

Maximal regularity of Stokes problem with dynamic boundary condition — Hilbert setting

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Abstract

In this contribution we discuss the maximal regularity of weak solutions in time for the evolutionary Stokes problem with dynamic boundary condition. Due to the characterization of R -sectorial operators on Hilbert spaces, the proof reduces to identifying the appropriate functional analytic setting and proving that the corresponding operator is sectorial, i.e., that it generates an analytic semigroup.

This is joint work with Tomáš Bárta and Paige Davis.

Keywords: Stokes problem, dynamic boundary conditions, maximal regularity, analytic semigroup

References

- [1] T. Bárta , P. Davis, P. Kaplický, *Maximal regularity of Stokes problem with dynamic boundary condition—Hilbert setting*, <https://arxiv.org/abs/2308.01616>.