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Geological and geophysical methods for monitoring of heritage structures

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Using the analysis of geological and geophysical survey of the soil conditions of the site where the architectural landmarks of Kyiv are concentrated the research proposes to develop an optimal set of geological and geophysical studies aimed at monitoring and evaluating the impact of underflooding, risk of landslide and increase of seismic magnitude on the upper portion of geological cross-section. The research offers suggestions concerning the establishment of a monitoring system for the principal sites where the architectural heritage is located.
As the earthquake origins are not scattered randomly but located within the relatively narrow zones of active faults, that is, the places most exposed to rapid geodynamic shifts, active faults and blocks they form are one of the main signs for identifying potential seismogenic areas.
From the point of view of the present geodynamic instability the morphostructural neotectonic points characterized by the high degree of tectonic fragmentation, including within the upper portion of the sedimentary cover, the high values of relief energy and activation of exogenous processes deserve special attention.
The research develops the comparison of areas with increased seismic impacts
allocated according to geophysical data with neotectonic structural plan, allows to conclude about their suitability for morphostructural neotectonic points and some sections of active faults exactly that is important to consider when constructing new buildings and protecting the existing ones.