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Poster: Ensheathed Falling Particle

Abdullah Abdal, Lyes Kahouadji, Debashis Panda, Seungwon Shin, Jalel Chergui, Damir Juric, Colm-Cille Caulfield, Omar Matar

► **To cite this version:**

Abdullah Abdal, Lyes Kahouadji, Debashis Panda, Seungwon Shin, Jalel Chergui, et al.. Poster: Ensheathed Falling Particle. 76th Annual Meeting of the APS Division of Fluid Dynamics, Nov 2023, Washington, United States. American Physical Society, 10.1103/APS.DFD.2023.GFM.P0042 . hal-04401573

HAL Id: hal-04401573

<https://hal.science/hal-04401573>

Submitted on 17 Jan 2024

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ENSHEATHED FALLING PARTICLE

Abdullah Abdal¹, Lyes Kahouadji¹, Debashis Panda¹,
Seungwon Shin², Jalel Chergui³, Damir Juric^{3,4},
Colm-Cille P. Caulfield⁴, Omar K. Matar¹

¹ Imperial College London, ² Hongik University, ³ CNRS-LISN,
⁴ University of Cambridge

We present three-dimensional Direct Numerical Simulations of a falling particle across an oil-water interface. An interfacial tail gradually forms past the particle, which is connected to the initial interface position.

Over time, the tail thins closer to the particle, which would cause the interface to pinch off and retract. The particle would then continue to settle, encapsulated by a layer of oil.

The presented color map depicts the vortical structures which arise due to the density and viscosity variations between the oil and the water phase.



Imperial College
London



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CAMBRIDGE