

## SEMINAR

# Monitoring natural environment: from landslides to snow

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Aula E7, piano E

**Abstract:** In the last two decades the use of terrestrial radar for the monitoring of different environments as landslides, glaciers and snow covered areas, has been rapidly increasing. In particular Ground Based SAR interferometers become a reliable tool for many Remote Sensing users. In these lectures the listener is introduced to the basic principles governing some of the applications, to achieve a deeper understanding of the physical mechanisms which govern these microwave based observations. Examples of applications in Geophysics and Civil Engineering are also shown aiming to provide an practical and exhaustive view to users and researcher.

**Bio:** Guido Luzi graduated in Physics and holds a PhD in Electronic Systems Engineering. He has been working since 1986 in microwave remote sensing, active and passive, both in industrial and research institutions, dedicating his work to the development and experimentation of microwave sensors. He was involved in several international remote sensing campaigns as AGRISCATT87, AGRISCATT88, MACEurope, EPOCH, MEDALUS II, ENVIRONMENT, GALAHAD and several national research contracts. He worked for the Department of Electronics and Telecommunications and the Department of Earth Sciences of the University of Florence, working on various applications from monitoring volcanic areas as the Stromboli Island, to the development and experimentation of microwave sensors for the detection of vital signs (heart beat and breath), or Civil Engineering and Cultural Heritage applications. He moved to the Institute of Geomatics in 2010, where he was involved in the design and experimentation of radar-based sensing techniques with emphasis on GB-SAR interferometry. He has mainly focused his interest towards geophysical applications, with emphasis in the observation of landslides through terrestrial and satellite microwave interferometry and civil structures monitoring. He has authored or co-authored many papers in international journals concerning the aforementioned topics, and published more than sixty papers in referred international journals. He acts as referee for different journals: IEEE Trans. On Geoscience and Remote Sensing, IEEE Geoscience Remote Sensing Letters, Int. Jour. of Remote Sensing, IEEE Selected Topics in Applied Earth Observations. He is with the Remote Sensing Department (Geomatics Division) of the CTTC since January 2014, where he is involved in research activities concerning the application of spaceborne and terrestrial radar techniques.

**Organizer**

Prof. Marco Pasian

**Ph.D. Coordinator**

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