

Energy for the Future Seminar Series presents: Big Solutions to Small Problems

Thursday, Dec. 12, 2019

4 - 5:00 p.m. | 401 Steidle Building



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Abstract: Recovery factors of unconventional reservoirs are prohibitively low. If not for the high initial rates and accelerated early production, development of these reservoirs would not be feasible with the current recovery factors. This has led to the current practice of continuously bringing new reservoirs into production by expanding drilling and fracturing activity. Eventual scarcity of resources and impending economic, social, and environmental, challenges, however, impose the need to improve longer-term recoveries with IOR/EOR. The current IOR/EOR proposals mostly depend on perceptions that extrapolate primary recovery dynamics into the future. However, the remaining fluid in the reservoir is usually retained in nanopore systems where different flow mechanisms are dominant. In these cases, explaining the retention mechanisms and screening IOR/EOR methods based on the dominance of bulk fluid flow described by Darcian/Fickian transport narrows our options to improve recovery factors. Current industry trend is to solve a nanoscale problem with a sledgehammer. No real success should be expected if the solution is not developed at the scale of the problem.

About: Ozkan is a professor of Petroleum Engineering at the Colorado School of Mines. He is the Director of the Unconventional Reservoir Engineering Project (UREP) and the Co-Director of the Marathon Center of Excellence for Reservoir Studies (MCERS). He holds BS and MS degrees from Istanbul Technical University and a Ph.D. degree from the University of Tulsa. His research interests are reservoir engineering, modeling fluid flow in porous media, pressure-transient analysis, and unconventional reservoirs. He is a Distinguished Member of the Society of Petroleum Engineers (SPE) and currently serves as the Reservoir Technical Director on the SPE International Board of Directors. He received the SPE Lester C. Uren award (2013), Formation Evaluation award (2007), and The Rocky Mountain North America Reservoir Description and Dynamics award (2018).