



## Model Calibration of Wooden Structure Assemblies - Using EMA and FEA

<https://research.thinkwood.com/en/permalink/catalogue638>

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### Summary:

To predict and, when needed to fulfil regularizations or other requirements, lower the impact sound transmission in light weight buildings prior to building, dynamically representative calculation models are needed. The material properties of commonly used building components have a documented spread in literature. Therefore, to validate the junction models, the dynamics of the actual assembly components have to be known. Here, the dynamic properties of a number of component candidates are measured using hammer excited vibrational tests. The spread of the properties of the components are hereby gained. Some of the components are selected to build up wooden assemblies which are evaluated first when they are screwed together and later when they are screwed and glued together. The focus is here on achieving representative finite element models of the junctions between the building parts composing the assemblies.

Online Access: Free

### Resource Link

[http://scho.wshosted\\_files/wcte2014/00/ABS427\\_Bolmsvik\\_web.pdf](http://scho.wshosted_files/wcte2014/00/ABS427_Bolmsvik_web.pdf)