

**Curriculum Vitae**

**Full name:** Dr. Pierre Quenneville  
**Present position:** Professor of Timber Design  
**Present employer:** University of Auckland  
**Present work address:** Dept. of Civil and Environmental Engineering  
 Private Bag 92019, Auckland 1142

**Academic qualifications:**

BE (1<sup>st</sup> Class Hons), Royal Military College of Canada 1983  
 ME Ecole Polytechnique, Montreal 1986  
 PhD. Queen's University in Kingston 1992

**Years as a practising researcher:** **24**

**Track Record**

Research Title	Principal outcome	Principal end user and contact
Resistance of bolted timber connections	Proposed design equations for inclusion into the Canadian Wood Design standard	Structural timber designers
Resistance of timber connectors	Changes to CSA O86 design requirements for connectors	Structural timber designers
Timber Portal Frame Moment Connection	Development of the timber portal frame Quick-Connect Connection	Structural timber designers and fabricators

**Honours/distinctions/membership of societies, institutions, committees:**

2007 Wood Champion Award, Canadian Wood Council Wood *Works!* Program, Natural Sciences and Engineering Research Council Scholarship 1983, ASCE member, Member Technical Committee Canadian Wood Design Standard O86, Australian TM-001 committee for AS 1720 Design Standard.

**Professional positions held:**

2011-present Head of Department, Dept of Civil and Environmental Engineering, University of Auckland  
 2007-present Professor of Timber Design, Dept of Civil and Environmental Engineering, University of Auckland.  
 2003-2007 Head of Department, Dept of Civil Engineering, Royal Military College of Canada  
 1988-2007 Professor, Civil Engineering Department, Royal Military College of Canada.  
 1986-1988 Project engineer, 1 Construction Engineering Unit, Canadian Armed Forces.  
 1983-1986 Post-graduate education and military engineer training.

**Present research/professional speciality:**

Teaching and research in structural design of timber buildings, structural engineering

**2011 Research and Creative Works****Book - Authored**

Quenneville, P.J., Franke, S., & swagger, T. (2011). *Timber Portal Frame Design Guide - Australia*. Christchurch, New Zealand: Structural Timber Innovation Company.

Quenneville, P.J. (2011). *Timber Portal Frame Design Guide - New Zealand*. Christchurch, : Structural Timber Innovation Company.

**Chapter**

Fortune, A., & Quenneville, P.J. (2011). A feasibility Study of New Zealand radiata pine crosslam. In: (Eds.), *Incorporating Sustainable Practice in Mechanics and Structures of Materials*, p885-889, CRC Press, (Published).

**Conference - Conference Paper**

Zarnani, P., & Quenneville, P.J. (2011). *New analytical method and experimental verification of timber rivet connections loaded parallel-to-grain*. Presented at Annual Conference of the Canadian Society for Civil Engineering 2011, Ottawa, Canada.

**Conference - Proceedings**

Wilson, AW, , QUENNEVILLE, PJH, , & Ingham, J.M. (2011). *Assessment of timber floor diaphragms in historic unreinforced masonry buildings*. Presented at International conference on structural health assessment of timber structures, Lisbon, Portugal.

WILSON, A.W., QUENNEVILLE, P.J.H., & Ingham, J.M. (2011). *Assessment of timber floor diaphragms in historic unreinforced masonry buildings*. Presented at International conference on structural health assessment of timber structures, Lisbon, Portugal.

Wilson, A.W., Quenneville, P.J.H., & Ingham, J.M. (2011). *Experimental testing of full-scale timber floor diaphragms in unreinforced masonry buildings*. Presented at Ninth Pacific Conference on Earthquake Engineering: Building an earthquake resilient society, Auckland.

Abdul Karim, A.R., Quenneville, P., Sa'don, N.M., & Ingham, J.M. (2011). *Wall-diaphragm connection assessment guideline for URM buildings*. Presented at Ninth Pacific Conference on Earthquake Engineering: Building an earthquake resilient society, Auckland.

Crews, K., Buchanan, A., Quenneville, P.J., & Pampanin, S. (2011). *Development of high performance structural timber systems for non residential buildings in New Zealand and Australia*. Presented at 12th East Asia-Pacific Conference on Structural Engineering and Construction, EASEC12.

