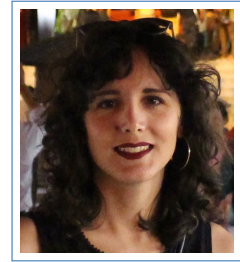


# Camilla Fiorini

## Curriculum Vitae

Inria Rennes - Bretagne Atlantique  
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Office F-116.



### Info

Born February, 9<sup>th</sup> 1990, in Milan, Italy.  
Citizenship Italian.  
Personal Page <https://camillafiorini.netlify.com>

### Current Position

Sept. 2020 - **Post-doctorat**, *Équipe Fluminance*, Inria, Rennes.  
Now Postdoctoral contract within the STUOD project.

### Education

- 2014-2018 **PhD in Applied Mathematics**.  
*LMV, UVSQ*, Versailles, France and *ACUMES, INRIA*, Sophia Antipolis, France.  
Title: Sensitivity analysis for nonlinear hyperbolic systems.  
Advisors: Christophe Chalons, Régis Duvigneau.
- 2012-2014 **Master of Science in Mathematical Engineering**, *Politecnico di Milano*, Milan, Italy.  
Thesis: Optimization of unsteady PDEs systems using a multi-objective descent method.  
Final grade: 110/110 cum laude.
- 2009-2012 **Bachelor in Mathematical Engineering**, *Politecnico di Milano*, Milan, Italy.  
Thesis: Numerical and mathematical model of lower limbs and cerebral venous system.  
Final grade: 108/110.
- 2004-2009 **Classical High School**, *Liceo Classico G. Carducci*, Milan, Italy.

### Awards

- 2019 **SMAI-GAMNI PhD Award** for the best PhD thesis in the field of computational methods in applied sciences and engineering defended in France in 2018.
- 2019 Finalist for the **Eccomas Award** for the two best PhD theses in the field of computational methods in applied sciences and engineering defended in Europe in 2018.
- 2017 **Siam Travel Award** to attend the conference SIAM OP17 in Vancouver, Canada.

### Work experience

- 2018 - 2020 **Post-doctoral researcher**, *Jacques Louis Lions laboratory*, Sorbonne Université, Paris.  
Forward uncertainty quantification for the Navier–Stokes equations.
- Apr.-Aug. **Internship**, *Inria*, Sophia Antipolis, France.
- 2014 Numerical minimisation of time dependent cost functionals for flow control problems.

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## Teaching activity

- 2019-2020 Labs for numerical methods for differential equations (“Méthodes numériques pour les équations différentielles”), third year. Sorbonne Université.
- 2019-2020 Problem sessions for mathematics for science (“Mathématiques pour les sciences 1”), first year. Sorbonne Université.
- 2015-2018 Lectures and problem sessions for general mathematics (“Mathématiques générales 1”), first year. Université de Versailles.

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## Computer skills

Languages C, C++,  $\LaTeX$ , Matlab, Python. Basics of OpenMP, MPI, CUDA.

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## Languages

- Italian Mother tongue.
- English Excellent.
- French Excellent.

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## Other Activities

- 2017-2018 **Organisation of CANUM 2018**, member of the organising committee.
- 2016-2017 **Organisation of Junior Seminars**, *LMV - Université Paris Saclay, Versailles, France*. Monthly seminar for PhD students and Post-docs.
- 2016-2017 **PhD students delegate to the EDMH board**, *Université Paris Saclay, France*.

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## Conferences

- July 2019 3rd TrioCFD user meeting, CEA, Saclay, France. Poster.
- June 2019 Séminaire d’analyse numérique - IRMAR, Rennes, France. Talk.
- May 2019 Tiger SHARK-FV, Minho, Portugal. Talk.
- March 2019 Journées Jeunes EDPistes, Rennes, France. Poster presentation.
- March 2019 Colloque d’ouverture 50 ans du LJLL, Roscoff, France. Talk.
- June 2018 École de recherche en mathématiques pour l’énergie nucléaire, Roscoff, France. **Invited speaker**.
- June 2018 HYP2018, State College, PA, USA. Talk.
- May 2018 CANUM, Cap d’Agde, France. Talk.
- May 2018 Silver SHARK-FV, Minho, Portugal. Talk.
- Feb. 2018 CEA-SMAI/GAMNI, Paris, France. **Invited speaker**.
- June 2017 FVCA8, Lille, France. Poster presentation.
- June 2017 Congrès SMAI 2017, Ronce-les-Bains, France. Talk.
- May 2017 SIAM OP17, Vancouver, Canada. Talk. **Winner of the SIAM Travel Award**.
- May 2017 Purple SHARK-FV, Ofir, Portugal. Talk.
- April 2017 School on Uncertainty Quantification for Hyperbolic Equations and Related Topics, GSSI, L’Aquila, Italy. Talk.
- Nov. 2015 Mathematics and Social Sciences Workshop, Imperial College, London, UK. Poster presentation.

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## Publications

- [1] C. Fiorini, R. Duvigneau and J.-A. Désidéri. *Optimization of an Unsteady System Governed by PDEs using a Multi-Objective Descent Method*. RR-8603 - INRIA. 2014
- [2] C. Fiorini. *Optimization of running strategies according to the physiological parameters for a two-runner model*. *Bulletin of Mathematical Biology*, 79(1): 143-162. 2017.
- [3] C. Chalons, R. Duvigneau, C. Fiorini. *Sensitivity analysis for the Euler equations in Lagrangian coordinates*. In *International Conference on Finite Volumes for Complex Applications* (pp. 71-79). Springer, Cham, 2017.
- [4] C. Chalons, R. Duvigneau, C. Fiorini. *Sensitivity analysis and numerical diffusion effects for hyperbolic PDE systems with discontinuous solutions. The case of barotropic Euler equations in Lagrangian coordinates*, *SIAM Journal on Scientific Computing*, 40(6): A3955-A3981. 2018.
- [5] C. Fiorini, C. Chalons, R. Duvigneau. *A modified sensitivity equation method for the Euler equations in presence of shocks*, *Numerical methods for PDEs*, 36(4) : 839-867. 2020.
- [6] C. Fiorini, B. Després, M. A. Puscas. *Sensitivity equation method for the Navier–Stokes equations applied to uncertainty propagation, early view*, *International journal for Numerical Methods in Fluids*. 2020.