



Gensheng Li, PhD

SENIOR AFFILIATE SCIENTIST

Dr. Gensheng Li is a Professor in the College of Petroleum Engineering at China University of Petroleum (Beijing) and the director of the Collaborative Innovation Center of Unconventional Oil & Gas Resources. He is Chief Scientist for the National 973 Plan, a national research program to advance technology and China's strategic edge in various scientific fields, and the beneficiary of the Government Particular Subsidy for scientist of great contribution to the national scientific development. Dr. Li is the recipient of numerous national awards in recognition of his outstanding contributions to Chinese science and technology as well as his service as an educator.

Dr. Li's work has focused on the fundamental research and application of Water Jet Technology in Drilling and Well Completion for over 30 years. His major contributions are as follows:

- Considering the complex drilling environment in deep reservoirs, conducted systematical and fundamental research on Self-Resonating Cavitating Jet theory and technology, invented new high efficient Self-Resonating Cavitating Jet Nozzle and Hydraulic Pulsed Cavitating Jet Drilling Bit, which contributed greatly in improving the rate of penetration in drilling.
- Proposed and proved Self-Resonating Cavitating Jet Stimulation method and invented Sands and Plugs Removal Technology with rotating jets, representing a significant technical breakthrough in near wellbore damage remediation using physical methods.
- Invented Multistage Abrasive Waterjet Perforation and Fracturing Technology based on the fundamental study of abrasive water-jet perforation and fracturing mechanisms and owns its intellectual property in China. This technology has been successfully applied in addressing the challenges of single trip multistage fracturing in horizontal wells. It is a critical technology in lowering the cost of developing unconventional shale reservoirs.

Dr. Li has applied for 15 patents (eight approved, seven pending), and has authored/co-authored four monographs and textbooks related to drilling and completions and 150+ peer-reviewed papers. From the beginning of Dr. Li's academic life, he has mentored over 20 Ph.D. students and 50 Masters students, of which one Ph.D. student obtained the National Outstanding Dissertation Award of China.

Dr. Li received a Bachelor degree in Petroleum Engineering from China University of Petroleum (East China) in 1983 and an M.Sc. and Ph.D. in Petroleum Engineering from China University of Petroleum (Beijing) in 1986 and 1998, respectively. He was a senior visiting scholar at Tohoku University, Japan in 1991 and the University of Oklahoma in 2012.

Research Interests

- Water Jet Assisted Drilling within HPHT Wells Abrasive
- Jet Perforation and Multistage Fracturing
- Unconventional Oil & Gas Well Drilling & Completion
- Supercritical CO₂ in Drilling & Completion

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