

RCCES Seminar series, Wednesday 6 March 2019, 5:30 pm, Room ELG11

Novel materials and elements in 21st century structures

Dr Katherine Cashell

Senior Lecturer in Structural Engineering at Brunel University London

Overview of presentation:

In this seminar, an overview of recent research in structural engineering at Brunel University London will be presented. The presentation will focus on two main areas: (1) the use of non-typical materials such as stainless steel and high strength steel in the design of metallic, composite and reinforced concrete structures, and (2) the development of new composite cross-sectional shapes to allow for larger spans and more efficient designs compared with existing methods. The behaviour of structural materials and elements both in normal and extreme conditions, such as fire, will be discussed.

Brief biography:

Katherine Cashell is a Senior Lecturer in Structural Engineering in the Department of Civil and Environmental Engineering at Brunel University London. She is a Chartered Engineer (CEng) and a Member of the Institution of Structural Engineers (MStructE), the Institution of Civil Engineers (MICE) and Engineers Ireland (MIEI). She obtained her PhD from Imperial College London in 2009 and worked at the Steel Construction Institute for a number of years before joining Brunel as a lecturer in 2012. At Brunel, Katherine is engaged in teaching at both undergraduate and postgraduate level in subjects including structural mechanics, analysis and design. Her principal research interests, in respect of which she has written over 20 journal papers and numerous conference articles, lie in the area of structural testing, numerical modelling and the development of efficient design guidance for steel and composite structures. In particular, she has developed an expertise in the analysis of structural response during extreme loading conditions, such as a fire. She is also actively engaged in researching the use of novel materials such as stainless steel and high strength steel in building structures.