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## Sentinel-1 landslides detection: the Granada coast

Anna Barra<sup>(1)</sup>, Cristina Reyes-Carmona<sup>(2)</sup>, Rosa María Mateos<sup>(2)</sup>, Jorge Pedro Galve<sup>(3)</sup>, Roberto Tomás<sup>(4)</sup>, Gerardo Herrera<sup>(2)</sup>, Marta Bejar<sup>(2)</sup>, José Miguel Azañón<sup>(3)</sup>, José Navarro<sup>(1)</sup>, Roberto Sarro<sup>(2)</sup>, Oriol Monserrat<sup>(1)</sup>

<sup>(1)</sup> Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Geomatics Division, Avinguda Carl Friedrich Gauss 7, 08860, Castelldefels, Spain ([abarra@cttc.cat](mailto:abarra@cttc.cat), [jnavarro@cttc.cat](mailto:jnavarro@cttc.cat), [omonserrat@cttc.cat](mailto:omonserrat@cttc.cat))

<sup>(2)</sup> Geohazards InSAR laboratory and Modelling group (InSARlab), Geoscience Research Department, Geological Survey of Spain (IGME), Alenza 1, 28003 Madrid, Spain ([c.reyes@igme.es](mailto:c.reyes@igme.es), [rm.mateos@igme.es](mailto:rm.mateos@igme.es), [g.herrera@igme.es](mailto:g.herrera@igme.es), [m.bejar@igme.es](mailto:m.bejar@igme.es), [r.sarro@igme.es](mailto:r.sarro@igme.es))

<sup>(3)</sup> Departamento de Geodinámica, Universidad de Granada, Avda. del Hospicio, s/n, 18010 Granada, Spain ([jpgalve@ugr.es](mailto:jpgalve@ugr.es), [jazanon@ugr.es](mailto:jazanon@ugr.es))

<sup>(4)</sup> Departamento de Ingeniería Civil. Universidad de Alicante, Alicante, Spain ([roberto.tomas@ua.es](mailto:roberto.tomas@ua.es))

The new European round Motion Service (Copernicus) opens a new perspective in the use of Satellite Synthetic Aperture Radar Interferometry (InSAR) products. Moreover, the start-up of new constellations with systematic acquisition policies and free data access like Sentinel-1, is increasing the interest in these techniques. In this context, not only the scientific community, but also the administrations and the authorities will deal more and more with InSAR displacement maps. Considering the huge amount of information, and the difficulties of analysis and interpretation, it is necessary to go towards semi-automatic tools and methodology to improve the operational use of this maps by users involved in territorial and risk management. Here we propose a set of tools and methodologies to detect and classify Active Deformation Areas, and to map the potential damages to anthropic elements, based on the differential displacement. We present the results achieved in the coast of Granada, which is strongly affected by slope instabilities. The methodology is applied at a regional scale and allows to go to a detailed local scale of analysis. The presented results have been achieved within the framework of the Riskcoast Project (financed by the Interreg Sudoe Program through the European Regional Development Fund (ERDF)).

*Keywords: Sentinel-1, Active Deformation Areas, Landslides, InSAR*