*Title*: **On the dynamic slip boundary condition**

*Abstract*: In the talk, we study the Navier–Stokes-like problems for the flows of homogeneous incompressible fluids. We introduce a new type of boundary condition for the shear stress tensor, which includes an auxiliary stress function and the time derivative of the velocity. The auxiliary stress function serves to relate the normal stress to the slip velocity via rather general maximal monotone graph. In such way, we are able to capture the dynamic response of the fluid on the boundary. Also, the constitutive relation inside the domain is formulated implicitly. The main result is the existence analysis for these problems.

Erika Maringová, Vienna University of Technology, Vienna, Austria