A bulk-surface Stokes system

Jonas Stange

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In this talk, we will consider a bulk-surface Stokes system, where the trace of the velocity field solves a Stokes equation on the boundary. After a short motivation, we will take a quick look at the weak well-posedness, which is based on a bulk-surface Korn-type inequality. Afterwards, we prove the existence of a strong solution and, if time permits, we introduce a bulk-surface Stokes operator and show some of its properties.