



“RANTKAT” project: Introducing high precision spaceborne interferometric analysis of landslides in Cyprus

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Project “RANTKAT” is funded by the European Union Structural and Cohesion Funds and the Republic of Cyprus as part of the Program for Entrepreneurship and Innovation. The project is coordinated by GEOFEM Ltd (Cyprus) with the partnership of the Cyprus University of Technology. “RANTKAT” aims to establish an innovative service on a national scale for observation and study of land movements using SAR images as part of the development of a landslide risk management system. Landslides are a major hazard in Cyprus with over 2500 landslides occurring every year. As part of the project’s methodology, Persistent Scatterer Interferometric (PSI) analysis for the period from 1994 to date will be conducted accompanied by the analysis of archived geotechnical data and geological / geohydrological / seismological data for areas prone to landslides. Contemporaneous in-situ information will also be used to validate parameters extracted from the PSI analysis. In addition, the causative factors for the different study areas will be established such as hydrological, seismological, or other. For the PSI analysis, imagery acquired by ERS-1, ERS-2, ENVISAT ASAR and Sentinel-1A/B will be used. As a final objective of the project will be the development of a GIS interface for the hosting of a live map of movements and risk maps.