# A free boundary problem related to the spin-coating process.

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We consider the spin-coating process which is described by the Navier-Stokes equations in a layer-like domain in $\mathbb{R}^3$ in the rotating setting. Our model takes into account Coriolis forces, centrifugal forces as well as surface tension on the free boundary. On the fixed boundary we prescribe Robin boundary conditions.

Our aim is to show local existence and uniqueness of strong solutions. In order to do so, we transform this problem to a fixed layer by the Hanzawa transform and show maximal regularity estimates for a suitable linearized problem.