A Simplicial Space-Time Finite Element Method for the Stokes System

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In this talk, we consider a space-time finite element method for the time-dependent Stokes system. While classical approaches rely on time-stepping schemes, we propose a fully space-time variational formulation in the Bochner setting. This allows for a unified treatment of spatial and temporal discretization. We further present numerical results on arbitrary and unstructured space-time meshes, which demonstrate the flexibility and effectiveness of the proposed method.

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