



Claudia Fonte

Postdoctoral fellow,
Applied mathematics



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About Me

I am a mathematician interested in partial differential equations, stochastic differential equations and their applications to biology.

Languages



Spanish



English



French



Computational Skills



Python



Matlab



Julia

Work experience

Since 2023

Postdoc fellow

Université Grenoble Alpes and INRIA Grenoble, France

Title: *Individual-based modelling and inference of heterogeneous growth and gene expression dynamics.*

Advisor Prof. Dr. Adeline Leclercq Samson (adeline.leclercq-samson@univ-grenoble-alpes.fr) and Aline Marguet (aline.marguet@inria.fr)

2019–2023

PhD candidate

Paris Dauphine–PSL University, France

Title: *Constructive and asymptotic estimates for the solutions of some linear and nonlinear PDEs.*

Advisor Prof. Dr. Stephane Mischler (mischler@ceremade.dauphine.fr)

2017 – 2018

Junior Professor

Havana University

Education

2019–2023

PhD fellow

Paris Dauphine–PSL University, France

Title: *Constructive and asymptotic estimates for the solutions of some linear and nonlinear PDEs.*

Advisor Prof. Dr. Stephane Mischler (mischler@ceremade.dauphine.fr)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 754362.

2018 – 2019

Master 2 "Mathématiques et applications"

Paris Dauphine–PSL University

Focus: Analysis of partial differential equations, numerical analysis and mathematical modeling

Master Thesis

Paris Dauphine–PSL University

Title: *Fitz-Hugh Nagumo Model. Emergence of Oscillatory Behaviors in Networks of Neurons Considering Noise and Mean-Field Interaction.*

Advisor Prof. Dr. Stephane Mischler

2013 – 2017

Bachelor in Mathematics

Havana University, Cuba

BSc Thesis: *About the Structure of the Wiener-Walsh Algebra*

Advisor Prof. Dr. Carlos Sanchez

Teaching Experience

2021 – 2022

Teaching assistant

Paris Dauphine–PSL University

Probability

2017 – 2018

Junior Professor

Havana University

Complex Variable Analysis and Topology for third year students of the bachelor's degree in mathematics

Course/seminar on mathematical problems

2015 – 2017

Student teaching assistant

Havana University

Analysis I and II, linear algebra

10/2024

Mini-course *Introduction to mathematical modeling for biology.*

Havana University

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Publications and Preprints

2022	Long time behavior of an age and leaky memory-structured neuronal population equation <i>Fonte, C., Schmutz, V.</i> SIAM Journal on Mathematical Analysis, vol. 54, no 4, p. 4721-4756.
2025	Statistical estimation of a mean-field Fitzhugh-Nagumo model <i>Fonte, C. and Hoffmann, M.</i> Preprint
2024	On the voltage conductance kinetic equation <i>Fonte, C., Mischler, S.,</i> Preprint
2023	On the Krein-Rutman theorem and beyond <i>Fonte, C. and Gabriel, P. and Mischler, S.</i> Preprint
2019	Mixture survival models methodology: an application to cancer immunotherapy assessment in clinical trials <i>Sanchez, L., Lorenzo-Luaces, P., Fonte, C., Lage, A.</i> Preprint

In preparation

2024	Estimation of protein cell dynamics from population distribution data. <i>Fonte, C., Marguet, A., Samsom, A.</i>
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Scientific Presentations

01/ 2025	Invited speaker. Talk "<i>On the Asymptotic Behavior of Weakly Connected Neuronal Networks</i>" Séminaire d'Analyse	Tours, France
11/ 2024	Invited speaker. Talk "<i>On the Asymptotic Behavior of Weakly Connected Neuronal Networks</i>" Séminaire Modélisation, Analyse et Calcul	Toulouse, France
11/ 2024	Invited speaker. Talk "<i>Modeling the relationship between cell growth and gene expression.</i>" Séminaire group Merge, Center for Applied Mathematics – Ecole Polytechnique	Palaiseau, France
09/ 2024	Invited speaker. Talk "<i>On the consequences of Krein-Rutman theorem for Growth-Fragmentation equations</i>" Non-local branching processes conference	Marseille, France
07/ 2024	Invited speaker. Talk "<i>On the voltage conductance kinetic model.</i>" Kinetic equation, Mathematical Physics and Probability Conference	Bilbao, Spain
09/ 2022	Talk "<i>Long time behavior of an age and leaky memory-structured neuronal population equation.</i>" Mathematical Biology on the Mediterranean Conference	Heraklion, Crete, Greece
06/ 2022	Talk "<i>Long time behavior of an age and leaky memory-structured neuronal population equation.</i>" ANR ChaMaNe Colloque	Ile Rousse, France

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05/ 2022	Talk "<i>Stability results for non-conservative semigroups</i>" Young Researchers Workshop on Probability and PDEs.	Granada, Spain
03/2022	Talk "<i>Long time behavior of an age and leaky memory-structured neuronal population equation.</i>" Winter school for Young Researchers of CEREMADE	Normandy, France
07/2021	Talk "<i>Long time behavior of an age and leaky memory-structured neuronal population equation</i>" International Conference on Mathematical Neuroscience	Digital Edition

Scholarships, grants and awards

2019-2023	Cofund: MathInParis , Fondation Sciences Mathématiques de Paris. Awarded funding from the MathInParis program co-funded by the European Horizon 2020 program 'Marie Skłodowska-Curie Co-funding of Regional, National and International Programmes' for PhD. https://sciencesmaths-paris.fr/nos-programmes?id=401
2018-2019	Scholarship of the programme Paris Graduate School for Mathematical Sciences (PGSM) for master students. https://sciencesmaths-paris.fr/pgsm-master
2017	Scientific Merit Award from the Rector of Universidad de La Habana
2016	Bronze medal in the Iberoamerican University Mathematics Olympiad Award winners 2016
2016	Gold medal in the National University Mathematics Olympiad
2015	Gold medal in the National University Mathematics Olympiad
2014	Silver medal in the National University Mathematics Olympiad

Other responsibilities

2021-2022	Co-organizer of the seminar for young researchers, Université Paris Dauphine PSL
Since 2023	Co-organizer of the seminar Cuba-France. https://www.cere-made.dauphine.fr/fr/collaborations/collaborations-internationales/cooperation-scientifique-avec-cuba.html

Extra-Curricular Activities

Chess player	Elo FIDE. 1995
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