**Journal - Research Article**

Jensen, J.L., Nakatani, M., Quenneville, P.J., & Walford, B. (2012). A simplified model for withdrawal of screws from end-grain of timber. *Construction and Building Materials*, 29 (2), p557-563.

Loo, W.Y., Quenneville, P.J., & Chouw, N. (2011). A numerical study of the seismic behaviour of timber shear walls with slip-friction connectors. *Engineering Structures*, 34 (January 2012), p233-243, 10.1016/j.engstruct.2011.09.016.

Franke, S., & Quenneville, P.J. (2011). Bolted and doweled connections in radiata pine and laminated veneer lumber using the European yield model. *Australian Journal of Structural Engineering*, 12 (1), p13-27.

Franke, S., & Quenneville, P.J. (2011). Compression Strength Perpendicular to the Grain of New Zealand Radiata Pine Lumber. *Australian Journal of Structural Engineering*, 12 (1), p1-12, (Published).

Jensen, J., & Quenneville, P.J. (2011). Experimental investigations on row shear and splitting in bolted connections. *Construction and Building Materials*, 25 (5), p2420-2425.

Quenneville, P.J., & Fortune, A. (2011). Feasibility Study of New Zealand Radiata Pine Cross-Laminated Timber. *New Zealand Timber Design Journal*, 19 (3), p3-7.

Franke, B., & Quenneville, P.J. (2011). Numerical Modelling of the Failure Behavior of Dowel Connections in Wood. *Journal of Engineering Mechanics*, 137 (3), p186-195, 10.1061/(ASCE)EM.1943-7889.0000217.

Jensen, J.L., Nakatani, M., Quenneville, P.J., & Walford, B. (2011). A Simple Unified Model for Withdrawal of lag Screws and Glued-in Rods. *European Journal of Wood Products*, 69 (4), p537-544, (Published).

Jensen, J.L., & Quenneville, P.J. (2011). Fracture Mechanics Analysis of Row Shear Failure in Dowelled Timber Connections: Asymmetric Case. *Materials and Structures*, 44 (1), p351-360, (Published).

**2006 – 2010 Research and Creative Works****Chapter**

Quenneville, P.J.H. (2009). Bolts and Dowels. In: Association, C.S. (Eds.), *O86-09 Engineering Design in Wood*, (2009 ed.), p122-132, Mississauga, Canada, Canadian Standards Association.

**Conference - Oral Presentation**

Quenneville, P.J.H. (2009). *Overview of New design Provisions for Bolts and Dowels in CSA O86 and Design Examples*. Presented at Connections for Multi-Storey Heavy Timber Constructions, Quebec, Canada.

- Quenneville, P.J.H., & Morris, H.W. (2007). *Earthquake Testing of a 7-storey Timber Building in Japan*. Presented at Timber Design Seminar, Wellington, N.Z..
- Quenneville, P.J.H., & Morris, H.W. (2007). *Earthquake Testing of a 7-storey Timber Building in Japan*. Presented at Timber Design Seminar, Christchurch, N.Z..
- Quenneville, P.J.H. (2007). *Fasteners and Connectors for Wood Applications*. Presented at Wood Solutions Fair, Toronto, Canada.
- Quenneville, P.J.H. (2007). *Timber Connections Update*. Presented at New Zealand Timber Design Society Seminar, Rotorua, N.Z..
- Quenneville, P.J.H. (2007). *Timber Connections Update*. Presented at New Zealand Timber Design Society Seminar, Auckland, N.Z..
- Quenneville, P.J.H. (2007). *Timber Connections Update*. Presented at New Zealand Timber Design Society Seminar, Wellington, N.Z..
- Quenneville, P.J.H. (2007). *Timber Connections Update*. Presented at New Zealand Timber Design Society Seminar, Christchurch, N.Z..

