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MS 3-6 Recent Advances in Plasticity and Damage Mechanics

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The mini-symposium focuses on recent advances in plasticity and damage mechanics across different areas, including theoretical, experimental, numerical and industrial application. The symposium aims to provide a forum for interdisciplinary discussion among researchers and to promote fruitful exchange of ideas and information among engineers, physicists and mathematicians.

In particular, but not limited to, contributions on the following topics are welcome:

- Coupling of plasticity and damage mechanisms in traditional and innovative materials;
- Anisotropic plasticity models for fibrous and composite materials;
- Advances in damage modeling accounting for anisotropic, cyclic or dynamical behaviors;
- Instability phenomena in plasticity and damage models;
- Nonlocal and enhanced damage models;
- Phase-field formulations for damage and other coupled fields;
- Multiphysics plasticity and damage processes in porous materials;
- Plasticity, damage and damage tolerance in metamaterials;
- Direct and indirect damage measurement methods;
- Multiscale and homogenization approaches to bridge microstructural failure mechanisms to macroscopic nonlocal models;
- Link between damage processes and fracture mechanics;
- Robust numerical methods for complex structural damage analyses up to failure.