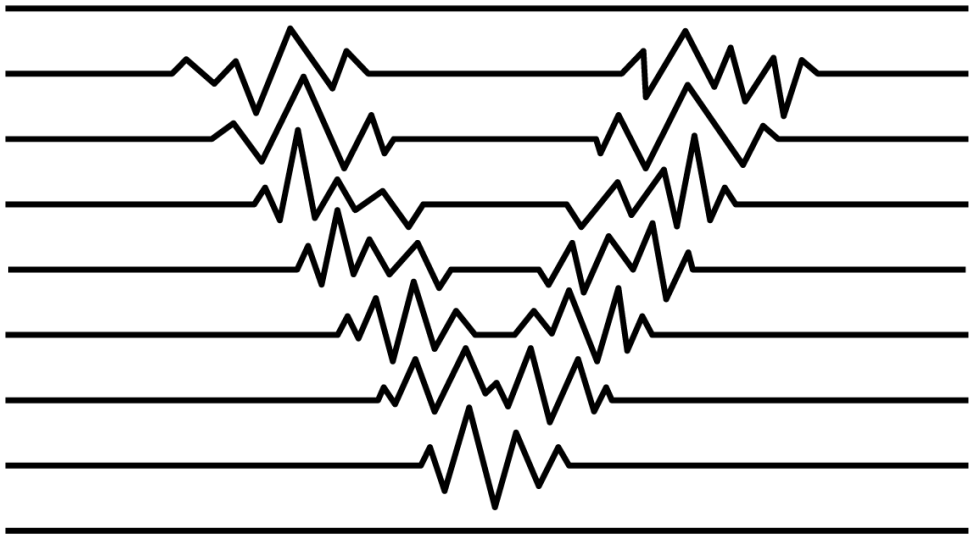


SPIN

MONITORING A RESTLESS EARTH

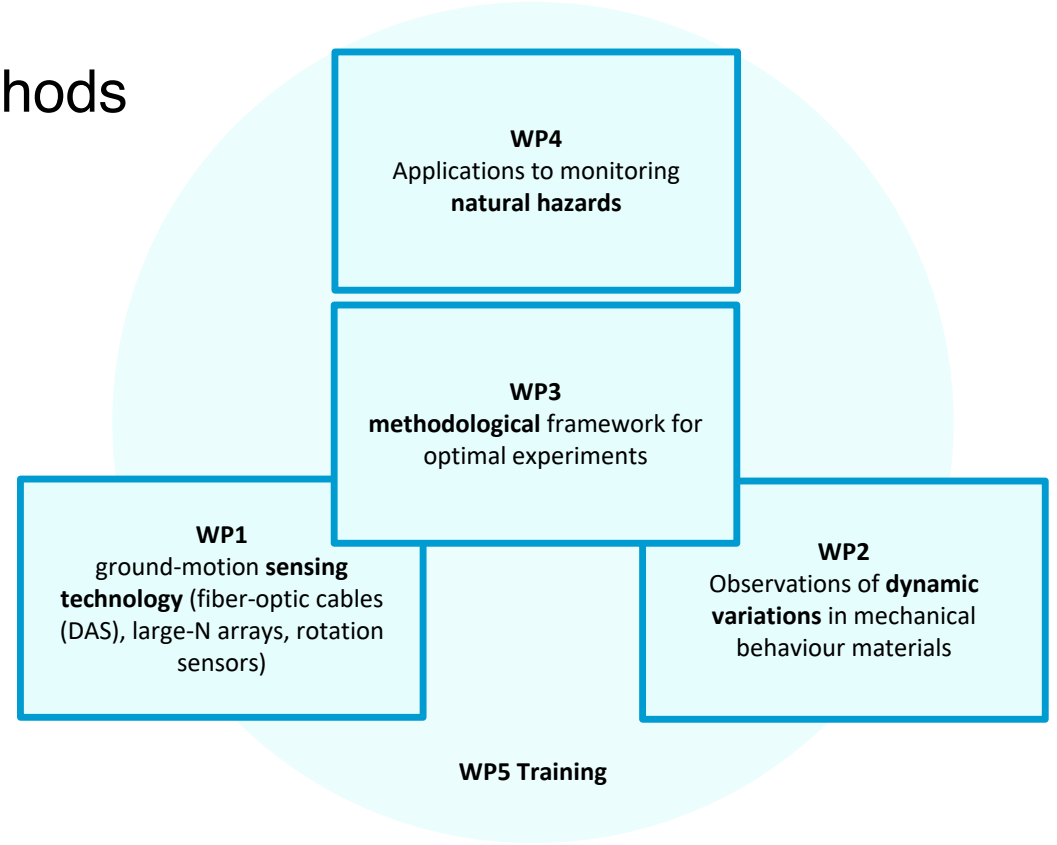
http://spin-itn.eu

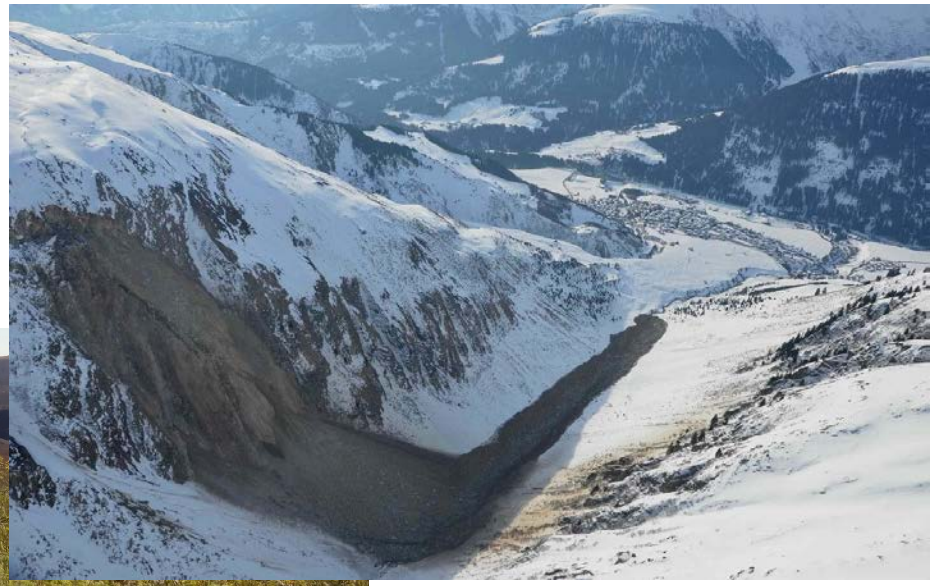
WP4 – Applications to monitoring natural hazards

- **Demonstrate** the full impact of SPIN
- Different **hazard** settings in volcanology, earthquake physics, structural health monitoring, hazard early warning and permafrost monitoring
- How does **maximizing the amount of information per observation point** lead to more constrained answers to scientific questions?

Relation to other WPs

- **WP1:** sensor-technology
- **WP2**: models will be tested on field data
- **WP3**: processing and design methods





SPIN ESR 4.1: Ground motion and unrest triggering on volcanoes

DIAS
Institiúid Ard-Léinn Bhaile Átha Cliath | Dublin Institute for Advanced Studies

- Host institution: Dublin Institute of Advanced Studies (DIAS)
- ESR: Eleanor Dunn
- Chris Bean (DIAS), Andrew Bell (UEdin)
- Better understand **dynamic triggering** of seismicity on critically stressed **volcanoes**

SPIN ESR 4.2: Nonlinear seismology meets structural health monitoring

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

- Host institution: University of Hamburg (UHH)
- ESR: Marco Antonio Dominguez Bureos
- Céline Hadzioannou (UHH), Andrew Curtis (UEdin), Ernst Niederleithinger (BAM)
- Methods of **non-destructive testing** (NDT) and **structural health monitoring** (SHM) to monitor long-term changes of mechanical properties

SPIN ESR 4.3: Monitoring hazards from a changing alpine environment

ETH zürich

- Host institution: ETH Zurich (ETH)
- ESR: Tjeerd Kiers
- C. Schmelzbach, J. Robertsson, P. Roux, Lorentz Meier, Margarita Segou, P. Edme, P. Paitz
- Climate change impact on hazards in the Alpes: **instable slopes**
- Monitoring and early warning using DAS and conventional sensors

SPIN ESR 4.4: Distributed Acoustic Sensing and Volcano-seismology

GFZ Helmholtz Centre POTSDAM

- Host institution: GFZ Helmholtz Centre Potsdam
- ESR: Sergio Diaz
- Philippe Jousset, Lotte Krawczyk
- Complex ground mechanical behaviour in **volcanic edifice**
- Infrasound, seismic and fibre optic cable DAS data, to better understand **structural and dynamic nature of the seismo-acoustic wavefield**.