

2012 event report

The 14th Young Researchers Conference, sponsored by Arup, Atkins, Flint & Neill, Ramboll, Institution of civil Engineers and the Institution of Structural Engineers Research Fund, was a huge success. PhD students from across the UK and Republic of Ireland came to the Institution to share about their research in structural engineering and make new contacts. Synopses of all the 57 delegates' research projects are available to view in the conference proceedings [here](#).

Keynote speech

David McKenzie, Chief Executive Officer of Flint & Neill, delivered a well-illustrated keynote address explaining the nature of research and charting its development and impact on practice. Hear David's presentation in full via our [webinar section](#).

Prizewinners

Many excellent oral and poster presentations were given during the day and the following prizes were awarded:

Oral category:

1st prize – Therese Sheehan of University of Warwick won £500 for her presentation on strength, ductility and energy dissipation of concrete-filled tubular braces under cyclic axial loading. Read more about Therese, her work and what she thought of the conference, on our [winners' page](#).

Joint 2nd prize – Alice Younge of Imperial College won £250 for her presentation on structural analysis of the femur; a collaborative tool for surgeons and engineers.

Joint 2nd prize – James Watson of University of Cambridge won £250 for his presentation on novel glass-metal and glass-glass structural joints for architectural applications.



Left to right: Professor Steve Denton, James Watson , Therese Sheehan, Martin Powell

Poster category:

1st prize - Paul McNulty of Queens University Belfast won £500 for his poster presentation on behaviour of a novel skew FlexiArch bridge system. Read more about Paul, his work and what he thought of the conference, on our [winners' page](#).

Joint 2nd prize - Alex Colman of Newcastle University won £250 for his poster presentation on a pragmatic approach to determining the mechanical behaviour of structural fabrics.

Joint 2nd prize - Danielle Densley Tingle of Sheffield University won £250 for her poster presentation on making the case for design for deconstruction.

All winners also received a book *Building: 3000 years of design, engineering and construction* by Bill Addis.



Left to right: Martin Powell, Alex Colman, Danielle Densley Tingle, Paul McNulty

Judges' comments

Professor Dennis Lam, lead oral judge, explained that the oral presentations had been judged on their technical content. He went on to encourage all young researchers to be inquisitive, advising them to question themselves and their supervisor (who may not have the answer to everything) and to think outside of the box.

Mike Banfi, lead poster judge, said that the judges had been impressed with the standard of the posters and were sure that some of the students would have gained some ideas for their own work by looking at what others had displayed. Mike commented on the wide range of topics and materials covered by the presentations. Materials ranged from fabric to concrete including masonry and timber. Topics ranged from the more typical engineering ones of strength to sustainability and ease of fabrication.

Chairman's closing remarks

Professor Steve Denton, conference chairman, reiterated the point made in David McKenzie's keynote address that, analysis is a tool to aid understanding. Professor Denton stressed the importance of having confidence in the predictive quality of these approaches and urged researchers to ask themselves if they understood the sensitivity of all the parameters in their models, particularly those used in non-linear analysis.

As Director of Engineering at Parsons Brinckerhoff, Steve felt researchers were valuable to industry because aside from the knowledge they accrue of a particular topic area, researchers develop the skill of understanding what problem needs solving. This can be the hardest part of research and involves 'climbing on the shoulders' of those who have gone before them in the subject area to ascertain what can usefully be done to take our understanding forward. In closing the conference Professor Denton congratulated all the young researchers on their achievements.

The Institution gratefully acknowledges the support of its conference sponsors: Arup, Atkins, Flint & Neill, Ramboll, Institution of Civil Engineers and Institution of Structural Engineers Research Fund.