



Università Tor Vergata, Roma

Dipartimento di Informatica,
Sistemi e Produzione

GeoInformation Doctorate

Yearly presentations by PhD candidates

DISP meeting room, Ingegneria dell'Informazione ground floor, Via del Politecnico, 1
3 February 2011, starting at 15:00

Vasileios Kalogirou

Monitoring and characterization of burned areas with SAR data

ABSTRACT

Burned areas are dynamic ecosystems under recovery, therefore there is a recent need to continuously monitor and characterize their evolution. The presentation will provide an overview of the quite complex literature “mosaic” on the subject and will go through the main approach which will be followed. Some preliminary results on the analysis of multitemporal ASAR WS data for basic characterization of burned areas will be shown. Finally, the possible contribution of the Tor Vergata scattering model to the subject will be considered.

Vasileios Kalogirou was born in Drama, Greece in 1981. He received his Bachelor Degree in Forestry and Natural Environment from the Aristotle University of Thessaloniki (Greece) in 2004. In 2006 he completed the MSc course in Remote Sensing at the University College of London (UK), Department of Geomatic Engineering, and is now enrolled in the second year of the Geoinformation Doctorate at Tor vergata. Since May 2008, Vasilis has worked as on-site contractor at ESA/ESRIN, Frascati (Italy), where he supports the activities of the Department of Science, Applications & Future Technologies.

Marco Meloni

Developments in Satellite Radar Altimetry over Land and applications to future altimetric missions

ABSTRACT

Satellite radar altimetry, which was initially designed for accurate measurements of sea surface height, has proven suitable for land surfaces as well. This seminar illustrates a simplified expression of the FSIR (Flat Surface Impulse Response) and IR (Impulse Response) that leads to a closed solution of the classical convolutional model. The new model has been validated by comparisons with real altimetric data from RA-2, collected over both ocean and land surfaces. A good correspondence has been found. The same model has been used to investigate the performance of the new sensors Cryosat-2 SIRAL and Sentinel-3 SRAL, by varying some key parameters such as σ^0 , off-nadir angle, surface RMS.

Marco Meloni received the Masters degree in Telecommunications Engineering from Tor Vergata University, Rome, in February 2008, defending his thesis on the external calibration of the MIRAS instrument of the ESA SMOS satellite. He currently works with SERCO S.p.A. as Quality Control engineer of the ESA Gravity Mission GOCE. He is now enrolled in the second year of the Geoinformation Doctorate at Tor Vergata University in partnership with ESA/ESRIN. His main research is focused on the study of satellite radar altimetry over land and the definition of new algorithms for waveform modelling.

You are cordially invited to attend.