



## WEB SEMINAR ENERGY

### RUBEN JUANES

*Associate Professor, Massachusetts Institute of Technology*

Ruben Juanes received his PhD in Civil and Environmental Engineering from University of California at Berkeley in 2003. After his doctorate he spent two years at Stanford followed by a year and a half at the University of Texas. He joined the Massachusetts Institute of Technology (MIT) faculty of the Department of Civil and Environmental Engineering in 2006 where he is an Associate Professor .

Juanes research focuses on advancing the fundamental understanding and predictive capabilities of the simultaneous flow of two or more fluids through rocks, soils and other porous materials. The research combines theory, simulation and experiments that elucidate fundamental aspects of multi-fluid flow. The results are then applied for prediction of large-scale Earth science problems in the areas of energy and the environment.

His research interest lies in the areas of *Methane* (Methane hydrates in nature; methane venting from freshwater sediments), *CO<sub>2</sub>* (Geological carbon sequestration; capillary and solubility trapping), *Oil* (Enhanced oil recovery; flow instabilities; mixing; flow through fractured media), *Water* (Water infiltration; gravity fingering; eco-hydrology of arid environment).