



Professor Mahen Mahendran



From: Poologanathan Keerthan and Mahen Mahendran, “Shear tests of hollow flange channel beams with real support conditions”, Structures (research journal of the Institution of Structural Engineers), Vol. 3, pp 109-119, August 2015

See:

<http://staff.qut.edu.au/staff/mahendra/>

<https://au.linkedin.com/in/mahen-mahendran-7a355448>

<https://scholar.google.com/citations?user=sTyYJLEAAAAJ>

<http://orcid.org/0000-0001-7306-8821>

Professor of Structural Engineering
Department of Civil Engineering
Queensland University of Technology, Brisbane Australia

Autobiography:

I have been actively engaged in academic research and lecturing since I completed my PhD at Monash University in 1985. Throughout my service of more than 30 years at six universities in three countries, my focus and commitment have always been to help universities produce the best civil/structural engineering graduates for the real world. I have taught a number of civil and structural engineering subjects at undergraduate and postgraduate levels, in particular, structural analysis and steel structural design subjects. In research I have supervised more than 40 higher degree research students to completion as the principal supervisor, out of which 26 were doctoral research students. Cold-formed and high strength steel structures, fire safety of steel buildings, structural safety and disaster mitigation, metal roof and wall cladding and sandwich panel systems and innovative building components and building systems are some of my areas of expertise in which I have published over 400 research papers (150 journal papers) while my research grants during the last 10 years has been over \$5 million.

Selected Publications:

Book:

M. Mahendran (Editor) Proceedings of the Fifth International Conference on Thin-Walled Structures, Queensland University of Technology, Brisbane, Australia, 2008

Journal Articles:

Mahendran M, Murray NW. Ultimate load behaviour of box columns under combined loading of axial compression and torsion. *Thin-Walled Struct* 1990;9:91–120.

Heldt, T. J., Mahendran, M. (1992), The buckling behaviour of hollow flange beams, *Proceedings of the 11th International Specialty Conference on Cold Formed Steel Structures*, Orlando, FL., U.S.A., October 20-21, pp. 131-144.

Mahendran M. (1997), Local plastic mechanisms in thin steel plates under in-plane compression, *Thin-Walled Structure*, Elsevier Appl. Sci, 27, 245-261.

Avery, P., Mahendran, M. (1997), Finite-element analysis of hollow flange beams with web stiffeners, *Journal of Structural Engineering*, ASCE, V. 123, N. 9 (September), pp. 1123-1129.

Mahendran, M., Avery, P. (1997), Buckling experiments of hollow flange beams with web stiffeners, *Journal of Structural Engineering*, ASCE, V. 123, N. 9 (September), pp. 1130-1134.

Zhao, X. L., Mahendran, M. (1998), Recent innovations in cold-formed tubular sections, *Journal of Constructional Steel Research*, V. 46, N. 1-3, CD-Rom Paper N. 228

Mahendran, M., Doan, V. (1999), Lateral distortional buckling tests of hollow flange beams, research monograph 99-3, Physical Infrastructure Centre, Queensland University of Technology, Brisbane, Australia

Avery P. & Mahendran M. (2000). Distributed Plasticity Analysis of Steel Frame Structures Comprising Non-Compact Sections, *Engng. Structures*, 22, 920-936.

Avery, P., Mahendran, M., Nasir, A. (2000), Flexural capacity of hollow flange beams, *Journal of Constructional Steel Research*, V. 53, pp. 201-223.

Narayanan, S., Mahendran, M. (2003), Ultimate capacity of innovative cold-formed steel columns, *Journal of Constructional Steel Research*, V. 59, pp. 489-508.

Lee, J.H., Mahendran, M., Mäkeläinen, P. (2003), Prediction of mechanical properties of light gauge steels at elevated temperatures, *Journal of Constructional Steel Research*, Vol. 59, Issue 12, pp. 1517-1532

K.S. Wanniarachchi, M. Mahendran, “Design of rectangular hollow flange steel beams,” *Proc. of the 8th International Conference on Steel, Space and Composite Structures*, Kuala Lumpur, Malaysia, pp. 393-400, 2006

S. Jeyaragan and M. Mahendran. “Experimental Investigation of the New Built-up Litesteel Beams.” *Fifth International Conference on Thin-Walled Structures Brisbane, Australia, 2008*

Ranawaka, T., Mahendran, M. (2009), Experimental study of the mechanical properties of light gauge cold-formed steels at elevated temperatures, *Fire Safety Journal*, Vol. 44, pp. 219- 229.

