

Aliénor Rivière

PhD student at PMMH (ESPCI)

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Education

- 2021–2022 **PhD**, PMMH, ESPCI, Paris, *Bubble deformations and fragmentation in a turbulent flow*.
- 2019–2020 **M2**, Sorbonne Université, Paris, *Master of Fluid Mechanics (MF2A)*, rank 2.
- 2018–2019 **M1**, ENS Ulm, Paris, *Master of fundamental physic and applications*, with high honors (good).
- 2017–2018 **L3**, ENS Ulm, Paris, *Fundamental Physics (FIP)*, with high honors (good).
- 2015–2017 **Classe préparatoire aux grandes écoles**, Lycée Louis le Grand, Paris, *PCSI/PC*.
- 2015 **Baccalauréat S**, Lycée Louis le Grand, Paris, With highest honors.

Summer/Winter school

- 08/01/2023–08/15/2023 **Physics school of Les Houches**, *200 Years of Navier-Stokes and Turbulences*, Les Houches, France.
- 07/01/2022–07/31/2022 **Boulder School for Condensed Matter and Materials Physics**, *Hydrodynamics across scales*, Boulder, USA.

Conferences

- 10/2023 **GDR NS 2.0**, Rouen, France, Speaker, "Stochastic oscillations of bubbles in turbulence".
- 09/2023 **European Turbulence Conference**, Valencia, Spain, Speaker, "Stochastic deformations of bubbles in turbulence".
- 07/2023 **Basilisk (Gerris) Users' Meeting 2023**, Paris, France, Speaker, "Subcritical bubble break-up".
- 05/2023 **Euromech Colloquium 628, Complex Particles in Turbulent Flow**, Nice, France, Poster, "Bubble shape fluctuations in turbulence".
- 03/2023 **Rencontre du Non-linéaire (RNL)**, Paris, France, Selected speaker, "Bubble break-up is always sub-critical".
- 11/2022 **APS Division of Fluid Dynamics (APS DFD)**, Indianapolis, USA, Speaker, "Bubble oscillations in a uni-axial extensional flow".
- 09/2022 **European Fluid Mechanics Conference (EFMC)**, Athens, Greece, Speaker, "Investigation of the coupling between bubble interface deformations and flow velocity".
- 03/2022 **Rencontre du Non-linéaire (RNL)**, Paris, France, Poster, "Fragmentation capillaire de larges bulles en milieu turbulent" (Capillary fragmentation of large bubbles in turbulence).
- 11/2021 **APS Division of Fluid Dynamics (APS DFD)**, Phoenix, USA, Speaker, "Capillary fragmentation of large bubbles in turbulent flows".
- 10/2021 **Journée du GDR Micro et Nano Fluidique : Ondes, Fluides, Interface**, Lille, France, Speaker, "Fragmentation capillaire de larges bulles en milieu turbulent" (Capillary fragmentation of large bubbles in turbulence).
- 03/2021 **Rencontre du Non-linéaire (RNL)**, Paris, France, Poster, "Déformations d'une bulle par un écoulement turbulent" (Bubble deformations by a turbulent flow).
- 08/2020+1 **International Congress of Theoretical and Applied Mechanics (ICTAM)**, Online, Selected Speaker, "Bubble deformation by a turbulent background".

11/2020 **APS Division of Fluid Dynamics (APS DFD)**, *Online*, Speaker, "Sub-Hinze scale bubble production in turbulent bubble break-up".

06/2019 **Basilisk Meeting**, *Sorbonne Université, Paris, France*, Speaker, "Bubble break-ups in turbulence".

Publications

- A. Rivière, L. Duchemin, C. Josserand, and S. Perrard, "Bubble break-up reduced to a 1D non linear oscillator", *Phy. Rev. Fluids*, 2023
- D. J. Ruth, A. Ayier, A. Rivière, S. Perrard, and L. Deike, "Experimental observations and modelling of sub-Hinze bubble production by turbulent bubble break-up", *J. Fluid Mech.*, 2022.
- A. Rivière, D. J. Ruth, W. Mostert, L. Deike and S. Perrard, "Bubble fragmentation in turbulent flow", *Phy. Rev. Fluids*, 2022.
- S. Perrard, A. Rivière, W. Mostert, and L. Deike, "Bubble deformation by a turbulent flow", *J. Fluid Mech.*, 2021.
- A. Rivière, S. Perrard, W. Mostert, and L. Deike, "Sub-hinze scale bubble production in turbulent bubble break-up", *J. Fluid Mech.*, 2021.

Numerical skills

- Python
- C++
- Basilisk flow solver
- \LaTeX

Languages

French	Native
English	Fluent
Spanish	Intermediate