

Estimation of local seismic activity by deterministic hazard assessment. A case study in north-eastern of Azerbaijan

Wednesday 26 June 2019 11:30 (15 minutes)

Site-specific deterministic hazard assessment at respective locations of the north-eastern of Azerbaijan that provides estimates of amplification factor on local soil conditions was carried out. Topics of interest include moment magnitude, seismic energy, b-value, simulated earthquake scenario-based Peak Ground Acceleration (PGA), site effects, the rock site characterization and intensity. This is a large scale seismicity analysis for seismic source zone clarification and estimation of maximum earthquake magnitude. The earthquake catalogue from Republican Center of Seismological Survey (RCSS) at Azerbaijan National Academy of Sciences (ANAS) was used. Intensity distribution classifies the region into the highest hazard level with intensity value of 7 and over in the west part and also in the east of the area. The b-value result shows that the decrease is observed in the western part of the region and on some areas of the northern part which is an indication of higher stress in those areas. The very high PGA is scattered also in the western and eastern parts. It may have significant impact on engineering design, especially for critical facilities on those areas. Independently from the epicenter of scenario earthquakes, the low and very low PGA is scattered in the central part of the study area.

Primary author: BABAYEV, Gulam (Institute of Geology and Geophysics, Azerbaijan National Academy of Sciences)

Presenter: BABAYEV, Gulam (Institute of Geology and Geophysics, Azerbaijan National Academy of Sciences)

Session Classification: T1.2 Solid Earth Structure

Track Classification: Theme 1. The Earth as a Complex System