

Weak solutions to lubrication equations in the presence of strong slippage

Dr. Georgy Kitavtsev (MPI MIS Leipzig)

In this talk the existence of global weak solutions for one-dimensional lubrication models that describe the dewetting process of nanoscopic thin polymer films on hydrophobized substrates and take account of large slippage at the polymer-substrate interface will be shown. The convergence of these solutions as either the Reynolds number or the capillarity goes to zero, as well as their limiting behaviour as the slip length goes to zero or infinity are investigated.