

## **Global persistence of regularity for the Stokes-transport sharp interface problem**

*Dr. Elena Salguero (MPI Leipzig)*

The Stokes-transport system models the dynamics of viscous flow under gravitational forcing. We consider the sharp interface problem for this system, where the interface separates two fluids with different densities. The evolution of this interface is driven by the interplay between gravity and density contrast. We investigate the persistence of Hölder regularity for the free boundary in this evolution. This work is in collaboration with F. Gancedo and R. Granero-Belinchón.