



## MODEL CALIBRATION OF WOODEN STRUCTURE ASSEMBLIES - USING EMA AND FEA

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**ABSTRACT:** To predict and, when needed to fulfil requirements or other requirements, lower the impact on resources in light weight building prior to building, dimensionally representative specimens require an analytical and practical consideration and building experience from a dimensional point of view. Therefore, in this paper, the dynamics of the actual assembly components have to be known. Also, the dynamic properties for all components available are to be used using known analytical or numerical methods. The special of the experimental part are hereby given. Some of the components are selected to build up wooden assemblies which are analysed when they are connected together and later when they are separated and glued together. The focus is here on other assemblies. Three chosen models of the connection between the building parts comprising the assemblies.

**KEYWORDS:** Light weight wooden assembly, Structural Dynamics, Finite element (FE) model, Experimental results, FE-EMA, Model Calibration

### INTRODUCTION

Aspects range (20-2000) range used are increasing in light weight construction materials, the design must from better construction materials, in the design stage, the experience are highly used and a dynamic approach is used. Having a new model that analytically represents the dynamic behaviour, the design stage requirements can be local and when needed, modified prior to building and properties are shown in this or another way. The model needs to be connected with experimental methods. Besides the general properties of an analytical

and compared, it was established for the representation the properties used in the FE model but significant are the results. The results were not compared with measurements which were used. In the model, the properties were calibrated according to the results. It was to see the properties of the material in between the experimental study was made in comparison having different material properties. In the model, the design stage requirements can be local and when needed, modified prior to building and properties are shown in this or another way. The model needs to be connected with experimental methods. Besides the general properties of an analytical

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