

Geomechanics, Numerical Modeling, Geotechnical Engineering

Expertise Rock Mechanics, Geomechanical Design, Numerical Modeling, Geotechnical Engineering

Education Ph.D. Candidate, Geotechnical Engineering
University of Alberta, Edmonton, Canada
M.A.Sc. (Rock Mechanics), 2003
B.A.Sc. (Mining Engineering), 2000
University of Tehran, Iran

Professional Affiliations Member — Canadian Geotechnical Society; Canadian Institute of Mining, Metallurgy and Petroleum; the Society of Petroleum Engineers; Iranian Society for Rock Mechanics

Professional Experience

2011 - Present *Itasca Consulting Canada Inc., Montreal, Canada*
Geomechanics Engineer

2007 - 2011 *University of Alberta, Dept. Civil Engineering, Edmonton, Canada,*
Research Assistant

2003 - 2007 *Mahab Ghodss Consulting Engineering Co., Tehran, Iran*
Geotechnical Engineer

2001 - 2003 *Khak & Sang Geotechnical Consultant Engineers, Tehran, Iran*
Rock Mechanics Engineer

Project Experience

Geomechanics and Geotechnical Engineering Applied to Dam and Hydropower Plant projects: Consulting, field work and numerical modeling for several dam and hydropower plant projects in Iran, including site investigation, analysis of in-situ large-scale rock mechanics tests, monitoring and analysis of underground spaces instrumentation records, geomechanical characterization of the dam foundation, foundation settlement analysis, slope stability analysis, water-tightening systems and grouting of the dam foundation.

Rock Mechanics Testing and Site Investigation: Conducting and supervising in-situ and laboratory geotechnical tests for civil and mining projects, such as the plate-loading test, dilatometer test, in-situ direct shear test, flat jack test, hydraulic fracturing test, permeability test and uniaxial and tri-axial tests on rock and soil specimens. Interpreting test results and site characterization.

Numerical Modeling: Stress and deformation analyses by *FLAC3D*, *FLAC*, *UDEC* and *3DEC* for various civil projects. Developed a 3D continuum equivalent constitutive model and implemented it in *FLAC3D* for non-linear deformation analysis of jointed rocks.