



Università Tor Vergata, Roma
Ingegneria Civile e Ingegneria Informatica

GeoInformation PhD Curriculum

GeoInformation Seminar

DISP meeting room, Ingegneria dell'Informazione, 1 Via del Politecnico
14 February 2013, starting at 15:00

Yogesh Kumar Singh

**Microwave radiometry of vegetated surfaces
in different environments**

It has been demonstrated that the higher microwave frequencies are well suited to observe low-vegetation areas, whereas lower frequencies are more suited for dense canopy (forest). Floods are one of the most recurring, widespread and disastrous hazards of the world, both natural and man-made in origin. It produces an increase of soil moisture in bare soil, and a reduction of vegetation emerging height in vegetated soils. Both effects are monitored by passive high-frequency microwave systems, since they influence the emission properties of the observed surface, at the various frequencies.

The presentation first reports on an analysis of high-frequencies data taken by the NASA Advanced Microwave Scanning Radiometer AMSR-E over selected areas of India for flood monitoring.

In addition, the presentation shows results of tests of the ESA Soil Moisture and Ocean Salinity (SMOS) satellite retrieval algorithm for the L-Band space borne radiometric data over forests.

Yogesh Kumar Singh received the M.Sc. degree in Geology from Banaras Hindu University, India and is currently working toward the Ph.D. degree at the Tor Vergata University, Rome.

He is working as a Scientist in Geomatics Solution Development Group, C-DAC, India, where he is responsible for the development of solutions for the GIS and RS community.

His main research interests concern Microwave Remote Sensing, Open source GIS and RS solutions and disaster management applications.

You are cordially invited to attend.