

Detournay, C., B. Damjanac, M. Torres, Y. Han. “Study of Hydraulic Fracture Interference with a Lattice Model,” in *Mechanics of Hydraulic Fracturing: Experiment, Model and Monitoring*. Wiley, in press.

Detournay C., G. Meng, J. Hou, J. Xu, Z. Cheng, R. Peterson, P. Cundall. “Numerical Simulation of Water Impoundment at a High Arch Dam Site,” in *Proceedings, 4th International Conference on Numerical Modeling in Engineering (NME 2021, Ghent, Belgium, August 2021)*, pp. 27–39, M. A. Wahab, Eds. Springer. 2021.

Damjanac, B., M. Torres and C. Detournay. “Modeling the Effect of a Natural Fracture Network and Its Properties on Multi-Stage Stimulation,” in *Proceedings, Unconventional Resources Technology Conference (URTeC, Houston, Texas, July 2021)*, URTeC: 5285. <https://doi.org/10.15530/urtec-2021-5285>. 2021.

Cheng, Z., and C. Detournay. “Formulation, Validation and Application of a Practice-Oriented Two-Surface Plasticity Sand Model,” *Computers and Geotechnics*, **132**, 103984. doi.org/10.1016/j.compgeo.2020.103984. 2021.

Hou, J., J. Xu, G. Meng, W. Chu, Z. Cheng, C. Detournay and P. Cundall. “Analysis of the Effect of Dam Impoundment at the Baihetan Site Using Coupled Fluid-Mechanical Elasto-Plastic Simulations,” in *IOP Conference Series: Earth and Environmental Science (Beijing, October 2020)*, Vol. 570, 022033. 2020.

Damjanac, B., C. Detournay and P. Cundall. “Numerical Simulation of Hydraulically Driven Fractures,” in *Modelling Rock Fracturing Processes: Theories, Methods, and Applications*, Second Edition, 531–561, B. Shen, O. Stephansson, and M. Rinne, Eds. Cham, Switzerland: Springer Nature Switzerland AG. 2020.

Bakun-Mazor, D., Y. Kelssar, A. Feldhelm, C. Detournay, and Y. H. Hatzor. “Thermally-Induced Wedging-Ratcheting Failure Mechanism in Rock Slopes,” *Rock Mech. Rock Eng*, doi.org/10.1007/s00603-020-02075-6. 2020.

Detournay, C., E. Dzik and C. Wood. “Geo-Mechanical and Flow Modeling for Paradox Valley Unit,” in *Applied Numerical Modeling in Geomechanics 2020 (Proceedings, 5th International Itasca Symposium, February 2020)*, Paper 06-04. Minneapolis, Minnesota: Itasca, 2020.

Detournay, C., G. Meng and P. Cundall. “Viscous Ubiquitous Joints in Comba User-Defined Model for FLAC3D/3DEC,” in *Applied Numerical Modeling in Geomechanics 2020 (Proceedings, 5th International Itasca Symposium, February 2020)*, Paper 02-06. Minneapolis, Minnesota: Itasca, 2020.

Meng, G., C. Detournay and P. Cundall. “Formulation and Application of a Constitutive Model for Multijointed Material to Rock Mass Engineering,” *Int. J. Geomech.*, **20**(6). 2020. DOI: [10.1061/\(ASCE\)GM.1943-5622.0001646](https://doi.org/10.1061/(ASCE)GM.1943-5622.0001646).

Meng, G., J. Xu, A. Shi and C. Detournay. “Griddle Generation of FLAC3D Models for the Baihetan Dam Project,” in *Applied Numerical Modeling in Geomechanics 2020 (Proceedings, 5th International Itasca Symposium, February 2020)*, Paper 13-02. Minneapolis, Minnesota: Itasca, 2020.

Xie, X., E. Fjaer and C. Detournay. “Application of a Bingham Viscoplastic Model to Borehole Closure: Comparison between Two Numerical Approaches,” in *Proceedings, 53rd U.S. Rock Mechanics/Geomechanics Symposium (ARMA, New York City, June 2019)*, ARMA 19-474. Alexandria, Virginia: ARMA, 2019.

