

AVVISO DI SEMINARIO

Lunedì 22 giugno, 10.00 – 13.00 Aula Villaggio - Sede di Strutture - DICI

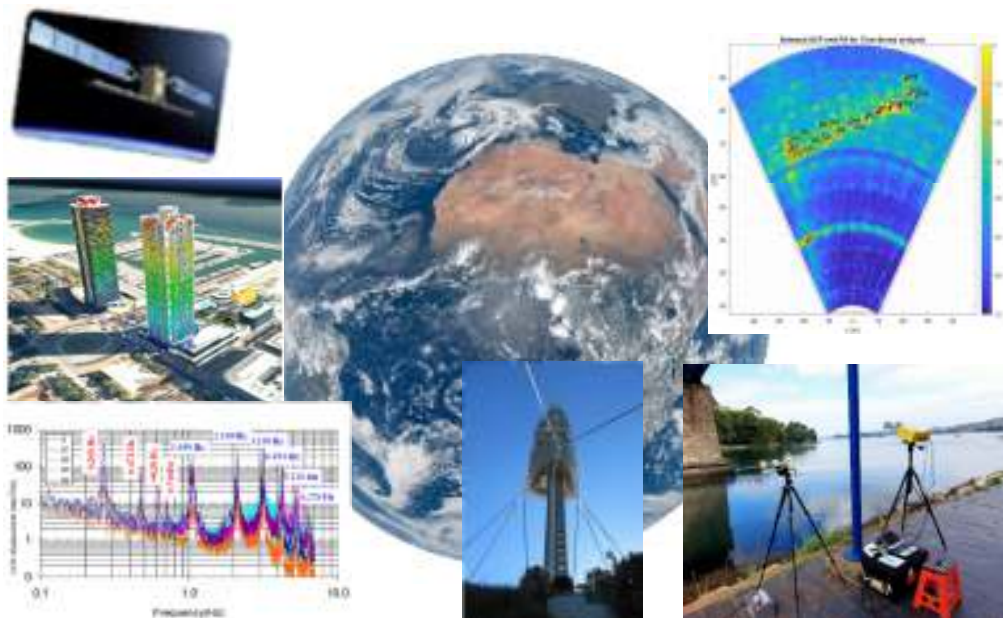
Talking about radar interferometry

Satellite and Ground-Based Radar Interferometry: Basic Principles and Applications in Deformation Monitoring and Dynamic Assessment of Civil Structures

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Abstract: In the last two decades, radar techniques have been increasingly used to monitor phenomena such as landslides, glaciers, and snow-covered areas. Satellite Synthetic Aperture Radar (SAR) imagery is now a well-established tool in remote sensing and is fully integrated into Copernicus activities. More recently, ground-based radar interferometers have also become available for terrestrial applications.

This lecture introduces the basic principles and physical mechanisms underlying microwave-based observations, with examples from geophysics and civil engineering. In particular, Real Aperture Radar (RAR) will be presented as a consolidated technique for estimating the static and dynamic behaviour of civil structures.

Bio: Guido Luzi holds a degree in Physics and a PhD in Electronic Systems Engineering. He has worked in microwave remote sensing since 1986, focusing on the development and experimentation of active and passive microwave sensors. His research activities include satellite and terrestrial radar interferometry, GB-SAR techniques, landslide monitoring, civil engineering, cultural heritage, and geophysical applications. Since 2014, he has been with the Remote Sensing Department, Geomatics Division, of CTTC. He has authored numerous international scientific publications.

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