

Ehsan Ghazvinian

Senior Geomechanics Engineer

<i>Expertise</i>	Rock Mechanics, Mining Engineering, Numerical modeling
<i>Education</i>	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
<i>Registration</i>	Engineer in Training (EIT), Ontario
<i>Professional Affiliations</i>	International Society for Rock Mechanics American Rock Mechanics Association Canadian Geotechnical Society
<i>Honors</i>	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)
<i>Professional Experience</i>	
	<i>Itasca Consulting Group, Minneapolis, Minnesota</i>
2022 – Present	<i>Senior Geomechanics Engineer</i>
2018 – 2022	<i>Geomechanics Engineer</i>
	<i>Mine Design Engineering (MDEng) Inc., Kingston, Ontario</i>
2016 – 2018	<i>Geomechanics Consultant</i>
2015 – 2016	<i>Geomechanics Research Specialist</i>
	<i>Geomechanics Group, Queen's University, Kingston, Ontario</i>
2015	<i>Research Associate</i>
2011 – 2015	<i>Synthetic Rock Mass Project Manager (funded by NWMO)</i>
2010 – 2015	<i>Rock Mechanics Lab Manager</i>

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*.