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.

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

Seismic risk assessment of low rise RC frame structure

A. Melani[a], R. K. Khare[a], R. P. Dhakal[b] and J. B. Mander[c]
[a] Department of Civil Engineering & Applied Mechanics, S.G.S. Institute of Technology & Science, Indore, India
[b] Department of Civil Engineering, University of Canterbury, Christchurch, NZ
[c] Department of Civil Engineering, Texas A&M University, USA
http://dx.doi.org/10.1016/j.istruc.2015.07.003

The sensitivity of bridge safety to spatial correlation of load and resistance

Donya Hajializadeh[a], Eugene J. OBrien[a,b] and Mark G. Stewart[c]
[a] Roughan & O'Donovan Innovative Solutions, Ireland
[b] University College Dublin, Ireland
[c] The University of Newcastle, Australia
http://dx.doi.org/10.1016/j.istruc.2015.07.002

Geometrically and materially nonlinear creep behaviour of reinforced concrete columns

Ehab Hamed[a] and Cynthia Lai[b]
[a] Center for Infrastructure Engineering and Safety, School of Civil and Environmental Engineering, The University of New South Wales, Sydney, Australia
[b] Higher Honour Student, School of Civil and Environmental Engineering, The University of New South Wales, Sydney, Australia
http://dx.doi.org/10.1016/j.istruc.2015.07.001

Unequally spaced lateral bracings on compression flanges of steel girders

Hassan Mehri, Roberto Crocetti and Per Johan Gustafsson
Div. of Structural Engineering, Lund Univ., Lund, Sweden
http://dx.doi.org/10.1016/j.istruc.2015.05.003

Highlights
- A simplified expression for critical moment of laterally braced girders is derived
- Solutions for rotational restraint of unequal spans between bracings are derived
- Applicability of the approach is examined by one comprehensive example
- Approach enables choosing more proper location and stiffness of lateral bracings
- Results verify that the approach can be very useful in pre-design stage

Experimental Response of Reinforced Concrete Frames With AAC Masonry Infill Walls to In-plane Cyclic Loading

S. Schwarz[a], A. Hanaor[a] and D. Z. Yankelevsky[b]
[a] National Building Research Institute (NBRI), Technion-Israel Institute of Technology, Haifa, Israel
[b] Faculty of Civil & Environmental Engineering, Technion-Israel Institute of Technology, Haifa, Israel
http://dx.doi.org/10.1016/j.istruc.2015.06.005

Seismic Behaviour of Different Bracing 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.2015.06.004

Development of a nonlinear FE modelling approach for FRP-strengthened RC beam-column connections

H. Baji, A. Eslami and H. R. Ronagh
School of Civil Engineering, The University of Queensland, Brisbane, Australia
http://dx.doi.org/10.1016/j.istruc.2015.06.003