

## Advanced Modelling of Cross Laminated Timber (CLT) Panels in Bending

<https://research.thinkwood.com/en/permalink/catalogue1796>

Author: Lorenzo Franzoni  
Arthur Lebéé  
Florent Lyon  
Gilles Forêt

Publisher: HAL archives-ouvertes.fr

Year of Publication: 2015

Country of Publication: Germany

Resource Type: Presentation

Material: CLT (Cross-Laminated Timber)

Application: Wood Building Systems  
General Application

Topic: Mechanical Properties

Keywords: Bending  
Model  
Panels  
Shear  
Stiffness  
Failure Behavior  
Shear Force  
Reference Test

Language: English

Conference / Proceeding: Euromech Colloquim 556 Theoretical Numerical and Experimental Analyses of Wood Mechanics

Notes: May 2015, Dresde, Germany

Online Access: Free

### Resource Link

<https://hal.archives-ouvertes.fr/hal-01270289>




## Air-Coupled Ultrasound Propagation and Novel Non-Destructive Bonding Quality Assessment of Timber Composites

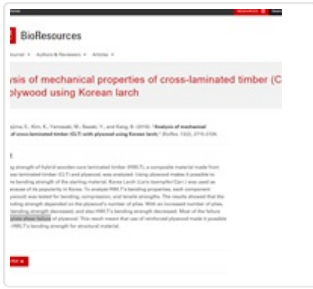
<https://research.thinkwood.com/en/permalink/catalogue13>

Author: Sergio Martín  
Organization: ETH Zurich  
Year of Publication: 2012  
Country of Publication: Switzerland  
Publication:  
Resource Type: Thesis  
Material: Glulam (Glue-Laminated Timber)  
Application: General Application  
Topic: Mechanical Properties  
Keywords: Adhesives  
Bonding  
Delamination  
Failure  
Non-Destructive Testing  
Air-coupled Ultrasound (ACU)  
Finite-Difference Time-Domain (FDTD) model  
Language: English  
Online Access: Free

### Resource Link

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<http://dx.doi.org/10.3929/ethz-a-7335172> 



# Analysis of Mechanical Properties of Cross-Laminated Timber (CLT) with Plywood using Korean Larch

<https://research.thinkwood.com/en/permalink/catalogue1806>

Author: Chul Choi  
Erina Kojima  
Kyung-Jung Kim  
Mariko Yamasaki  
Yasutoshi Sasaki  
Seog-Goo Kang

Publisher: NC State University

Year of Publication: 2018

Country of Publication: United States

Resource Type: Journal Article

Material: CLT (Cross-Laminated Timber)

Application: General Application

Topic: Mechanical Properties

Keywords: Korean Larch  
Bending Strength  
Hybrid Wooden-Core Laminated Timber (HWLT)  
Lamina  
Compression  
Tensile Strength  
Korea  
In-Plate Shear Failure

Language: English

Series: BioResources

Online Access: Free

## Resource Link

<https://bioresources.cnr.ncsu.edu/resources/analysis-of-mechanical-properties-of-cross-laminated-timber-clt-with-plywood-using-korean-larch/>



# Analysis of Shear Transfer and Gap Opening in Timber–Concrete Composite Members with Notched Connections

<https://research.thinkwood.com/en/permalink/catalogue1399>

Author: Lorenzo Boccadoro  
René Steiger  
Simon Zweidler  
Andrea Frangi

Publisher: Springer Netherlands

Year of Publication: 2017

Country of Publication: Netherlands

Resource Type: Journal Article

Material: Timber-Concrete Composite

Application: General Application

Topic: Connections  
Mechanical Properties

Keywords: Notched Connections  
Analytical Model  
Shear Stress  
Failure

Language: English

Series: Materials and Structures

ISSN: 1871-6873

Online Access: Payment Required

## Resource Link

<https://doi.org/10.1617/s11527-017-1098-3>



# Analysis of the Fracture Behavior of Radiata Pine Timber and Laminated Veneer Lumber

<https://research.thinkwood.com/en/permalink/catalogue438>

Author: Bettina Franke  
Pierre Quenneville

Publisher: ScienceDirect

Year of Publication: 2014

Country of Publication: Netherlands

Resource Type: Journal Article

Material: LVL (Laminated Veneer Lumber)  
Solid-sawn Heavy Timber

Application: General Application

Topic: Mechanical Properties

Keywords: Failure Mechanisms  
Fracture Mode  
Pine

Language: English

Series: Engineering Fracture Mechanics

Online Access: Payment Required

## Resource Link

<http://dx.doi.org/10.1016/j.engfracmech.2013.12.004> 



## Analytical and Experimental Evaluation of the Effect of Knots on Rolling Shear Properties of Cross Laminated Timber (CLT)

