

Michaël Orieux

PhD student at Univ. Paris Dauphine, CNRS & Inria

Experience

- 2015– **PhD. in mathematics**, *Université Paris Dauphine & Inria*, Paris.
Some properties and applications of minimum time control.
- 2015 **Research internship - Master thesis**, *Université Paris 7 & Observatoire*, Paris, France.
On the averaged controlled dynamics of the Kepler problem
- 2013 **Research internship: Representation and Fourier transform on Lie groups**,
University of New South Wales, Sydney, Australia.
On uniformly bounded representation and harmonic analysis on Lie groups, under the supervision of Prof. Michael Cowling
- 2012 **Research internship**, *Université de Montpellier II*, Montpellier, France.
In the Geometry and Algebraic Topology team on the construction of knot invariant in knot theory under the supervision of Dr. Bertrand Toen

Publications and preprints

- 2018 **Bifurcation model for minimum time control systems**, *Preprint*.
- April 2018 **Singularities of minimum time control affine systems.**, *Submitted to JEP*, with J.-B. Caillau, Féjoz, J., and R. Roussarie, <https://hal.archives-ouvertes.fr/hal-01718345v1>.
- January 2018 **Non integrability of the minimum time Kepler problem**, *J. of Geom. Phys.* (2018), with J.-B. Caillau, T. Comboto, and J. Féjoz, <https://arxiv.org/abs/1801.04198>.

Talks given

- June 2018 **16th School on Interactions between Dynamical Systems and Partial Differential Equations**, *Centre de Recerca Matemàtica*, Barcelona, Poster.
- June 2018 **Perspectives in Hamiltonian Dynamics**, *Don Orione Artigianelli Cultural Center*, Venice.
- January 2018 **A closing conference for the Chaire d'excellence Eva Miranda, Geometry and Dynamics in Interaction**, *Observatoire de Paris*, Paris.
- January 2018 **12th International YOUNG RESEARCHERS WORKSHOP on Geometry, Mechanics and Control**, *Università degli Studi di Padova*, Padova.

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- October 2017 **Journées annuelles 2017 des GdR MOA et MIA**, *Institut de Mathématiques de Bordeaux*, Bordeaux.
- September 2017 **18th French - German - Italian Conference on Optimization**, *Universität Paderborn*, Paderborn.
- September 2017 **Workshop on Classical Integrability and Perturbations**, *Observatoire de Paris*, Paris.
- November 2016 **PGMO days 2016**, *EDF'Lab Paris Saclay*, Paris.
- October 2016 **CEREMADE's young researcher seminar**, *CEREMADE*, Paris.
- March 2016 **SMAI MODE days 2016**, *ENSEEIH*, Toulouse, Poster.

Teaching

- 2017–2018 **Linear algebra 3**, *Université Paris Dauphine*, Paris, 2nd year students.
- 2016–2017 **Numerical methods: optimization**, *Université Paris Dauphine*, Paris, 3rd year Students.
- 2016–2017 **Probability and modelisation**, *Université Paris Dauphine*, Paris, 1st year students.
- 2016–2017 **Linear algebra 3**, *Université Paris Dauphine*, Paris, 2nd year students.
- 2015–2016 **Numerical methods: optimization**, *Université Paris Dauphine*, Paris, 2nd year Students.
- 2015–2016 **Real analysis, free and constrained optimization**, *Université Paris Dauphine*, Paris, 1st year students.
- 2014–2015 **Colles de mathématiques**, *Lycée Saint Louis*, Paris.
- 2013–2014 **Colles de mathématiques**, *Lycée Claude Bernard*, Paris.

Organisation of conferences and events

- Since September 2017 **CEREMADE's young researcher seminar**, *CEREMADE*, Paris, Organizer.
<https://sites.google.com/site/jeuneschercheursceremade/home>
- September 2016 **CEREMADE's young researcher summer school**, *CEREMADE*, Raveau, Organizer.
 In collaboration with Raphael Butez, Lenaïc Chizat and Camille Pagnard, we were supported financially by the SMAI: <http://smi.emath.fr/IMG/pdf/Matapli112.pdf>

Education

- 2014–2015 **Master 2 pure mathematics - 4th year of ENS**, *Universités Paris 6 et Paris 7 - ENS de Cachan*, Paris, with Honors.
- 2013–2014 **Préparation à l'agrégation de mathématiques**, *ENS de Cachan*, Cachan, rank : 72.
- 2011–2012 **Bachelor in mathematics and Magistère de mathématiques et modélisation**, *ENS de Cachan - antenne de Bretagne and Université de Rennes 1*, Rennes, with Honors.

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- 2009–2011 **Classe préparatoire aux grandes écoles MPSI-MP***, *Lycée Joffre*, Montpellier, Mention A.
- 2008 **Baccalauréat S**, *Lycée Saint Louis de Gonzague*, Perpignan, with Honors.

Languages

Anglais	Fluent	880 TOIC
Italian	In progress	
Portuguese	Basics	
Spanish	Basics	
Français	Mother tongue	

Programming skills

Matlab,	Regular use
mapple, $\text{\LaTeX}$	
C++	Basics

References

[Pr. Alain Trouvé](#)

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[Pr. Jean Baptiste Caillau](#)

Professor Univ. Côte d'Azur and CNRS/INRIA Math. Email: cail-lau@unice.fr

[Pr. Jacques Féjoz](#)

Professor at Université Paris-Dauphine & Observatoire de Paris, Email : jacques.fejoz@dauphine.fr

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