

UNIVERSITY OF  
BIRMINGHAM

# Midland Geotechnical Society Meeting Notice

[www.midlandgeotechnicalsociety.org.uk](http://www.midlandgeotechnicalsociety.org.uk)

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#### Contact Us

Honorary Secretary: Scott O'Neill

Scott.oneill@aecom.com

Tel: 0121 214 8194

#### Meeting Venue

Lectures start 7pm

ARUP Campus.

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Refreshments are available prior to  
the meeting Engineering, from 6:15  
onwards.

Talk kindly sponsored by:



Wednesday 15th November 2017

BGA Touring Lecture 2017

Tunnelling in the Urban Environment:

engineering challenges and research

Professor Giulia Viggiani

University of Cambridge

#### Synopsis

Tunnelling construction is forced to address increasingly complex scenarios, and the ability to control displacements during excavation and in the long term is often a crucial issue in the urban environment. The technical challenges stemming from the construction of large underground projects can represent an opportunity to advance our understanding of the impact of mechanised tunnelling on existing structures and to develop tools to optimise design and control construction processes.

The lecture explores this idea by illustrating the results of a collaborative research project carried out in connection to the design and construction of the third line of Roma underground. The project examined mechanised tunnelling and construction processes, tunnelling-induced damage assessment and connected mitigation and remedial measures, using a combination of field monitoring, laboratory observations, and physical and numerical modelling.

#### About our speaker

**Giulia Viggiani** has just been appointed Professor of Infrastructure Geotechnics at Cambridge University. Before this, she was Full Professor of Geotechnics at Università di Roma Tor Vergata where she was Head of the Board of Studies in Civil and Environmental Engineering. She obtained a Laurea in Civil Engineering from Università di Napoli Federico II in 1989 and a PhD in Geotechnical Engineering from the City University in London, in 1994.

Her research deals mainly with underground construction, foundation engineering, and earthquake geotechnical engineering. She has been involved in many infrastructural projects in Italy and the UK, including monitoring building response to construction of the Jubilee Line Extension in London, the design and construction of Lines 1 and 6 of Napoli underground and of Line C of Roma underground, and the design of the foundations, anchor blocks and terminal structures of the Strait of Messina Bridge

***This seasons lectures are as follows:***

Date	Location	Speaker Name & Company	Title	Sponsor
4 <sup>th</sup> December	University of Birmingham	Shezad Hafiz, Aecom	<u>BTYM Joint Meeting</u> Inner Doha Resewerage Implementation Strategy; tunnelling in the Middle East	AECOM
8 <sup>th</sup> January	<i>University of Birmingham</i>	<i>Nick Sartain</i>	<i>Geotechnical aspects of HS2</i>	Arcadis
5 <sup>th</sup> February	<i>University of Birmingham</i>	<i>TBC</i>	<u>IGS joint meeting</u> (provisional) Talk title TBC	<i>WSP</i>
5 <sup>th</sup> March	University of Birmingham	Mike Streetly, ESI	Hydrogeological Interpretation @ Stonehenge	Applied Geology
9 <sup>th</sup> April	<i>University of Birmingham</i>	<i>TBC</i>	<i>John Mitchell Lecture 2018</i>	<i>Geotechnics</i>
14 <sup>th</sup> May	<i>University of Birmingham</i>	<i>Ben De Waal, The Fiscal Incentives Group</i>	<i>Environmental lecture: Land remediation tax relief on brownfield/derelict sites</i>	<i>DTS-Raeburn</i>

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