

Dr. Sébastien Gomé

Date of birth: 08/03/1996
Nationality: French

✉ E-mail: sebastien.gome@gmail.com
ORCID: 0000-0002-4423-6213

RESEARCH INTERESTS	Turbulence, Statistical Physics, Computational Physics, Geophysical flows, Laminar to Turbulent transition, Wave Turbulence, Perturbative Methods	
CURRENT POSITION	Post-doctoral researcher at the Technion - Israel Institute of Technology , (Dept. of Physics), in collaboration with Anna Frishman.	01/2023 – now
EDUCATION	Sorbonne Université , Paris (France) <ul style="list-style-type: none">– Ph.D. at the Laboratory of Physics and Mechanics of Heterogeneous Media (ESPCI Paris): “Transition to turbulence in shear flows”, supervised by Profs. Laurette S. Tuckerman & Dwight Barkley. ISAE-Supaero , Toulouse (France). <ul style="list-style-type: none">– M.Sc in Aerospace Engineering: Aerodynamics, simulations and modeling.– M.Sc in Fluid Dynamics, Energy and Transfers (Université Paul Sabatier)	2019–2022 2018–2019
	Ecole polytechnique , Palaiseau (France). <ul style="list-style-type: none">– <i>Diplôme d'Ingénieur</i> (M.Sc.) in Mechanical Engineering.	2015–2019
	Preparatory class , Lycée Saint-Louis, Paris (France). <ul style="list-style-type: none">– B.Sc.: Physics, Mathematics, Chemistry.	2013–2015
AWARDS	<ul style="list-style-type: none">– Euromech Young Scientist Prize 2025, received at the 2nd European Fluid Dynamics.– Runner-up in the JFM Emerging Scholar Best Paper Prize 2024 for paper n°5.	
PUBLICATIONS	<ul style="list-style-type: none">– S. Gomé & A. Frishman. “Helicity controls the direction of fluxes in rotating turbulence”, 2025. <i>ArXiv preprint</i> https://arxiv.org/pdf/2512.05253.pdf.– S. Gomé & A. Frishman. “Waves drive the rise and fall of 2D flows in rotating turbulence”, 2025. <i>ArXiv preprint</i>, https://arxiv.org/abs/2509.18323.pdf.– S. Gomé, A. Rivière, L. S. Tuckerman. “Phase Transition to Turbulence via Moving Fronts”. <i>Physical Review Letters</i>, 2024.– S. Gomé, L. S. Tuckerman, D. Barkley. “Wavelength selection in transitional shear turbulence. Part 1. Spectral analysis”. <i>Journal of Fluid Mechanics</i>, 2023– S. Gomé, L. S. Tuckerman, D. Barkley. “Wavelength selection in transitional shear turbulence Part 2: Emergence and optimal wavelength”. <i>Journal of Fluid Mechanics</i>, 2023.– S. Gomé, L. S. Tuckerman, D. Barkley. “Extreme events in transitional turbulence”. <i>Philosophical Transactions of the Royal Society</i>, 2022.– S. Gomé, L. S. Tuckerman, D. Barkley. “Statistical transition to turbulence in plane channel flow”. <i>Physical Review Fluids</i>, 2020.	
TEACHING	Teaching Assistant at Sorbonne Université (Dept. of Mechanics): <ul style="list-style-type: none">– <i>Mathematical and numerical methods for Mechanics</i>, for 2nd and 3rd year Undergraduates;– <i>Fluid Mechanics</i> (including the supervision of experimental projects) for 2nd and 3rd year Undergraduates.	
SCHOOLS	<ul style="list-style-type: none">– CIRM 2025 (Marseille): “Physics and Mathematics of Hydrodynamic and Wave turbulence”– Les Houches 2023, “200 years of Navier-Stokes and turbulences”– Boulder 2022, “Hydrodynamics across scales”	