Han, Y., C. Detournay and Y. Abousleiman. “Investigation of Kerogen’s Effects on Hydraulic Fracturing Using a Micromechanical HF Simulator,” in *Proceedings, 52nd U.S. Rock Mechanics/Geomechanics Symposium (ARMA, June 2018, Seattle, Washington)*, ARMA 18-347. Alexandria, Virginia: ARMA, 2018.

Dzik, E., C. Detournay and P. Cundall. “A Practical Approach to Challenges in Meshing Mining Models,” in *Proceedings, 26th International Meshing Roundtable and User Forum (Barcelona, September 2017)*. Sandia National Laboratories, 2017.

Detournay, C., G. Meng and P. Cundall. “Application of a Constitutive Model for Multi-Jointed Material to Rock Mass Engineering,” in *IACMAG (Proceedings, 15th International Conference of the International Association for Computer Methods and Advances in Geomechanics, October 2017, Wuhan, China)*. In press, 2017.

Cundall, P., and C. Detournay. “Chapter 2: Dynamic relaxation applied to continuum numerical models in geomechanics,” in *Rock Mechanics and Engineering, Volume 3: Analysis, Modeling & Design*, X.-T. Feng, Ed. Boca Raton, Florida: CRC Press, 2017.

Damjanac, B., C. Detournay and P. Cundall. “Application of Particle and Lattice Codes to Simulation of Hydraulic Fracturing,” *Computational Particle Mechanics*, 3(2), 249–261. 2016. DOI 10.1007/s40571-015-0085-0

Detournay, C., J. Lemos and F. Zhang. “Development of a Proppant Transport Logic in 3DEC,” in *Applied Numerical Modeling in Geomechanics — 2016 (Proceedings, 4th Itasca Symposium on Applied Numerical Modeling, Lima, March 2016)*, pp. 573–585, P. Gómez, C. Detournay, R. Hart, and M. Nelson, Eds. Minneapolis: Itasca Consulting Group, Inc., 2016.

Detournay, C., G. Meng and P. Cundall. “Development of Constitutive Model for Columnar Basalt,” in *Applied Numerical Modeling in Geomechanics — 2016 (Proceedings, 4th Itasca Symposium on Applied Numerical Modeling, Lima, March 2016)*, pp. 249–265, P. Gómez, C. Detournay, R. Hart, and M. Nelson, Eds. Minneapolis: Itasca Consulting Group, Inc., 2016.

Meng, G., C. Detournay and Cundall, P. “Continuum/Discrete Numerical Simulation of Columnar Basalt in Large-Scale Underground Excavations,” in *50th US Rock Mechanics/Geomechanics Symposium (Proceedings, ARMA, Houston, June 2016)*, ARMA-16-211. Alexandria, Virginia: ARMA, 2016.

Cheng, Z., and C. Detournay. “Plastic Hardening Model I: Implementation in FLAC3D,” in *Applied Numerical Modeling in Geomechanics — 2016 (Proceedings, 4th Itasca Symposium on Applied Numerical Modeling, Lima, March 2016)*, pp. 267–276, P. Gómez, C. Detournay, R. Hart, and M. Nelson, Eds. Minneapolis: Itasca Consulting Group, Inc., 2016.

Detournay, C., J. Cundall, P. and B. Damjanac. “A Study of Fracture Interference in 3D with XSite,” in *Applied Numerical Modeling in Geomechanics — 2016 (Proceedings, 4th Itasca Symposium on Applied Numerical Modeling, Lima, March 2016)*, pp. 607–616, P Gómez, C. Detournay, R. Hart, and M. Nelson, Eds. Minneapolis: Itasca Consulting Group, Inc., 2016.

Detournay, C., and B. Hobbs. “Numerical Simulations of Convection Cells in Sedimentary Basins with Application to Geothermal Energy,” *Rock Mechanics and Rock Engineering*, 48(6), 2631–2636. 2015.

Detournay, C., A. Lucarelli and Varun. “Back-Analysis of an Embankment Constructed on Soft Soil Using the Cysoil Model,” in *Numerical Methods in Geotechnical Engineering (Proceedings, 8th NUMGE Conference, Delft, Netherlands, May 2014)*, pp. 597–602. London: Taylor & Francis. 2014.

