

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.

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Update for members

In January 2016 we introduced changes to the way Institution members access articles published in *Structures*.

During 2015 all content in *Structures* was available free of charge to both Institution members and non-members. Since January 2016 non-members require a subscription to access the journal, or can purchase individual articles on a pay-per-view basis. See www.elsevier.com/journals/structures/2352-0124/order-journal for details.

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Special Issue

Steel Structures: Mechanics, Simulation and Testing

Guest Editors: *Nuno Silvestre and Leroy Gardner*

This Special Issue of *Structures* contains updated and extended versions of a selected collection of papers presented at the Mini- Symposium on ‘Steel Structures: Mechanics, Simulation and Testing’, held within the 9th European Solid Mechanics Conference (ESMC), Madrid, 6–10 July 2015.

A new approach to modal decomposition of buckled shapes

Jurgen Becque

Interactively Induced Localization in Thin-walled I-section Struts Buckling About the Strong Axis

Elizabeth L. Liu and M. Ahmer Wadee

A GBT Model for the Analysis of Composite Steel–Concrete Beams with Partial Shear Interaction

Gerard Taig, Gianluca Ranzi, Daniel Dias-da-Costa, Giuseppe Piccardo and Angelo Luongo

Local–Distortional Interaction in Cold-formed Steel Columns: Mechanics, Testing, Numerical Simulation and Design

André Dias Martins, Dinar Camotim, Pedro Borges Dinis and Ben Young

Structural modeling of cold-formed steel portal frames

Xi Zhang, Kim J.R. Rasmussen and Hao Zhang

Experimental Study on Ferritic Stainless Steel RHS and SHS Cross-sectional Resistance Under Combined Loading

I. Arrayago and E. Real

Experimental study of stainless steel angles and channels in bending

M. Theofanous, A. Liew and L. Gardner

On the influence of the load sequence on the structural reliability of steel members and frames

Andreas Taras and Stefan Huemer

Advanced materials for concrete-filled tubular columns and connections

Ana Espinos, Manuel L. Romero, Antonio Hospitaler, Ana M. Pascual and Vicente Albero

Numerical investigation on I-beam to CHS column connections equipped with NiTi shape memory alloy and steel tendons under cyclic loads

Wei Wang, Tak-Ming Chan and Hongliang Shao

Articles in press

The following articles 'in press' have recently been made available online:

Response sensitivity analyses of skewed bridges with and without considering soil–structure interaction

Abdoul R. Ghotbie, Civil and Environmental Engineering Department, University of California, Los Angeles, USA

<http://dx.doi.org/10.1016/j.istruc.2015.12.002>

Identification of mass–spring–damper model of walking humans

Erfan Shahabpoor^a, Aleksandar Pavic^b and Vitomir Racic^{c,d}

^a *INSIGNEO Institute for In-Silico Medicine, Department of Civil & Structural Engineering, University of Sheffield, UK*

^b *Vibration Engineering, College of Engineering, Mathematics and Physical Sciences, University of Exeter, UK*

^c *Department of Civil and Environmental Engineering, Politecnico di Milano, Italy*

^d *Department of Civil & Structural Engineering, University of Sheffield, UK*

<http://dx.doi.org/10.1016/j.istruc.2015.12.001>

Longitudinal shear resistance of PVA-ECC composite slabs

Bashar S. Mohammed, Muhammad Aswin, Walden Harry Beatty and Muhammad Hafiz, Department of Civil and Environmental Engineering, Universiti Teknologi

PETRONAS, Bandar Seri Iskandar, Malaysia

<http://dx.doi.org/10.1016/j.istruc.2015.12.003>

The Institution
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Papers are accepted from, but not limited to, the following subject areas:

- materials
- structural form
- structural design
- construction engineering
- structural innovation
- extreme events
- sustainability
- architectural topics (that impact structural performance)

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