



## **Two-phase debris flow modelling**

**J. Kowalski** (1), P. Bartelt (1), J. McElwaine (2)

(1) Swiss federal institute for Snow and Avalanche research, (2) University of Cambridge

Depth-averaged one-phase equations of motion are suitable to model debris flows. However applying them, it is difficult to distinguish between different flow regimes. In this presentation we therefore discuss the application of two-phase theory to model such flows. Former attempts proposed by Iverson, Bozhinsky and Pitman are reviewed and modified to derive a new two-phase model. First results will be presented.