

Characterizing the Chaochou Fault in Southern Taiwan using surface morphometry, field, and petrofabric analysis

Lauren E. Hassler

Texas A&M University, Department of Geology and Geophysics

College Station, Texas

LaurenHassler@neo.tamu.edu

The Chaochou Fault (CCF) is both an important lithologic boundary and a significant surface feature in the Taiwan orogenic belt. Although the fault is known to be a high angle, oblique, sinistral thrust fault, both its kinematic history and its current role in the development of the orogen is poorly understood. Recent geodetic data indicate that the obliquity of current motion changes along strike. Preliminary field data suggest that structural orientations also vary along strike. The goal of this study is to determine the kinematics of the CCF in Southern Taiwan by integrating structural and petrographic data and landscape morphology with available GPS data. Understanding the development of this fault system will contribute to our understanding of the development of the Taiwan mountain belt, as well as processes associated with oblique collision, strain partitioning, and slab break-off.