

ENGINEERING GROUP LECTURE



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Tunnel Vision: Navigating Geological Risks for Financial Success Lorenzo Martelli

SYNOPSIS

Tunnels play a transformative role in enhancing connectivity and mobility, but their success hinges on robust financial sustainability, which is deeply intertwined with geological risk and sensitivity analysis. This webinar aims to explore two critical aspects: (i) achieving a comprehensive understanding of the geological model, and (ii) assessing the impact of geological uncertainties on risk and sensitivity analysis.

Geological uncertainty is a pivotal factor influencing the economic viability of underground infrastructure projects. Preliminary investigations, often constrained by high upfront costs, are essential but may lack the depth needed to fully address epistemic uncertainties related to tunnel alignments or facility locations. This limitation can significantly affect project outcomes and financial sustainability.

Robust project preparation—grounded in expert-led fundamental investigations—emerges as the most effective risk mitigation approach. The webinar will also highlight the role of blended finance as a mechanism for risk-sharing, emphasizing collaboration among stakeholders to balance geological risks and financial commitments. By integrating geological expertise into financial planning, professionals can enhance decision-making and ensure the long-term success of tunnel projects.



BIO

Lorenzo Martelli is a Senior Transport Engineer and Tunnel Expert at the European Investment Bank (JASPERS). With over 25 years of experience in large-scale infrastructure, he specializes in the intersection of hydrogeological risk and project financing. His expertise focuses on early-stage geological mitigation to ensure the financial sustainability and environmental eligibility of major underground projects.



JOINING INSTRUCTIONS

11 March 2026

Venue: Hybrid event – Burlington House and webinar ([Zoom meeting link](#))

Tea / coffee from 1730 followed by 1800 start.

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