Course Schedule:

09:30-10:00, Foreword by Prof. Orhan Altan, Technical University of Istanbul, Turkey.

Part 1: Methods of Radar Remote Sensing
Presenter: Prof. Dr. M. Chandra, Technische Universität Chemnitz, Germany.

Meeting 1: 10:00-11:15; Topics:
Electromagnetic interaction for radar remote sensing
Examples from radar observation from aerospace- and ground-based radars
Polarisation basics for radars and remote sensing
Polarimetric radar measurement schemes
Polarimetric form of radar equations
Understanding key polarimetric radar observables

Short break: 11:15-11:30

Meeting 2: 11:30-12:30; Topics:
Understanding radar I-Q signals: an explanation using basic Physics
'Golden Rules' of radar remote sensing based on Physics of remote sensing
Radar measurement dilemmas that limit range-coverage and Doppler measurements
Why use radar waveforms?
Spatial and Doppler resolution

Lunch break: 12:30-13:30

Meeting 3: 13:30-15:00; Topics:
Radio science of radar signal propagation
Hands-on exercises for understanding and interpreting Doppler and polarimetric weather radar images
Hands-on exercises for understanding and interpreting Doppler and polarimetric SAR images
Outlook: DBF (Digital-Beam-Forming) and MIMO methods for radars: Promise versus hype.

Short break: 15:15-15:30

Part 2: Application-based Approach to Disaster Management and the Role of Radar Remote Sensing.
Presenter: Prof. Dr. Tullio Tanzi, Institut Mines-Telecom - Telecom ParisTech. LTCI UMR, CNRS, Télécom ParisTech-LabSoC, c/o EURECOM, Campus SophiaTech Les Templiers, France; In-Coming URSI Commission-F chair.

Meeting 4: 15:30-17:30 (with a short 10 minute mid-way interval)
Topics:
Introduction
Radio sciences versus disaster management requirements
Radar and optical remote sensing
New approaches and future systems: GPR, UAV, etc.
Design consideration for humanitarian-relief-dedicated systems

Close of course: 17:30