

Flavien Léger

Curriculum Vitæ

Employment

2017–2019 **Assistant Adjunct Professor**, *UCLA, Department of Mathematics*, Los Angeles, CA, USA.

Education

2012–2017 **Ph.D. in Mathematics**, *Courant Institute, New York University*, New York, USA.

2010–2012 **M.S. in Mathematics**, *Paris 6*, Paris, France.

2010 **B.S. in Mathematics**, *ENS Cachan*, France.

Research Interests

Optimal transport, PDEs, fluid mechanics.

Awards

2016–2017 Dean's Dissertation Fellowship, NYU GSAS

2012–2016 Henry MacCracken Fellowship, NYU GSAS

2007 Mention at the *Concours Général des Lycées de Mathématiques*, a mathematical Olympiad

Publications

1. Flavien Léger. A gradient descent perspective on sinkhorn. *arXiv preprint arXiv:2002.03758*, 2020.
2. Matt Jacobs and Flavien Léger. A fast approach to optimal transport: The back-and-forth method. *arXiv preprint arXiv:1905.12154*, 2019.
3. Flavien Léger and Wuchen Li. Hopf–Cole transformation via generalized Schrödinger bridge problem. *arXiv preprint arXiv:1901.09051*, 2019.
4. Matt Jacobs, Flavien Léger, Wuchen Li, and Stanley Osher. Solving large-scale optimization problems with a convergence rate independent of grid size. *SIAM J. Numer. Anal.*, 57(3):1100–1123, 2019.
5. Flavien Léger. A geometric perspective on regularized optimal transport. *J. Dynam. Differential Equations*, 31(4):1777–1791, 2019.

6. Flavien Léger. A new approach to bounds on mixing. *Math. Models Methods Appl. Sci.*, 28(5):829–849, 2018.
7. Andrea L. Bertozzi, Thomas Laurent, and Flavien Léger. Aggregation and spreading via the Newtonian potential: the dynamics of patch solutions. *Math. Models Methods Appl. Sci.*, 22(suppl. 1):1140005, 39, 2012.
8. Flavien Léger, Guoshen Yu, and Guillermo Sapiro. Efficient matrix completion with Gaussian models. In *Acoustics, Speech and Signal Processing (ICASSP), 2011 IEEE International Conference on*, pages 1113–1116. IEEE, 2011.

Presentations

- Mathematics Colloquium, VU Amsterdam, January 2020 (invited)
- SIAM Conference on Analysis of PDEs, La Quinta (CA), December 2019 (invited)
- Geometric Science of Information, Toulouse, August 2019 (invited)
- SOCAMS, Caltech, April 2019 (invited)
- Optimal transport seminar, Caltech, March 2019
- Level Set Seminar, UCLA, Oct. 2017
- CSCAMM Seminar, University of Maryland, Feb. 2017 (invited)
- Analysis Seminar, University of Wisconsin–Madison, Sept. 2016 (invited)
- Optimal Transport working group, Courant Institute, Feb. & May 2016
- Poster session, ICASSP, 2011
- Internships presentations, ENS Cachan, Sept. 2010

Computer skills

Advanced MATLAB, PYTHON (SCI-PY)
 Intermediate Julia, C, Linux

Teaching experience

Spring 2019 Differential equations
 Winter 2019 Optimization
 Fall 2019 Optimization
 Spring 2018 Mathematical Modeling
 Winter 2018 Methods of Applied Mathematics
 Fall 2015 Recitation Leader, Calculus I
 Fall 2014 Recitation Leader, Calculus I

Extended professional travel

Summer 2014 UCLA, Los Angeles, CA

Spring 2011 UCLA, Los Angeles, CA
Summer 2010 University of Minnesota, Minneapolis, MN

Languages

French (Mothertongue), English (Fluent), Italian (Intermediate), German (Basic).