



**Professor Sheida Afshan**

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<http://www.brunel.ac.uk/people/sheida-afshan>

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### Biography:

Sheida Afshan is a lecturer in Structural Engineering in the Department of Mechanical, Aerospace and Civil Engineering at Brunel University London, and a member of the Institute of Materials and Manufacturing. Her research interests are related to the behaviour and design of structures of metallic materials, and in particular stainless steel and high strength steel. Other new areas of her research include the use of innovative structural solutions such as stainless steel concrete filled tubes in building applications, with particular attention on their design in case of extreme loading conditions (e.g. fire). Using combinations of experimental (material testing to large scale member testing), numerical (non-linear finite element analysis) and analytical research, her research focuses on the development of efficient structural design approaches. Professor Afshan is actively involved in teaching and supervising undergraduate and postgraduate projects.

### Education:

2013 PhD and DIC, Imperial College London

2010 MEng in Civil Engineering (1<sup>st</sup> Class Hons), Imperial College London

### Selected Publications:

Wang, J., Afshan, S. and Gardner, L. (2017) 'Axial behaviour of prestressed high strength steel tubular members'. *Journal of Constructional Steel Research*, 133 pp. 547 – 563

Zhao, O., Afshan, S. and Gardner, L. (2017) 'Structural response and continuous strength method design of slender stainless steel cross-sections'. *Engineering Structures*, 140 pp. 14 – 25

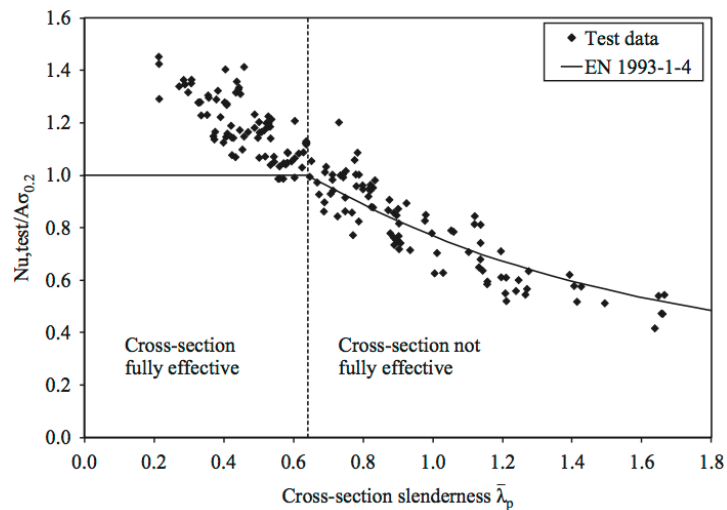


Fig. 1. Comparison of 81 stub column test results with EN 1993-1-4 provisions.

From: Afshan, S. and Gardner, L. (2013) 'The continuous strength method for structural stainless steel design'. *Thin-Walled Structures*, 68 pp. 42 – 49

- Afshan, S., Yu, JBY., Standing, JR., Vollum, RL. and Potts, DM. (2017) 'Ultimate capacity of a segmental grey cast iron tunnel lining ring subjected to large deformations'. *Tunnelling and Underground Space Technology*, 64 pp. 74 - 84
- Wang, J., Afshan, S., Schillo, N., Theofanous, M., Feldmann, M. and Gardner, L. (2017) 'Material properties and compressive local buckling response of high strength steel square and rectangular hollow sections'. *Engineering Structures*, 130 pp. 297 – 315
- Wang, J., Afshan, S., Gkantou, M., Theofanous, M., Baniotopoulos, C. and Gardner, L. (2016) 'Flexural behaviour of hot-finished high strength steel square and rectangular hollow sections'. *Journal of Constructional Steel Research*, 121 pp. 97 - 109
- Afshan, S., Francis, P., Baddoo, NR. and Gardner, L. (2015) 'Reliability analysis of structural stainless steel design provisions'. *Journal of Constructional Steel Research*, 114 pp. 293 - 304
- Afshan, S. and Gardner, L. (2013) 'Experimental Study of Cold-Formed Ferritic Stainless Steel Hollow Sections'. *Journal Of Structural Engineering-ASCE*, 139 (5). pp. 717 – 728
- Afshan, S. and Gardner, L. (2013) 'The continuous strength method for structural stainless steel design'. *Thin-Walled Structures*, 68 pp. 42 – 49
- Rossi, B., Afshan, S. and Gardner, L. (2013) 'Strength enhancements in cold-formed structural sections - Part II: Predictive models'. *Journal Of Constructional Steel Research*, 83 pp. 189 – 196
- Afshan, S., Rossi, B. and Gardner, L. (2013) 'Strength enhancements in cold-formed structural sections - Part I: Material testing'. *Journal Of Constructional Steel Research*, 83 pp. 177 - 188