

## **MESH-FREE PARTICLE METHODS FOR MULTI-PHYSICS PROBLEMS**

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### **MINISYMPOSIUM**

The goal of this mini-symposium is to promote discussion and facilitate the exchange of knowledge and expertise on the fundamentals and applications of particle-based numerical methods for solving a variety of multi-physics problems. Multi-physics applications involve the convergence of various physical processes in the scope of fluid mechanics, solid mechanics, heat and mass transfer, and beyond. The focus will be on particle-based methods both as discretization concept and as physical particles, including, but not limited to, distinguished methods such as smoothed particle hydrodynamics method (SPH), moving particle semi-implicit method (MPS), material point method (MPM), and discrete element method (DEM). The coupling of these methods with conventional numerical techniques is also in the scope of this mini-symposium. Join us in this enriching mini-symposium as we unravel the intricacies of particle-based methods, share insights, and foster connections at the crossroads of multi-physics exploration