

Date of birth: 08/03/1996  
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RESEARCH INTERESTS	Fluid dynamics, turbulence, statistical mechanics, computational physics, geophysical flows	
CURRENT POSITION	Post-doctoral researcher at the <b>Technion - Israel Institute of Technology</b> , 01/2023 – now (Dept. of Physics), in collaboration with <b>Anna Frishman</b> . Subject: “Mean-wave interactions in rotating turbulence”.	
EDUCATION	<b>Sorbonne Université</b> , Paris (France)	2019–2022
	– Ph.D. in Fluid Mechanics at the Laboratory of Physics and Mechanics of Heterogeneous Media (ESPCI Paris): “Transition to turbulence in shear flows”, under the supervision of Prof. Laurette S. Tuckerman & Prof. Dwight Barkley.	
	<b>ISAE-Supaero</b> , Toulouse (France).	2018–2019
	– Master in Engineering: Aerodynamics, simulations and modeling. – MSc in Fluid Dynamics, Energy and Transfers (Université Paul Sabatier)	
	<b>Ecole polytechnique</b> , Palaiseau (France).	2015–2019
	– <i>Diplôme d'Ingénieur</i> (MSc) in Mechanical Engineering. – Research project at EPFL (Switzerland) in 2018: “Impact of wetting conditions on the Faraday instability” (Supervisor: François Gallaire).	
	<b>Preparatory class</b> , Lycée Saint-Louis, Paris (France).	2013–2015
	– BSc: Physics, Mathematics, Chemistry.	
TEACHING	<b>Teaching Assistant</b> at Sorbonne Université (Dept. of Mechanics): – <i>Mathematical and numerical methods for mechanics</i> , for 2 <sup>nd</sup> and 3 <sup>rd</sup> year Undergraduates; – <i>Fluid Mechanics</i> (including the supervision of experimental projects) for 2nd and 3rd year Undergraduates.	
AWARDS	– <b>Euromech Young Scientist Prize 2025</b> , received at the 2 <sup>nd</sup> European Fluid Dynamics Conference for the best oral presentation given by an attendee under the age of 35. – <b>Runner-up</b> in the <b>JFM Emerging Scholar Best Paper Prize 2024</b> for paper n°5.	
PUBLICATIONS	1. S. Gomé & A. Frishman. “Helicity controls the direction of fluxes in rotating turbulence”. <i>submitted to Physical Review Letters</i> , 2025. 2. S. Gomé & A. Frishman. “Waves drive the rise and fall of 2D flows in rotating turbulence”. <i>manuscript under revision, Physical Review X</i> , 2024. 3. S. Gomé, A. Rivière, L. S. Tuckerman. “Phase Transition to Turbulence via Moving Fronts”. <i>Physical Review Letters</i> , 2024. (Editor’s suggestion) 4. S. Gomé, L. S. Tuckerman, D. Barkley. “Wavelength selection in transitional shear turbulence. Part 1. Spectral analysis”. <i>Journal of Fluid Mechanics</i> , 2023 5. 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. (JFM Emerging Scholar Best Paper Prize – Runner up Honorable Mention) 6. S. Gomé, L. S. Tuckerman, D. Barkley. “Extreme events in transitional turbulence”. <i>Philosophical Transactions of the Royal Society</i> , 2022. 7. S. Gomé, L. S. Tuckerman, D. Barkley. “Statistical transition to turbulence in plane channel flow”. <i>Physical Review Fluids</i> , 2020. (Editor’s suggestion)	

SCHOOLS	<ul style="list-style-type: none"> <li>– CIRM 2025 (Marseille): “Physics and Mathematics of Hydrodynamic and Wave turbulence”</li> <li>– Les Houches 2023, “200 years of Navier-Stokes and turbulences”</li> <li>– Boulder 2022, “Hydrodynamics across scales”</li> </ul>
CONFERENCES	<ol style="list-style-type: none"> <li>1. 2nd European Fluid Dynamics Conference (2025, Dublin, Ireland): ”Rotating turbulence: 2D or not 2D?”</li> <li>2. 70th Annual Meeting of the Israel Physics Society (2025): ”Rotating turbulence: 2D or not 2D”</li> <li>3. 1st European Fluid Dynamics Conference (2024, Aachen, Germany): ”Condensate formation in 3D rotating turbulence”</li> <li>4. European Turbulence Conference 2023 (Valencia, Spain): ”Mechanism for turbulent proliferation in planar shear flows”</li> <li>5. European Turbulence Conference 2023 (Valencia, Spain): ”Transition to turbulence without large-scale flow”</li> <li>6. European Fluid Mechanics Conference 2022 (Athens, Greece): ”Mean flow and patterns in transitional turbulence”</li> <li>7. Rencontres du Non-Lineaire 2022 (Paris, France): ”Wavelength selection in transitional shear flows”</li> <li>8. APS-DFD 2021 (Phoenix, USA): ”Wavelength selection of turbulent bands in transitional turbulence”</li> <li>9. ICTAM 2020+1 (online): ”Decay and splitting pathways in transitional channel flow”</li> <li>10. APS - March Meeting 2021 (online): ”Rare events and the transition to turbulence in channel flow” (participant)</li> <li>11. APS - DFD 2020 (online): ”Rare events and the transition to turbulence in channel flow”</li> <li>12. European Turbulence Conference 2019 (Torino, Italy) . ”Transition to turbulence in plane channel flow”.</li> </ol>
INVITED SEMINARS	<ol style="list-style-type: none"> <li>1. Institut de Physique de Nice, 08/12/2025, ”Self-organized turbulence: from shear flows to wave systems”</li> <li>2. Ecole polytechnique, 03/2025, ”Rotating turbulence: 2D or not 2D?”</li> <li>3. University of Sheffield (UK), 11/23/2022, ”Transition to turbulence in planar shear flows”</li> <li>4. University of Leeds (UK), 11/21/2022, ”Transition to turbulence in planar shear flows”</li> <li>5. Johns Hopkins University, Baltimore (USA), 11/30/2021, ”Extreme events in transitional shear flows”</li> <li>6. École Normale Supérieure, Paris, 11/16/2021, ”Extreme events in transitional shear flows”</li> <li>7. Imperial College, London (UK), 06/25/2021, ”Rare events in transitional shear flows”</li> <li>8. Simons Foundation (turbulence and statistical physics group) : ”Rare-event algorithm applied to transition to turbulence.”</li> </ol>
REVIEWING	<b>Referee</b> for the Journal of Fluid Mechanics
TECHNICAL SKILLS	<ul style="list-style-type: none"> <li>• <i>Programming Languages:</i> C/C++, Fortran, Python, Matlab</li> </ul>
MISCELLANEOUS	<ul style="list-style-type: none"> <li>• Music: playing the viola for 20 years (Regional Conservatory of Paris)</li> <li>• Vice-President of the university orchestra of Ecole Polytechnique and Paris-Saclay University (2016-2017)</li> <li>• 7-month experience as police trainee lieutenant during my studies at Ecole polytechnique (2015-2016)</li> </ul>