

Bahrani, N., B. Valley, P. K. Kaiser and M. Pierce. "Evaluation of PFC2D Grain-Based Model for Simulation of Confinement — Dependent Rock Strength Degradation and Failure Process," in *CD Proceedings, ARMA 45th U.S. Rock Mechanics / Geomechanics Symposium (San Francisco, June 2011)*, Paper No. ARMA 11-156. A. Iannacchione et al., Eds. Alexandria, VA: ARMA, 2011.

Kwok, C. Y., and M. Pierce. "Time-Dependent Compaction in Caving Rock," in *CD Proceedings, ARMA 45th U.S. Rock Mechanics / Geomechanics Symposium (San Francisco, June 2011)*, Paper No. 11-501. A. Iannacchione et al., Eds. Alexandria, VA: ARMA, 2011.

Mas Ivars, D., M. E. Pierce, C. Darcel, J. Reyes-Montes, D. O. Potyondy, R. P. Young and P. A. Cundall. "The Synthetic Rock Mass Approach for Jointed Rock Mass Modelling," *Int. J. Rock Mech. Min. Sci.*, **48**, 219-244 (2011).

Pettitt, W., M. Pierce, B. Damjanac, J. Hazzard, L. Lorig, C. Fairhurst, I. Gil, M. Sanchez, N. Nagel, J. Reyes-Montes and R. P. Young. "Fracture Network Engineering for Hydraulic Fracturing," *The Leading Edge*, **30**(8), 844-853, doi 10.1190/1.3626490 (2011).

Sainsbury, B. L., D. P. Sainsbury and M. E. Pierce. "A Historical Review of the Development of Numerical Cave Propagation Simulations," in *Continuum and Distinct Element Modeling in Geomechanics — 2011 (Proceedings, 2nd International FLAC/DEM Symposium, Melbourne, February 2011)*, Paper 02-01, pp. 23-36. D. Sainsbury et al. Eds. Minneapolis: Itasca International Inc., 2011.

Taghavi, R., and M. Pierce. "Modeling Flow of Fragmented Rock with 3DEC: A Polyhedral DEM Approach," in *Continuum and Distinct Element Modeling in Geomechanics — 2011 (Proceedings, 2nd International FLAC/DEM Symposium, Melbourne, February 2011)*, Paper 14-03, pp. 799-808. D. Sainsbury et al., Eds. Minneapolis: Itasca International Inc., 2011.

Damjanac, B., I. Gil, M. Pierce, M. Sanchez, A. Van As and J. McLennan. "A New Approach to Hydraulic Fracturing Modeling in Naturally Fractured Reservoirs," in *Proceedings, 44th U.S. / 5th U.S.-Canada Rock Mechanics Symposium (Salt Lake City, June 2010)*, Paper No. ARMA 10-400.

Pettitt, W., M. Pierce, B. Damjanac, L. Lorig and C. Fairhurst. "Fracture Network Engineering and Enhanced Geothermal Systems," *Geoth. Res. T.*, **34**, 419-426 (2010).

Pierce, M., D. K. Weatherley and T. Kojovic. "A Hybrid Methodology for Secondary Fragmentation Prediction in Cave Mines," in *Caving 2010 (Proceedings, Second International Symposium on Block and Sublevel Caving, Perth, Australia, April 2010)*, pp. 567-581, Y. Potvin, Ed. Perth: Australian Centre for Geomechanics (2010).

Reyes-Montes, J. M., W. S. Pettitt, M. E. Pierce and R. P. Young. "Geomechanical Evaluation of Solids Injection," in *Proceedings, 44th U.S. / 5th U.S.-Canada Rock Mechanics Symposium (Salt Lake City, June 2010)*, Paper No. ARMA 10-273.

Reyes-Montes, J. M., W. S. Pettitt, M. E. Pierce and R. P. Young. "Microseismic Validation of Jointed Rock Models in Cave Mining," in *Proceedings, 44th U.S. Rock Mechanics Symposium (5th U.S.-Canada Rock Mechanics Symposium, Salt Lake City, Utah, June 2010)*, Paper No. 10-273. Alexandria, Virginia: ARMA, 2010.

Reyes-Montes, J. M., B. Sainsbury, W. S. Pettitt, M. Pierce and R. P. Young. “Microseismic Tools for the Analysis of the Interaction Between Open Pit and Underground Developments,” in *Caving 2010 (Proceedings of the Second International Symposium on Block and Sublevel Caving, Perth, Australia, April 2010)*, pp. 119-132, Y. Potvin, Ed. Perth: Australian Centre for Geomechanics (2010).

Pierce, M. “The Mechanics of Caving in Jointed Rock,” presented at the *Lassonde Institute Colloquium*, University of Toronto, Canada, January 20, 2009.

Board, M., and M.E. Pierce. “A Review of Recent Experience in Modeling of Caving,” presented at the International Workshop on Numerical Modeling for Underground Mine Excavation Design, National Institute for Occupational Safety and Health (NIOSH) Pittsburgh Research Laboratory, 43<sup>rd</sup> U.S. Rock Mechanics Symposium, (Asheville, June 2009).

