

Senior Geomechanics Engineer

Expertise	Rock Mechanics, Mining Engineering, Numerical Modeling
Education	Ph.D., Geological Engineering (Geomechanics), 2015 M.A.Sc., Geological Engineering (Geomechanics), 2010 Queen's University, Kingston, Ontario B.Sc., Civil Engineering, 2008 K. N. Toosi University of Technology, Tehran, Iran
Registration	Engineer in Training (EIT), Ontario
Professional Affiliations	Member: International Society for Rock Mechanics, American Rock Mechanics Association, Canadian Geotechnical Society
Honors	Best AfriRock 2017 (ISRM International Symposium) paper by a young author (2017) Natural Science and Engineering Research Council of Canada: Industrial Graduate Scholarship, Queen's University funded by NWMO for three years (2011) Carl Reinhardt Fellowship, Queen's University (2008, 2013)
Professional Experience	
2022 – Present	ITASCA Minneapolis Senior Geomechanics Engineer
2018 – 2022	Geomechanics Engineer
2016 – 2018	Mine Design Engineering (MDEng) Inc., Kingston, Ontario Geomechanics Consultant
2015 – 2016	Geomechanics Research Specialist
2015	Geomechanics Group, Queen's University, Kingston, Ontario Research Associate
2011 – 2015	Synthetic Rock Mass Project Manager (funded by NWMO)
2010 – 2015	Rock Mechanics Lab Manager

Project Experience

Underground Mining: Geomechanical analysis of underground mines, including calibration of numerical models by means of microseismic data and forward simulation of life of mine plans to assess the anticipated magnitude of mining-induced stresses and the associated hazard related to induced seismicity for developing strategic sequencing.

Surface Mining: Three-dimensional continuum and discontinuum modeling of surface and underground mining interactions to evaluate the stability of the pit walls and underground stopes as well as the geotechnical risks associated with extraction of crown pillars.

Hydraulic Fracturing: Numerical simulation of induced hydraulic fracturing in unconventional reservoirs as well as for rock mass pre-conditioning in underground mining applications by using 3D random Voronoi tessellation in 3DEC.