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SPACE-TIME MODELING OF COUPLED PROBLEMS

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MINISYMPOSIUM

In this minisymposium, we invite presentations devoted to space-time approaches. Space-time modeling is well-established since the late 1960s and has further developed since then. The holistic treatment of the spatial and temporal coordinates spanning one physical space in which processes evolve provides several benefits, both from the modeling and the numerical perspective. Space-time methods have been utilized in various applications, such as incompressible flow, solids and fluid-structure interaction, and recently even up to thermo-mechanical dissipative microstructure evolution, and other multi-physics problems. In this minisymposium, current state-of-the-art advancements in space-time methods will be presented. These include space-time modeling of fluids and solids, space-time discretizations, space-time model order reduction techniques, space-time variational approaches, solvers and error control. Both engineers and applied mathematicians are equally addressed to contribute to this minisymposium to create a platform for fruitful exchange of ideas and discussions of novel trends.