

DR. GLENN SHARROCK

SENIOR LECTURER – ROCK MECHANICS



- QUALIFICATIONS** B.E. in Mining Engineering, University of New South Wales, 1993
M.Sc in Materials Science, University of Queensland, 1996
Ph.D in Mining Engineering, University of Queensland, 2003
- EMPLOYMENT** 1989 - 1993 Co-Op Scholarship Program, UNSW
1994 - 1999 Post Graduate Researcher / Geotechnician / Tutor UQ
1999 - 2003 Rock Mechanics Engineer – Mt Isa Mines
2003 - 2006 Senior Geotechnical Engineer – AMC Consultants Pty Ltd
- PROFESSIONAL SOCIETIES** Australasian Institute of Mining & Metallurgy, Member
Australasian Rock Mechanics Society – Treasurer
- TEACHING AREAS** Rock mechanics/geotechnical engineering
Mining seismology
Mine planning & design
Particle Flow and Soil Mechanics
- RESEARCH INTERESTS** Discontinuum Mechanics of Rock – Rock mass strength and deformation
Rock flow in sub-level caving and block caving mines (cellular automata and discrete element methods)
Inelastic modelling rock mass damage of deformation
Seismicity in deep, high stress mining environments
- SELECTED PUBLICATIONS** Sharrock, G B, Sandy, M, Albrecht, J, Basson, F, 2006. Practical estimates of rock mass strength in underground mining operations, in *Proc Deep and High Stress in Mining*, Quebec City.
Albrecht, J, Sandy, M, Sharrock, G B, 2006. Excavation Design Guidelines And Support Requirements For Seismic Conditions, in *Proc Deep and High Stress in Mining*, Quebec City.
Mikula, P, Sharrock, G B, Lee, M, Kinnerly, E, 2005. Seismicity Management by tight slot blasting for stress control at Mount Charlotte, in *Proc. RASIM6*, Perth.
Sharrock, G B, Beck, D, Booth, G, Sandy, M, 2004. Simulating gravity flow in sub-level caving with cellular automata, in *Proc. Massmin 2004*, Santiago, pp 189-194.
Sharrock, G B, Slade, N, Thin, I, Duplancic, P, 2002. The prediction of stress induced caving on a mining abutment, in *Proc. Deep and High Stress Mining Conference*, Australian Centre for Geomechanics, Nov 2002, Section 13, pp1-21
Sharrock, G B, Kuszmaul, J, 1999. Tool shearing of a granular material, in *Proc. 2nd Australasian Congress Applied Mech.*, Canberra, Australia.
Sharrock, G B, Aspinall, T O, Scott, A, 1997. Scale modelling of dragline block operating methods, *J. Australian Coal Rev.*, Calgary Canada
Sharrock, G.B, Aspinall, T O, Scott, A, 1996. Measurement and analysis of dragline operating parameters for block excavation, in *Proc. 4th Int. Symp. on Mine Planning and Equipment Selection*, Calgary Canada.
- PROFESSIONAL INTERESTS AND CONSULTING** Particle flow in sub-level caves, and block caves
Assessment of mine seismicity and rockburst
Mining in high stress or high displacement environments
Rock mechanics and instrumentation - program design and interpretation
Risk Assessment of underground excavations
Numerical modelling for:
- underground mine stability assessment, including life of mine infrastructure
- back analysis of failures, damage and seismicity
- discrete element and cellular automata modelling of rock flow (PFC3D, FLOW3D, CAVESIM)
- orebody sequence analysis
- seismicity – energy analysis
- inelastic modelling of rock damage and deformation (FLAC3D, ABAQUS – FEA)
Rock mass classification and characterisation
Mine design and operations audits and training.