#### **Conference - Conference Paper**

- Scheibmair, F., & Quenneville, P.J. (2010). *Development of an Expedient Moment Connection for large span portal frames in LVL or Glulam*. Presented at 21st Australian Conference on the Mechanics of Structures and Materials, Melbourne, Australia.
- Salenikovich, , Legras, B., Mohammad, M., & Quenneville, P.J. (2010). *Effect of Moisture on the Performance of Bolted Connections in Timber Structures*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.
- Franke, S., & Quenneville, P.J. (2010). *Investigation of the Embedding Strength of New Zealand timber and view for the NZA standard*. Presented at 21st Australian Conference on the Mechanics of Structures and Materials, Melbourne, Australia.
- Jensen, J., & Quenneville, P.J. (2010). *Row Shear Failure in Bolted Connections*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.
- Quenneville, P.J. (2010). *Sharing of the Connection Load within a Row of Bolts: from Zero to Ultimate Load*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.
- Mohammad, M., Munoz Toro, W., Quenneville, P.J., & Salenikovich, A. (2010). *Stiffness and Ductility of Bolted Connections*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.
- Jensen, J.L., & Quenneville, P.J.H. (2009). *Connections with glued-in rods subjected to combined bending and shear actions*. Presented at International Council for Research and Innovation in Building and Construction - W18 - Timber Structures, Zurich, Switzerland.
- Franke, S., & Quenneville, P.J.H. (2009). *Embedding strength of New Zealand timber and recommendation for the NZ standard*. Presented at International Council for Research and Innovation in Building and Construction - W18 - Timber Structures, Zurich, Switzerland.

#### **Conference - Proceedings**

- Franke, S., & Quenneville, P.J. (2010). *Embedding Behavior of LVL and Radiata Pine Lumber*. Presented at WCTE 2010, Riva del Garda, Italy.
- Morris, H.W., & Quenneville, P. (2010). *Moment deformation of multi-nailed joints in LVL – Development of a long term test procedure*. Presented at World Conference on Timber Engineering 2010, Riva Del Garda, Italy.
- Franke, B., & Quenneville, P.J. (2010). *Analysis of the Failure Behaviour of Transversely Loaded Dowel-Type Connections in Wood*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Trento, Italy.
- Abdul Karim, A.R., Quenneville, P.J.H., M Sa'Don, N., & Ingham, J.M. (2010). *Assessing the bolted connection strength of New Zealand hardwood*. Presented at 2010 NZSEE Annual Conference, Wellington.
- Franke, B., & Quenneville, P.J. (2010). *Failure Behaviour and resistance of Dowel-Type Connections Loaded Perpendicular to Grain*. Presented at CIB-W18 Timber Structures, Nelson, New Zealand.
- Wilson, A.W., Moon, F.L., Quenneville, P.J.H., & Ingham, J.M. (2009). *Characterization of nailed connections for the seismic assessment of timber diaphragms in unreinforced masonry buildings*. Presented at 2009

ANCER Workshop, Urbana, Illinois, USA.

Abdul Karim, A.R., Quenneville, P.J.H., M Sa'Don, N., & Ingham, J.M. (2009). *Strength assessment of typical wall-diaphragm connections in New Zealand URM buildings*. Presented at 11th Canadian Masonry Symposium, Toronto, Ontario, Canada.

Quenneville, P.J.H., & Mohammad, M. (2008). *Bolted Connection Design - A New Design Approach*. Presented at 2008 Annual Conference of the Canadian Society for Civil Engineers, Quebec, Canada.

Quenneville, P.J.H. (2008). *Bolted Timber Connection Design - A New Design Approach and Comparisons with Existing Standards*. Presented at ASEC 2008, Melbourne, Australia.

Quenneville, P.J.H. (2008). *Design of Bolted Connections: A comparison of a Proposal and Various Existing Standards*. Presented at 10th World Conference on Timber Engineering, Miyasaki, Japan.

Munoz, W., Mohammad, M., Salenikovich, A., & Quenneville, P.J.H. (2008). *Determination of Yield Point and Ductility Assemblies: In search for a Harmonised Approach*. Presented at 10th World Conference on Timber Engineering, Miyasaki, Japan.

Mohammad, M., Munoz, W., Gagnon, S., Belanger, L.M., & Quenneville, P.J.H. (2008). *Evaluation and restoration of Covered Timber Bridges in Quebec*. Presented at 2008 Annual Conference of the Canadian Society for Civil Engineers, Quebec, Canada.

