NUS National University of Singapore

Department of GEOGRAPHY Seminar Series

Semester 2, 2015-2016

Satellite Earth Observation & Change Analysis – An Example From The Tropics

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Speaker: **Dr Sandeep Kundu**
Dept of Geography, NUS

Chair: **Dr Winston Chow**
Dept of Geography, NUS

Date/Time: Friday, 4 March 2016, 3.30pm – 5.00pm

Place: Earth Lab (AS2 02-03), Department of Geography, NUS

Abstract

A constellation of satellites revolve around our earth that are programmed to image our earth through sensors that offer varying temporal, spectral and spatial resolution. Repeated imaging of the same region at regular intervals allow us to compare and analysis change using Geographical Information Systems (GIS).

Monitoring land cover change using satellite imagery provides us with an opportunity to study and identify the causative factors and trends over time. The presentation includes examples of change across the world and focusses on a case study in the tropics where land cover changes in a watershed establishes the link between farming practices and erosion. The study uses NDVI, its thresholding and differencing as a methodology to discourse decadal changes in the Sambas watershed of West Kalimantan, Indonesia.

About the Speaker

Dr Sandeep Narayan Kundu is a geoscientist specializing in Remote Sensing and Geographic Information System applications in the Geosciences. Dr Kundu has a BSc (1994) and an MScTech (1997) in Applied Geology after which he studied for the MSc in GIS (1999) at Leicester, UK on a British Council fellowship.

Before obtaining his PhD in Geology (2013) from Utkal University, India on an Industry themed project, Dr Kundu spent 3 years conducting research on GIS/RS for Geoscience and Environmental applications at Indian Institute of Technology, Kanpur (India), University of Jena (Germany) and University of Muenster (Germany) after which he moved to Industry until end 2013. He has worked for global majors like Telefonica, Fugro, Reliance Industries and BHP Billiton in roles where he used his expertise in GIS and Geoscience for radio networks, mapping the seafloor for shallow hazards, exploring for natural resources like coal, petroleum, diamonds and copper.

Dr Kundu joined NUS to teach geoscience and allied technologies for analyzing sediments, sedimentary basins and exploration of petroleum in graduates and undergraduate programs. His research interest revolves around application of geospatial technology for Geoscientific modelling using multi-source data like bathymetry, remote sensing, seismic surveys and well logs.

ADMISSION IS FREE – ALL ARE WELCOME

CONVENORS: Dr Karen Lai (karenlai@nus.edu.sg) Dr Sin Harng Luh (geosinhl@nus.edu.sg) Dr Winston Chow winstonchow@nus.edu.sg)
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