

**DIM-CMM PDE Seminar**

**Speaker:** Mathieu Pageard (Université Claude Bernard Lyon 1)

**Title:** Well-posedness for 2D non-homogeneous incompressible fluids with general density-dependent odd viscosity

**Abstract:** Viscosity in fluids is often related to the dissipation of energy. However, in physical systems where the microscopic dynamics do not obey time-reversal symmetry, a non-dissipative viscosity can emerge, often referred to as "odd viscosity". In this talk, we will consider the initial value problem for a system of equations describing the motion of two-dimensional non homogeneous incompressible fluids exhibiting odd viscosity effects. We will prove the local existence and uniqueness of strong solutions in sufficiently regular Sobolev spaces. Differently from previous works, we suppose the odd viscosity coefficient to be a general function of the density of the fluid.

For those unable to attend in person, the talk will also be available via Zoom at the following link:

<https://uchile.zoom.us/j/9361339766?pwd=vB3J7Vhb0EX3kQDHfH741CKN19YKQz.1>

**Wednesday 8th, at 16:15 hs** in the Sala de Seminarios (Beauchef 851, DIM, fifth floor).

For further information, see our webpage: <https://eventos.cmm.uchile.cl/pdeseminar/>

