Editorial

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The present issue of *Structures and Buildings* contains five papers and two discussion articles. In the first paper, Afefy *et al.* (2011) present an experimental study of beam-to-column joints, where both connected members are concrete-filled steel tubes. Full load-deformation responses of the test specimens are reported and analysed, and the importance of shear connection and joint debating are highlighted.

The second paper, by do Carmo and Lopes (2011), presents an investigation into the behaviour and design of D-regions (i.e. those in which the Bernoulli assumption of sections remaining plane design bending is invalid) in reinforced concrete beams. A series of experiments are conducted and a strut-and-tie model is presented.

Fibre-reinforced polymers (FRP) are gaining increasing usage in construction, particularly in strengthening and reinforcing applications. The third paper in this issue, by Pilakoutas *et al.* (2011), outlines recent design proposals by the *fib* Task Group 9-3 for FRP reinforcement of concrete structures, covering a range of structural scenarios. This paper is followed by a study of fibre-reinforced cementitious mortar (FRCM) strengthening systems, which may be considered as an alternative to FRP systems (Ombres, 2011). The initial test results generated in this paper are encouraging, though further research and comparisons are required.

The fifth paper, by Kijewski-Correa and Bentz (2011), considers occupant comfort in tall buildings during wind-induced vibrations. The focus of the investigation is on transient events such as thunderstorms or gust fronts, which are typically overlooked when considering habitability limit states. The study included analysis of data measurements from an instrumented tall building and found that the accelerations induced during transient events may exceed those in stationary wind events with comparable wind velocities; further exploration was recommended.

This issue finishes with two discussion items. Lively discussion is always encouraged in the journal, and the first discussion in this issue includes just that (Rankin *et al.*, 2011). It relates primarily

to the mode of failure of steel portal frames comprising tapered members, on which full-scale experimental results were presented in a previous paper. Further analyses by both the contributors and authors are underway, and perhaps further discussion will ensue. The second discussion article (Sebastian and Jenkins, 2011) relates to the analysis of indeterminate structures where an interesting exchange on computational tools is presented.

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