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

SEMINAR

Earth Observation for Natural Resources Modelling

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Esch-sur-Alzette (L)

Thursday, 21st November 2024, 2:15 pm
Magenta Seminar Room, Floor D, Engineering School

Abstract: The Luxembourg Institute of Science and Technology (LIST) is a Research and Technology Organization (RTO) active in the fields of materials, environment, IT, and space resources. It is under the trusteeship of the country's Ministry of Higher Education and Research. It works across the entire innovation chain: fundamental and applied research, incubation, and transfer of technologies. By transforming scientific knowledge into technologies, smart data, and tools, LIST empowers citizens in their choices, public authorities in their decisions, and businesses in their strategies. **The LIST's 'Remote Sensing and Natural Resources Modelling' research group** conducts impact-driven research to monitor, forecast, and predict environmental systems in a changing world. The group is capitalizing on a blend of remote sensing data obtained from space- and airborne platforms, as well as in-situ measured data, for producing information on the status of natural resources for public and private stakeholders. Moreover, it aims to extract information from remote sensing data using advanced machine learning techniques (e.g., deep learning, AI) in order to provide evidence-based decision support in near real time in a variety of thematic domains (i.e., disaster risk reduction, precision agriculture, viticulture, and forestry, preservation and management of natural resources, defense, and maritime surveillance)

Bio: Marco Chini in 2003 earned the M.S. degree in electronic engineering from the Sapienza University of Rome, Italy, and in 2008 the Ph.D. degree in geophysics from the University of Bologna, Italy. He is a lead researcher and technology associate responsible for acquiring, managing, and developing research and innovation projects focusing on remote sensing, urban

monitoring, natural resources, defense, maritime surveillance, and disaster management. His research objectives have always been focused on achieving a better understanding, characterization, and monitoring of land surfaces and their changes. The projects he is involved in, both fundamental and applied in nature, are in the fields of floodwater and natural disasters mapping, machine learning, soil moisture retrieval, geophysical parameter estimation, and InSAR techniques applied to geophysical phenomena, e.g., earthquakes and volcanic eruptions. Since 2016, he has been the Luxembourg representative for the Copernicus Relay and Academy networks, which are awareness-raising initiatives of the Copernicus satellite program. In 2017, he was an associate scientist of the Geosynchronous-Continental Land-Atmosphere Sensing System (G-CLASS) proposal in the ESA Earth Explorer X call. Between 2018 and 2020, he was a member of the ESA Mission Advisory Group for the future Copernicus L-Band SAR mission (ROSE-L). He also acts as associate editor for several prestigious remote sensing journals, e.g., IEEE Transactions on Geosciences and Remote Sensing, MDPI Remote Sensing.

Organizer

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