

**Prof. Kenichi Soga, University of Cambridge, UK**

Kenichi Soga is Professor of Civil Engineering. He specialises in the area of Geotechnical Engineering and Environmental Geotechnics. He studied at Kyoto University and obtained B.Eng. and M. Eng. in 1987 and 1989, respectively. He then studied at the University of California at Berkeley and was awarded a Ph.D. in 1994. He is an editorial member of Computers and Geotechnics, Geomechanics and Geoengineering, Georisk and Geomechanics and Engineering. In the past, he served as an editorial board member for Geotechnique (2003-2005), ASCE Journal of Geotechnical and Geoenvironmental Engineering (2001-2009), JGS Soils and Foundations (2001-2005) and Vadose Zone Journal. He is co-author of "Fundamentals of Soil Behavior, 3rd Edition"(John Wiley and Sons). He has written about 200 journal and conference papers and is recipient of several prizes such as the Telford Gold Medal (Institution of Civil Engineers), the George Stephenson Medal (Institution of Civil Engineers) and the Walter L. Huber Civil Engineering Research Prize (American Society of Civil Engineers). He is fellow of the Institution of Civil Engineers and an Executive member of the Technical Oversight Committee of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE).



**Keynote abstract:**

**Innovative monitoring technologies for underground infrastructure**

One of the greatest challenges facing civil engineers in the 21st century is the stewardship of civil engineering infrastructure. Nowhere is this more apparent than in underground structures in the major cities around the world. Advances in the development of fibre optics, computer vision, miniature micro-electro-mechanical sensors (MEMS) and wireless sensor network (WSN) offer intriguing possibilities that can radically alter the paradigms underlying existing methods of condition assessment and monitoring of such infrastructure. This paper discusses potentials of these technologies for monitoring underground infrastructure.