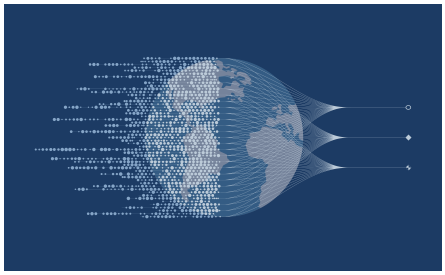

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-Temporal Distribution of b-Value in Albania and its Surroundings Over the Last Decade

Albania, situated on the Adriatic microplate boundary, experiences high seismicity. The Gutenberg-Richter relationship, characterized by the a and b values, is crucial for understanding seismicity and forms the foundation for seismic hazard assessment. Using ZMAP7, we analysed seismicity in Albania (18.5–21.5° longitude, 38.0–43.0° latitude) from 2015 to 2024. The declustered seismic catalog, processed with the Gardner-Knopoff method, allowed for the calculation and spatial visualization of a and b values. Regions with significant b-value variations, indicating seismicity changes, were identified. Temporal analysis further revealed b-value fluctuations before and after significant earthquakes (M > 5.5). Consistent with global observations, low b-values were detected prior to large earthquakes, highlighting their potential as a forecasting indicator for major seismic events.

E-mail

k.qoshi@geo.edu.al

In-person or online preference

Primary author: QOSHI, Klajdi (Institute of GeoSciences, Polytechnic University of Tirana.)

Co-authors: Prof. DUSHI, Edmond (Institute of GeoSciences, Polytechnic University of Tirana.); KOXHAJ, Damiano (Institute of GeoSciences, Polytechnic University of Tirana.); MATRAKU, Kristina (Institute of GeoSciences, Polytechnic University of Tirana.)

Presenter: QOSHI, Klajdi (Institute of GeoSciences, Polytechnic University of Tirana.)

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