

Yongsheng Zhu

Geotechnical Engineering

Expertise Numerical Modeling, Underground Engineering

Education M.Sc. (Bridge and Tunnel Engineering), 2006
Southwest Jiaotong University, Chengdu, China
B.Sc. (Civil Engineering), 2003
Southwest Jiaotong University, Chengdu, China

Professional Experience

2014 – Present *Itasca Consulting China Ltd., Wuhan City, China*
Geomechanics Engineer/Technical Support

2013 – 2014 *South-Central University for Nationalities, Wuhan City, China*
Civil Engineer

2012 – 2013 *HydroChina—Itasca R&D Center, Hangzhou City, China*
Geomechanics Engineer

2006 – 2012 *Itasca Consulting China Ltd., Wuhan City, China*
Geomechanics Engineer/Technical Support

2006 – 2006 *The Yellow River Investigation and Design Co. Ltd., Zhengzhou, China*
Tunneling Engineer

Project Experience

The Jinping II Tunneling Project: The Jinping II project consists of a total of seven tunnels, with a length of 16.7 kilometers each, drilled through the base of Jinping Mountain. The mountainous topography creates a maximum depth of 2,525 meters for the tunnels, which have opening sizes up to 13.6 meters in diameter. Several problems have been encountered while drilling these deeply seated tunnels, including ground squeezing, fracturing and fracture propagation, and particularly severe rock bursts. A technical team has been assembled to understand and provide practical solutions to all of these problems. Mr. Zhu has been involved in this team as a simulation engineer charged with duplicating the complex mechanical behavior of the rock mass including both short-term and long-term considerations.

The Baihetan Caverns: Baihetan is currently the third largest hydropower station in the world in terms of power-generation capacity. The cavern is considered one of the most challenging underground facilities due to its large scale and the geological complexity of its basalt flow formation. Mr. Zhu has been involved in this project for many study subjects, such as the stability of the cavern and an assessment of support design.

Slope Projects: These projects involve natural and manmade-cut slopes, mostly in the Gorges valley area.