

# **THE COMPARISON OF THE INFLUENCE OF SEISMIC ACTIVITY IN MINING AREAS ON THE DYNAMIC RESISTANCE OF FRAME BUILDINGS**

Dagmara Waśniowska-Rataj <sup>\*1</sup>, Janusz Rusek <sup>1</sup>

<sup>1</sup> *AGH University of Krakow, Faculty of Geo-Data Science, Geodesy and Environmental Engineering,  
Department of Engineering Surveying and Civil Engineering, al. Adama Mickiewicza 30, 30-059 Cracow*

\*Corresponding author: rataj@agh.edu.pl

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The presentation shows the results of a study of the dynamic resistance of frame buildings located in mining areas characterized by different seismic activity. A building model was created to represent frame objects and then the numerical analyses were carried out using the FEA method and the RSA (response spectrum analysis). For the comparative analysis of seismic activity, the reference response spectra were selected for the following areas: Upper Silesian Coal Basin (USCB) and the Legnica-Głogów Copper District (LGCD). For the analyzed cases, the response of the structure to kinematic force was compared with the effects of the load combinations assumed at the design stage. Limiting values of the design horizontal ground acceleration in the horizontal axis were established. On this basis, the effect of the seismicity of the area on the design dynamic resistance of the frame building was evaluated. The interpretation and the scope of applicability of the results are discussed.