

Jiao HE

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Education

2019-present, University of Evry & Paris-Saclay, Paris, France

Post-doc Researcher funded by the Programme Sophie Germain of FMJH.

2016-2019, Claude Bernard University Lyon 1, Villeurbanne, France

Date of defense : 20 September, 2019

Thesis title : Motion of a small rigid body in an incompressible viscous fluid, convection problems and dynamics of falling films.

Advisors : Dragoş IFTIMIE (Lyon 1, ICJ), Lorenzo BRANDOLESE (Lyon 1, ICJ).

2015-2016, University of Picardie Jules Verne, Amiens, France

M2, AAM (Applied Analysis and Modelisation), UFR Sciences

Feb-June 2016, Thesis of master 2 supervised by Mr. Youcef MAMMERI.

Theme: The deterministic and stochastic behavior of fractional Benjamin-Bona-Mahony equation and their numerical methods.

2010-2015, Central China Normal University, Wuhan, China

B.S. and M1 in Mathematics.

Short-term research experiences

15 July- 23 August 2019 Centre International de Rencontres Mathématiques, Marseille

Geophysical Fluids, Gravity Flows (CEMRACS19)

3 - 31 May 2019 Shanghai Jiaotong University (China). Invited by Chengjie Liu.

13 -17 January 2019 Cantabria University (Spain). Invited by Rafael Granero-Belinchón .

Publications

Accepted articles

[1] Jiao He and Dragoş Iftimie. Small moving rigid body into a 3D incompressible viscous fluid (Journal of the London Mathematical Society, 2020)

[2] Diego Chamorro and Jiao He. On the partial regularity theory for the MHD equations. Journal of Mathematical Analysis and Applications 2020).

[3] Jiao He and Dragoş Iftimie. A small solid body with large density in a planar fluid is negligible (Journal of Dynamics and Differential Equations, 2019).

[4] Lorenzo Brandolese and Jiao He. Uniqueness theorems for the Boussinesq system (Tohoku Mathematical Journal, 2019).

[5] Jiao He and Youcef Mammeri. Remark on the well-posedness of weakly dispersive equations (ESAIM: Proceeding and surveys, 2018)

Submitted articles

[1] Rafael Granero-Belinchón and Jiao He. On the dynamics of 3D electrified falling films.

[2] Diego Chamorro, Fernando Cortez, Jiao He and Oscar Jarrín. On the local regularity theory for the MHD equations

[3] Edoardo Bocchi, Jiao He and Gaston Vergara. Wave-structure interactions.

[4] Diego Chamorro and Jiao He. Regularity theory for the dissipative solutions of the MHD equations

Scientific communications

Talks

01/12/2020 - (Séminaire vidéo, upcoming) Séminaire of ACSIOM, University of Montpellier

09/07/2020 - (Séminaire vidéo) Analysis & PDE Working Seminar, University of Minnesota, USA

22/05/2020 - (Séminaire vidéo) Mathematics of Planet Earth Webinars: Analysis and Modelling

21/05/2020 - (séminaire vidéo) PhD seminar, Université Paris-sud, Orsay

02/03/2020 - Analysis seminar, Picardie Jules Verne University, Amiens

25/02/2020 - Analysis and PDE seminar, Bordeaux University, Bordeaux

09/08/2019, Summer school on geophysical Fluids and Gravity Flows, CIRM, Marseille (CEMRACS19)

19/01/2019, Analysis and PDE seminar, Savoie Mont Blanc University, Chambéry

19/10/2018 - PhD seminar, Institut Fourier, Grenoble Alpes University

14/05/2018 - Colloque Inter'Actions en Mathématiques, Claude Bernard University Lyon 1

23/04/2018 - PhD seminar, ENS de Lyon

03/04/2018 - Analysis and PDE Seminar, Claude Bernard University Lyon 1

Poster

20-22/03/2017, Young researcher PDE days 207, Savoie Mont-Blanc University, Autrans, France

Conferences

03-07/06/2019, Partial differential equations days 2019, Obernai, Alsace

25-29/03/2019, Celebrating Jean-Yves Chemin's 60th birthday, Paris

08-09/11/2018, Rhône-Alpes PDE days, Institut Fourier, Grenoble

27-31/08/2018, 14th Franco-Roumain colloque in applied mathematics, Bordeaux

11-15/06/2018, Partial differential equations days 2018, Obernai, Alsace

21-23/03/2018, Young researcher PDE days 2018, Nancy

05-09/06/2017, Partial differential equations days 2017, Roscoff, France

09-10/03/2017, Conference : "Theory of the incompressible Navier-Stokes system and related topics", Calais

10-21/03/2016, Spring school in hyperbolic system and conservation laws, Amiens

Teaching Experience

Sep 2020 - Dec 2020, 33h TD in basic mathematical, University of Evry & Paris Saclay

Tutorials on basic mathematical techniques for 1st year undergraduates in Eco-Maths.

Oct 2018 - Sept 2019, 64h TD in basic mathematical II, Claude Bernard University Lyon 1.

Tutorials on basic mathematical techniques for 1st year undergraduates in Maths-Info.

Spring 2018, 24h "Khôlles" in basic mathematical II, Claude Bernard University Lyon 1.

Oral assessments for 1st year undergraduates in mathematics.

Automne 2014, Central China Normal University, Wuhan (China).

Assistante in analysis Mathematics for 1st year undergraduates in mathematics.

Awards

Oct 2019 - Sep 2021, Post-docoral funding of Sophie Germain program of FMJH.

Languages

Chinese: **Mother tongue**

French: **Fluent**

English: **Fluent**

Computer skills

Programming: Python, Matlab, Scilab, R, Maple

Os: Linux, MS Windows

Office: LATEX, MS Office