowski, R.M. (2014). "Three dimensional modeling of long-term structural behavior of wood-concrete composite beams." *Journal of Structural Engineering*, ASCE, Vol. 140 No. 8, 11 pp., A4014006.
 8. Rinaldin, G., Amadio, C., and Fragiaco, M. (2013). "A component approach for the hysteretic behaviour of connections in cross-laminated wooden structures." *Earthquake Engineering and Structural Dynamics*, Vol. 42 No. 13, pp. 1885–2042, doi: 10.1002/eqe.2310.
- Carina Fonseca Ferreira, Dina D'Ayala, Jose L. Fernandez Cabo, Marina Arce Blanco, Rafael Díez Barra, Pedro Hurtado Valdez (2015): Numerical Modelling and Seismic Assessment of Historic Planked Timber Arches. *International Journal of Architectural Heritage*. DOI: 10.1080/15583058.2015.1041194

