

## Personal Bio

### Vital Stats

Full Name: Kathy Kalenchuk

Affiliation: Mine Design Engineering Inc.

Position: Senior Geomechanics Consultant



### Biography

Kathy Kalenchuk is a Professional Engineer and holds a Doctorate Degree in Geomechanical Engineering. Dr. Kalenchuk is a consulting expert in mining geomechanics and rock engineering with experience from around the globe. She has worked in the mining industry for 13 years and has considerable on site experience in rock engineering, ground control and the design of ground support systems for static and dynamic applications. Dr. Kalenchuk is an expert in high-end numerical modelling, with particular skills in developing calibrated models capable of reproducing rock mass behavior as observed through field studies and monitoring instrumentation. She also provides expertise in slope mechanics, particularly large-scale rock slopes. Her slope experience includes numerous pit slope designs and sophisticated analyses of massive landslide kinematics and dynamics for some of the world's largest known active landslides in Canada and Europe. Further to being a Senior Geomechanics Consultant for Mine Design Engineering Inc. (MDEng), Dr. Kalenchuk is an Adjunct Professor at Queen's University in Kingston, Ontario where she supervises graduate students in mining geomechanics research areas.

### Education

Doctor of Philosophy, Geomechanical Engineering, 2010  
Multi-Dimensional Analysis of Large, Complex Landslide Systems  
Queen's University, Kingston, Ontario, Canada

Master of Science in Engineering, Geomechanics, 2006  
Geomechanical Assessment of Dilution Potential for Sublevel Caving at Ekati Diamond Mine: Case Study and Generalized Approach

Queen's University, Kingston, Ontario, Canada  
Bachelor of Science in Mining Engineering with Distinction, 2004  
University of Alberta, Edmonton, Alberta, Canada

## Awards and Major Publications

### Book Chapters

Kalenchuk, K.S., Hutchinson, D.J., Diederichs, M.S. and Moore, D. (2012) Downie Slide, British Columbia, Canada in *Landslides: Types, Mechanisms and modeling*, Clauge, J. and Stead, D. Eds.

Hoek, E., Hutchinson, D.J., Kalenchuk, K.S. and Diederichs, M. (2009). Influence of in situ stresses on open pit design, Appendix 3 in *Guidelines for Open Pit Design*, Read, J and Stacey, P.F., Eds. CSIRO Publishing, Melbourne: 437 - 445.

### Refereed Journal Articles (Published)

Kalenchuk, K.S., Hutchinson, D.J. and Diederichs, M.S. (2013). Downie Slide: numerical simulations of groundwater fluctuations influencing the behavior of a massive landslide. *Bulletin of Engineering Geology and the Environment* (DOI 10.1007/s10064-013-0484-5)

Kalenchuk, K.S., Hutchinson, D.J. and Diederichs, M.S. (2012). Geomechanical interpretation of Downie Slide considering field data and three-dimensional numerical modelling. *Landslides*, 10 (6); 737-756 (DOI 10.1007/s10346-012-0363-3)

Kalenchuk, K.S., Diederichs, M.S. and Hutchinson, D.J. (2011). Three-dimensional numerical simulations of the Downie Slide to test the influence of shear surface geometry and heterogeneous shear zone stiffness. *Comp. Geosci.* (<http://dx.doi.org/10.1007/s10596-011-9245-3>)

Kalenchuk, K.S., Hutchinson, D.J. and Diederichs, M.S. (2009). Application of spatial prediction techniques to defining 3-dimensional landslide shear surface geometry. *Landslides* 6(4): 321-333

Kalenchuk, K.S., McKinnon, S. and Diederichs, M.S. (2008). Block geometry and rockmass characterization for prediction of dilution potential into sub-level cave mine voids, *Int. J. Rock Mech. Min. Sci.* 45: 929-940

Kalenchuk, K.S., Diederichs, M.S. and McKinnon, S. (2006). Characterizing Block Geometry in Jointed Rock Masses. *Int. J. Rock Mech. Min. Sci.* 43 (8): pp 1212-1225