

Geophysics

Expertise Rock Mechanics, Seismology, Geomechanical Numerical Modeling, Software Development, C++ Programming

Education Ph.D. (Numerical Modeling of Acoustic Emissions and Dynamic Rock), 1998
Liverpool University, Liverpool, UK
B.Sc. (Geological Engineering (Geophysics), Honors), 1994
Queen's University, Ontario, Canada

Honors & Awards NSERC Industrial Research Fellowship, Rocscience, 2004
BP Prize, Best Student Talk at UK Geophysical Assembly, 1997
Overseas Research Scholarship, Keele University, 1995

Professional Affiliations Member, Professional Engineers Ontario (PEO)
Member, Canadian Geotechnical Society (CGS)
Member, International Society for Rock Mechanics (ISRM)
Member, American Geophysical Union (AGU)

Professional Experience

2010 - Present *Itasca Consulting Group, Inc., Minneapolis, Minnesota*
Senior Engineer

2004 - 2010 *Rocscience, Inc., Toronto, Canada*
Geomechanics Software Developer

2002-2004 *University of Toronto, Dept. of Civil Engineering & Mining, Canada*
Research Associate

1999-2002 *University of Liverpool, United Kingdom*
Research Associate

Project Experience

Rock Mechanics: Research on fluid flow and hydraulic fracturing in rock and the resulting stress, strain, cracking and dynamic output to obtain an understanding of dynamic rock behavior in the mining, petroleum and nuclear-waste industries.

Software Development: Development of a three-dimensional finite element program with fluid-mechanical coupling and dynamic solution capabilities.

Geomechanical Numerical Modeling: Numerical modeling of acoustic emissions and dynamic rock behavior. Coupled solid-fluid analysis of rock slopes and large open-pit mines.