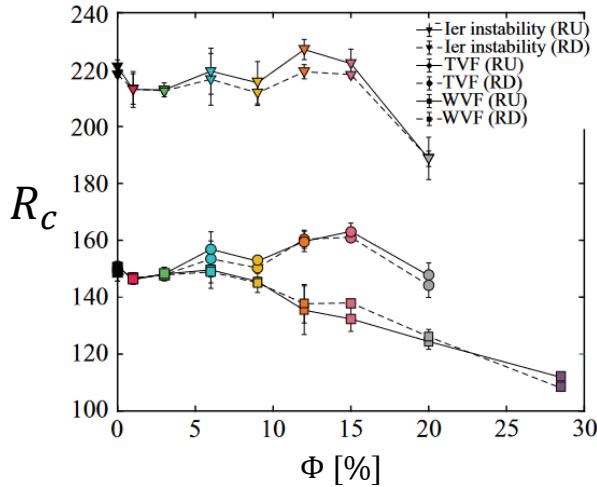


# Particles alteration of elasto-inertial transitions in viscoelastic Taylor-Couette flow

Charles Carré, Masoud Moazzen, Tom Lacassagne, Amir Bahrani



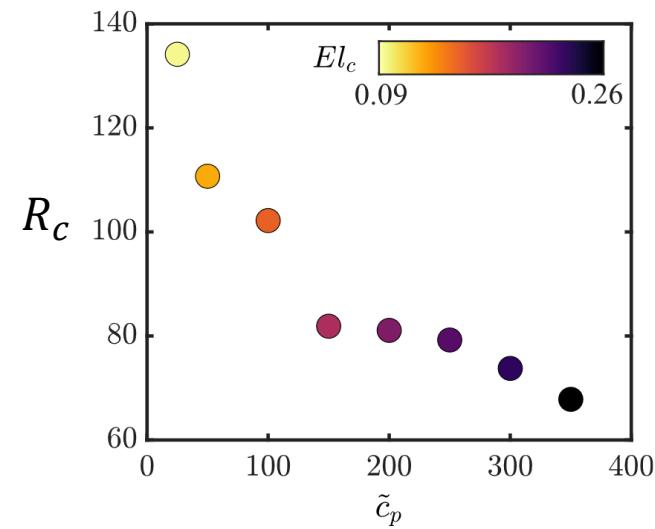
Particles in newtonian solvent

Moazzen et al. (2022)

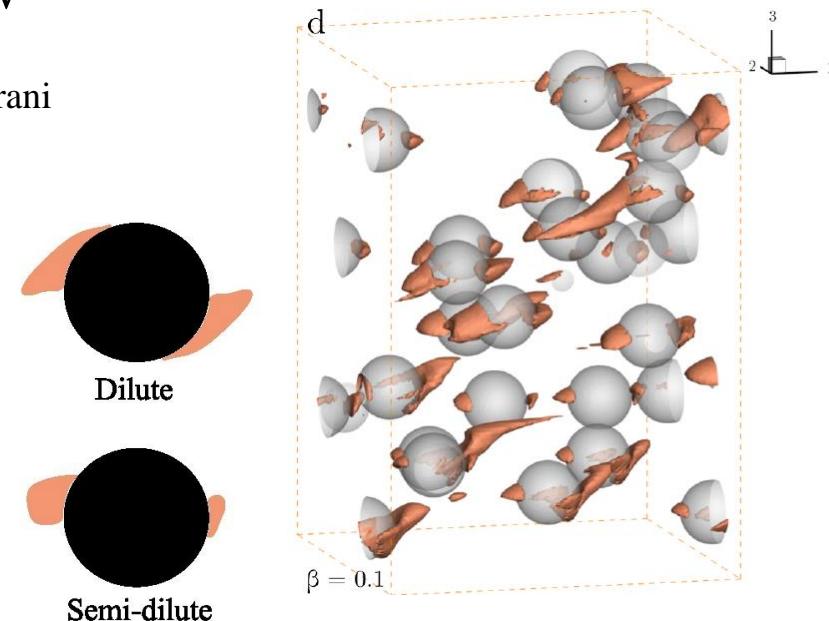
Particles + Polymer

Polymer + solvent

Moazzen et al. (2023)

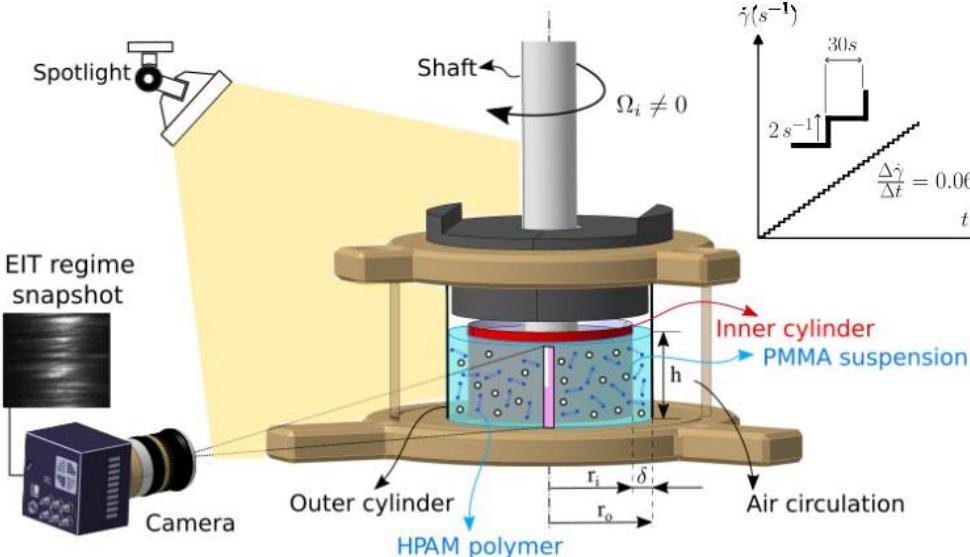


Impact of particles-polymer chain and  
particle-particle interactions on instabilities ?



Zhang et al. (2023)

# Particles alteration of elasto-inertial transitions in viscoelastic Taylor-Couette flow



Taylor-Couette cell in MCR102 rheometer  
Inner cylinder rotation – outer cylinder fixed

Coupling methods:  
Flow visualisation + friction measurement

## Elasto-Inertial Turbulence (EIT)

$$\Phi \leq 2\%$$

## Elasto-Inertial Dissipation (EID)

$$\Phi > 2\%$$

