

UNDERGROUND LUNCH & LEARN

Variable Density TBMs and the Related Considerations

Variable Density TBMs are used in more and more projects around the world. As they offer unique capabilities for face support, tunneling in extremely difficult ground conditions becomes safer. The lecture discusses the different mechanics of face support and the technical means to realize them. A number of international projects are introduced as well as the different TBM concepts which have been deployed.



April 3rd, 12-1 P.M.
BERTHOUD HALL 241



Dr.-Ing Ruben Duhme is General Manager at Herrenknecht Asia. He is responsible for Herrenknecht's engineering and geotechnical departments in Asia. Ruben graduated with a

Master's degree in mechanical engineering from Technical University Munich and received his Doctorate in 2017 at the Institute for Construction Technology, Tunnelling and Construction Management at the Ruhr University Bochum. In 2009, Ruben joined Herrenknecht's Headquarter R&D department still as a student and has since then set up an R&D department in Herrenknecht's Asia branch while being stationed in Singapore and Guangzhou China. Among other R&D projects, he developed a number of patented technologies, used in today's TBMs, mostly focusing on slurry TBM tunneling. Today Rubens main work field lies in the geotechnical evaluation and development of suitable TBM technology for projects throughout the Asia Pacific region. His main interests in the further development of mechanized tunneling lie in the increased push for digitalization for productivity increases in tunneling as well as improving the industries use of sensors and data to reduce risks.