Ranawaka, T., Mahendran, M. (2010), Numerical modeling of light gauge cold-formed steel compression members subjected to distortional buckling at elevated temperatures, *Thin- Walled Structures*, Vol. 48, pp. 334-344.

Keerthan, P. and Mahendran, M. (2010). “Elastic shear buckling characteristics of litesteel beams.” *Journal of Constructional Steel Research*, 66, pp. 1309–1319.

Keerthan, P. and Mahendran, M. (2011). “New design rules for the shear strength of litesteel beams.” *Journal of Constructional Steel Research*, 67, pp. 1050–1063.

Keerthan, P. and Mahendran, M. (2012). Experimental studies into the shear behaviour of lipped channel beams. *Research Report*, Queensland University of Technology, Brisbane, Australia.

Kankanamge, N.D., Mahendran, M. (2011), Mechanical properties of cold-formed steels at elevated temperatures, *Thin-Walled Structures*, Vol. 49, pp. 26-44.

Kankanamge, N.D., Mahendran, M. (2012), Behaviour and design of cold-formed steel beams subject to lateral-torsional buckling at elevated temperatures, *Thin-Walled Structures*, Vol. 61, pp. 213-228.

Jung Kwan Seo, Mahen Mahendran and Jeom Kee Paik, “Numerical method for predicting the elastic lateral distortional buckling moment of a mono-symmetric beam with web openings”, *Thin-Walled Structures*, Vol. 49, No. 6, pp 713-723, June 2011

Dolamune Kankanamge, N. and Mahendran, M., 2011, Mechanical properties of cold-formed steels at elevated temperatures, *Thin-Walled Structures*, 49, 26-44.

S. Gunalan, Y. Bandula Heva and M. Mahendran, "Cold-Formed Steel Columns Subject to Local Buckling at Elevated Temperatures", *Steel Innovations Conference 2013*, Christchurch, New Zealand 21-22 February 2013

Poologanathan Keerthan and Mahen Mahendran, "Shear buckling characteristics of cold-form steel channel beams", *International Journal of Steel Structures*, Vol. 13, No. 3, pp 385-399, September 2013

Poologanathan Keerthan and Mahen Mahendran, "Experimental studies of the shear behaviour and strength of lipped channel beams with web openings", *Thin-Walled Structures*, Vol. 73, pp 131-144, December 2013

Shanmuganathan Gunalan and Mahen Mahendran, "Improved design rules for fixed ended cold-formed steel columns subject to flexural-torsional buckling", *Thin-Walled Structures*, Vol. 73, pp 1-17, December 2013

Poologanathan Keerthan, David Hughes and Mahen Mahendran, "Experimental studies of hollow flange channel beams subject to combined bending and shear actions", *Thin-Walled Structures*, Vol. 77, pp 120-140, April 2014

Anthony Deloge Ariyanayagam and Mahen Mahendran, "Numerical modeling to load bearing light gauge steel frame wall systems exposed to realistic design fires", *Thin-Walled Structures*, Vol. 78, pp 148-170, May 2014

Poologanathan Keerthan, Mahen Mahendran and Edward Steau, "Experimental study of web crippling behaviour of hollow flange channel beams under two flange load cases", *Thin-Walled Structures*, Vol. 85, pp 207-209, December 2014

Poologanathan Keerthan and Mahen Mahendran, "Experimental investigation and design of lipped channel beams in shear", *Thin-Walled Structures*, Vol. 86, pp 174-184, January 2015

Poologanathan Keerthan and Mahen Mahendran, "Shear tests of hollow flange channel beams with real support conditions", *Structures (research journal of the Institution of Structural Engineers)*, Vol. 3, pp 109-119, August 2015

Hong-Xia Wan and Mahen Mahendran, "Behaviour and strength of hollow flange channel sections under torsion and bending", *Thin-Walled Structures*, Vol. 94, pp 612-623, September 2015

Edward Steau, Mahen Mahendran and Poologanathan Keerthan, "Web crippling tests of rivet fastened rectangular hollow flange channel beams under two flange load cases", *Thin-Walled Structures*, Vol. 95, pp 262-275, October 2015