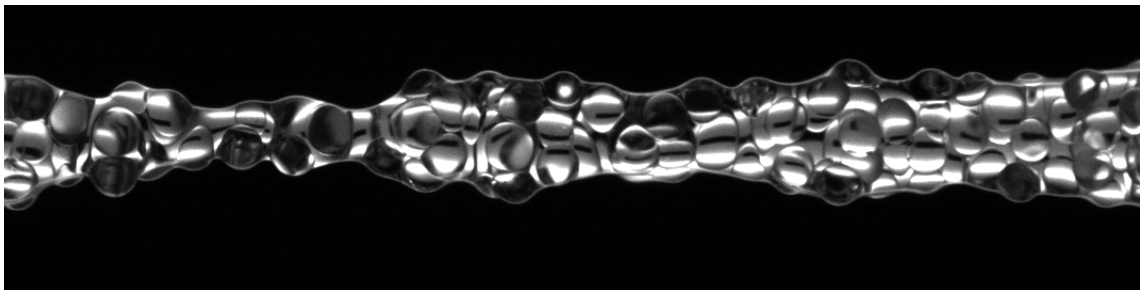
Post doctoral researcher position available

on *Suspension Jet Breakup*



How does a composite jet breaks?

Small liquid streams are shaped, destabilized and fragmented by capillarity. The physics is understood for most monophasic liquids, but many natural phenomena and human processes involve jets containing a granulated solid phase in suspension. This may be beneficial because it allows tuning the bulk properties of the jet and/or an efficient patterning of the particles, from which new interfacial, structural or hierarchical properties emerge. Concomitantly, the particles influence the jet dynamics by changing the rheology and introducing a new length scale. However, in spite of recent advances[1,2,3], the dynamics by which a dense suspension jet eventually breaks up are still not understood.

A 12+12 month post-doc position is opened at IUSTI Aix-Marseille Univ. to tackle this fundamental question. The research will build on experiments with model viscous suspensions to decipher the role of finite size effects and capillarity. A great deal of inventiveness will be required to design and set a series of elegant experimental setups allowing to isolate the physical mechanisms at play.

The project is funded by ANR. Candidates with a background in Physics, Fluid Mechanics or Soft Matter and a strong taste for both experiments and theoretical analysis are invited to apply (CV+letter of support).

Place	IUSTI, Aix-Marseille University
Dates	12+12 months, available now
Contact	Henri Lhuissier

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[1] Château, Guazzelli & Lhuissier, *J. Fluid. Mech.* **852** (2018)
[2] Château & Lhuissier, *Phys. Rev. Fluids* **4** (2019)
[3] Thievenaz & Sauret. *Proc. Natl. Acad. Sci.* **119** (2022)