

Institute of Fluid Science, Tohoku University
Innovative Energy Research Center Energy Resources Geomechanics Lab
(Graduate School of Environmental Studies, Extraction of Crustal Energy lab.)

## lto • Mukuhira Lab. Institute of Fluid Science,

伊藤・椋平 研究室

Institute of Fluid Science,

2<sup>nd</sup> Building 3F 301-1, Katahira Campus

Lab. HP URL http://www.ifs.tohoku.ac.jp/geo/



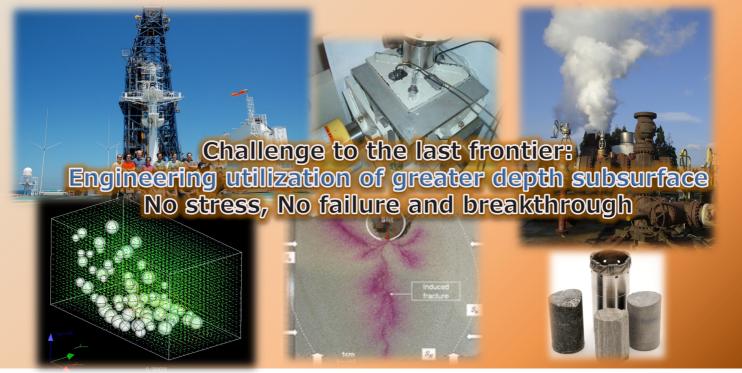
## Development of Zero Emission Energy & Technology by "Geomechanics = Geo(地球) + Mechanics(力学)"

We develop the technology to highly utilize the subsurface environment (temperature, stress, closedness) to solve many challenges related to energy and to realize a sustainable society.

- 1) CO2 geological storage
- 2) Methane hydrate from dep sea floor
- 3) Unconventional resources Shale gas/oil
- 4) Easy and reliable *in-situ* stress measurement
- 5) Super critical geothermal resource development

#Keywords
CCS, Methane hydrate, shale gas/oil, in-situ stress, geothermal,
geomechanics, resource engineering.
Geophysics, energy, rock mechanics,
material transport, lab. experiment,
simulation, analysis, nature, camp,
beer. international

Lab. HP access here!





## Design of Structure and Flow in the Earth Lab

Ito Suzuki Lab

For designing of sustainable energy systems, we study "structure" created by nature and its "flow" by analyzing their measurement data.



3D printing rocks Microfluidics Machine learning Topology





