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Present a JOINT TUNNELING SEMINAR on **WEDNESDAY OCT 10TH**
at **NOON** in **BB 125** entitled:

Techniques to Explore the Unknown Conditions Ahead of a Tunnel Boring Machine..... and some other cool stuff!

Often, the single greatest challenge to tunnel projects is the lack of information about ground conditions. Unanticipated ground conditions such as voids, faults, fractured rock with high water inflows, etc., can cause severe problems and dangerous conditions during tunneling. To address the 'unknown ahead of the tunnel boring machine (TBM), non-destructive 'look ahead' techniques are being developed. Such techniques include using injected current, acoustic waves and seismic reflection. In this presentation, I will provide an overview of look ahead techniques that have been developed and summarize on-going research in this area at Colorado School of Mines. I'll kick off the presentation with a brief overview of the career opportunities in underground construction and tunneling.

PRESENTATION BY:

Dr. Mike Mooney



- Mike is a Professor in the Department of Civil & Environmental Engineering at Colorado School of Mines (CSM).
- He serves as Acting Director of the Center for Underground Construction and Tunneling at CSM and is the Director of the SmartGeo program.
- Mike received his Ph.D. from Northwestern University in Civil-Geotechnical Engineering, M.S. in Civil-Structural Engineering from University of California-Irvine, and a B.S. in Civil Engineering from Washington University in St. Louis.
- Mike is teaching a tunnel design in soft ground course this semester and will teach earth retaining structures/support of excavations in the spring.
- His research interests include underground construction & tunneling, earth dams & levees, geoconstruction monitoring, intelligent geoconstruction processes, geophysical site investigation and ground improvement.
- Mike is a registered Professional Engineer in Colorado.