



Gran Paradiso Summer School
Fundamental Processes in Earth System Dynamics

Course 2024

The Future of Critical Zone

City Hall, Commune de Valsavarenche (Val d'Aosta, Italy), 21-28 June 2024



<i>Lectures</i>	
S. Anderson	Regolith, weathering, and geomorphology
E. Aronson	Role of microorganisms in the CZ
C. Beierkuhnlein	Biogeography, biodiversity and climate change
S. Billings	How biology and geology combine to create the CZ
A. Dere	Soil morphology and geochemistry
R. Huang	Erosion, weathering and nutrient transport in catchments
P. Le Coent	Transdisciplinary approaches, from natural to social science, for the design and evaluation of sustainable groundwater management strategies
N. Nikolaidis	(1) Human Impacts on Soils - Restoring ecosystem services (2) Towards Integrated Water and Land Management - The WEF NEXUS and NBS
Y. Onda	Forest practices, groundwater recharge and soil erosion in the CZ
A. Provenzale	(1) Carbon and water fluxes in the soil-vegetation-atmosphere system (2) Virtual Research Environments and the ITINERIS vision
T. White	Introduction to the CZ; Geosciences in the context of the CZ
E. Wozniak	Remote Sensing of the Critical Zone
A. Wymore	Ecosystem Vectors and Critical Zone Reactors: Studying the integrated system
<i>Special seminars</i>	
C. Arvanitidis	The activities of LifeWath ERIC
G. Cassiani	Hydrogeophysics: a tool for the characterization of the Earth's Critical Zone
S. Giamberini	The Arctic Critical Zone: challenges and opportunities
S. Marta	Structural Equation Models for carbon fluxes at Nivolet
C. Richiardi	ABRESO at the Gran Paradiso National Park

Directors of the course

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For information visit the school website at <https://www.thematic-school.cnr.it/>