Pierce, M., M. Gaida and D. DeGagné. “Estimation of Rock Block Strength,” in *ROCKENG09 (Proceedings, 3rd CANUS Rock Mechanics Symposium, Toronto, May 2009)*, Paper No. 4360. M. Diederichs and G. Grasselli, Eds.

Pierce, M., D. Mas Ivars and B. Sainsbury. “Use of Synthetic Rock Masses (SRM) to Investigate Jointed Rock Mass Strength and Deformation Behavior,” in *CD Proceedings, International Conference on Rock Joints and Jointed Rock Masses (Tucson, January 2009)*, Paper 1091. P. H. S. W. Kulatilake, Ed. Tucson: Kulatilake & Associates, 2009.

Tawadrous, A., D. De Gagné, M. Pierce and D. Mas Ivars. “Prediction of Uniaxial Compression PFC3D Model Micro-Properties Using Artificial Neural Networks,” *Int. J. Numer. Anal. Methods Geomech.*, doi:10.1002/nag.809.

Cundall, P. A., M. E. Pierce and D. Mas Ivars. “Quantifying the Size Effect of Rock Mass Strength,” in *SHIRMS 2008 (Proceedings, 1st Southern Hemisphere International Rock Mechanics Symposium, Perth, Western Australia, September 2008)*, Vol. 2, pp. 3-15. Y. Potvin et al., Eds. Nedlands, Western Australia: Australian Centre for Geomechanics, 2008.

Deisman, N., D. Mas Ivars and M. Pierce. “PFC2D Smooth Joint Contact Model Numerical Experiments,” in *GeoEdmonton '08: A Heritage of Innovation (61st Canadian Geotechnical Conference, Edmonton, September 2008)*, Paper No. 83.

Mas Ivars, D., M. Pierce, D. DeGagné and C. Darcel. “Anisotropy and Scale Dependency in Jointed Rock-Mass Strength — A Synthetic Rock Mass Study,” in *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (Proceedings, 1st International FLAC/DEM Symposium, Minneapolis, August 2008)*, Paper No. 06-01. R. Hart et al., Eds. Minneapolis: Itasca Consulting Group, Inc., 2008.

Mas Ivars, D., D. O. Potyondy, M. Pierce and P. A. Cundall. “The Smooth-Joint Contact Model (Abstract),” in *Proceedings, WCCM8 - ECCOMAS 2008 (8th World Congress on Computation Mechanics/5th European Congress on Computational Methods in Applied Sciences & Engineering, Venice, Italy, June-July 2008)*, Paper No. a2735. B. A. Schrefler and U. Perego, Eds. Barcelona: International Center for Numerical Methods in Engineering (CIMME), 2008.

Sainsbury, B., M. E. Pierce and D. Mas Ivars. “Analysis of Caving Behaviour Using a Synthetic Rock Mass — Ubiquitous Joint Rock Mass Modelling Technique,” in *SHIRMS 2008 (Proceedings, 1st Southern Hemisphere International Rock Mechanics Symposium, Perth, Western Australia, September 2008)*, Vol. 1, pp. 343-252. Y. Potvin et al., Eds. Nedlands, Western Australia: Australian Centre for Geomechanics, 2008.

Sainsbury, B., M. Pierce and D. Mas Ivars. “Simulation of Rock Mass Strength Anisotropy and Scale Effects Using a Ubiquitous Joint Rock Mass (URJM) Model,” in *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (Proceedings, 1st International FLAC/DEM Symposium, Minneapolis, August 2008)*, Paper No. 06-02. R. Hart et al., Eds. Minneapolis: Itasca Consulting Group, Inc., 2008.

Board, M., B. Damjanac and M. Pierce. “Development of a Methodology for Analysis of Instability in Room and Pillar Mines,” in *Deep Mining 07 (Fourth International Seminar on Deep and High Stress Mining, November 2007, Perth, Australia)*, pp. 273-282. Y. Potvin, Ed. Perth: Australian Centre for Geomechanics, 2007.

Mas Ivars, D., M. Pierce, D. O. Potyondy and P. A. Cundall. “A New Modelling Approach for the Study of Deformation, Yield and Failure of Jointed Rock Masses,” in *Bergmekanikdag 2007 (Swedish Rock Mechanics Day 2007)*, pp. 33-41. Stockholm: SveBeFo.

Pierce, M., P. Cundall, D. Potyondy and D. Mas Ivars. “A Synthetic Rock Mass Model for Jointed Rock,” in *Rock Mechanics: Meeting Society’s Challenges and Demands (1st Canada-U.S. Rock Mechanics Symposium, Vancouver, May 2007)*, Vol. 1: *Fundamentals, New Technologies & New Ideas*, pp. 341-349. E. Eberhardt et al., Ed. London: Taylor & Francis Group, 2007.

Mas Ivars, D., N. Deisman, M. Pierce and C. Fairhurst. “The Synthetic Rock Mass Approach — A Step Forward in the Characterization of Jointed Rock Masses,” in *The Second Half Century of Rock Mechanics (11th Congress of the International Society for Rock Mechanics, Lisbon, July 2007)*, Vol. 1, pp. 485-490. L. Ribeiro e Sousa et al., Eds. London: Taylor & Francis Group, 2007.

