



**Università Tor Vergata, Roma**  
**Ingegneria Civile e Ingegneria Informatica**  
**GeoInformation PhD Curriculum**

**1<sup>st</sup> 2014 GeoInformation Seminar**

DISP meeting room, Ingegneria dell'Informazione, 1 Via del Politecnico  
20 March 2014, starting at 15:00

**Ruggero G. Avezzano**

**Neural Network approaches to PolSAR data processing**

Polarimetric data processing techniques have reached the operational level during the last decade. The next generation of space borne Synthetic Aperture Radar satellites, as COSMO-SkyMed SG, will implement full- or dual- polarimetric capabilities. As a consequence, in a few years a huge amount of data will have to be processed in fast and reliable way.

Neural Network approaches allow a considerable reduction of computational efforts and a substantial data compression with a minimal loss of information.

Examples describing different case studies will be presented and discussed.

**Ruggero Giuseppe Avezzano**

received the Master's (*Laurea Magistrale*) degree in Telecommunications Engineering in 2011 from the Tor Vergata University, Rome, Italy, where is now pursuing his PhD degree, GeoInformation Curriculum, supported by a scholarship granted by the Italian Space Agency (ASI). In 2011 he was visiting the Oceanography Department of the Earth Observation Institute of DLR, Oberpfaffenhofen, Germany, working on automatic detection of oil spill from X-band Synthetic Aperture Radar data.

His PhD research project deals with the exploration and definition of applicative scenarios for the polarimetric data that the COSMO-SkyMed Second Generation Mission is expected to provide.

R.G. Avezzano has been awarded by the European Meteorological Society for the Best Poster of the European Space Agency (ESA) 2012 Summer School on Earth System Monitoring and Modelling.

*You are cordially invited to attend.*