

Dynamics of two non miscible fluids inside a rotating cylinder

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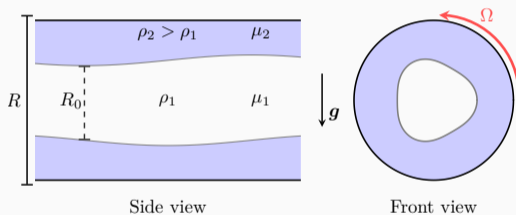
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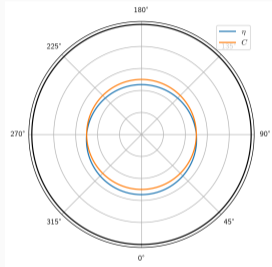
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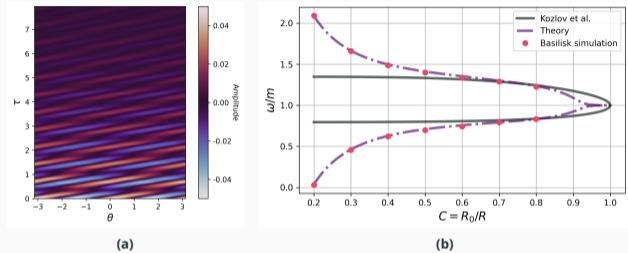
Experimental/Numerical setup

1- Base flow modified by gravity



Analytical displacement of the bubble η compared to the initial position C .

2- Axisymmetric configuration: waves at the interface



(a) Interface deformation overtime (Basilisk) $\rho_r = 0.75$; $C = 0.7$, $\mu_r = 1$, $Re = 1000$, $Fr = \infty$, $We = 1/0.0109$.

(b) The frequency ω of the interface for the second mode $m = 2$ for different confinement parameter C . the generalized eigenvalue problem $Ax = i\omega B$ (---)