Grégoire NADIN

CNRS researcher

since 2009
Laboratoire Jacques-Louis Lions
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Born on October 16, 1982, French nationality, civil union, two children born in 2013 and 2016

Education

2018	Habilitation to supervise research, defended on June 28, 2018.
2006-2008	Thesis under the direction of Henri Berestycki (EHESS Paris) and François Hamel (université Aix-Marseille III) at the Département de mathématiques et applications of ENS Paris, defended on November 28, 2008.
2004-2006	Master 2 of Mathematics and applications, university Pierre et Marie Curie, Paris.
2003-2007	Student at Ecole Normale Supérieure de Paris.

Research interests

Reaction-diffusion equations and propagation phenomena in heterogeneous media.

Shape and eigenvalues optimization in PDEs

Mathematical modeling in life sciences and ecology

Appels à projets

2016–2020	Analyse and simulation of optimal shapes, application to life sciences, call for proposal Emergence(s), Paris City hall (PI : Y. Privat, UPMC)
2015-2018	Modeling innovative control methods for dengue fever, CAPES- Cofecub, Fiocruz (PI : B. Perthame, UPMC)
2015-2019	ANR Nonlocal (PI : F. Hamel, Univ. Aix Marseille)
2013-2018	ERC Readi (PI : H. Berestycki, EHESS)
2008-2012	ANR Preferred (PI : J.-M. Roquejoffre, Univ. Toulouse III)

Selected publications

- *G. Nadin, Optimization of the L1 norm of the solution of a Fisher-KPP equations in the small diffusivity regime, to appear in Proc. Am. Math. Soc.*
- *H. Berestycki, G. Nadin. Asymptotic spreading for general heterogeneous equations, Mem. AMS,* ***280(1381)****, 2022*
- *G. Nadin, E. Ogier-Denis, A. I. Toledo Marrero, H. Zaag. A Turing mechanism in order to explain the patchy nature of Crohn's disease. J. Math. Biology, Vol* ***83(2)*** *(2021).*
- *G. Nadin, L. Rossi. Generalized transition fronts for one-dimensional almost periodic Fisher-KPP equations, Arch. Rat. Mec. Anal.* ***223(3)*** *(2017), 1239–1267.*
- *E. Bouin, V. Calvez, G. Nadin. Front propagation in a kinetic reaction-transport equation, Arch. Ration. Mech. Anal.* ***217*** *(2015), no. 2, 571–617*

Supervision of students and post-docs

2017-2021	A. Toledo (PhD, with H. Zaag), position in a start-up since September 2021
2016-2020	I. Mazari (PhD, with Y. Privat), assistant prof. at univ. Paris Dauphine since sept. 2021
2017-2019	C. Carrère (post-doc, with C. Clairambault), assistant prof. at Orléans since sept. 2020
2015-2018	L. Girardin (PhD, with V. Calvez), CNRS researcher at Lyon since sept. 2020

Teaching

2023, 2018, 2010-15	M2 course *« Équations de Reaction-diffusion et dynamique des populations »* (12 heures), University Paris 6
2014	L3 course *« Modélisation des phénomènes de la nature »* (6 heures), ENS Cachan.
2011-2014	Jury for the BCPST entrance exam to the Ecole Normale Supérieure
2007-2009	Assistant professor (agrégé préparateur) at the Département de mathématiques et applications, ENS Paris.