

# 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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## Volume 7

*Structures* Volume 7 (August 2016) has recently been published online.

## Editor's highlights

The Editor-in-Chief has selected the following highlights:

### Out-of-plane Testing of Unreinforced Masonry Walls Strengthened Using ECC Shotcrete

*Y. Lin, Derek Lawley, Liam Wotherspoon and Jason M. Ingham*

<http://dx.doi.org/10.1016/j.istruc.2016.04.005>

### Experimental study of flush end plate beam-to-column composite joints with precast slabs and deconstructable bolted shear connectors

*Abdolreza Ataei, Mark A. Bradford and Xinpei Liu*

<http://dx.doi.org/10.1016/j.istruc.2016.05.002>

### Static and fatigue performance of resin injected bolts for a slip and fatigue resistant connection in FRP bridge engineering

*Behrouz Zafari, Jawed Qureshi, J. Toby Mottram and Rusi Rusev*

<http://dx.doi.org/10.1016/j.istruc.2016.05.004>

## Full issue

The issue also contains the following articles:

### Seismic behavior of RC building structures designed according to current codes

*A. Mosleh, H. Rodrigues, H. Varum, A. Costa and A. Arêde*

<http://dx.doi.org/10.1016/j.istruc.2016.04.001>

### Parametric Characterization of RC Bridges for Seismic Assessment Purposes

*Claudia Zelaschi, Ricardo Monteiro and Rui*

*Pinho*

<http://dx.doi.org/10.1016/j.istruc.2016.04.003>

### Nominal Curvature Design of Circular HSC Columns Confined with Post-tensioned Steel Straps

*Chau Khun Ma, Abdullah Zawawi Awang, Reyes Garcia, Wahid Omar, Kypros Pilakoutas and Mohammadamin Azimi*

<http://dx.doi.org/10.1016/j.istruc.2016.04.002>

### Review of Concrete Structures Strengthened with FRP Against Impact Loading

*Thong M. Pham and Hong Hao*

<http://dx.doi.org/10.1016/j.istruc.2016.05.003>

### Monotonic and reverse-cyclic load experiment for plywood and RC slab diaphragms used in timber-concrete hybrid building

*Naohito Kawai, Hiroshi Isoda, Minoru Okabe and Solomon Tesfamariam*

<http://dx.doi.org/10.1016/j.istruc.2016.05.011>

### Response of CFS Sheathed Shear Walls

*Matteo Accorti, Nadia Baldassino, Riccardo Zandonini, Federica Scavazza and Colin A. Rogers*

<http://dx.doi.org/10.1016/j.istruc.2016.06.009>

### Design of Top-hat Purlins for Cold-formed Steel Portal Frames

*Asraf Uzzaman, Andrzej M. Wrzesien, James B.P. Lim, Robert Hamilton and David Nash*

<http://dx.doi.org/10.1016/j.istruc.2016.06.006>

### Deformed steel fibres as minimum shear reinforcement – An investigation

*Kranti Jain and Bhupinder Singh*

<http://dx.doi.org/10.1016/j.istruc.2016.06.003>

### Buckling and Post-buckling Behavior of Beams With Internal Flexible Joints Resting on Elastic Foundation Modeling Buried Pipelines

*Vasileios E. Melissianos and Charis J. Gantes*

<http://dx.doi.org/10.1016/j.istruc.2016.06.007>

### Investigation of Compressive Bond Behavior of Steel Rebar Embedded in Concrete With Partial Recycled Aggregate Replacement

*S. Moallemi Pour and M. Shahria Alam*

<http://dx.doi.org/10.1016/j.istruc.2016.06.010>

### A New Metallic Damper for Seismic Resilience: Analytical Feasibility Study

*Dhiman Basu and P.R.M. Reddy*

<http://dx.doi.org/10.1016/j.istruc.2016.06.011>

### Three Dimensional Extension for Park and Ang Damage Model

*J. Guo, J.J. Wang, Y. Li, W.G. Zhao and Y.L. Du*

<http://dx.doi.org/10.1016/j.istruc.2016.06.008>

## Articles in press

The following articles have recently been made available online:

### Seismic Behaviour of Outrigger Braced Systems in High Rise 2-D Steel Buildings

*Dhanaraj M. Patil and Keshav K. Sangle, Structural Engineering Department, VJTI, Mumbai, India*

<http://dx.doi.org/10.1016/j.istruc.2016.07.005>

### A Numerical Solution for the Shape of Fabric-formed Concrete Structures

*Robert M. Foster and Tim J. Ibell, Department of Architecture and Civil Engineering, University of Bath, Bath, UK*

<http://dx.doi.org/10.1016/j.istruc.2016.08.003>

### Effect of Inconsistent Diaphragms on Exterior Girder Rotation During Overhang Deck Construction

Md Ashiquzzaman<sup>a</sup>, Li Hui<sup>a</sup>, Ahmed Ibrahim<sup>b</sup>, Will Lindquist<sup>c</sup>, Mark Thomson<sup>d</sup> and Riyadh Hindi<sup>a</sup>

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<sup>b</sup> Department of Civil Engineering, University of Idaho, Moscow, ID, USA

<sup>c</sup> William Jewell College, Liberty, MO, USA

<sup>d</sup> Bureau of Bridges & Structures Design & Construction Review Unit Chief, Illinois Department of Transportation, Springfield, IL, USA

<http://dx.doi.org/10.1016/j.istruc.2016.08.002>

### Slender steel columns: How they are affected by imperfections and bracing stiffness

Anders Klasson, Roberto Crocetti and Eva Frühwald Hansson, Division of Structural Engineering, Lund University, Lund, Sweden

<http://dx.doi.org/10.1016/j.istruc.2016.08.004>

### Hot-rolled steel and steel-concrete

### composite design incorporating strain hardening

L. Gardner, X. Yun, L. Macorini and M. Kucukler, Department of Civil and Environmental Engineering, Imperial College London, London, UK

<http://dx.doi.org/10.1016/j.istruc.2016.08.005>

### Nailed Steel Plate Connections: Strength and Ductile Failure Modes

R. Crocetti<sup>a</sup>, P.J. Gustafsson<sup>b</sup>, U.A. Girhammar<sup>c</sup>, L. Costa<sup>d</sup> and A. Asimakidis<sup>e</sup>

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<sup>e</sup> Structural Engineer, Sydmark Konstruera, Malmö, Sweden

<http://dx.doi.org/10.1016/j.istruc.2016.07.003>

### Influence of Ultra-high Strength Concrete on Circular Concrete-filled Dual Steel Columns

Manuel L. Romero<sup>a</sup>, C. Ibañez<sup>b</sup>, A. Espinos<sup>a</sup>, J.M. Portolés<sup>b</sup> and A. Hospitaler<sup>a</sup>

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<sup>b</sup> Department of Mechanical Engineering and Construction, Universitat Jaume I, Castellón, Spain

<http://dx.doi.org/10.1016/j.istruc.2016.07.001>

### Behaviour and Design of Connections for Demountable Steel and Composite Structures

Brian Uy<sup>a</sup>, Vipulkumar Patel<sup>a,b</sup>, Dongxu Li<sup>a</sup> and Farhad Aslan<sup>a,c</sup>

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<http://dx.doi.org/10.1016/j.istruc.2016.06.005>

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