# Ductility of Dowelled New Zealand Douglas-Fir CLT Connections Under Monotonic and Cyclic Loading




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|---|---|
| Author: | Ottenhaus, Lisa-Mareike |
| | Li, Minghao |
| | Brown, J. |
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| | Scott, B. |
| Organization: | University of Canterbury |



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|---|---|
| Year of Publication: | 2019 |
| Country of Publication: | New Zealand |
| Format: | Conference Paper |
| Material: | CLT (Cross-Laminated Timber) |
| Application: | Shear Walls |
| Topic: | Connections |
| Keywords: | Multi-Story |
| | Douglas-Fir |
| | Dowel-Type Connections |
| | Dowels |
| Language: | English |
| Conference: | Pacific Conference on Earthquake Engineering |
| Research Status: | Complete |
| Online Access: | Free |


## Resource Link

http://hdl.handle.net/10092/16743

# Influence of Varying Strength, from Story to Story, on Modeled Seismic Response of Wood-Frame Shear Wall Structures

**https://research.thinkwood.com/en/permalink/catalogue2075**

| | |
|---|---|
| Author: | Perry, Logan |
| | Line, Philip |
| | Charney, Finley |
| Year of Publication: | 2018 |
| Country of Publication: | South Korea |
| Format: | Conference Paper |
| Material: | Light Frame (Lumber+Panels) |
| Application: | Walls |
| | Wood Building Systems |
| Topic: | Seismic |
| Keywords: | Hysteretic Model |
| | Multi-Story |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Online Access: | Free |

### Resource Link

https://www.researchgate.net/publication/337224398_INFLUENCE_OF_VARYING_STRENGTH_FROM_STORY_TO_STORY_ON_MODELED_SEISMIC_RESPONSE_OF_WOOD-FRAME_SHEAR_WALL_STRUCTURES


# A Theoretical Approach Towards Ressource Efficiency in Multi-Story Timber Buildings Through BIM and Lean

**https://research.thinkwood.com/en/permalink/catalogue1910**

| | |
|---|---|
| Author: | Santana-Sosa, Aída |
| | Riola Parada, Felipe |
| Year of Publication: | 2018 |
| Country of Publication: | Korea |
| Format: | Conference Paper |
| Material: | LVL (Laminated Veneer Lumber) |
| | Timber-Concrete Composite |
| | Light Frame (Lumber+Panels) |
| Application: | Wood Building Systems |
| | Walls |
| | Columns |
| Topic: | Design and Systems |
| | Cost |
| Keywords: | Multi-Story |
| | Integrated Elements |
| | Offsite Construction |
| | Collaborative Work |
| | Interdisciplinary Process |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Notes: | August 20-23, 2018, Seoul, Republic of Korea |
| Online Access: | Free |

### Resource Link

https://www.researchgate.net/publication/331354920_A_Theoretical_Approach_Towards_Ressource_Efficiency_in_Multi-Story_Timber_Buildings_Through_BIM_and_LEAN

# Post-Tensioned Mass Timber Systems

**https://research.thinkwood.com/en/permalink/catalogue1256**

| | |
|---|---|
| Author: | Iqbal, Asif |
| | Popovski, Marjan |
| Organization: | Structures Congress |
| Publisher: | American Society of Civil Engineers |
| Year of Publication: | 2017 |
| Country of Publication: | United States |
| Format: | Conference Paper |
| Application: | Frames |
| | Shear Walls |
| Topic: | Design and Systems |
| | Seismic |
| Keywords: | North America |
| | New Zealand |
| | Post-Tensioning Cables |
| | Post-Tensioned |
| | Multi-Story |
| | Lateral Load Resisting Systems |
| | High Seismic Regions |
| Language: | English |
| Conference: | Structures Congress 2017 |
| Research Status: | Complete |
| Notes: | April 6–8, 2017, Denver, Colorado |


Summary:

A new type of mass timber structural system has been developed in New Zealand over the last decade. Timber members made of engineered wood products are used in combination with post-tensioning cables to produce highly efficient structural components suitable for multi-story moment resisting frames or shear wall-based lateral load resisting systems...


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| Online Access: | Payment Required |

## Resource Link

https://doi.org/10.1061/9780784480427.036

# Timber-Glass Composites: Calculation and Sizing Concept

**https://research.thinkwood.com/en/permalink/catalogue1741**

| | |
|---|---|
| Author: | Hochhauser, Werner<br>Fadai, Alireza<br>Rinnhofer, Matthias<br>Winter, Wolfgang |
| Year of Publication: | 2016 |
| Country of Publication: | Austria |
| Format: | Conference Paper |
| Material: | Timber-Glass Composite |
| Application: | Hybrid Building Systems |
| Topic: | Mechanical Properties<br>Cost |
| Keywords: | Long-term<br>Load Bearing Capacity<br>Multi-Story |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Notes: | August 22-25, 2016, Vienna, Austria<br>p. 4904-4912 |

Summary:

Glued glass front constructions have long been in use and are generally considered the state of the art. However, with these solutions the glass serves no stiffening or bearing function, but merely functions as an outer cover. The objective of several research projects was to investigate alternative constructions of stiffening glass fronts, which...