Detournay, C., and P. Cundall. “Hydraulic Fracture Simulation: Comparison with Exact Solutions,” in *SEMC 2013 (Proceedings, 5th International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, September 2013)*. Boca Raton, Florida: CRC Press. 2013.

Detournay, C., A. P. Bungler and B. Wu. “Modeling the Impact of Drilling Fluid Salinity on Wellbore Stability Using *FLAC*,” in *Continuum and Distinct Element Numerical Modeling in Geomechanics - 2013 (Proceedings, 3rd International FLAC/DEM Symposium, Hangzhou, China, October 2013)*. Paper: 10-05, H. Zhu, C. Detournay, R. Hart, and M. Nelson, Eds. Minneapolis: Itasca International, Inc., 2013.

Damjanac, B., C. Detournay, P.A. Cundall and Varun. “Chapter 41: Three-Dimensional Numerical Model of Hydraulic Fracturing in Fractured Rock Masses” in *Effective and Sustainable Hydraulic Fracturing – 2013*. doi: 10.5772/45724. A.P. Bungler, J. McLennan and R. Jeffrey, Eds. InTech, 2013.

Detournay, C., P. A. Cundall and B. Damjanac. “Hydraulic Fracture Simulation: Comparison with Exact Solutions,” in *Research and Applications in Structural Engineering, Mechanics and Computation (Proceedings, SEMC 2013, Cape Town, South Africa, September 2013)*, pp. 603-608, A. Zingoni, Ed. Leiden, Netherlands: CRC Press/Balkema, 2013.

Zhu, H., C. Detournay, R. Hart and M. Nelson, Eds. *Continuum and Distinct Element Numerical Modeling in Geomechanics - 2013 (Proceedings, 3rd International FLAC/DEM Symposium, Hangzhou, China, October 2013)*. Minneapolis: Itasca International Inc., 2013.

Hazzard, J., B. Damjanac, C. Detournay and L. Lorig. “Numerical Investigation of Flow Regimes in Fractured Rock Slopes,” in *21st Canadian Rock Mechanics Symposium: RockEng12 — Rock Engineering for Natural Resources (Proceedings, CARMA, Edmonton, Canada, May 2012)*, pp. 161-168, C. Hawkes, Ed. Westmount, Quebec: CARMA, CIMICM. 2012.

Detournay, C., R. Hart and P. Varona. “Factor of Safety Measure for Hoek-Brown Material,” in *Continuum and Distinct Element Modeling in Geomechanics — 2011 (Proceedings, 2nd International FLAC/DEM Symposium, Melbourne, February 2011)*, Paper No. 13-07, pp. 765-772. D. Sainsbury et al., Eds. Minneapolis: Itasca International Inc., 2011.

Detournay, C., Z. Wang and Y. Han. “Modeling of Nevada Sand Behavior Using CHSOIL,” in *Continuum and Distinct Element Modeling in Geomechanics — 2011 (Proceedings, 2nd International FLAC/DEM Symposium, Melbourne, February 2011)*, Paper No. 13-08, pp. 773-780. D. Sainsbury et al., Eds. Minneapolis: Itasca International Inc., 2011.

Hazzard, J., B. Damjanac, C. Detournay and L. Lorig. “Developing Rules of Thumb for Groundwater Modelling in Large Open Pit Mine Design,” in *2011 Pan-Am CGS Geotechnical Conference (Proceedings, Geo-Innovation Addressing Global Challenges, Toronto, Ontario, Canada, October 2011)*. Canada: Canadian Geotechnical Society. 2011.

Hazzard, J., B. Damjanac, L. Lorig and C. Detournay. “Guidelines for Groundwater Modelling in Large Open Pit Mine Design,” in *Slope Stability 2011 (Proceedings, Int. Symp. on Rock Slope in Open Pit Mining and Civil Engineering, Vancouver, September 2011)*, Paper No. 114. E. Eberhardt and D. Stead, Eds. Vancouver: Canada Rock Mechanics Association, 2011.

