



## Manas Pathak, PhD

### AFFILIATE SCIENTIST

**Email**  
mpathak@egi.utah.edu

**Phone**  
801-300-7420

#### Research Interests

- Effect of the presence of kerogen and confinement on PVT properties of liquids in shales
- Thermodynamic modeling of fractionation of oil through kerogen-absorbed and free oil
- Enhanced recovery through CO<sub>2</sub> sequestration in shales
- Reservoir characterization and simulations
- Basin and petroleum systems modeling
- Big data and data-driven modeling

**EMAIL:**  
[ContactEGI@egi.utah.edu](mailto:ContactEGI@egi.utah.edu)

**PHONE:** (801) 585-3826

Manas Pathak spent three years as a Graduate Research Assistant and EGI Fellowship recipient working closely with EGI Affiliate Scientist and Professor and Chair of the Department of Chemical Engineering at the University of Utah, Dr. Milind Deo, before beginning a career at Hewlett Packard in California in 2017. At EGI Manas examined the interaction between kerogen and formation fluids and its importance in predicting the Pressure-Volume-Temperature properties of oils. His research established the presence of two phases of oil in shales, absorbed and free oil. His thermodynamic models predicted the retention of oil in the matured kerogen within the shales. He also investigated enhanced recovery through CO<sub>2</sub> sequestration in shales. His regional and basin expertise includes major US shale play basins, onshore Netherlands and the North Sea, and onshore and offshore Myanmar.

Manas received the prestigious STAR scholarship from the Society of Petroleum Engineers and the INSPIRE Scholarship awarded by the government of India. He received his Master of Science and Technology (Applied Geology) in 2013 from the Indian School of Mines and completed a Ph.D. in Chemical Engineering at the University of Utah. Manas has delivered several well accepted talks in different conferences hosted by SPE, AAPG, SEG and EAGE. He has served as vice president for the student chapter of SPE and president for student chapter of A&WMA at the University of Utah. He is member of Society of Petroleum Engineers, American Association of Petroleum Geologist, European Association of Geoscientists and Engineers.

#### Selected Publications

- Pathak M., Panja P., Huang H., Deo M.D., Enhanced Recovery in Shales: Molecular investigation of CO<sub>2</sub> energized fluid for re-fracturing shale formation in URTeC 2016
- Panja P., Pathak M., Guachalla R.V., Deo M.D., Least Square Support Vector Machine: An Emerging Tool for Data Analysis in SPE Low Permeability Symposium, 2016
- Pathak, M., Pawar, G., Huang, H., & Deo, M. D. Carbon Dioxide Sequestration and Hydrocarbons Recovery in the Gas Rich Shales: An Insight from the Molecular Dynamics Simulations. Carbon Management Technology Conference. (2015, November 17), Woodlands TX. doi:10.7122/439481-MS
- Pathak, M., Deo, M. D., Panja, P., & Levey, R. A., The Effect of Kerogen-Hydrocarbons Interaction on the PVT Properties in Liquid Rich Shale Plays. Society of Petroleum Engineers Unconventional Resources Conference, Calgary, Canada (2015, October 20), doi:10.2118/175905-MS
- Pathak M., Deo M., Levey R., Examination of the Generation of Overpressure in Eagle Ford. 65th Annual Convention Gulf Coast Association of Geological Societies, September 20-22, 2015, Houston, USA