Seismogenic Faulting in Northeastern Asia

with Special Reference to the January 1, 2024, Noto Peninsula Earthquake Sequence

Professor Wang-Ping CHEN (陳望平教授)

China University of Geosciences (Wuhan) &
University of Illinois, Urbana-Champaign

26 Jan 2024

11:30 a.m.

Conference Room, 3/F, Mong Man Wai Building

Zoom Link (Mixed-mode)

ID: 992 4969 9833 Passcode: 983837

The recent, damaging earthquake sequence of January 1, 2024 near the Noto peninsular of western Honshu, Japan, is another reminder of high seismic hazard throughout northeastern Asia. Here I use a combination of 60 years of seismicity, over 45 years of fault plane solutions of moderate-sized to large earthquakes, and recent databases of high-resolution topography to delineate spatial patterns of seismogenic faulting of northeastern Asia in its entirety.

In addition to the risk posed by continual earthquakes along the East Japan Sea fold-and-thrust belt, regions of particular concern include: 1) The east coast of South Korea where recent, moderate earthquakes ruptured small sections of an active fault system that has a set of sharp fault scarps extending southward near the metropolitan area of Busan; and 2) the North China basin where intense historical seismicity contrasts with quiescence that persisted since 1976. Overall, only the oceanic Japan Sea and the Amorian continental block exhibit little internal deformation, but the northern boundary of the latter is also diffuse.

EARTH AND ENVIRONMENTAL SCIENCES PROGRAMME

Enquires: 3943 5494 eesc@cuhk.edu.hk