

EDITORIAL: February 2013

Editorial

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Welcome to the February 2013 issue of *Civil Engineering*, the flagship journal of the *Proceedings of the Institution of Civil Engineers*.

We celebrate the lives of two construction luminaries in this issue. The main cover image and lead paper (Martuscelli *et al.*, 2013) is on one of the last designs of the great Brazilian architect Oscar Niemeyer, who sadly died in December 2012 at the age of 104. He first rose to international prominence in the 1950s as the designer of the many stunning civic buildings in Brasilia, which we hope to cover in more detail in a forthcoming special issue on Brazil.

As described in this issue, design and construction of the eponymous Auditorium Oscar Niemeyer on the Amalfi coast in southern Italy – with a vault-roofed hall cantilevering out from a mountain – was not without its structural engineering challenges and complexities, but the results are nothing less than striking.

And the continuing need for iconic design is highlighted in the inaugural address of ICE's 148th president, Barry Clarke (2013) – somewhat younger at just 62 but another star of the profession. He too champions iconic structures, ones that will capture society's imagination and inspire young people to join the profession. A professor of civil engineering geotechnics at the University of Leeds, Clarke also stresses the need for education to be a lifelong commitment for all civil engineers.

From the heady heights of academia we then delve into the subterranean world of London Underground, where the second paper (Bessant and McKoy, 2013) provides a fascinating insight into how structural secrets of the railway network's 8000 bridges and 12 000 structures have finally been unravelled. Built over the past 150 years at minimum cost by a variety of private operating companies, very few record drawings or design calculations were kept, making asset management and upgrades increasingly fraught.

The paper describes a 30-year project to determine the extent, condition and load-carrying capacity of all bridges and structures, which has included the development of a unique risk-assessment system. The results have enabled maintenance and improvement works to be cost-effectively prioritised, resulting in dramatic improvements in both safety and operation.

In the first of two special issues of *Civil Engineering* that we produced 2 years ago on delivering the London 2012 Olympic and Paralympic Games, there was a paper on the overall approach to construction health and safety (Shiplee *et al.*, 2011) – no mean feat with a total workforce of 30 000 at the Olympic Park site alone. The third paper in this issue (Webster, 2013) focuses on implementation of the Construction (Design and Management) Regulations 2007 (HMG, 2007) on the project and how this compares with implementation elsewhere.

Certainly, the regulations appear to have been a success: comparisons with the wider UK construction industry showed that the London 2012 construction programme scored significantly higher in 27 of 39 factors that influence construction health and safety – and many of the implementation lessons learnt on London 2012 are generally applicable in the wider construction industry.

And finally back to education. Our fourth paper in this issue (Anwar and Richards, 2013) examines mutual recognition of professional engineering qualifications and the globalisation of accreditation of engineering education by US organisation ABET.

Despite the Washington Accord on mutual recognition, it seems that getting UK degree programmes accredited by ABET is by no means straightforward. The paper concludes that ABET accreditation and the US professional engineer (PE) qualification may become the de facto global standard due to lack of significant competition from the UK or Europe.

I hope you find the papers and briefing articles in this issue an interesting and enjoyable read – and I would encourage you to consider writing papers of your own for either *Civil Engineering* or the other 17 journals which together make up the *Proceedings*.

References

- Anwar A and Richards D (2013) Is the USA set to dominate accreditation of engineering education and professional qualifications? *Proceedings of the Institution of Civil Engineers – Civil Engineering* **166(1)**: 42–48, <http://dx.doi.org/10.1680/cien.12.00012>.
- Bessant G and McKoy R (2013) London Underground: unravelling 150 years of structural secrets. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **166(1)**: 27–34, <http://dx.doi.org/10.1680/cien.12.00006>.
- Clarke B (2013) Civil engineers: inspiring, innovating, informing. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **166(1)**: 3–8, <http://dx.doi.org/10.1680/cien.2013.166.1.3>.
- HMG (2007) Health and Safety. The Construction (Design and Management) Regulations 2007. The Stationery Office, Norwich, UK, Statutory Instrument 2007 No. 320.
- Martuscelli G, Coppola I and Di Placido M (2013) Concrete renaissance: design and construction of the Auditorium Oscar Niemeyer, Ravello, Italy. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **166(1)**: 19–26, <http://dx.doi.org/10.1680/cien.12.00008>.
- Shiplee H, Waterman L, Furniss K, Seal R and Jones J (2011) Delivering London 2012: health and safety. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **164(5)**: 46–54, <http://dx.doi.org/10.1680/cien.2011.164.5.46>.
- Webster M (2013) The use of CDM 2007 in the London 2012 construction programme. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **166(1)**: 35–41, <http://dx.doi.org/10.1680/cien.12.00010>.

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