

Basics of satellite Synthetic Aperture Radar (SAR) data and their contribution in mapping/monitoring spatial and temporal earth surface changes

[Seminario](#)

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Abstract:

It is well known that the collection of pointwise ground data for mapping/monitoring purposes is typically tedious, expensive, and either difficult or impossible to gather at several locations. Spaceborne remote sensing is the only reliable system to collect systematic data, with high temporal frequency, over large areas. Therefore, it can be considered as the ideal tool to observe the spatial and temporal aspects of land cover changes. Since the early seventies, operational spaceborne sensors have been continuously collecting images of the Earth: in 40 years huge amounts of data have been stored in the archives of national and international space agencies. Unfortunately these data are still nearly unexploited! In order to transform this huge amount of multi-temporal multi-source data into information, automated data understanding systems are needed.

This seminar deals with the basic principles of Synthetic Aperture Radar (SAR) technology and the application of SAR data to Topography, Land Displacements, Forestry, Flooding and Change Detection. The active, coherent and weather-independent nature of SAR systems makes the measurements gathered with these sensors highly complementary to more conventional electro-optical technologies, enlarging the variety of bio- and geo-physical measurements that can be measured from Remote Sensing systems, and extending the capacity of regular monitoring of environmental phenomena over long time periods.

Nota per i partecipanti di lingua italiana

Durante il seminario sono previsti chiarimenti e sintesi in lingua italiana.

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(<http://www.sarmap.ch/>)

Tipo seminario: Arduino Lecture
