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.

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.

Access to *Structures* is free to Institution members (excluding Student members) as one of their membership benefits, with access provided via the "My account" section of the Institution website. The journal is available online at: **www.structuresjournal.org**

This month, we'd like to share a few key statistics about *Structures* with you, as well as information about the initiatives the Institution and Elsevier are taking to encourage members to engage with the journal.

Structures in numbers

Since *Structures* opened to submissions in 2014, it has built up a healthy flow of papers – with over 170 received in 2016 (Figure 1). The journal currently accepts around 50% of papers submitted, with 84 accepted last year. Authors of papers come from around the globe, although the UK remains the largest contributor (Figure 2).

Readership of the journal is also global and papers can be accessed in two ways: students and academics can access *Structures* via Elsevier's ScienceDirect platform if their university is a subscriber; Institution members should use the dedicated portal at www.structuresjournal.org.

In 2016, there were over 40 000 article downloads via ScienceDirect and close to 7000 via the member portal.

Member engagement

The latter number has exceeded expectations and shows how well *Structures* has been received by members. If you haven't yet sampled any content from the journal, there are a number of initiatives that may point you towards articles of interest:

- **Editor's highlights –** each issue the Editor-in-Chief selects three articles of particular value which are the promoted on the journal homepage.
- **Editor's choice –** in a new initiative this year, the Editor-in-Chief will also select one article in each issue to be made available free of charge and promoted more widely to members and non-members alike.
- **Impact statements –** authors of articles judged likely to have a tangible impact on practice are invited to submit 'impact statements' which will also be published in the journal and promoted to members.
- **Most read articles –** the 'Most Read' tab on the journal homepage indicates which articles have proven most popular with other members over the past 30 days.
- **Alerts –** members can also sign up to two types of alert on the journal website: 'table of contents' alerts when a new issue is published; or article alerts when a new article becomes available.

Do take a look at *Structures*. We hope most members will recognise it as a valuable benefit. Any feedback should be submitted to structures@istructe.org.

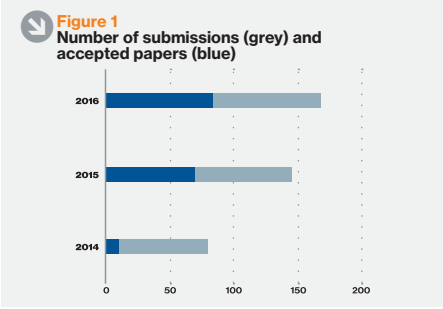

Figure 1
Number of submissions (grey) and accepted papers (blue)

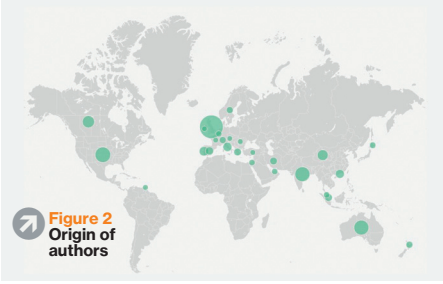

Figure 2
Origin of authors

Editor's choice

The current Editor's choice article, selected by Professor Leroy Gardener from Volume 10 (May 2017), is:

Prediction of Wear in Grouted Connections for Offshore Wind Turbine Generators

Paul Dallyn[a], Ashraf El-Hamalawi[a], Alessandro Palmeri[a] and Robert Knight[b]
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[b] Civil Engineering, E.ON Technologies (Ratcliffe) Limited, Nottingham, UK
http://doi.org/10.1016/j.istruc.2017.02.001

Insufficient axial capacity of large-diameter plain-pipe grouted connections has recently been observed in offshore wind turbine substructures across Europe. Aimed at understanding the implications of this phenomenon, a campaign of structural condition monitoring was undertaken. The measurements showed significant axial displacements occurring between the transition piece and the monopile, which in turn resulted in a considerable amount of wear. A methodology was developed to quantify the likely risk to the foundation integrity of the wear failure mode. The output of this model showed that, for a representative sample of the wind farm substructures analysed as a case study, the accumulated lifetime wear would be minimal in the majority of the grouted connection, i.e. less than 0.4mm over 75% of the connection, but a much greater loss in thickness, of the order of 4mm, was predicted at the very top and bottom of the connection.

The article is open access and available free of charge to both members and non-members alike.