

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 Technion - Israel Institute of Technology , 01/2023 – now (Dept. of Physics), in collaboration with Anna Frishman . Subject: “Mean-wave interactions in rotating turbulence”. |
| EDUCATION | <p>Sorbonne Université, Paris (France) 2019–2022</p> <ul style="list-style-type: none"> – 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. <p>ISAE-Supaero, Toulouse (France). 2018–2019</p> <ul style="list-style-type: none"> – Master in Engineering: Aerodynamics, simulations and modeling. – MSc in Fluid Dynamics, Energy and Transfers (Université Paul Sabatier) <p>Ecole polytechnique, Palaiseau (France). 2015–2019</p> <ul style="list-style-type: none"> – <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). <p>Preparatory class, Lycée Saint-Louis, Paris (France). 2013–2015</p> <ul style="list-style-type: none"> – BSc: Physics, Mathematics, Chemistry. |
| TEACHING | <p>Teaching Assistant at Sorbonne Université (Dept. of Mechanics):</p> <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. |
| AWARDS | <ul style="list-style-type: none"> – Euromech Young Scientist Prize 2025, received at the 2nd European Fluid Dynamics Conference for the best oral presentation given by an attendee under the age of 35. – Runner-up in the JFM Emerging Scholar Best Paper Prize 2024 for paper n°5. |
| PUBLICATIONS | <ol style="list-style-type: none"> 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) |

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