

CURRICULUM VITAE

FOR

MACPHEDRAN, Ian

Department of Civil, Geological and Environmental Engineering
University of Saskatchewan

1. PERSONAL

Employee ID: 7230357

2. DEGREES

PhD, University of Alberta, November 2009, Civil and Environmental Engineering, Structural Engineering

MSc, College of Graduate and Postdoctoral Studies, University of Saskatchewan, May 1989, Structural Engineering

BE, Department of Civil, Geological and Environmental Engineering, University of Saskatchewan, May 1983, Civil Engineering

3. CREDENTIALS

CLS User, Canadian Light Source Inc., University of Saskatchewan, June 2018

P.Eng., Association of Professional Engineers and Geoscientists of Alberta, April 2009, Structural Engineering

P. Eng., Association of Professional Engineers and Geoscientists of Saskatchewan, Structural Engineering

4. APPOINTMENTS (INCLUDING JOINT) AND PROMOTIONS AT THE UNIVERSITY OF SASKATCHEWAN

Nil

5. MEMBERSHIPS AND AFFILIATIONS

5.1 Associate Memberships at the University of Saskatchewan

Nil

5.2 Adjunct Appointments at Other Institutions

Nil

5.3 Affiliations

Professional Affiliate, Department of Civil, Geological and Environmental Engineering, University of Saskatchewan, February 2010 to present

6. PREVIOUS POSITIONS RELEVANT TO UNIVERSITY OF SASKATCHEWAN EMPLOYMENT

Nil

7. LEAVES

*Nil***8. RECOGNITIONS**

Vinnakota Award for best student paper at SSRC Annual Stability Conference, Structural Stability Research Council, Structural Stability Research Council, 200 (USD), April 2009

9. TEACHING ACTIVITIES**9.1 Scheduled Instructional Activity**

<u>YEAR</u>	<u>COURSE, TITLE</u>	<u>INST. TYPE</u>	<u>ENRL</u>	<u>YIH</u>	<u>YCSH</u>
2024-25	CE 470.3, Design in Structural Steel	Lecture	60	57	3420
2024-25	CE 805.3, Structural Stability	Lecture	2	39	78
2023-24	CE 470.3, Design in Structural Steel	Lecture	52	57	2964
2022-23	CE 470.3, Design in Structural Steel	Lecture	42	57	2394
2021-22	CE 470.3, Design in Structural Steel	Lecture	44	57	2508
2021-22	CE 805.3, Structural Stability	Lecture	1	39	39
2020-21	CE 470.3, Design in Structural Steel	Lecture	60	57	3420
2019-20	CE 805.3, Structural Stability	Lecture	4	39	156
2019-20	CE 470.3, Design in Structural Steel	Lecture	50	57	2850
2018-19	CE 470.3, Design in Structural Steel	Lecture	47	57	2679
2017-18	CE 470.3, Design in Structural Steel	Lecture	44	57	2508
2017-18	CE 805.3, Structural Stability	Lecture	8	39	312
2016-17	CE 470.3, Design in Structural Steel	Lecture	58	57	3306
2015-16	CE 805.3, Structural Stability	Lecture	8	39	312
2015-16	CE 470.3, Design in Structural Steel	Lecture	43	57	2451
2014-15	CE 470.3, Design in Structural Steel	Lecture	49	57	2793
2013-14	CE 805.3, Structural Stability	Lecture	2	39	78
2012-13	CE 805.3, Structural Stability	Lecture	3	39	117
2011-12	CE 898.3, Structural Stability	Lecture	3	39	117
2010-11	CE 898.3, Structural Stability	Lecture	4	39	156
2009-10	CE 898.3, Structural Stability	Lecture	5	39	195

9.2 Unscheduled Instructional Activity*Nil*

9.3 Course and Program Development

CE 805.3, CE 898.3, Structural Stability (Became CE 805). Department of Civil, Geological and Environmental Engineering, University of Saskatchewan (September 2009 to present).

CE 470.3, CE470.3, Design in Structural Steel.. Department of Civil, Geological and Environmental Engineering, University of Saskatchewan

9.4 Teaching Materials

Nil

9.5 Other Teaching-Related Activities

ENV E 471, Elements of Structural Design. University of Alberta, September 2005 to December 2005

10. SUPERVISION AND ADVISORY ACTIVITIES**10.1 Undergraduate Student Supervision**

Nil

10.2 Graduate Student Supervision

Nil

10.3 Graduate Theses Supervised

Nil

10.4 Post-Doctoral Supervision

Nil

10.5 Staff Supervision

Hu, Song, Scientific and Technical Staff, Principal Supervisor, August 2015 to October 2018

10.6 Other Advisory Activities

Cordova Alcivar, Pedro Luis, Master's Thesis, Committee Member, Fretting fatigue in steel bolted connections, November 2016 to December 2018 (Completed)

11. BOOKS AND CHAPTERS IN BOOKS**11.1 Authored Books****Accepted:**

Nil

Published:

Nil

11.2 Edited Books

Accepted:

Nil

Published:

Nil

11.3 Chapters in Books

Accepted:

Nil

Published:

Surovek, A.E., Foley, C., Ziemian, R.D. & **MacPhedran, I.** Chapter 16, "Frame Stability". In Ronald D Ziemian (Ed.), *Guide to Stability Design Criteria for Metal Structures*. Hoboken NJ US: : John Wiley and Sons

12. PAPERS IN REFEREED JOURNALS

Accepted:

Nil

Published:

MacPhedran, I. & Grondin, G. (2011). A simple steel beam design curve. *Canadian Journal of Civil Engineering*, 38(2): 141-153.

