

**IFMGA Webinar** 

May, 12<sup>th</sup>, 2021



# Mountain permafrost an invisible threat for mountaineers ?

#### **Florence Magnin**

### Researcher, alpine permafrost monitoring and modeling

EDYTEM laboratory (CNRS, Savoie Mont Blanc University)

florence.magnin@univ-smb.fr





**IFMGA Webinar** 

May, 12<sup>th</sup>, 2021



## Mountain permafrost an invisible threat for mountaineers ?

- 1. What is permafrost?
- 2. Where is permafrost in mountain areas ?
- 3. What are the different mountain permafrost grounds ?
- 4. How does mountain permafrost evolve ?
- 5. How does permafrost impact mountain practices ?
- 6. Can we determine the most dangerous areas and periods ?



**IFMGA Webinar** 

May, 12<sup>th</sup>, 2021



## Mountain permafrost an invisible threat for mountaineers ?

- Mountain permafrost affects a large proportion of the ground and is found in most alpine ranges worldwide
- Investigations on its distribution, evolution and its link with rockfall have started only in the 2000s
- There is a clear link of rockfall occurrence and permafrost dynamics
- This impacts mountaineering practices because mountain routes are changing, conditions become more unpredictable or more dangerous
- Permafrost dynamics have impacts that go further than mountaineering practices, notably through rock avalanches and cascading processes

