

Roberto Garzonio is graduated in 2012 in Environmental Sciences. He concluded his studies with the Ph.D. working on glacier suitability for ice core drilling, Unmanned Aerial Vehicle (UAV) and hyperspectral spectroscopy systems. After this first experience he continued his collaboration with the University of Milano-Bicocca working on optical properties of snow and glacier from multisource remote sensing (satellite, UAV and field data). He achieves different postdoctoral research fellowship on these topics developing instrument and algorithms for retrieval ice and snow properties from thermal and optical data. In the 2019 he becomes a professional drone pilot licensed by ENAC, the Italy's civil aviation institute for safely flying drones. In September 2020 he becomes a scientist technician of the GEMMA laboratory (Geo Environmental Measuring and Monitoring from multiple platforms of the Department of Earth and Environmental science – University of Milano Bicocca).

Technical skills

- Excellent experience in GIS software, scripting and programming.
- Remote sensing and data acquisition tools: spectrometer (ASD Fieldspec, Ocean Optics, HeadWall Photonics), image processing, time series analysis, hyperspectral data.
- Experience with Unmanned Aerial Vehicle (UAV) and field monitoring activities.
- Geo-spatial data, Differential Global Position System (DGPS), Structure from Motion software.
- UAV pilot licence (from 4 to 25 kg).

WORK EXPERIENCE

September 2020

Scientist technician of the GEMMA laboratory (Geo Environmental Measuring and Monitoring from multiple platforms of the Department of Earth and Environmental science – University of Milano Bicocca).

May 2018 – July 2020

Research fellowship (University of Milano-Bicocca, Department of Earth and Environmental Sciences).

Developing of new algorithms for the retrieval of geophysics parameter from multisource remote sensing.

June 2017 – May 2018

Research fellowship (University of Milano-Bicocca, Department of Earth and Environmental Sciences).

Analysis of optical and thermal properties of snow and ice for evaluating snow melting processes in the context of CHRISTMAS satellite mission (ASI project).

April 2016 – March 2017

Research fellowship (University of Milano-Bicocca, Department of Earth and Environmental Sciences).

Development of an automatic hyperspectral imaging system for analysing optical properties of ice cores.

January 2013 – February 2016

PhD in Environmental Sciences (University of Milano-Bicocca, Doctorate School of Sciences).

Modelling the suitability for ice core drilling of mountain glaciers and development of new spectroscopy systems for cold room laboratory and environmental monitoring.