Talk announcement

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15:30, S2 054 and via Zoom

Symbolic Local Fourier Analysis to determine the inf-sup stability of the Stokes equation

In this talk, we will construct a closed form for the inf-sup-constant for the Stokes equations in 2D, where we use periodic boundary conditions for simplicity. We use an isogeometric Taylor Hood element for discretization, which is based on B-Spline basis functions. Fourier Analysis is used to get a term whose minimum can be determined using cylindrical algebraic decomposition (CAD). The goal is to find a closed form for the inf-sup-constant, that only depends on the degree of the B-Splines.