13. ARTISTIC WORKS

Nil

14. REFEREED CONFERENCE PUBLICATIONS

Accepted:

Nil

Published:

MacPhedran, I. & Grondin, G.Y. (May 2010). Simplified Monosymmetric Beam Design. Paper presented at 2010 Structural Stability Research Council Annual Stability Conference. Orlando, FL.

MacPhedran, I. & Grondin, G.Y. (April 2009). A Proposed Simplified Canadian Beam Design Approach. Paper presented at 2009 Annual Stability Conference of the Structural Stability Research Council. Phoenix, AZ.

MacPhedran, I. & Grondin, G.Y. (June 2008). A Simpler Steel Beam Design Strength Curve. Paper presented at Canadian Society for Civil Engineering's Second International Structural Specialty Conference 2008. Quebec QC.

MacPhedran, I. & Grondin, G.Y. (June 2007). A brief history of beam-column design. Paper presented at Canadian Society for Civil Engineering's 2007 Annual General Meeting and Conference. Yellowknife, NT.

MacPhedran, I. & Grondin, G.Y. (April 2007). Out-of-plane instability considering frame-member interaction. Paper presented at 2007 Structural Stability Research Council Annual Stability Conference. New Orleans, LA.

MacPhedran, I. & Grondin, G.Y. (August 2006). Fatigue of high strength bolted connections in tension. Paper presented at 7th International Conference on Short and Medium Span Bridges (2006). Montreal, QC.

Grondin, G.Y. & **MacPhedran, I.** (August 2006). Prying action in bolted tension joints loaded at service load. Paper presented at Tenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-10) (2006). Bangkok, Thailand.

MacPhedran, I. & Grondin, G.Y. (February 2006). Effects of plasticity on steel beam stability considering partial warping restraint. Paper presented at 2006 Structural Stability Research Council Annual Stability Conference. San Antonio, TX.

MacPhedran, I. & Grondin, G.Y. (April 2005). Warping Restraint and Steel Frame Instability. Paper presented at 2005 Structural Stability Research Council Annual Stability Conference. Montreal, QC.

MacPhedran, I. & Hosain, M.U. (June 1984). Use of computers in teaching a basic course in steel design. Paper presented at American Society of Civil Engineering 1984 Spring Convention. Atlanta, GA.

15. PRESENTATIONS

15.1 Invited Presentations

Nil

15.2 Contributed Presentations

Nil

15.3 Poster Presentations

Nil

16. REPORTS AND OTHER OUTPUTS

Conference Publication - **MacPhedran, I.** (March 2025). Why do cantilever beams buckle the wrong way?. In *Proceedings of the Annual Stability Conference Structural Stability Research Council Louisville, Kentucky, April 1-4, 2025*. Paper presented at Annual Stability Conference Structural Stability Research Council

Conference Publication - Surovek, A.E., **MacPhedran, I.**, Palaniswamy, V. & Bradford, M.A. A Comparison of International Design Standards for Assessing Lateral Stability of Steel Beams. Paper presented at 4th International Conference on Steel & Composite Structures

Report - **MacPhedran, I.** & Grondin, G.Y. *University of Alberta Department of Civil & Environmental Engineering Structural Engineering Report No. 283 "Frame stability considering member interaction and compatibility of warping deformations"*. Edmonton AB: University of Alberta (October 2009).

17. BOOK REVIEWS

Nil

18. INTELLECTUAL PROPERTY

Nil

19. RESEARCH FUNDING HISTORY

Nil

20. PRACTICE OF PROFESSIONAL SKILLS

Journal Review. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, May 2024

Journal Review. Journal of Structural Engineering, August 2023 to September 2023

Journal Review. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, April 2022

Journal Review. Canadian Journal of Civil Engineering, August 2020 to March 2021

Journal Review. Journal of Bridge Engineering, December 2019 to January 2020

21. ADMINISTRATIVE SERVICE

21.1 University Committees

Nil

21.2 College and Departmental Committees

Nil

21.3 Other Administrative Services

Nil

22. PROFESSIONAL OR ASSOCIATION OFFICES AND COMMITTEE ACTIVITY OUTSIDE USask

Chair, nominating committee for SSRC, Structural Stability Research Council, January 2019 to December 2019

Member, American Institute of Steel Construction, September 2010 to present

Member, Structural Stability Research Council, June 2006 to present

23. PUBLIC AND COMMUNITY CONTRIBUTIONS

23.1 University Related

Member of the Technical Committee for CSA S16, Design of steel structures, Chair of WG3 "Beams and beam-columns", Canadian Standard Association, June 2016 to present

Chair of committee to edit Chapter 8, Beam Columns, in the next edition of "Guide to Stability Design Criteria for Metal Structures", Structural Stability Research Council, July 2015 to present

Associate Member of the Technical Committee for CSA S16, Limit States Design of Steel Structures., Canadian Standard Association, January 2011 to January 2014

23.2 Non University Related

Academic Review Committee, APEGS, Association of Professional Engineers and Geoscientists of Saskatchewan, April 2023 to present

24. OTHER ACTIVITIES

Knowledge and Technology Translation - **MacPhedran, I** (May 2016). CISC Spring Steel Event - Bolted Connections: Getting the best from your bolted connection designs, Canadian Institute of Steel Construction. (Fee for service: No)