

## Publications and talks

- 2021 Wahanik, H., Moallemi, S., Curran, J., Yacoub, T., Corkum, B. (2021) The Fast Multipole Method for the computation of large-scale three dimensional elastostatics boundary-element problems in underground excavations. *Rocscience International Conference*, Toronto, Ontario. (Taylor and Francis publication), April 2021.
- 2018 Wahanik, H. (2018), Machine Theory of Mind Lecture *Toronto Deep Learning Series*, Toronto, April 2018
- 2018 Wahanik, H., Goteti, R., Zaretskiy, Y., Agar, S., Sousa, MC., Silva, JD. (2018) Semi-automated workflow in rapid meshing of sketch-based geological prototypes for physics-based simulation of geological processes, *Research Report*, Aramco Research, Houston, Texas, March 2018
- 2015 Ferreira, F., Wahanik, H., et al. (2015) Multi-Gaussian Pore-throat Decomposition and a New Universal J-Function for Rock Characterization of Complex Carbonate Reservoirs. Offshore Technology Conference, OTC 26112-MS, Oct. 2015
- 2015 Ferreira, F., Wahanik, H., et al., (2015) New Rock-Typing Index Based on Hydraulic and Electric Tortuosity Data for Multiscale Dynamic Characterization of Complex Carbonate Reservoirs, SPE ACTE-Houston, SPE 175014-MS, Sept. 2015
- 2015 Wahanik, H., Vasconcelos, I., Galetti, E., Curtis, A. (2015) Transdimensional Tomography, *Research Report*, Schlumberger Gould Research, Cambridge-UK
- 2014 Wahanik, H., Vasconcelos, I. (2014) Transdimensional Seismic Tomography, *Invited talk*, December 2014, Schlumberger Gould Research, University of Cambridge, Cambridge-UK
- 2013 Wahanik, H., Suarez, J. (2013) Reliability analysis in the presence of outliers for deepwater completions installations, *Schlumberger Symposium*, Rio de Janeiro-Brazil
- 2012 Wahanik, H., Booth, R., Canesin, F., Quintana, M. (2012) High performance computing at Schlumberger Research, *HPC Workshop* Schlumberger Moscow Research, Moscow-Russia
- 2012 Wahanik, H., Booth, R., Morton, K., Borovskaya, I. (2012) A beautiful mind for tendering, *Schlumberger Symposium*, Rio de Janeiro-Brazil
- 2011 Wahanik, H., Castañeda, Bruining, J., Marchesin, D. (2011) Buoyancy driven migration of supercritical CO<sub>2</sub> in aquifers, *1<sup>st</sup> Brazilian Conference in CO<sub>2</sub>*, Rio de Janeiro-Brazil
- 2011 Wahanik, H. (2011) Thermal effects in the injection of CO<sub>2</sub> in deep underground aquifers, *PhD thesis*, IMPA, Rio de Janeiro-Brazil
- 2011 Eftekhari, A.A., Bruining, J., Wahanik, H., Marchesin, D. (2011) CO<sub>2</sub> injection in sub-salt water layers at 7000 m depth. *SPE Reservoir Simulation Symposium*, Texas, SPE 142191
- 2010 Wahanik, H., Eftekhari, A.A., Marchesin, D., Bruining, J. (2010) Analytical Solutions for mixed CO<sub>2</sub>-water injection in geothermal reservoirs, *Canadian Unconventionals Resources Conference*, SPE 138154, Calgary-Canada
- 2010 Wahanik, H., Marchesin, D. (2010) Riemann problems for conservation laws applied to CO<sub>2</sub> sequestration, *SIAM Conference in Dynamical Systems and PDEs*, Barcelona-Spain
- 2009 Wahanik, H., Marchesin, D., Bruining, J. (2009) Riemann solutions for injection of supercritical CO<sub>2</sub> in porous media, *SIAM Conf. Math. and Comp. Geosciences*, Leipzig-Germany

Wahanik, H., Eftekhari, A.A. (2009) The Riemann solution for the injection of supercritical CO<sub>2</sub> and steam in porous media. *Internacional Conference on Nonlinearities and Upscaling in Porous Media*, Stuttgart-Germany

2009 Wahanik, H. (2009) The Riemann solution for the injection of supercritical CO<sub>2</sub> and steam in porous media. *Invited talk, Seminar series*, TUDelft, Delft-The Netherlands

2007 Wahanik, H., Barba, L. (2007) Spectral methods for the vortex tripole, *Research report Scientific Computing Advanced Training*, U. of Bristol-UK