

Keynote 7

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Keynote Title

Deep Energy Geomechanics:
Extraction, Storage, Disposal



Maurice carries out research in coupled problems in geomechanics including thermal and non-thermal oil production, wellbore integrity, deep disposal technologies for solid and liquid wastes, hydraulic fracture mechanics, CO₂ sequestration in saline aquifers, shale gas and shale oil mechanics, and compressed air energy storage in salt caverns. He holds over 80 international patents on several different subjects and has co-authored two textbooks with John Franklin (former ISRM President, deceased 2012) as well as 525 full text conference and journal articles.

He has started five different companies over the years in various geomechanics domains. Maurice works with governments and industry as an advisor and professional instructor in petroleum geomechanics. He was a Society of Petroleum Engineers Distinguished Lecturer in 2002-2003, visiting 19 countries and 28 separate SPE sections, speaking on New Oil Production Technologies. He teaches a number of professional short courses in subjects such as production approaches, petroleum geomechanics, waste disposal, and sand control, presented in over 21 different countries in the last 15 years.

Current projects are focused in these areas: 1) Hydraulic fracturing of naturally fractured rock masses in differential stress states; 2) Work, energy and stress-strain responses of deep stressed rock masses (reservoirs, mines, geothermal reservoirs); 3) Rock-cement-casing interaction and gas seepage along oil and gas wells; 4) THM coupling in naturally fractured rock masses; 5) Monitoring deformation in rock masses using surface and subsurface methods; 6) Storage of energy from stochastic renewable sources as compressed air in dissolved salt caverns.