<https://research.thinkwood.com/en/permalink/catalogue1942>

Author: Yawei Cao  
Jason Street  
Hyungsuk Lim

Year of Publication: 2018

Country of Publication: Korea

Resource Type: Conference Paper

Material: CLT (Cross-Laminated Timber)

Application: General Application

Topic: Mechanical Properties

Keywords: Rolling Shear  
Southern Pine  
Center Point Bending Test  
Two-Plate Shear Test  
Knots  
Strength  
Failure Mechanism

Language: English

Conference / Proceeding: World Conference on Timber Engineering

Notes: August 20-23, 2018, Seoul, Republic of Korea

Online Access: Free

### Resource Link

<https://indico.conference4me.psnk.pl/event/171/session/337/contribution/90/material/paper/1.pdf>



# An Analytical Model for Design of Reinforcement around Holes in Laminated Veneer Lumber (LVL) Beams

<https://research.thinkwood.com/en/permalink/catalogue135>

Author: Manoochehr Ardalany  
Massimo Fragiaco  
Peter Moss  
Bruce Deam

Publisher: Springer Netherlands

Year of Publication: 2013

Country of Publication: Netherlands

Resource Type: Journal Article

Material: LVL (Laminated Veneer Lumber)

Application: Beams

Topic: Design and Systems  
Mechanical Properties

Keywords: Failure  
Glued-In Rods  
Model  
Reinforcement  
Screws  
Tensile

Language: English

Series: Materials and Structures

ISSN: 1871-6873

Online Access: Payment Required

## Resource Link

<https://doi.org/10.1617/s11527-013-0019-3>



# An Empirical Model for Predicting the Mechanical Properties Degradation of Bamboo Bundle Laminated Veneer Lumber (BLVL) by Hygrothermal Aging Treatment

<https://research.thinkwood.com/en/permalink/catalogue1405>

Author: Haidong Li  
Fuming Chen  
Yu Xian  
Jianchao Deng  
Ge Wang  
Haitao Cheng

Publisher: Springer Berlin Heidelberg

Year of Publication: 2017

Country of Publication: Germany

Resource Type: Journal Article

Material: Other Materials

Application: General Application

Topic: Serviceability  
Mechanical Properties

Keywords: Degradation  
Computed Tomography  
MOE  
MOR  
Temperature  
Failure  
Bamboo

Language: English

Series: European Journal of Wood and Wood Products

ISSN: 1436-736X

Online Access: Payment Required

## Resource Link

<https://doi.org/10.1007/s00107-016-1100-8>





## An Innovative Hybrid Timber Structure in Japan: Performance of Column and Beams

<https://research.thinkwood.com/en/permalink/catalogue1759>

Author: Shinichi Shioya  
Takeshi Koga  
Yuto Kumon  
Kazuaki Otsuki  
Kouhei Uchimura

Year of Publication: 2016

Country of Publication: Austria

Resource Type: Conference Paper

Material: Glulam (Glue-Laminated Timber)

Application: Beams  
Columns

Topic: Mechanical Properties

Keywords: Japanese Cedar  
Reinforcement  
Steel Bars  
Epoxy  
Flexural Stiffness  
Flexural Strength  
Reverse Cyclic Loading  
Force-Displacement Curves  
Strain Distribution  
Failure  
Numerical Analysis

Language: English

Conference / Proceeding: World Conference on Timber Engineering

Notes: August 22-25, 2016, Vienna, Austria  
p. 5058-5067

### Abstract:

In this paper, bending behaviours in hybrid composite glulam timbers reinforced using deformed steel bars and epoxy resin adhesives (RGTSB) are presented. The technique RGTSB was developed in order to improve flexural stiffness and strength in glulam timbers...

Online Access: Free

### Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650028> 



# Application of Quasi-Brittle Material Model for Analysis of Timber Members

<https://research.thinkwood.com/en/permalink/catalogue925>

Author: Nima Khorsandnia  
Keith Crews

Publisher: Taylor&Francis Online

Year of Publication: 2014

Country of Publication: United Kingdom

Resource Type: Journal Article

Material: Solid-sawn Heavy Timber

Application: General Application

Keywords: ultimate load  
Finite Element Model  
Load-Deflection Response  
Failure Load  
Four Point Bending Test

Language: English

Series: Australian Journal of Structural Engineering

Online Access: Payment Required

## Resource Link

<https://doi.org/10.1080/13287982.2015.11465183>