UNIVERSITÀ
DI PAVIA

Ph.D. Program in Electronics, Computer Science and Electrical Engineering

COURSE

Polarimetric Synthetic Aperture Radar (SAR) and applications

Prof. Avik Bhattacharya
Indian Institute of Technology Bombay, Mumbai, India

OBJECTIVES: The main objective of the course is to let the students acquire theory and intuition on techniques for processing multivariate time series of measurements and develop an understanding of radar/target interaction in spaceborne Earth monitoring. The students will also learn about multi-temporal vegetation monitoring. The course will include an introductory lesson to align the preparation of attendees and let them fruitfully attend the lectures on more advanced topics.

PROGRAM (T: Theory, L: Hands-on)

- Understanding SAR Fundamentals (T: 1hr 2-3 pm, 27th May)
- Radar Targets: An Introductory Exploration (T: 1hr 3-4 pm, 27th May)
- Electromagnetic Vector Waves: Insights into Polarization Descriptors (T: 2.5hrs + L: 1.5hrs, 9 am – 1 pm 28th May)
- Electromagnetic Vector Scattering: Understanding Descriptors and Phenomena (T: 2.5hrs + L: 1.5hrs, 9 am – 1 pm 29th May)
- Selected Topics in SAR Applications (T: 2.5hrs + L: 1.5hrs, 9 – 11 am 30th and 31st May)

EVALUATION: A 20-question multiple choice quiz for 2 hours (11 am – 1 pm 31st May)

ATTENDANCE: The course will take place in the **Magenta Seminar Room** (27,28,31 May) and **FabSpace Lab** (29, 30 May). Students who are interested but cannot attend please contact the organizing professor.

LECTURES: 14h + 2h final test; CREDITS: **4 CFU**

DATES: **27th – 31st May 2024**

Organizer

Prof. Fabio Dell'Acqua

Ph.D. Coordinator

Prof. Ilaria Cristiani

Course in English – see the Lab LinkedIn Page for news

EMAIL: fabio.dellacqua@unipv.it