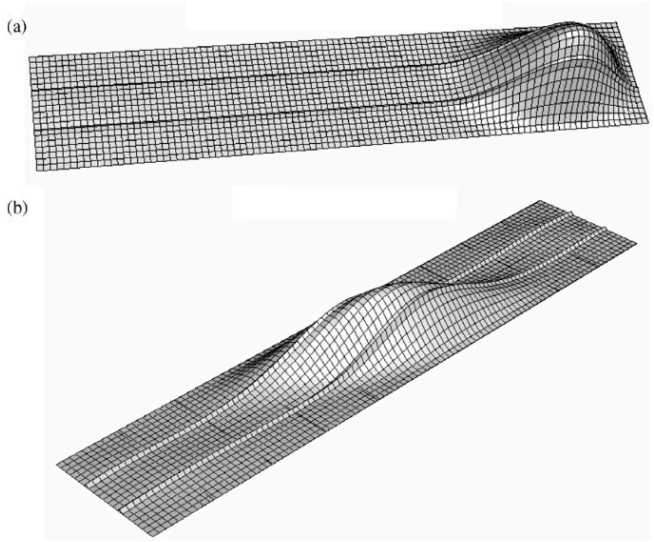
Professor George Charles Clifton



ABAQUS buckling modes for skin sheets with $h = 5$ mm. (a) Compressive buckling mode. (b) Shear buckling mode.

From: Ma X, Butterworth J W, Clifton C G. Unilateral contact buckling of lightly profiled skin sheets under compressive or shearing loads. International Journal of Solids and Structures, 2008, 45(3–4): 840–849

See:
https://unidirectory.auckland.ac.nz/profile/c-clifton
https://www.researchgate.net/profile/George_Clifton

Department of Civil and Environmental Engineering
The University of Auckland, New Zealand

Biography:
Charles Clifton graduated from the University of Canterbury with a Bachelor of Civil Engineering (Hons) in 1978 and a Master of Civil Engineering in 1979. From 1979 to 1981 he worked for a major New Zealand consulting engineering firm, then from 1981 to 1983 for a joint UK/Saudi Arabian consulting engineering firm in London. In 1983 Charles joined the New Zealand Heavy Engineering Research Association (HERA) first as Structural Engineer then as Senior Structural Engineer, with responsibility for promoting the efficient and effective use of structural steel in buildings. At HERA he conducted and coordinated research in structural steel, composite construction, fire engineering and durability. He also made major and ongoing contributions to the introduction of new and revised standards, developed widely used design guides and was actively involved in professional development. A long and productive collaboration with The University of Auckland whilst at HERA saw several innovations researched, developed and adopted by the profession and also the award of his PhD in 2005. The principal outcome of his PhD was two new forms of semi-rigid beam to column connections for moment-resisting steel frames which are now used in a number of high profile New Zealand buildings. He has also formulated design and detailing requirements for composite floor systems in fully developed fires, based on research undertaken in the UK and New Zealand. In 2008 he joined the Department of Civil and Environmental Engineering specialising in structural steel and composite engineering. He is currently engaged on a large government funded research project on the development of composite structural assemblies as well as being involved in ongoing development of the seismic and fire research topics mentioned above.

Education:
Bachelor of Civil Engineering (Second Class Honours Division 1), University of Canterbury (1978)
Master of Civil Engineering, University of Canterbury (1979)
Doctor of Philosophy in Civil Engineering, The University of Auckland (2005)

Research Interests:
- Behaviour and design of steel seismic-resisting systems
- Behaviour and design of steel buildings for fully developed fire conditions, especially in regard to composite floor systems
- Corrosion rates for steel in above ground and below ground conditions
- Behaviour and design of composite steel and concrete elements
- Behaviour and design of light gauge steel, for strength and thermal performance
- Acoustic performance of buildings and building elements

Professional Affiliations:
- Fellow of the Institute of Professional Engineers New Zealand (IPENZ)
- Fellow of the New Zealand Society for Earthquake Engineering (NZSEE)
- Member of the Structural Engineering Society of New Zealand (SESOC)
- Member of Standards New Zealand Committee on the Loadings Standard and Steel Structures Standard
- Member of Department of Building and Housing Working Groups on aspects of fire safety design and acoustic performance.

Selected Publications:
Ma X, Butterworth J W, Clifton C G. Elasto-plastic post-buckling analysis of plates resting on tensionless foundations. In: Proceedings of 19th Australian Conference on the Mechanics of Structures and Materials, Christchurch, New Zealand, 2006: 103–108
Ma X, Butterworth J W, Clifton C G. Compressive buckling analysis of plates in unilateral contact. International Journal of Solids and Structures, 2007, 44(9): 2852–2862
Ma X, Butterworth J W, Clifton C G. Initial compressive buckling of clamped plates resting on tensionless elastic or rigid foundations. Journal of Engineering Mechanics, 2008, 134(6): 514–518
Ma X, Butterworth J W, Clifton C G. Practical analysis procedure for compressive local buckling of skin sheets in composite panels. International Journal of Advanced Steel Construction, 2008, 4(3): 230–242
Ma X, Butterworth J W, Clifton C G. Unilateral contact buckling of lightly profiled skin sheets under compressive or shearing loads. International Journal of Solids and Structures, 2008, 45(3–4): 840–849
Tremblay, R., Dehghani, M., Fahnestock, L., Herrera, R., Canales, M., Clifton, C., & Hamid, Z. (2016). Comparison of seismic design provisions for buckling restrained braced frames in Canada, United States, Chile, and New Zealand. Structures, 8 (2), 183-196.
James B.P. Lim, Gregory J. Hancock, G. Charles Clifton, Cao Hung Pham and Raj Das, "DSM for ultimate strength of bolted moment-connections between cold-formed steel channel members", Journal of Constructional Steel Research, Vol. 117, pp 196-203, February 2016
Yousefi, A. M., Lim, J. B. P., & Charles Clifton, G. (2017). Cold-formed ferritic stainless steel unlipped channels with web openings subjected to web crippling under interior-two-flange loading condition – Part I: Tests and finite element model validation. Thin-Walled Structures, 116, 333-341.
Yousefi, A. M., Lim, J. B. P., & Clifton, G. C. (2017). Cold-formed ferritic stainless steel unlipped channels with web openings subjected to web crippling under interior-two-flange loading condition – Part II: Parametric study and design equations. Thin-Walled Structures

Kingsley U. Ukanwa, Umesh Sharma, Stephen J. Hicks, Anthony Abu, James B.P. Lim and G. Charles Clifton, "Behaviour of continuous concrete filled steel tubular columns loaded concentrically in fire", Journal of Constructional Steel Research, Vol. 136, pp 101-109, September 2017
Yousefi, A. M., Uzzaman, A., Lim, J. B. P., Clifton, G. C., & Young, B. (2017). Numerical investigation of web crippling strength in cold-formed stainless steel lipped channels with web openings subjected to interior-two-flange loading condition. Steel and Composite Structures, 23 (3), 363-383