Munoz, W., Mohammad, M., Salenikovich, A., & Quenneville, P.J.H. (2008). *Need for a Harmonized Approach for Calculations of Ductility of Timber Assemblies*. Presented at Annual CIB-W18 Meeting, St-Andrews, Canada.

Quenneville, P.J.H., & Jensen, J.L. (2008). *Validation of the Canadian Bolted Design Approach*. Presented at CIB-W18 Meeting - Timber Structures, St-Andrews, Canada.

Munoz, W., Mohammad, M., Salenikovich, A., & Quenneville, P.J.H. (2008). *Yield Point and Ductility of Timber Assemblies: A Need for a Harmonised Approach*. Presented at 2008 Annual Conference of the Canadian Society for Civil Engineers, Quebec, Canada.

Marjerrison, M., & Quenneville, P.J.H. (2007). *Model for the Predictions of the Ductile and Brittle Failure Modes (Parallel-to-Grain) of Timber Rivet Connections*. Presented at CIB-W18 Annual Conference, Bled, Slovenia.

Quenneville, P.J., Smith, I., Asiz, A., Snow, M., & Chui, Y.H. (2006). *Generalized Canadian Approach for Design of Connections with Dowel Fasteners*. Presented at 2006 CIB W18 Conference, Firenze, Italy.

Quenneville, P.J., & Bickerdike, M. (2006). *Effective In-row Capacity of Multiple Fastener Connections*. Presented at 2006 CIB W18 Conference, Firenze, Italy.

#### **Journal - Research Article**

Jensen, J.L., & Quenneville, P.J. (2010). Splitting of New Zealand Grown Radiata Pine due to Connections Loading Perpendicular to Grain: Theory and Applications. *SESOC*, 23 (1), p89-96, (Published).

Jensen, J.L., & Quenneville, P. (2009). Fracture mechanics analysis of row shear failure in dowelled timber connections. *Wood Science and Technology*, p1-15.

Quenneville, P.J.H. (2009). Bolted Timber Connections. *The Structural Engineer*, 87 (17).

Quenneville, P.J.H. (2009). Design of Bolted Connections: A Comparison of a Proposal and Various Existing Standards. *NZ TIMBER DESIGN JOURNAL*, 17 (2), p57-62.

Quenneville, P., & Morris, H. (2009). Proposal for a mechanics-based bolted connection design approach for AS1720.1. *Australian Journal of Structural Engineering*, 9 (3), p195-206.

Quenneville, P.J.H., & Morris, H.W. (2007). Earthquake Performance of Multi-storey Cross Laminated Timber Buildings. *New Zealand Timber Design Journal*, 15 (4), p10-16.

#### **Journal - Discussion Paper**

Quenneville, P.J.H. (2008). A New Design Philosophy for Bolted Timber Connections. *Timber Design Australasia*.

#### **Patent**

Quenneville, P.J.H., & Scheibmair, F. *Patent Pending*, New Zealand. :

**Other - Oral Presentation**

Quenneville, P.J.H. (2008). *Connecting Timber*. Presented at Brisbane, Australia, 18 November 2008.

Quenneville, P.J.H. (2008). *Timber in Non-Residential Construction: Pushing the Limit and Breaking Cultural Barriers*. Presented at University of Auckland, 2 October 2008.

Quenneville, P.J.H. (2008). *New Technologies to Revolutionise Timber Buildings*. Presented at Auckland, 15 September 2008.

Quenneville, P.J.H. (2008). *Future Trends in Timber Construction*. Presented at The University of Auckland, 2 July 2008.

**Other - Other**

Quenneville, P.J.H. (2009). *Proposed Section 4 on Joints - New Zealand Standard 3603*. .

**Poster**

Scheibmair, F., & Quenneville, P.J. (2010). *Expedient Moment Connections for Large Scale Portal Frame Structures*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.

Franke, S., & Quenneville, P.J. (2010). *The Material Behaviour of Radiata Pine under Compression*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.

Jensen, J., Quenneville, P.J., & Nakatani, M. (2010). *Withdrawal of Lag Screws in End Grain*. Presented at WCTE 2010 World Conference on Timber Engineering, Riva del Garda, Italy.