Sainsbury, D., R. Hart, C. Detournay and M. Nelson, Eds. *Continuum and Distinct Element Modeling in Geomechanics — 2011 (Proceedings, 2nd International FLAC/DEM Symposium, Melbourne, February 2011)*. Minneapolis: Itasca International Inc., 2011.

Detournay, C. “Impact of Rock Strength on Sand Production — Numerical and Semi-Analytical Investigations,” in *Proceedings, 9th HSTAM International Congress on Mechanics (Dedicated to the Memory of Professor Ioannis Vardoulakis, Limassol, Cyprus, July 2010)*, pp. 319-329. Limassol: University of Cyprus, 2010.

Connell, L. D., and C. Detournay. “Coupled Flow and Geomechanical Simulation of Gas Production from Coal Seams,” in *CD Proceedings, 2008 Asia Pacific Coalbed Methane Symposium (September 2008)*, Paper No. IL006. P. Massarotto et al., Eds. Brisbane, Australia: University of Queensland, Chem. Eng. & Earth Sci., 2008.

Cundall, P. A., and C. Detournay. “Modeling Shock and Detonation Waves with *FLAC*,” in *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (Proceedings, 1st International FLAC/DEM Symposium, Minneapolis, August 2008)*, Paper No.10-06. R. Hart et al., Eds. Minneapolis: Itasca Consulting Group, Inc., 2008.

Detournay, C. “Numerical Modeling of the Slit Mode of Cavity Evolution Associated with Sand Production,” in *CD Proceedings, SPE Annual Technical Conference & Exhibition (Denver, September 2008)*, Paper No. SPE 116168. Houston: SPE, 2008.

Detournay, C., and P. Cundall. “The Cysoil Model: A Simple Strain Hardening Constitutive Model for Soft Stiff Soils,” in *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (Proceedings, 1st International FLAC/DEM Symposium, Minneapolis, August 2008)*, Paper No. 06-07. R. Hart et al., Eds. Minneapolis: Itasca Consulting Group, Inc., 2008.

Detournay, C., and Y. Han. “Installation of a Triple Anchored Excavation Wall in Sand Using the Cysoil Model,” in *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (Proceedings, 1st International FLAC/DEM Symposium, Minneapolis, August 2008)*, Paper No. 11-02. R. Hart et al., Eds. Minneapolis: Itasca Consulting Group, Inc., 2008.

Detournay, C., and R. Hart. “Stability of a Slope in Unsaturated Conditions,” in *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (Proceedings, 1st International FLAC / DEM Symposium, Minneapolis, August 2008)*, Paper No. 03-03. R. Hart et al., Eds. Minneapolis: Itasca Consulting Group, Inc., 2008.

Hart, R., C. Detournay and P. Cundall, Eds. *Continuum and Distinct Element Numerical Modeling in Geo-Engineering (CD Proceedings, St International FLAC / DEM Symposium, Minneapolis, August 2008)*. Minneapolis: Itasca Consulting Group, Inc., 2008.

Detournay, C., and E. Dzik. “Nodal Mixed Discretization for Tetrahedral Elements,” in *Numerical Modeling in Geomechanics — 2006 (CD Proceedings, 4th International Symposium, Madrid, May 2006)*, Paper No. 07-02. R. Hart and P. Varona, Eds. Minneapolis, Minnesota: Itasca Consulting Group, Inc., 2006.

Detournay, C., and B. Wu. “Semi-Analytical Models for Predicting the Amount and Rate of Sand Production,” in *Multiphysics Coupling and Long Term Behaviour in Rock Mechanics (Proceedings, ISRM Eurock 2006, Liège, Belgium, May 2006)*, pp. 373-380. A. Van Cotthem et al., Eds. London: Taylor & Francis, 2006.

Detournay, C., C. Tan and B. Wu. “Modeling the Mechanism and Rate of Sand Production Using *FLAC*,” in *Numerical Modeling in Geomechanics — 2006 (CD Proceedings, 4th International Symposium, Madrid, May 2006)*, Paper No. 08-10. R. Hart and P. Varona, Eds. Minneapolis, Minnesota: Itasca Consulting Group, Inc., 2006.

