
Christian Viau, Ph.D., E.I.T.

Curriculum Vitae
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Business Address

Department of Civil Engineering
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PROFESSIONAL APPOINTMENTS

- Present - 2020 **Assistant Professor**, Department of Civil Engineering, Royal Military College of Canada, Kingston ON.
- 2020 - 2017 **Part-Time Professor**, Department of Civil Engineering, University of Ottawa, Ottawa ON.
- 2020 - 2013 **Research Assistant**, Department of Civil Engineering, University of Ottawa, Ottawa ON.
- 2017 **Structural Engineer in Training**, J. L. Richards & Associates Ltd., Ottawa ON.
- 2015 - 2009 **Designer**, R. Viau Drafting & Design Ltd., Ottawa ON.

EDUCATION

- 2020 - 2016 **Ph.D.**, Department of Civil Engineering, University of Ottawa
Thesis: *Investigation and Optimization of Connections in Timber Assemblies Subjected to Blast Loading*
Supervisor: Dr. Ghasan Doudak
- 2015 - 2014 **M.A.Sc.**, Department of Civil Engineering, University of Ottawa
Thesis: *Investigating the Response of Light-Frame Wood Stud Walls with and Without Boundary Connections to Blast Loads*
Supervisor: Dr. Ghasan Doudak
- 2013 - 2009 **B.A.Sc.**, Department of Civil Engineering, University of Ottawa
Summa Cum Laude

RESEARCH EXPERIENCE

National Research Council of Canada

- 2020 Procedure for the Evaluation of Seismic Performance of CLT Connections
- 2020 Seismic Screening of Part 9 Type Buildings
- 2019 - 2018 Rapidly deployable modular building system

University of Ottawa

- 2020 - 2016 Experimental and analytical development of blast-resistant timber members and connections (Ph.D. thesis)
- 2020 - 2019 Development and modelling of blast-resistant connections
- 2017 - 2016 Blast retrofitting of glulam and cross-laminated timber using fibre-reinforced polymers
- 2017 - 2016 Blast performance of cross-laminated timber panels
- 2017 - 2013 Blast response of glued laminated beams and columns
- 2015 - 2014 Investigating the response of light-frame wood stud walls with and without boundary connections to blast loads (M.A.Sc. thesis)
- 2013 Lateral torsional buckling of wood beams

TEACHING EXPERIENCE

Courses Taught

- Design assisté par ordinateur en génie civil, Royal Military College: Fall 2020
- Mécanique pour ingénieurs, University of Ottawa: Winter 2020, Fall 2019
- Structural Design in Timber, University of Ottawa: Winter 2019
- Mécanique de génie civil, University of Ottawa: Fall 2018
- Engineering Mechanics, University of Ottawa: Fall 2017

PUBLICATIONS

Refereed Journal Articles

- A1. **Viau, C.**, and Doudak, G. (2020). "Application of Energy-Absorbing Connections in Timber Assemblies Subjected to Blast Loads." Manuscript submitted for publication.
- A2. **Viau, C.**, and Doudak, G. (2020). "Behaviour and Modelling of Glulam Beams with Bolted Connections Subjected to Shock Tube Simulated Blast Loads." Manuscript submitted for publication.
- A3. **Viau, C.**, and Doudak, G. (2019). "Behaviour and Modelling of Cross-Laminated Timber Panels with Boundary Connections Subjected to Blast Loads." *Engineering Structures*, 197, 109404.
- A4. Poulin, M., **Viau, C.**, Lacroix, D.N., and Doudak, G. (2017). "Experimental and Analytical Investigation of Cross-Laminated Timber Panels Subjected to Out-of-Plane Blast Loads." *Journal of Structural Engineering*, 144(2), 04017197.
- A5. **Viau, C.**, Lacroix, D.N., and Doudak, G. (2016). "Damage level assessment of response limits in light-frame wood stud walls subjected to blast loading." *Canadian Journal of Civil Engineering*, 44(2): 106-116.
- A6. **Viau, C.**, and Doudak, G. (2016). "Investigating the Behavior of Light-Frame Wood Stud Walls Subjected to Severe Blast Loading." *Journal of Structural Engineering*, 142(12), 04016138.
- A7. **Viau, C.**, and Doudak, G. (2016). "Investigating the behaviour of typical and designed wall-to-floor connections in light-frame wood stud wall structures subjected to blast loading." *Canadian Journal of Civil Engineering*, 43(6), 562-572.

Refereed Conference Papers

- B1. **Viau, C.**, and Doudak, G. (2019). "Analytical Modelling of Heavy Timber Assemblies with Realistic Boundary Conditions Subjected to Blast Loading." CSCE 2019 Annual Conference, Canadian Society for Civil Engineering, Laval, QC, Canada.
- B2. **Viau, C.**, and Doudak, G. (2019). "Effect of High Strain-Rates on Heavy Timber Connections." CSCE 2019 Annual Conference, Canadian Society for Civil Engineering, Laval, QC, Canada.
- B3. McGrath, A., **Viau, C.**, and Doudak, G. (2019). "Investigating the Response of Bolted Wood Connections to the Effects of Blast Loading." CSCE 2019 Annual Conference, Canadian Society for Civil Engineering, Laval, QC, Canada.
- B4. **Viau, C.**, Lacroix, D., and Doudak, G. (2018). "Design Considerations for Cross-Laminated Timber Panels Subjected to Simulated Blast Loads." Proceedings of the CSCE 2018 Annual Conference, Canadian Society for Civil Engineering, Fredericton, NB, Canada.
- B5. Côté, D., **Viau, C.**, Lacroix, D., and Doudak, G. (2018). "Blast Performance of Cross-Laminated Timber Panels with Realistic Boundary Conditions." Proceedings of the CSCE 2018 Annual Conference, Canadian Society for Civil Engineering, Fredericton, NB, Canada.

