

## **On a fluid-structure interaction problem for plaque growth: cylindrical domain**

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This talk concerns a free-boundary fluid-structure interaction problem for plaque growth proposed by Yang et al. [J. Math. Biol., 72(4):973--996, 2016] with additional viscoelastic effects, which was also investigated by the authors [arXiv preprint: 2110.00042, 2021]. Compared to it, the problem is posed in a cylindrical domain with ninety-degree contact angles, which brings additional difficulties when we deal with the linearization of the system. By a reflection argument, we obtain the existence and uniqueness of strong solutions to the model problems for the linear systems, which are then shown to be well-posed in a cylindrical (annular) domain via a localization procedure. Finally, we prove that the full nonlinear system admits a unique strong solution locally with the aid of the contraction mapping principle. This talk is based on a joint work with Helmut Abels (University of Regensburg).