

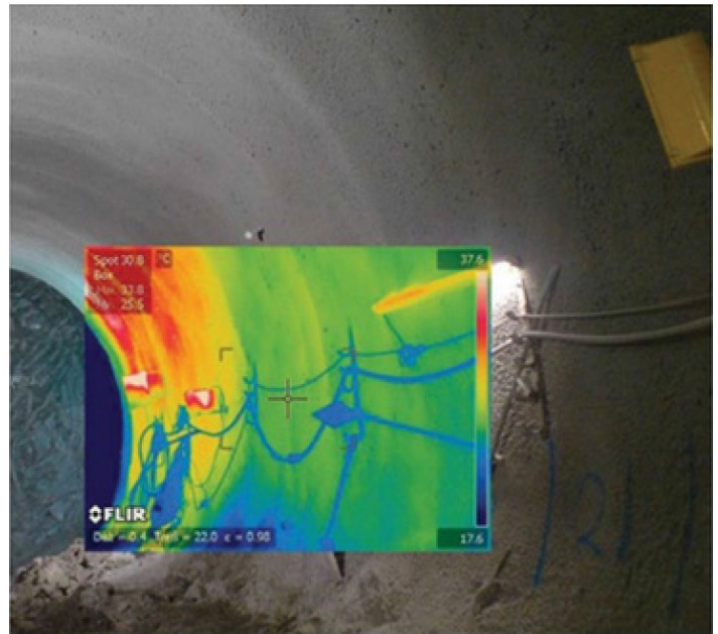
The future of shotcrete tunnelling

Dr Benoît D. Jones

Course Director – Laing O’Rourke Centre Construction Engineering Masters Programme
Founder and Previous Course Manager of the Tunnelling and Underground Space MSc (University of Warwick)

Seminar overview:

Shotcrete (or sprayed concrete) tunnel linings are loaded at early age as the tunnel advances. Therefore to construct sprayed concrete tunnels safely, we need to know the current stress state and the current strength of the lining, as well as its geometry and quality, with the aim of estimating the factor of safety. However, to approach the face of a tunnel puts workers at risk of falling ground or fresh shotcrete. This talk will describe a novel method of measuring shotcrete strength from a remote location using a thermal imaging camera and propose ways that this may be incorporated into an automated system for monitoring factor of safety. Along the way we will also discuss technology adoption in the construction industry and finding the right partners.



When and where:

Wednesday, 17 February, 19:30
Erasmus Room, Queen’s College

Queries:
Stefan Ritter
sr671@cam.ac.uk

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Short biography:

Benoît Jones graduated from the University of Bristol in 2000 with a First Class Honours degree in Civil Engineering with Study in Europe (Polytech’ Grenoble, France). He then joined Mott MacDonald as a Graduate Tunnel Engineer. Between 2002-2006 he undertook research for an EngD at the University of Southampton with Professor Chris Clayton as his supervisor, sponsored by Mott MacDonald and the EPSRC. After working on Crossrail MDC3, in late 2007 he went to work for Morgan Est (now Morgan Sindall) as Section Engineer on the King’s Cross Underground Station Redevelopment, then as Engineering Manager on the Stoke Newington to New River Head Thames Water Ring Main Extension Tunnel. In Autumn 2010 he joined OTB Engineering, a small consultancy specialising in tunnelling and geotechnics, working on temporary works designs for Tottenham Court Road Station Upgrade and for the Crossrail Eastern Running Tunnels (C305). From September 2011 to December 2015 he worked at the University of Warwick, where he set up and ran a new MSc in Tunnelling and Underground Space. He joined the University of Cambridge in January 2016 as Course Director of the Construction Engineering Masters Programme.



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