

Curriculum Vitae

Benjamin Melinand

Associate professor

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Born in October 24 1989

University of Strasbourg, IRMA

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Research

Themes Fluid mechanics : Modeling and evolutionary PDEs

Present position Associate professor at Strasbourg University, IRMA

Recent talks

KIT seminar (July 2025)

SMF Congress (June 2025)

Orsay seminar (March 2025)

Bordeaux seminar (February 2025)

ANR HEAD starting conference (February 2025)

Mathematics of fluids in motion (CIRM, November 2024)

Equadiff 2024 (Karlstad, June 2024)

Recent responsibilities

- Co-organizer of the MATH.en.JEANS Grand Est congress, Strasbourg May 2026
- Co-organizer "End of CRISIS" conference, CIRM October 2025
- Member of the hiring associated professor comitee at Tours University, 2025
- Co-organizer of the analysis seminar, IRMA, from September 2024

Recent students supervision

2025-	PhD, A. Marissaël : "Schrödinger type asymptotic model for water waves" (with R. Côte)
April-August 2025	M2 Internship, A. Marissaël : "Water waves and around" (with R. Côte)
2024-2025	Undergrad internship, P. Roulier : "Topology on space of functions"
2024-2025	Undergrad internship, T. Delarue : "Analytic function of a matrix"

Publications

Submitted

- Phase sinks and sources around two-dimensional periodic solutions of reaction-diffusion-advection systems (avec M. Rodrigues) *arXiv :2408.14869*

Accepted papers

- Rigid lid limit in shallow water over a flat bottom
Stud. Appl. Math, 153, 2024
- Rectification of a deep water model for surface gravity waves (avec Vincent Dûchene)
Pure and Applied Analysis, 15, 2024, 73-128
- Dispersive estimates for nonhomogeneous radial phases : an application to weakly dispersive equations and water wave models, *J. Funct. Anal*, 286, 2024
- Existence and stability of steady noncharacteristic solutions on a finite interval of the full compressible Navier-Stokes equations (avec B. Barker, K. Zumbrun), *Confluentes Mathematici*, 15, 2023, 1-26
- Existence and stability of steady compressible Navier-Stokes solutions on a finite interval with noncharacteristic boundary conditions (avec K. Zumbrun), *Physica D*, 394, 2019, 16-25
- The KP approximation under a weak Coriolis forcing
Journal of mathematical fluid mechanics, 20(3), 2018, 1229-1247
- A splitting method for deep water with bathymetry (avec A. Bouharguane)
IMA Journal of Numerical Analysis, 38(3), 2017, 1324-1350
- A Long wave approximation for water waves under a Coriolis forcing and the Ostrovsky equation, *Proc. Roy. Soc. of Edin. Sect. A*, 148(6), 2018, 1201-1237
- Coriolis effect on water waves, *ESAIM :M2AN* 51(5), 2017, 1957-1985
- A mathematical study of meteo and landslide tsunamis : The Proudman resonance, *Nonlinearity*, 28, 2015, 4037-4080

Proceeding

- Parametric study of the accuracy of an approximate solution for the mild-slope equation, *SYNASC2017*, avec Quemar P., Audusse E., Lafitte O, Leroy A. et Pham C.T.

Education

2016 - 2025	Associated professor, Paris Dauphine PSL university
2016 - 2018	Zorn Postdoctoral Fellow, Indiana University, under the mentorship of Kevin Zumbrun
2014 - 2016	Ph.D., under the supervision of David Lannes, IMB. Defended on 06/28/2016
2010 - 2014	Student of the École Normale Supérieure of Rennes
2013 - 2014	Research internship under the supervision of David Lannes
2013	Agrégation in Mathematics (highly competitive French state exam for the recruitment of high school and preparatory classes to the grandes écoles classes teachers). Rank : 27
2011 - 2013	M.Sc. in Analysis and partial differential equations, summa cum laude, ENS Rennes
2010 - 2012	B.Sc. in Physics, summa cum laude. University of Rennes
2010 - 2011	B.Sc. in Mathematics, summa cum laude. École Normale Supérieure of Rennes