

# Flavien Léger

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## *Curriculum Vitæ*

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### Employment

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

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### 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.

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### Research Interests

Optimal transport, PDEs, fluid mechanics.

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### 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

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### 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

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## Languages

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