

## Ground-Based Synthetic Aperture Radar Deformation Monitoring: Introduction

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The presentation will concern an interesting radar-based deformation measurement technique, which offers complementary advantages with respect to the optical-based techniques: Ground-Based SAR (GB-SAR). In the last years the ground-based (i.e. terrestrial) radar techniques have received an increasing interest for monitoring fast movements at relatively small scale (e.g.  $< 1 \text{ km}^2$ ) and with spatial resolution better than those offered by the satellite-based SAR techniques. The paper will introduce the main concepts related to GB-SAR deformation measurement. In addition, it will describe some of the most relevant GB-SAR results achieved by the Institute of Geomatics in the last years using C-band (5.955 GHz of central frequency, wavelength = 5.03 cm) and Ku-band GB-SAR data.