

**FRACTURE OF LAYERED SNOW  
BY COHESIVE ZONE TECHNIQUE AND EXPERIMENTS**

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ABSTRACT: One mechanism responsible for avalanche initiation is the weak bond between snow layers. Experiments under controlled conditions at the cold lab are performed in tension and shear to determine the load displacement behavior of layered snow. This behavior is next simulated using FEM with the weak interface between the layers represented by cohesive zone elements. There are four parameters (Fracture energy in tension, Fracture energy in shear, Characteristic length in tension and shear) in these cohesive models which are obtained by comparing the experimental results with FEM simulation.

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