

Personal Bio

Vital Stats

Full Name: Yanhui Han

Affiliation: Aramco Services Company

Position: Petroleum Engineer (Geomechanics)



Biography

Yanhui Han is a staff petroleum engineer at Houston Research Center of Saudi Aramco. His research interests are petroleum geomechanics related R&D and applications, such as geomechanics in drilling and wellbore stability, new stimulation technology, micro- and nano-indentation of shales. His previous positions include production technologist at Shell for two years, principal technical professional at Halliburton for one year, and FLAC developer and geomechanics consultant at Itasca Consulting Group for ten years. At Shell, he was primarily working on wellbore stability in deep-water drilling with bedding planes considered, sand screen integrity analysis for completion design in unconsolidated sandstones, and water injection in depleted deep-water sandstone reservoirs. At Halliburton, he applied both continuum mechanics and discrete element method (DEM) methods to study fundamental geomechanics problems encountered in oil/gas E&P, such as wellbore stability in shale while drilling, interaction between hydraulic fracturing and natural fractures, digital rock technology. At Itasca, he worked on both geomechanics consulting services and software development. He obtained extensive experiences in fluid-mechanical coupling, dynamic analysis and nonlinear elastic-plastic constitutive model development. The consulting projects that he had been involved spanned multiple disciplines including civil, petroleum, hydropower and mining engineering. He also served as the product manager and a principal developer for FLAC version 5.0, 6.0 and 7.0. He holds a PhD degree in geomechanics from the University of Minnesota and professional engineer (PE) license. Dr. Han has 40+ technical publications.

Education

PhD in Geomechanics, University of Minnesota

MS in Civil Engineering (PoroMechanics), University of Oklahoma

MS in Computer Science, University of Oklahoma

Awards and Major Publications

Han, Y., J. Hampton, G. Li, N.R. Warpinski and M.J. Mayerhofer (2015). Investigation of Hydromechanical Mechanisms in Microseismicity Generation in Natural Fractures Induced by Hydraulic Fracturing. SPE Journal (Preprint).

Han, Y., and P. A. Cundall (2013). LBM-DEM Modeling of Fluid-solid Interaction in Porous Media. Int. J. Numer. Anal. Meth. Geomech. 67(10): 1391-1407.

Awards:

Dr. N.G.W. Cook Award, American Rock Mechanics Association (2013)