

## **Discrete models for material failure**

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Discrete models, where materials are represented by separable solid particles, elastic sections and/or other dynamically interacting elementary units, allow for meso-scale simulations of material degradation and failure. Materials may be frictional, cohesive-frictional, quasi-brittle or ductile with inherent disorder subject to various kinds of loading conditions.

This session serves as a stage to discuss recent developments of discrete models and their applications to the damage of materials from a physical point of view with focus on dynamical, collaborative processes resulting in failure.

Topics include but are not limited to: development of novel lattice and particle based approaches, efficient simulation techniques, description of the role of mesoscale complexity in materials failure, scale spanning description of failure phenomena from meso to macro.