

Spotlight on Structures

Research Journal of The Institution of Structural Engineers

In this section we shine a spotlight on papers recently published in *Structures* – the Research Journal of The Institution of Structural Engineers.

Structures is a collaboration between the Institution and Elsevier, publishing internationally-leading research across the full breadth of structural engineering which will benefit from wide readership by academics and practitioners.

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Structures prizes – explore the shortlisted papers

The following eight papers drawn from last year's issues have been shortlisted for the *Structures* prizes in 2018. The two prizes – for 'Best Research Paper' and 'Best Research into Practice Paper' – are judged by the Institution's Research Panel. The winners will be unveiled at the Institution's People and Papers Awards ceremony in June.

Best Research Paper

Structural Behaviour of Beam to Concrete-filled Elliptical Steel Tubular Column Connections

J. Yang, T. Sheehan, X. Dai and D. Lam

Volume 9 (2017), pp. 41–52

<https://doi.org/10.1016/j.istruc.2016.09.005>

Moment-curvature-thrust relationships for beam-columns

Andrew Liew, Leroy Gardner and Philippe Block

Volume 11 (2017), pp. 146–154

<https://doi.org/10.1016/j.istruc.2017.05.005>

Wind Loading of Structures: Framework, Phenomena, Tools and Codification

Giovanni Solari

Volume 12 (2017), pp. 265–285

<https://doi.org/10.1016/j.istruc.2017.09.008>

Predicting effects of design variables on modal responses of CLT floors

Ebenezer Ussher, Kaveh Arjomandi, Jan Weckendorf and Ian Smith

Volume 11 (2017), pp. 40–48

<https://doi.org/10.1016/j.istruc.2017.04.006>

Best Research into Practice Paper

Hot-Rolled Steel and Steel-Concrete Composite Design Incorporating Strain Hardening

L. Gardner, X. Yun, L. Macorini and M. Kucukler

Volume 9 (2017), pp. 21–28

<https://doi.org/10.1016/j.istruc.2016.08.005>

Full-scale Tests of Stabilized and Unstabilized Extended Single-plate Connections

Kristin Thomas, Robert G. Driver, Steven A. Oosterhof and Logan Callele

Volume 10 (2017), pp. 49–58

<https://doi.org/10.1016/j.istruc.2016.12.005>

Prestressing in Coventry Cathedral

Chris Burgoyne and Owen Mitchell

Volume 11 (2017), pp. 62–83

<https://doi.org/10.1016/j.istruc.2017.04.003>

Stability of Multiple-crossarm Prestressed Stayed Columns with Additional Stay Systems

Luke Lapira, M. Ahmer Wadee and Leroy Gardner

Volume 12 (2017), pp. 227–241

<https://doi.org/10.1016/j.istruc.2017.09.010>

Articles in press

The following articles have recently been made available online:

A Suggested Method for Improving Post Buckling Behavior of Concentric Braces Based on Experimental and Numerical Studies

Ali Kachooee and Mohammad Ali Kafi, Faculty of Civil Engineering, Semnan University, Semnan, Iran

<https://doi.org/10.1016/j.istruc.2018.04.003>

Concrete Filled Double Skin Tubular Deep Beam Having Outer Circular and Inner Square Sections Under Bending-shear

Kojiro Uenaka, Department of Civil Engineering, Kobe City College of Technology, Nishi, Kobe, Japan

<https://doi.org/10.1016/j.istruc.2018.03.016>

Volume 13 – Editor's highlights

If you haven't yet done so, don't forget to explore the Editor's highlights from the February issue – three papers selected by Editor-in-Chief Professor Leroy Gardner.

Sustainability of Cold-formed Steel Portal Frames in Developing Countries in the Context of Life Cycle Assessment and Life Cycle Costs

Ross P.D. Johnston, Teresa McGrath, Sree Nanukkuttan, James B.P. Lim, Marios Soutsos, Mei Chee Chiang, Rehan Masood and Mohammad Afjalur Rahman

<https://doi.org/10.1016/j.istruc.2017.11.003>

Shake Table Testing of Concentrically Braced Steel Structures with Realistic Connection Details Subjected to Earthquakes

J. Goggins, B.M. Broderick, A.Y. Elghazouli, S. Salawdeh, A. Hunt, P. Mongabure and J. English

<https://doi.org/10.1016/j.istruc.2017.12.003>

Out-of-plane Strength of Existing Two-way Spanning Solid and Cavity Unreinforced Masonry Walls

H. Derakhshan, W. Lucas, P. Visintin and M.C. Griffith

<https://doi.org/10.1016/j.istruc.2017.11.002>