- B6. Lacroix, D., **Viau, C.**, and Doudak, G. (2018). "Design Considerations for Glulam Beams and Columns Under High Strain-Rates." Proceedings of the CSCE 2018 Annual Conference, Canadian Society for Civil Engineering, Fredericton, NB, Canada.
- B7. Lacroix, D., **Viau, C.**, Côté, D., Poulin, M., Lopez, A., and Doudak, G. (2016). "Overview on the structural performance of timber structures under the effects of blast loading - research and design considerations." Structures and Architecture, CRC Press, Guimarães, Portugal, 67-74.
- B8. **Viau, C.**, and Doudak, G. (2016). "Investigating the dynamic response of light-frame wood stud walls with various boundary connections when subjected to blast loads." Proceedings of the World Conference on Timber Engineering, Vienna, Austria.
- B9. **Viau, C.**, and Doudak, G. (2016). "Establishing the Failure Sequence of Light-Frame Wood Stud Walls Under the Effects of Blast Loads." Proceedings of the World Conference on Timber Engineering, Vienna, Austria.
- B10. **Viau, C.**, and Doudak, G. (2015). "Behaviour and Retrofit Options for Light-Frame Wood Stud Walls Subjected to Blast Loads." Proceedings of the 11th International Conference on Shock and Impact Loads on Structures, CI-Premier Conference Organisation, Ottawa, ON, 363-371.
- B11. **Viau, C.**, Lacroix, D. N., and Doudak, G. (2015). "Proposed Damage Level Assessment of Response Limits in Light-Frame Wood Stud Walls Subjected to Blast Loading." Proceedings of the 11th International Conference on Shock and Impact Loads on Structures, CI-Premier Conference Organisation, Ottawa, ON, 373-382.
- B12. Lacroix, D. N., **Viau, C.**, and Doudak, G. (2014). "Flexural response of glued laminated (glulam) beams subjected to blast loads." Proceedings of the World Conference on Timber Engineering, Quebec City, QC, Canada.

Software Intellectual Properties

- C1. BlasTDOF (2019) – A free software for the analysis of realistic structural assemblies subjected to blast loads. Using a versatile two-degree-of-freedom (TDOF) algorithm, it allows students, designers, and researchers to perform inelastic dynamic analysis of assemblies with realistic end connections. <http://www.cviau.ca/blastdof.html>

AWARDS AND HONOURS

- 2019 **Best Technical Paper Award - Mechanics and Materials**, CSCE 2019 Annual Conference, Laval QC.
- 2016 **Nominee**, Commission on Graduate Studies in Sciences Prize, awarded for an outstanding Master's thesis in the Sciences, University of Ottawa, Ottawa ON.
- 2015 **Best Graduate Seminar Presentation Award**, Department of Civil Engineering, University of Ottawa, Ottawa ON.
- 2015 **Highly Commendable Paper Award**, 11th International Conference on Shock and Impact Loads on Structures, Ottawa ON.
- 2015 **2nd Place**, Engineering and Computer Science Graduate Poster Competition, Faculty of Engineering, University of Ottawa, Ottawa ON.
- 2013 **Best Commercial and Environmental Application**, PEO Student Papers Night, Professional Engineers Ontario, Ottawa ON.

GRANTS AND SCHOLARSHIPS

- 2020 - 2019 **Ontario Graduate Scholarship (OGS) - Doctoral Award**, Government of Ontario, \$15,000/year.
- 2020 - 2014 **University of Ottawa Excellence Scholarship**, University of Ottawa, \$7,500/year.
- 2019 - 2016 **Postgraduate Scholarship - Doctoral (PGS-D) Award**, Natural Sciences and Engineering Research Council of Canada, \$21,000/year.
- 2015 - 2014 **Canada Graduate Scholarship - Master's (CSG-M) Award**, Natural Sciences and Engineering Research Council of Canada, \$17,500/year.
- 2015 **Ontario Graduate Scholarship (OGS) - Master's Award**, Government of Ontario, \$15,000/year.

SERVICE TO THE PROFESSION

Journal Review Work

- Present - 2020 Canadian Journal of Civil Engineering
- Present - 2020 Engineering Structures
- Present - 2020 Journal of Architectural Engineering
- Present - 2017 Journal of Structural Engineering

DEPARTMENTAL TALKS

- 2018 “Aperçu sur les structures exposées aux charges extrêmes”, University of Ottawa, Enrichment Mini-Courses Program, Ottawa, ON, May 1.

DEPARTMENTAL SERVICES

- 2020 - 2018 Member and Secretary, University of Ottawa Structures Lab Safety Committee

LANGUAGES

- English, Fluent
- French, Fluent

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

- Engineering Intern (E.I.T.), Professional Engineers Ontario
- Associate Member (A.M.ASCE), American Society of Civil Engineers
- Associate Member, Canadian Society for Civil Engineering