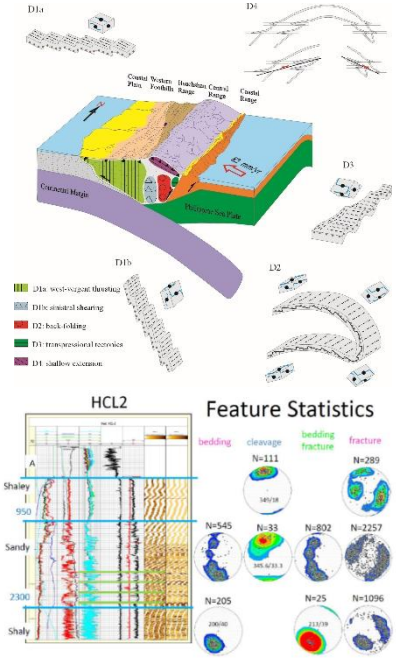
Department of Earth Sciences

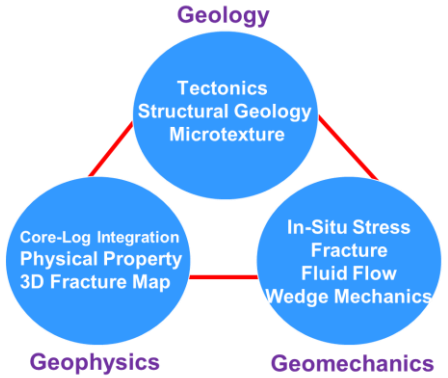
Structural Geology & Geomechanics

Lab research mainly aims to analyze aspects of geological structures and to explore their construction relationship between stress and strain. Based on observations of geological structures from different structural levels on multiple scales, we examine and evaluate their characteristics of geometric features, kinematics and dynamics to understand the origin and the role in the context of orogenic evolution, and apply concepts and results to the stress assessment, strain analysis, fracture reactivation examination, and relevant technique development of underground resources and deep-seated waste disposals.

Techniques used in study

Strain Evaluation, Microfabric Examination, In-Situ Stress Assessment, Fracture Characterization, Fault Reactivation Analysis,





Our research achievements in characterization of Taiwan mountain building processes and geothermal exploration

En-Chao Yeh, Associate Professor
Department of Earth Sciences,
Structural Geomechanics Laboratory
ecyeh@ntnu,edu.tw

Background:

Ph.D. in Department of Geosciences, Pennsylvania State University, U.S.A.

Funding:

Ministry of Science and Technology
National Taiwan Normal University

Publications

- Chou, Y.-M., C. Aubourg, **E.-C. Yeh**, S.-R. Song, Y.-K. Lin, F. Humbert, X. Jiang, and T.-Q. Lee, (2020) The Magnetic Fabric of Gouge Mimics the Co-seismic Focal Mechanism of the Chi-Chi Earthquake (1999, Mw 7.6). *Geophysical Research Letters*, Accepted manuscript online by 22 October 2020, DOI: 10.1029/2020GL090111.
- Lu, Y.-C., S.-R. Song, S. Taguchi, P.-L. Wang, **E.-C. Yeh**, Y.-J. Lin, J. MacDonald, and C.M. John, (2018) Evolution of hot fluids in the Chingshui geothermal field inferred from crystal morphology and geochemical vein data. *Geothermics*, 74, 305-318.
- Mondro, C.A., D. Fisher, and **E.-C. Yeh**, (2017) Strain histories from the eastern Central Range of Taiwan: A record of advection through a collisional orogen. *Tectonophysics*, 705, 1-11.