

# Curriculum Vitae

## Professional experience

- Since 2017 Associate professor at École Centrale de Lyon.  
2016 – 2017 Postdoc position at UMPA (ENS Lyon) under the direction of Vincent Calvez.

## Formation

- 2013 – 2016 PhD in mathematics at the university of Rennes 1 under the direction of Nicolas Crouseilles and Mohammed Lemou on the subject *mathematical and numerical study of some kinetic models and of their asymptotic : diffusion and anomalous diffusion limits*.  
2012 French *Agrégation de mathématiques* with rank 8.  
2009 – 2013 Study as a trainee civil servant at the ENS Cachan - Brittany extension (normalienne).

## Prizes and distinctions

- 2017 2nd Rennes 1 foundation PhD prize for the doctoral school MATISSE.

## Submitted works

- 2017 • H. Hivert. “An asymptotic preserving scheme for front propagation in a kinetic reaction-transport equation”. In: *hal-01522278* (2017).

## Accepted or published works

- 2018 • H. Hivert. “Numerical schemes for kinetic equation with diffusion limit and anomalous time scale”. In: *Kinet. Relat. Models* 11.2 (2018), pp. 409–439.  
2016 • Bondesan, A. et al. “Study of a Depressurisation Process at Low Mach number in a nuclear reactor core”. In: *ESAIM: ProcS* 55 (2016), pp. 41–60 (Proceeding CEMRACS 2015).  
• N. Crouseilles, H. Hivert, and M. Lemou. “Numerical Schemes for Kinetic Equations in the Anomalous Diffusion Limit. Part II: Degenerate Collision Frequency”. In: *SIAM J. Sc. Comput.* 38.4 (2016), A2464–A2491.  
• N. Crouseilles, H. Hivert, and M. Lemou. “Numerical Schemes for Kinetic Equations in the Anomalous Diffusion Limit. Part I: The Case of Heavy-Tailed Equilibrium”. In: *SIAM, J. Sc. Comput.* 38.2 (2016), A737–A764.  
2015 • N. Crouseilles, H. Hivert, and M. Lemou. “Multiscale numerical schemes for kinetic equations in the anomalous diffusion limit”. In: *C. R. Math. Acad. Sci. Paris* 353.8 (2015), pp. 755–760.

## Administration

- 2016 • Part of the scientific committee of the Centre Henri Lebesgue.  
2015 • Co-organization of the young researchers’ seminary in analysis of Rennes (2015 – 2016).  
• Part of the organizing committee of the Young french math applied meeting 2015 (Saint Brévin, March 30th- April 1st).

## Teaching experience

- Since 2017 • Teaching in École Centrale de Lyon.  
2016 – 2017 • Teaching assistant at ENS Lyon for teaching in the preparatory class for the agrégation.  
• Oral examinations (colles) in preparatory class BCPST2 at Lycée La Martinière Monplaisir (Lyon).  
2013 – 2016 • Teaching assistant at ENS Rennes for numerical analysis practicals, teaching in the preparatory class for the agrégation and tutorials of Lebesgue integration.

- (2015) Participation to MathC2+ in the ENS Rennes (short mathematics traineeships for undergraduate students).

- 2012 – 2013
- Teaching assistant in the graduate school of engineering INSA (Rennes, France) for numerical analysis practicals and tutorial classes in differential geometry.
  - Oral examinations (colles) in preparatory class MP\* at Lycée Chateaubriand (Rennes).

## Talks, conferences and traineeships

- 2018
- Seminars and talks: Orsay, ANR Achylles closure conference (Bordeaux), Laboratoire Paul Painlevé (Lille), Laboratoire J. A. Dieudonné (Nice), CANUM 2018.
  - Co-organization of a mini-symposium in the CANUM 2018.
  - 3-weeks research stay at UBC (Vancouver).
- 2017
- Participation in the project *Aggregation of stochastic equations* proposed by F. Delarue, T. Goudon, F. Lagoutière and N. Vauchelet in the CEMRACS 2017 (*coming*).
  - Seminars and talks: LJK (Grenoble), mini-symposium *Recent development on fractional diffusion equation: analysis and computation* at SIAM 2017 (Pittsburgh, Pennsylvania, USA), Journées Jeunes EDP-istes français 2017 (Autrans, Isère), I2M (Marseille), MAP5 (Paris), LJLL (Paris), SMAI 2017 (La Tremblade, Charente-Maritime), spring school KINEMA 2017 (Cargèse).
  - Talk at the GAPDE seminary (Cambridge - UK) and 1-week stay.
- 2016
- Seminars and talks: JERAA 2016 (Grenoble), young researchers' seminary in Strasbourg and Metz, CANUM 2016, Journées Louis Antoine XIV (Rennes, about the Poincaré-Bendixson theorem), Journées Rennes-Nantes d'analyse 2016 (Rennes), CELIA (Bordeaux)
  - Participation to the poster session of the summer school *Methods and models of kinetic theory* (Porto Ercole).
  - Participation to the poster session of the workshop *Modeling and numerical methods for hot plasmas II* (Bordeaux).
- 2015
- Participation to the CEMRACS 2015. This event is organized every summer by the SMAI and brings together young researchers in numerical analysis to work on research projects during 6 weeks. I worked in the project proposed by Stéphane Dellacherie, Gloria Faccanoni, Bérénice Grec, Jonathan Jung and Yohan Penel about the study of a depressurisation process at low mach number in a nuclear reactor core. It is integrated in the activities of the research group CDMath.
  - Talk in the SMAI congress 2015.

## Interests

- Arts
- Organization of the interENS culturelles 2011, this event brings together the students of the four french ENS for cultural activities.
  - Amateur dramatics (mise en scène and acting).
  - Direction of La Compagnie Vert, a drama-club for students in Rennes created in 2010.
  - Accordion playing.
- Sports
- Horsesriding.
- Informatics
- Use of Matlab, Scilab and Maple, knowledge of C++, Fortran and FreeFem++.
- Languages
- French (native).
  - English (fluent) **TOEIC** : 945/990.
  - German (basic).