

# Spotlight on Structures

Research Journal of The Institution of Structural Engineers

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

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

## Experimental response and bilinear approximation of steel plate O-connector dissipaters

K. M. Twigden and R. S. Henry, Department of Civil and Environmental Engineering, University of Auckland

## Improved formulation of travelling fires and application to concrete and steel structures

Egle Rackauskaite<sup>a</sup>, Catherine Hamel<sup>a,b</sup>, Angus Law<sup>c</sup> and Guillermo Rein<sup>a</sup>  
<sup>a</sup> Department of Mechanical Engineering, Imperial College London, UK  
<sup>b</sup> Department of Fire Protection Engineering, University of Maryland, USA  
<sup>c</sup> Arup, UK

## Performance of concrete-encased CFST box stub columns under axial compression

Yu-Feng An<sup>a</sup>, Lin-Hai Han<sup>a</sup> and Charles Roeder<sup>b</sup>  
<sup>a</sup> Department of Civil Engineering, Tsinghua University, Beijing, China  
<sup>b</sup> Department of Civil Engineering, University of Washington, Seattle, USA

## Timber gridshells: Numerical simulation, design and construction of a full scale structure

B. D'Amico<sup>a</sup>, A. Kerman<sup>b</sup>, H. Zhang<sup>a</sup>, A. Pugnale<sup>b</sup>, S. Colabella<sup>c</sup> and S. Pone<sup>c</sup>  
<sup>a</sup> School of Engineering and the Built Environment, Edinburgh Napier University, UK  
<sup>b</sup> Faculty of Architecture, Building and Planning, University of Melbourne, Australia  
<sup>c</sup> Department of Architecture, University of Naples Federico II, Italy

## Torsional stiffness bounds of helical structures under the influence of kinematic constraints

Nikolaos Karathanasopoulos, Institute for Mechanical Systems, ETH Zürich, Switzerland

## Seismic response of nonstructural components supported by a 4-story SMRF: Effect of nonlinear soil-structure interaction

Prishati Raychowdhury and Samit Ray-Chaudhuri, Department of Civil Engineering, Indian Institute of Technology Kanpur, India

## In Situ Out-of-Plane Testing of Unreinforced Masonry Cavity Walls in as-Built and Improved Conditions

Kevin Q. Walsh<sup>a</sup>, Dmytro Y. Dizhur<sup>a</sup>, Jalil Shafaei<sup>b</sup>, Hossein Derakhshan<sup>c</sup> and Jason M. Ingham<sup>a</sup>

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<sup>b</sup> School of Civil Engineering, College of Engineering, University of Tehran, Iran

<sup>c</sup> School of Civil, Environmental, and Mining Engineering, University of Adelaide, Australia

## Imperfection sensitivity and geometric effects in stiffened plates susceptible to cellular buckling

M. Ahmer Wade<sup>a</sup> and Maryam Farsi, Department of Civil & Environmental Engineering, Imperial College London, UK

## Full-scale experimental study on the influence of damages on the static behavior of the single-layer cable net structure

Lu Yang<sup>a</sup>, Gang Shi<sup>b</sup>, Hao Yin<sup>b</sup>, Xiaohao Shi<sup>c</sup> and Zaoyang Guo<sup>c</sup>

<sup>a</sup> College of Architecture and Civil Engineering, Beijing University of Technology, China

<sup>b</sup> Key Laboratory of Civil Engineering Safety and Durability of China Education Ministry, Department of Civil Engineering, Tsinghua University, Beijing, China

<sup>c</sup> School of Civil Engineering and Geosciences, Newcastle University, UK

## U-shaped metallic-yielding damper in building structures: Seismic behavior and comparison with a friction damper

Saman Bagheri, Majid Barghian, Farhad Saieri and Ali Farzinfar, Faculty of Civil Engineering, University of Tabriz, Iran

## Modelling of beam response for progressive collapse analysis

P. M. Stylianidis, D. A. Nethercot, B. A. Izzuddin and A. Y. Elghazouli, Department of Civil and Environmental Engineering, Imperial College London, UK