Taghavi, R., M. Pierce and D. Sainsbury. “Automatic Meshing of Complex Models in FLAC3D 3.0,” to be published in *FLAC and Numerical Modeling in Geomechanics — 2006 (Proceedings of the 4th International FLAC Symposium, Madrid, May 2003)*, CD Proceedings, ISBN 0-9767577-0-2. R. Hart and P. Varona, Eds. Minneapolis: Itasca Consulting Group, Inc., 2006.

Pierce, M. E., C. Detournay and H. Lager. “Numerical Modeling of Ground Freezing for Sub-Surface Construction,” in *Proceedings of Alaska Rocks 2005 — Rock Mechanics for Energy, Mineral and Infrastructure Development in the Northern Regions (CD)*. University of Alaska-Anchorage, June 2005, Paper No. ARMA/USRMS 05-854. G. Chen et al., Eds. ARMA, University of Alaska-Fairbanks, 2005.

Pierce, M. E. “PFC3D Modeling of Inter-Particle Percolation in Caved Rock Under Draw,” in *Numerical Modeling in Micromechanics Via Particle Methods — 2004 (Proceedings of the 2nd International PFC Symposium, Kyoto, Japan, October 2004)*, pp. 149-156. Y. Shimizu et al., Eds. Leiden: Balkema, 2004.

Selldén, H., and M. Pierce. “PFC3D Modelling of Flow Behaviour in Sublevel Caving,” in *Proud to Be Miners (Proceedings of MassMin 2004, Santiago, August 2004)*, pp. 201-214. A. Karzulovic and M. A. Alfaro, Eds. Santiago: Minería Chilena, 2004.

Sainsbury, D. P., M. E. Pierce and L. J. Lorig. “Two- and Three-Dimensional Numerical Analysis of the Interaction Between Open-Pit Slope Stability and Remnant Underground Voids,” in *Harnessing Technology by Managing Data and Information (Proceedings of the 5th Large Open Pit Conference, Kalgoorlie, Western Australia, November 2003)*, pp. 251-257. C. Workman-Davies and E. Chanda, Eds. Carlton: AUSIMM, 2003.

Pierce, M. E., P. A. Cundall, G. J. van Hout and L. Lorig. “PFC3D Modeling of Caved Rock Under Draw,” in *Numerical Modeling in Micromechanics via Particle Methods (Proceedings of the 1st International PFC Symposium, Gelsenkirchen, Germany, November 2002)*, pp. 211-217. H. Konietzky, Ed. Lisse: Balkema, 2003.

Pierce, M. E., D. Potyondy, P. Andrieux and J.-S. Lessard. “Use of the Particle Flow Code (PFC2D) to Assess Stability of Undercut Rockfill at Brunswick Mine,” in *NARMS-TAC 2002: Mining and Tunnelling Innovation and Opportunity*, Vol. 1, pp. 173-180. R. Hammah et al., Eds. Toronto: University of Toronto Press, 2002.

Trueman, R., M. Pierce and R. Wattimena. “Quantifying Stresses and Support Requirements in the Undercut and Production Level Drifts of Block and Panel Caving Mines,” *Int. J. Rock Mech. & Min. Sci.*, **39**, 617-632 (2002).

Pierce, M. E. “Stability Analysis of Paste Backfill Exposures at Brunswick Mine,” in *FLAC and Numerical Modeling in Geomechanics — 2001 (Proceedings of the 2nd International FLAC Conference, Lyon, France, October 2001)*, pp. 147-156. D. Billiaux et al., Eds. Lisse: Balkema, 2001.

Andrieux, P., M. Board, R. Brummer, A. Mortazavi and M. Pierce. “Elastic vs Inelastic Numerical Stress Modelling — Practical Considerations and Issues,” in *Proceedings, 16<sup>th</sup> Quebec Mining Association Ground Control Colloque (Val d’Or, Quebec, March 2001)*.

Pierce, M., T. Brandshaug and M. Ward. “Slope Stability Assessment at the Main Cresson Mine,” in *Slope Stability in Surface Mining*, Ch. 26, pp. 239-250. W. A. Hustrulid, M. K. McCarter and D.J.A. Van Zyl, Eds. Littleton, Colorado: SME, 2000.

Pierce, M., W. Bawden and J. Paynter. “Laboratory Testing and Stability Analysis of Paste Backfill at the Golden Giant Mine,” in *Minefill ‘98 (Proceedings of the Sixth International Symposium on Mining with Backfill, Brisbane, Australia, April 1998)*, pp. 159-165.

Pierce, M. E. *Laboratory and Numerical Analysis of the Strength and Deformation Behaviour of Paste Backfill*. M.S. Thesis, Queen’s University, Kingston, Ontario, Canada, November 1997.

Pierce, M. “Risk Analysis in Open Stope Mine Design: A Probabilistic Approach to the Modified Mathews Stability Graph Method,” B.Sc. Thesis, Queen’s University, Canada, 1995.