

**SEMINAR:**

# **Calibration and Data Analysis of Polarimetric Synthetic Aperture Radar**

**Speaker:** Dr. Toshifumi Moriyama  
(Nagasaki University, Japan)

**Date:** 20/11/2014 @ 03:00 PM

**Location:** Room Ofek – Polo Scientifico F. Ferrari - Povo

**Note:** The seminar will be held in English

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Recently, the remote sensing technologies become an essential tool to know earth's environment and mankind's activities. In these technologies, synthetic aperture radar (SAR) plays an important role for estimating forest's biomass and monitoring disaster and cultivated areas. In Japan, ALOS/PALSAR was operated from 2006 to 2011. It became the first space borne L-band polarimetric synthetic aperture radar (POLoSAR). The follow-on sensor, ALOS-2/PALSAR-2, was launched in May, 2014. The measured polarimetric data includes the distortions, which are caused by the transmitting and receiving hardware, during polarimetric channels. Then, the accuracy of inversion and classification algorithm depends on a polarimetric calibration to remove the distortions in the measured data. Moreover, the decomposition of polarimetric SAR data has received significant attention to retrieve geophysical parameters. I will explain the polarimetric calibration and the decomposition technique of polarimetric SAR in the seminar. In addition, the results of disaster monitoring by polarimetric SAR will be introduced.

## • **About the Speaker**

**Toshifumi Moriyama** was born in Fukui Prefecture, Japan, on January 1, 1972. He received B.E., M.E., and D.E. degrees in Information Engineering all from Niigata University, in 1994, 1995, and 1998, respectively. In his theses research, he was engaged in radar polarimetry and polarimetric radar sensing of buried objects. He was with Fujitsu System Integration Laboratories Ltd from 1998 to 2003, the National Institute of Information and Communications Technology, Japan (NICT) from 2003 to 2005, and the Earth Observation Research and Application Center (EORC), Japan Aerospace and Exploration Agency (JAXA) in 2006, respectively. He is now an assistant professor at Nagasaki University. His interests are in inverse scattering, radar polarimetry and microwave remote sensing.