

Senior Geotechnical Engineer

Expertise Geotechnical Engineering, Rock Mass Characterization, Rock Mechanics, Data Integration and Visualization, Slope Stability, Construction Vibration Assessment and Monitoring, Instrumentation, Occupied Underground Space Design, Underground Utilities Rehabilitation

Education B.S. (Geological Engineering), 2001
University of Minnesota, Minneapolis, Minnesota

Registration Registered Professional Engineer, Minnesota

Professional Affiliations Member and Past President: Minnesota Geotechnical Society
Member: American Society of Civil Engineers

Professional Experience

2015 – Present	ITASCA Minneapolis Senior Geotechnical Engineer
2012 – 2015	Geotechnical Engineer
2001– 2012	CNA Consulting Engineers, Minneapolis, Minnesota Project Engineer and Project Manager
2002 – 2004	Minnesota Air National Guard, Saint Paul, Minnesota Civil Engineering Assistant
1996 – 2002	Communication Plans and Implementation Specialist

Project Experience

Rock Mechanics Applied to Surface Mining: Rock mass characterization and numerical modeling projects for various problems at some of the largest open-pit mines in the world, including Jwaneng, Orapa, and Karowe (Botswana); Bingham Canyon and Morenci (USA); and Antapaccay (Peru). Surface-mining activities: estimating rock mass properties, geotechnical block model generation, quality control of numerical models, calibrating numerical models for slope stability assessments, back-analyzing slope failures, and studying remedial measurements (dewatering, buttresses, step-outs, structural support, unloading excavations, etc.).

Rock Mechanics Applied to Underground Mining: Rock mass characterization and numerical modeling projects for diverse underground mining problems. Clients include Henderson, Hecla, Vulcan, Twin Metals, and Lundin (United States); and IAMGOLD and Raglan (Canada).

Rock Mechanics Applied to Civil Engineering: Rock mass characterization, site investigation, rockfall analysis, stability analysis using numerical and analytical methods, and design for a diverse range of projects. Clients include the National Park Service, Bureau of Land Management, Tennessee Valley Authority, Minnesota Department of Transportation, as well as regional and municipal government agencies.

Soil Mechanics Applied to Civil Engineering: Soil characterization, subsurface interpretation and geometric modeling, construction vibration analysis, geotechnical baseline reporting, and design for a large variety of tunneling, roadway, and ground improvement projects.

Rock Mechanics Applied to Hydroelectric Dams: Characterization, numerical model construction, and analysis for hydroelectric projects including the Baihetan Dam (China) and Junction Dam (USA).

Unstructured Grid Generation for Numerical Analysis: Construction of complex three-dimensional grids for numerical analysis (various projects).