

Experiments and Constitutive Modelling of Materials in Advanced Forming Processes

Organizers

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Technical Focus

Material forming through plastic deformation is one of the most efficient and economical manufacturing processes available. The objectives of the symposium are: 1) to enhance the understanding of material behavior during deformation processes; 2) to present improved material models available for simulating forming; and 3) to promote R&D activities in forming new materials and/or new forming technologies at various length scales, from microscale to macroscale.

Topics of interest include, but are not limited to:

- Experiments on plastic behavior of materials
- Identification of material properties
- Anisotropic yield functions and constitutive modeling
- Fracture, failure and formability
- Computational methods in modeling and designing of forming processes
- Microstructure evolution and characterization in forming processes
- Multi-scale modeling of materials behavior
- New/emerging forming and joining technologies
- Press hardening/hot forming
- Microforming
- Forming of lightweight materials (Ti, Mg, Al, Advanced High Strength Steels)