Contact Line Dynamics: A Never Ending Challenge?

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Rigorous analytical treatment of models related to contact line dynamics have been a great and fascinating challenge for decades now. In this talk we consider one of the most fundamental 2D models in this context. Its well-posedness seems still to be open. We will not be able to present the "final" result, but some (hopefully) promising steps towards its well-posedness. In particular, we will present a maximal regularity result on the corresponding linearized Stokes system. A suitable handling of the corresponding Stokes equations seems to be the crux of the entire problem. We will also explain how our approach can help to get closer to a "final" result. This is a joint project with Christiane Bui and Matthias Köhne.