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

Tan, C. P., C. Detournay and X. Chen. “Factors Governing Mud Infiltration and Impact on Wellbore Stability in Fractured Rock Mass,” in *CD Proceedings, Alaska Rocks 2005 — Rock Mechanics for Energy, Mineral and Infrastructure Development in the Northern Regions (University of Alaska-Anchorage, June 2005)*, Paper No. ARMA/USRMS 05-834. G. Chen et al., Eds. ARMA, University of Alaska-Fairbanks, 2005.

Hart, R. D., and C. Detournay. “Geotechnical Constitutive Models in an Explicit, Dynamic Solution Scheme,” in *Soil Constitutive Models: Evaluation, Selection and Calibration (Proceedings, Geo-Frontiers 2005, Austin, Texas, January 2005)*, ASCE Geotechnical Special Publication No. 128, pp. 185-203. J. A. Yamamuro and V. N. Kaliakin, Eds. Reston, Virginia: ASCE, 2005.

Detournay, C., B. Wu and C. Tan. “Hydro-Mechanical Modeling of Damage around Borehole in Laboratory Experiments,” in *Gulf Rocks 2004: Rock Mechanics Across Borders & Disciplines (Proceedings, 6th NARMS Conference, Houston, June 2004)*, Paper no. ARMA/NARMS 04-590. D. P. Yale et al., Eds. 2004.

Brummer, R., P. Andrieux, C. Detournay and R. Hart, Eds. *FLAC and Numerical Modeling in Geomechanics — 2003 (Proceedings, 3rd International FLAC Symposium, Sudbury, Ontario, Canada, October 2003)*. R. Brummer et al., Eds. Lisse: Balkema, 2003.

Chen, X., C. P. Tan and C. Detournay. “A Study on Wellbore Stability in Fractured Rock Masses with Impact of Mud Infiltration,” *J. Pet. Sci. & Eng.*, **38**, 145-154. 2003.

Detournay, C., P. Cundall and J. Parra. “A Study of Compaction Band Formation with the Double-Yield Model,” in *FLAC and Numerical Modeling in Geomechanics — 2003 (Proceedings, 3rd International FLAC Symposium, Sudbury, Ontario, Canada, October 2003)*, pp. 27-33. R. Brummer et al., Eds. Lisse: Balkema, 2003.

Detournay, C., C. Tan and X. Chen. “Modeling of Factors Influencing the Extent of Mud Infiltration in a Fractured Rock Mass,” in *Technology Roadmap for Rock Mechanics (Proceedings, 10th Congress of the ISRM, Johannesburg, September 2003)*, Vol. 1, pp. 231-236. Johannesburg: SAIMM, 2003.

Pathak, Y., M. Alfaro and C. Detournay. “Wetting-Induced Deformation of Geosynthetic Reinforced Slopes with Expansive Soils,” in *CD Proceedings, 2003 North American Geosynthetics Society and 56th Canadian Geotechnical Conference (Winnipeg, 2003)*, Specialty Geosynthetics Sessions. 2003.

Chen, X., C. P. Tan and C. Detournay. “The Impact of Mud Infiltration on Wellbore Stability in Fractured Rock Masses,” in *Proceedings, SPE / ISRM Rock Mechanics Conference (Irvine, Texas, October 2002)*, Paper No. SPE/ISRM 78241.

Billiaux, D., X. Rachez, C. Detournay and R. Hart, Eds. *FLAC and Numerical Modeling in Geomechanics — 2001 (Proceedings, 2nd International FLAC Conference, Lyon, France, October 2001)*. Lisse: Balkema, 2001.

Detournay, C. and P. A. Cundall. “Numerical Modeling of Unsaturated Flow in Porous Media Using *FLAC*,” in *FLAC and Numerical Modeling in Geomechanics — 2001 (Proceedings, 2nd International FLAC Conference, Lyon, France, October 2001)*, pp. 115-124. D. Billiaux et al., Eds. Lisse: Balkema, 2001.

