

CV de David GERARD-VARET

PERSONAL DATA

DATE OF BIRTH: December 26, 1977
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WORK EXPERIENCE

2009- | Professor of Mathematics, Université Paris Cité (formerly Paris Diderot).
Member of *Institut de Mathématiques de Jussieu - Paris Rive Gauche*.

2017- | Part-time professor, Ecole Polytechnique.

2004-2009 | Junior CNRS Researcher, Ecole Normale Supérieure.
Member of *Département de Mathématiques et Applications*.

2006-2007 | Courant Instructor, Courant Institute of Mathematical Sciences, NYU.

EDUCATION

Nov. 2008 | Habilitation à diriger des recherches (accreditation to supervise research),
University Paris 6.

2000-2003 | PhD in Mathematics (supervisor E. Grenier), ENS Lyon.

1999-2000 | Agrégation de Mathématiques
(french national competition for teaching in high school).
Master degree in Numerical analysis and PDE, ENS Lyon.

1997-1999 | Undergraduate studies in Mathematics, ENS Lyon.

DISTINCTIONS

ICL-CNRS fellowship 2022.
Junior member, Institut Universitaire de France, 2016-2021.
ANR grant SingFlows 2019.
Prize *La Recherche* 2009 (with D. Bresch, B. Desjardins, E. Dormy, E. Grenier).
ANR grant RUGO, January 2009-April 2012.
Bonus Quality Research from Ecole Normale Supérieure, 2005.
Recipient of PhD and Research Supervising Bonus
(*Prime d'encadrement doctoral et de recherche*) since October 2010.

PUBLICATIONS

65 papers in peer-reviewed journals, 30 over the last 10 years (preprints available [here](#)).
10 proceedings.

Current research themes : effective models for fluid/particle systems, synchronization phenomena, hydrodynamic stability, boundary layers.

Selected publications:

- On the Ill-posedness of Prandtl Equation (with E. Dormy),
J. Amer. Math. Soc., 23, 591-609 (2010).

- Homogenization and Boundary Layers (with N. Masmoudi), *Acta Math.*, 209, 133-178 (2012).
- Landau damping to partially locked states in the Kuramoto model (with H. Dietert and B. Fernandez), *Comm. Pure Appl. Math.* 71, 953-993 (2018).
- Gevrey stability of Prandtl expansions for 2d Navier-Stokes flows (with Y. Maekawa and N. Masmoudi), *Duke Math. J.* 167, 2531-2631 (2018).
- Orientation mixing in active suspensions (with M. Coti Zelati and H. Dietert), *Annals of PDE* 9, paper 20 (2023).

CONFERENCES

Invited to 56 international conferences or workshops since 2015.

Co-organizer of 10 conferences or mini-symposia since 2015.

SUPERVISION

PHD

Marcel Sagbo Zodzi, 2021-2025 (supervised with C. Burtea).
 Alexandre Girodroux-Lavigne, 2020-2023.
 Marco Prestipino, 2013-2018. Now Highschool Teacher.
 Christophe Prange, 2010-2013. Now Professor at Université de Cergy-Pontoise.
 Ismaël Bouya, 2009-2013 (supervised with E. Dormy). Now Programmer in an Internet firm.

POSTDOCS

Maria Eugenia Martinez, 2021. Now Assistant Pr., University of Chile.
 Richard Höfer, 2021-2022. Now Associate Pr., University of Regensburg.
 Amina Mecherbet, 2019-2020. Now *Maîtresse de conférences*, Université Paris Cité.
 Helge Dietert, 2016-2018. Now junior CNRS researcher.
 Aneta Wroblewska-Kaminska, 2013-2014. Now Assistant Pr., Polish Academy of Sciences.
 Chao Wang, 2012- 2013. Now Associate Pr., PKU.

DUTIES

EDITORIAL BOARDS

Member of the editorial boards of *Analysis and PDE*, *Asymptotic Analysis*, *ESAIM Proc.*, *Journal de l'Institut de Mathématiques de Jussieu*, and *Journal of Mathematical Fluid Mechanics*.

MAIN UNIVERSITY DUTIES

Vice-director of the Mathematics Department of Université Paris Cité, 2022-2024.
 Coordinator of the Master *Mathématiques et Applications*, Paris Diderot (from Dec. 2015).
 Coordinator of Master 2 *Mathématiques Générales*, Paris Diderot (2011-2015).
 Full member of the Scientific Board of the Maths Department of Paris Diderot (2010- 2014).
 Alternate member since September 2014.
 President of two hiring committees, for full professors and assistant professor positions in Paris Diderot (2012 and 2015).

SCIENCE POPULARIZATION

Micro-Conference [De la tasse de thé aux océans](#), September 2025.

Article *Mathématiques Marines* (with D. Bresch and B. Desjardins), Magazine La Recherche, March 2005.

Conference at the Palais de la Découverte: *Mathématiques, Asymptotique et Fluides Géophysiques*, February 2010.

Facettes Mathématiques de la Mécanique des Fluides, series of talks intended to Classes préparatoires (together with J.-Y. Chemin et I. Gallagher), June 2010.