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### Resource Link

http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650009

# Timber-Glass Composite: Long-term Behavior

**https://research.thinkwood.com/en/permalink/catalogue1743**

| | |
|---|---|
| Author: | Fadai, Alireza |
| | Nicklisch, Felix |
| | Rinnhofer, Matthias |
| Year of Publication: | 2016 |
| Country of Publication: | Austria |
| Format: | Conference Paper |
| Material: | Timber-Glass Composite |
| Application: | Hybrid Building Systems |
| Topic: | Serviceability |
| | Mechanical Properties |
| | Environmental Impact |
| | Cost |
| Keywords: | Stiffening |
| | Multi-Story |
| | Long-term |
| | Load Bearing |
| | Creep |
| | Façade |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Notes: | August 22-25, 2016, Vienna, Austria<br>p. 4921-4929 |

Summary:

Up to now, structural sealant glazing façades have been extensively applied. They are at the cutting edge of technology and meet the highest standards. The objective of several research projects was to develop stiffening glass fronts, which replace expensive frameworks or wind bracings behind the large glass windows. Thus, potential applications...

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### Resource Link

http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650011

# System Solutions for Point Supported Wooden Flat Slabs

**https://research.thinkwood.com/en/permalink/catalogue1784**

| | |
|---|---|
| Author: | Zingerle, Philipp |
| | Maderebner, Roland |
| | Flach, Michael |
| Year of Publication: | 2016 |
| Country of Publication: | Austria |
| Format: | Conference Paper |
| Material: | CLT (Cross-Laminated Timber) |
| Application: | Wood Building Systems |
| Topic: | Mechanical Properties |
| | Connections |
| Keywords: | Point-Supported |
| | Stiffness |
| | Load Carrying Capacity |
| | Multi-Story |
| | Reinforcement |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Notes: | August 22-25, 2016, Vienna, Austria<br>p. 5663-5668 |

Summary:

The challenge with point-supported flat slabs is the stress concentration at the supporting points. The small strength of the wood perpendicular to the grain should not reduce the load carrying capacity of the CLT –Panels. Therefore, there are some existing state of the art methods of reinforcement with self-tapping screws, which open up the...

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| Online Access: | Free |

### Resource Link

http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650138

# Seismic Analysis of Cross Laminated Timber Buildings Using Code Prescribed Methods

**https://research.thinkwood.com/en/permalink/catalogue1646**

| | |
|---|---|
| Author: | Sustersic, Iztok |
| | Fragiacomo, Massimo |
| | Dujic, Bruno |
| Year of Publication: | 2016 |
| Country of Publication: | Austria |
| Format: | Conference Paper |
| Material: | CLT (Cross-Laminated Timber) |
| Application: | Wood Building Systems |
| Topic: | Seismic |
| | Connections |
| Keywords: | FE Analysis |
| | Multi-Story |
| | Geometry |
| | Vertical Load |
| | Friction |
| | Strength |
| | Stiffness |
| | Ductility |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Notes: | August 22-25, 2016, Vienna, Austria<br>p. 3453-3461 |

Summary:

This paper investigates the seismic analysis of multi-story cross laminated timber (XLAM) buildings. The influence of different parameters such as wall geometry, vertical load level, friction and, most importantly, connection stiffness, strength and ductility is assessed. Linear and nonlinear finite element (FE) analyses are carried out on a...

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**Resource Link**

http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1649333

# Design of Multi-Story Building Using Multi-Objective Particle Swarm Optimization

**https://research.thinkwood.com/en/permalink/catalogue455**

| | |
|---|---|
| Author: | Decker, Stéphanie |
| | Ndiaye, Amadou |
| | Brangeon, Boris |
| | Sempey, Alain |
| | Galimard, Philippe |
| | Pauly, Marie |
| | Lagière, Philipe |
| | Bos, Frédéric |
| Year of Publication: | 2014 |
| Country of Publication: | Canada |
| Format: | Conference Paper |
| Material: | CLT (Cross-Laminated Timber) |
| Application: | Wood Building Systems |
| Topic: | Environmental Impact |
| | Market and Adoption |
| Keywords: | Multi-Story |
| | Design Optimization |
| | Feasibility |
| Language: | English |
| Conference: | World Conference on Timber Engineering |
| Research Status: | Complete |
| Notes: | August 10-14, 2014, Quebec City, Canada |

Summary:

This paper presents a design method for multi-story timber building with consideration of regulatory constraints. The objective is to optimize in the same time thermal, structural and environmental objectives taking into account the industrial feasibilit...

Online Access: Free

### Resource Link

http://schd.ws/hosted_files/wcte2014/70/ABS117_Armand_web.pdf

# Tall Cross-Laminated Timber Building: Design and Performance Session WW300 Experimental and Modeling Studies on Wood Frame Buildings

**https://research.thinkwood.com/en/permalink/catalogue618**

| | |
|---|---|
| Author: | Dolan, Daniel |
| | Bordry, Vincent |
| | Pei, Shiling |
| | van de Lindt, John |
| Organization: | Structures Congress |
| Publisher: | American Society of Civil Engineers |
| Year of Publication: | 2014 |
| Country of Publication: | United States |
| Format: | Conference Paper |
| Material: | CLT (Cross-Laminated Timber) |
| Application: | Walls |
| | Wood Building Systems |
| Topic: | Design and Systems |
| | Seismic |
| Keywords: | Damping |
| | Multi-Story |
| | Ductility |
| | Cost |
| | Fire Resistance |
| Language: | English |
| Conference: | Structures Congress 2014 |
| Research Status: | Complete |
| Notes: | April 3-5, 2014, Boston, Massachusetts, United States |

Summary:

Cross-laminated timber (CLT) is widely perceived as the most promising option for building high-rise wood structures due to its structural robustness and good fire resistance. While gravity load design of a tall CLT building is relatively easy to address...

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| Online Access: | Payment Required |

**Resource Link**

http://dx.doi.org/10.1061/9780784413357.252