



**University of Pavia**  
**Ph.D. School of Electrical and Electronics Engineering and Computer Science**  
**Ph.D. School in Physics**

## **SEMINAR**

### **Optical remote sensing of snow: In situ perspective**

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**Helsinki, Finland**

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**Aula seminari ex Dipartimento di Elettronica, piano D**

**Abstract:** Snow albedo controls the surface radiation budget of snow-covered regions. When climate warms, the induced changes in snow cover amplify the climate change through the snow albedo feedback. Snow monitoring mostly rely on satellite-based sensors, which need in-situ snow observations for the validation and development of the snow retrieval methods. However, in-situ snow observations are sparse, and snow albedo measurements are very challenging. In the seminar, an introduction to the snow optical properties and to the factors affecting snow albedo will be given. Then, the in-situ instruments applied to measure snow albedo will be presented, together with the technical and practical challenges involved in the measurements.

**Bio:** In 1998 Dr. Pirazzini graduated at the University of Bologna (Italy), Department of Physics, with a Master thesis in Polar Meteorology. In 2009 she got her Doctoral degree at the University of Helsinki (Finland), Department of Physics, Division of Atmospheric Sciences, with a dissertation on “Factor controlling the surface energy budget over snow and ice”. Since 2008 she has worked as scientist at the Finnish Meteorological Institute (FMI) in Helsinki. Her research activities include measurement and modelling of the interaction of solar radiation with snow and ice, development of instrumentation to measure the snow spectral albedo, snow and ice surface energy budget, cloud radiative forcing on the snow/ice surface temperature. She is responsible for the development of the radiometric laboratory at FMI used for the calibration and characterization of the optical sensors.

#### **Organizers**

**Prof. Fabio Dell’Acqua**  
**Prof. Marco Pasian**

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