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Modelings and Analysis of Hydraulic Fracturing in Reservoirs

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Message from the Guest Editors

Dear Colleagues,

Economic production from unconventional petroleum and geothermal reservoirs relies on creating a stimulated volume or a fracture network by hydraulic stimulation using optimum amounts of water, chemical additives, and proppants, while minimizing the risk of felt seismicity. Hydraulic fracturing results are often poorly predictable, because of the multi-scale, multi-physics processes that operate in the target rock mass with complex textures and variable in-situ stress conditions. Much effort has been spent in the last decade to improve the understanding and design of stimulation treatments. This Special Issue will draw upon recent advances to characterize the state-of-the-art and to help chart a course for future research activities. Works pertaining to numerical and experimental developments related to geomechanics of multiple fracturing in reservoirs with natural fractures, the impact of coupled processes, the role of heterogeneous and anisotropic rock fabric, dynamics of complex fracture networks, frac hits, proppant transport, and settling are of particular interest for this Special Issue.

Prof. Ahmad Ghassemi
Dr. Dharmendra Kumar
Guest Editors



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Special Issue



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Message from the Editor-in-Chief

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