Dr. Gerhard Fink **(Finland)**

Aalto University, School of Engineering, Department of Civil Engineering
Espoo, Finland

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COST FP1402, MC Substitute, WG1 Vice Leader

Personal	*Organisation*		
Years of experience in relevant field: 6 Expertise: Mechanical properties of solid timber and GLT, probabilistic modelling of GLT, strength grading, quality control, test methods, code calibration, Bayes updating, risk analysis Degree: PhD (24.03.2014)	Aalto University, School of Engineering; Department of Civil Engineering (www.aalto.fi) Focus: theoretical and practical research, education/training Facilities: Testing lab with strong floor, several universal testing machines, hydraulic jacks of different capacities.		
	No. of staff	PhD students	MSc/year
	3	2	2

Research projects

WG 2 - Solid Timber Construction:

- Earthquake-resistant timber system for multi-storey buildings. 4 years. 4 persons.

- Assessment of the residual load-carrying capacity of large span glulam members with cracks. 2 years. 3 person.

- Homogenous and combind glulam made from beech wood - Technical basis for the market implementation as building product used for beams and columns. 3 years. 4 persons.

WG 3 - Connections:

- Enhancement of compression perp. to grain strength of glulam with pin-shaped fasteners. 2 years. 3 persons.

- Structural behaviour of glued laminated timber beams with unreinforced and reinforced nothces. 4 years. 3 persons.

WG 4 - Hybrid Structures:

- CLT-concrete composite slab lacking of any rebar and metallic shear connectors. 1.5 years, 3 persons.

Publications

WG 1 - Basis of Design:

Kohler, J. & Fink, G. 2015. Aspects of code based design of timber structures, Accepted for publication at ICASP Applications of Statistics and Probability in Civil Engineering, Vancouver, Canada.

Köhler J., Steiger R., Fink G., Jockwer R. 2012: Assessment of selected Eurocode based design equations in regard to structural reliability. Proceedings of CIB-W18 Meeting 45, Växjö, Sweden, August 27 – 30, 2012. Paper 45-102-1.

WG 2 - Solid Timber Construction:

Theiler M., Frangi A., Steiger R. 2013: Strain-based calculation model for centrically and eccentrically loaded timber columns. Engineering Structures 56: 1103 – 1116.

Steiger R., Gehri E. 2011: Interaction of shear stresses and stresses perpendicular to the grain. Proceedings of CIB-W18 Meeting 44, Alghero, Sardegna (Italy), August 28 – September 1, 2011. Paper 44-6-2.

Steiger R., Arnold A. 2009: Strength grading of Norway spruce structural timber: Revisiting property relation-ships used in EN 338 classification system. Wood Science and Technology 43 (3-4): 259 – 278.

Steiger R., Fontana M. 2005: Bending moment and axial force interacting on solid timber beams. Materials and Structures 38 (279): 507 – 513.

WG 3 - Connections:

Tlustochowicz G., Serrano E., Steiger R. 2011: State-of-the-art review on timber connections with glued-in steel rods. Materials and Structures 44 (5): 997 – 1020.