



University of Pavia

Ph.D. School of Electrical and Electronics Engineering and Computer Science

SEMINAR

Landscape Epidemiology: A new high social impact area for Space Technology Application

Prof. Carlos Marcelo Scavuzzo
Universidad Nacional de Cordoba, Argentina

29th March, 2017 – 2:15 pm
Seminar Room of former Dept. of Electronics

Space technology gifts humanity with many benefits since the launching of the first artificial satellites in the '50's, although they're not entirely perceived by the population at large. Focusing on health issues, there are two big areas of contact between Health and Space Technology. The first and probably most widely known is called "Telemedicine", relying on satellites for long-distance transmission and monitoring of remote parameters in patient care. A second and probably less known is termed "Landscape Epidemiology" or "Spatial Epidemiology", where the satellite-based Earth observation is leveraged to monitor the environment and its influence on the population dynamics of disease vectors or reservoirs. Based on satellite data, geomatics can boost our capacity to analyze human and animal health distribution and dynamics. In this presentation, we will review some basic concepts of this novel discipline, and a historic review about seminal publications and leading research groups in the field. We will include examples from our experiences in Latin America. Finally, the idea of integrated operational systems for early warning, surveillance and control based on user's requirements and geomatic tools will be discussed.

Bio: Carlos M. Scavuzzo holds a PHD in Physics from the University of Cordoba on atmospheric physics and cloud modeling, with a Post-Doctorate degree at the École Polytechnique of Paris, France. He is currently Full Professor at the National University of Cordoba, Argentina, and part of the disaster response team in the Argentinean space Agency.

He develops his teaching activity at under-graduate and post graduate courses for Physics and Computer science at the Faculty of Physics (Famaf, UNC). He has offered numerous courses on remote sensing applied to health issues at the Gulich Institute as well as at international meetings.

He has published resource material for under-graduate and postgraduate courses, including a tutorial Book for the course "Estadística Aplicada ao Sensoriamento Remoto". Since 1997 he was in charge of health application to human health program of the National Commission on Space Activities, developing an active task of scientific and pedagogic releases in addition to establish operative programs in cooperation with the National Health Minister.

He was Head of the Space Applications area at the Argentinean Space Agency from 2008 to 2013 with a strong focus on issues related to SAR images and Natural Disaster Management Applications. He is co-founder of the Panamerican Tele-Epidemiology Group. Since 2010 he's been the head of the Advanced International Training School on this subject, whose latest edition was held at the Gulich Institute on May 2014.

From its creation in 2007 to 2014 he was a head of the first postgraduate program of the Argentinean Space Agency on Emergencies Early Warning Response Space Applications

Organizer

Prof. Fabio Dell'Acqua

Ph.D. Coordinator

Prof. Paolo Di Barba

Seminar in English

For more information: fabio.dellacqua@unipv.it