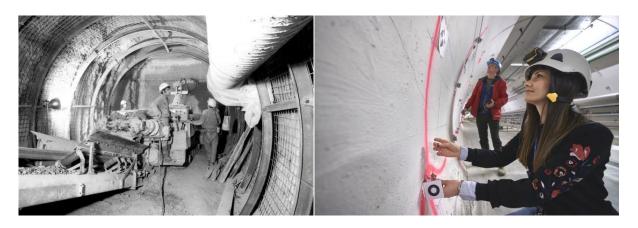






Tuesday, 31 May 17:00 to 18:00 hrs (GMT+2)

## Long-term investigation of tunnel linings: A study case from CERN



Vanessa Di Murro, PhD Senior Tunnel Engineer, Ove Arup & Partners Ltd., London, UK

The long-term performance of tunnel concrete linings through innovative monitoring technologies using distributed fibre optic strain sensors has been a topic of particular interest in the tunnelling industry. Dr. Di Murro will be presenting on the unique setup that was developed at the European Centre for Nuclear Research (CERN) in Geneva, focusing on the long-term investigation of tunnels which experienced cracking and tunnel lining distress many years after construction. The investigation involved the monitoring of the tunnel lining by using both conventional and innovative technologies, such as distributed fibre optic sensors supporting finite element numerical back analyses to understand the conditions under which long-term induced loading was imposed on the tunnel.

**Bio:** Vanessa is passionate about working in the tunnel and underground structures design and she has developed a comprehensive knowledge of the multidisciplinary design of tunnels, with an extensive knowledge of mined tunnel design and associated monitoring. Vanessa obtained a PhD in Geotechnical and Tunnel Engineering at the University of Cambridge (UK) in 2019. Prior to joining Arup, she acquired experience in field supervisions and tunnel construction works at CERN in Geneva.

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