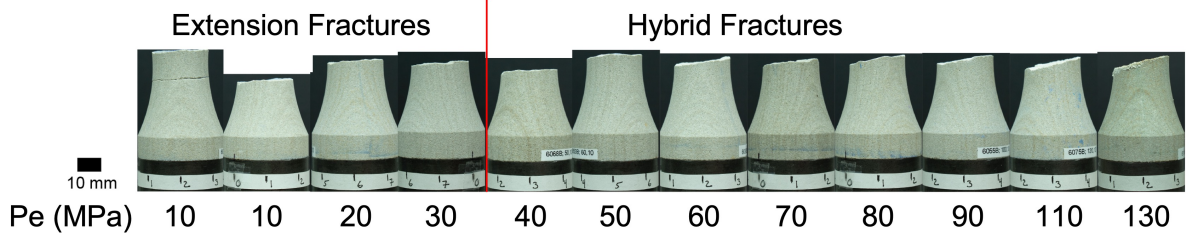


VENERDÌ 10 MARZO 2023  
AULA LUCCHESI ORE 11:00  
SEMINARIO

HIROKO KITAJIMA

# TRIAXIAL EXTENSION DEFORMATION TESTS ON BEREA SANDSTONE EFFECTS OF PORE FLUID PRESSURE ON EXTENSION AND EXTENSION-SHEAR MIX-MODE FRACTURES



Elevated pore fluid pressure is observed in natural systems such as subduction zones but is also induced by human activities such as fracking. It not only reduces the rock strength (both sliding friction and fracturing) because of a reduction in effective normal stress but also changes the modes of fractures. Fractures generated at such low normal stress conditions can be extension-mode (purely mode I) fractures or extension-shear mix-mode (mode I and mode II or III) fractures. In this talk, I present the results of triaxial extension experiments on Berea sandstone under pore fluid pressure-controlled conditions to document the effects of pore fluid on extension and extension-shear mix-mode fractures.

