Geophysical Research Abstracts
Vol. 16, EGU2014-4855, 2014
EGU General Assembly 2014


# 1. The geophysical approaches to ground condition assessment in densely populated areas

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The fact that more and more people are living in large cities located close to regions of known seismic hazard, urges the need to accurately examine the extent of risk associated with such location.
Considerable share of damages caused by destructive earthquakes worldwide is related to the amplification of seismic waves in the near-surface layers of the Earth crust, which is determined by local soil conditions. Recognizing the above, we conclude that from the standpoint of seismic hazard assessment for seismically active regions, it is extremely important to study local soil conditions.
Considering dense network of urban development in the modern cities, military and industrial facilities, also other infrastructure available in the city, we assessed the situation and found it appropriate to realize geophysical surveys using a multi-channel seismic station and the method of micro-tremor records to enable determination of the seismic properties (shear wave propagation velocities, natural periods of soil vibration) within the upper 30 meters section and establishing soil categories.