Chen, X., C. P. Tan and C. Detournay. "Wellbore Behaviour in Fractured Rock Masses," in *Rock Mechanics in the National Interest (Proceedings, 38th U.S. Rock Mechanics Symposium, Washington, D.C., July 2001)*, Vol. 1, pp. 59-66. Lisse: Balkema, 2001.

Savitski, A. A., E. Detournay and C. Detournay-Piette. "Stress Induced by Production from a Fractured Well in a Horizontal Reservoir Bounded by Impermeable Layers," in *Pacific Rocks 2000: Rock Around the Rim (Proceedings, 4th North American Rock Mechanics Symposium, Seattle, July-August 2000)*, pp. 161-168. J. Girard et al., Eds. Rotterdam: Balkema 2000.

Berchenko, I., C. Detournay and E. Detournay. "Solution of Thermoplastic Problems Using FLAC," in *FLAC and Numerical Modeling in Geomechanics (Proceedings, Conference, Minneapolis, September 1999)*, pp. 133-140. C. Detournay and R. Hart, Eds. Rotterdam: Balkema, 1999.

Detournay, C., and P. A. Cundall. "Numerical Modeling of Free Surface Flow in Porous Media Using FLAC3D," in *FLAC and Numerical Modeling in Geomechanics (Proceedings, Conference, Minneapolis, September 1999)*, pp. 155-161. C. Detournay and R. Hart, Eds. Rotterdam: Balkema, 1999.

Detournay, C., and R. Hart, Eds. *FLAC and Numerical Modeling in Geomechanics (Proceedings, Conference, Minneapolis, September 1999)*. Rotterdam: Balkema, 1999. Noorany, I., S. Frydman and C. Detournay. "Prediction of Soil Slope Deformation Due to Wetting," in *FLAC and Numerical Modeling in Geomechanics (Proceedings, Conference, Minneapolis, September 1999)*, pp. 101-107. C. Detournay and R. Hart, Eds. Rotterdam: Balkema, 1999.

Siebrits, E., J. L. Elbel, E. Detournay, C. Detournay-Piette and M. Christianson. "Parameters Affecting Azimuth and Length of a Secondary Fracture During a Refracture Treatment," in *Proceedings, 1998 SPE Annual Technical Conference & Exhibition (New Orleans, September 1998)*, Paper No. SPE 48928. Dallas: SPE, 1998.

Cheng, A., Y. Abousleiman, C. Detournay and J. C. Roegiers. "Source Solution for a Generalized Dual Porosity Model," in *Structure et Comportement Mécanique des Géomatériaux (Colloque René Houfert, Nancy, September 1992)* pp. 109-116.

Detournay, C. "A Cauchy Integral Element for Boundary Singularities," in *Boundary Element Technology VII*, pp. 801-813. C. A. Brebbia and M. S. Ingber, Eds. Boston: Computational Mechanics Publications, 1992.

Detournay, C. "A Cauchy Integral Element for Power-type Singularities," *Appl. Math. Modelling*, **16**, 450-463. 1992.

Detournay, C. "On a Cauchy Integral Element Method for Potential Flow with Corner Singularities," in *Computational Engineering with Boundary Elements (Proceedings, Fifth International Conference on Boundary Element Technology, University of Delaware, July 1990)*, Vol. 1: Fluid and Potential Problems, pp. 119-130. S. Grilli et al., Eds. Boston: Computational Mechanics Publications, 1990.

Detournay, C., and O.D.L. Strack. "A New Approximate Technique for the Hodograph Method in Groundwater Flow and its Application to Coastal Aquifers," *Water Resour. Res.*, **24**(9), 1471-1481. 1988.

Detournay, C. "A Boundary Element Technique for Conformal Mapping," in *Boundary Elements X*, Vol. 2, Heat Transfer, Fluid Flow and Electrical Applications, pp. 143-154. Boston: Computational Mechanics Publications, 1988.

Piette (Detournay), C., and S. Cescotto. “Application des éléments finis à la détermination de la surface piézométrique d’une nappe d’eau souterraine,” *Journée d’études sur la méthode des éléments finis appliquée à la géotechnique*, *1*, 179-192. 1983.