

WEBINAR

Overview and developments in digitalisation for underground construction



Date

11 February 2026

Time

4.00 PM

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Dr Amanda Huang

Swinburne University of Technology

Webinar on Overview and developments in digitalisation for underground construction

SYNOPSIS

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Global investment in transport, utilities, and social infrastructure is driving rapid growth in tunnelling projects. Yet, critical risks associated with complex ground conditions are least understood during the early project stages when mitigation is most effective. This presentation explores how Industry 4.0 technologies are reshaping underground construction through digitalisation. A Digital Twin-based framework is introduced, focusing on data, models, and information exchange to address key challenges in underground construction by integrating workflows across the design, construction, and operational phases, improving interoperability through Building Information Modelling (BIM), 3D numerical modelling, and data analytics.

SPEAKER BIODATA

Dr Amanda (Mengqi) Huang received her BA of Mining Engineering (honours) in 2018 and PhD from Monash University in 2022 where her research focused on digital twin for underground infrastructure by leveraging building information modelling, geological/geotechnical modelling, and field monitoring technologies. She has 5 years industry experience and has participated in consulting and project elivery services on several transport infrastructure projects.

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✓ Each approved registrant will receive a unique Zoom link for the webinar.

✓ A minimum attendance of 75% is required in order to obtain a certificate of attendance.