

Jonathan Vacher
2593 Frederick Douglass Boulevard, Apt 9
10030 New-York
USA

Phone : +33 6 15 86 70 72
E-mail : jonathan.vacher@ens.fr
Website : jonathanvacher.github.io

Born 04.10.1989
French
Single
Driving license in 2007

Research Experience

- Sept. 2017 **Postdoctorate Research Fellow** *Under the supervision of Ruben Coen-Cagli.* Department of Comp. Biology, Albert Einstein College of Medicine (AECOM), New-York.
- 2016–2017 **Postdoctorate Research Fellow** *Under the supervision of Gabriel Peyré.* Département de Mathématiques et Applications (DMA), École Normale Supérieure, Paris.
- 2013–2017 **PhD under the supervision of G. Peyré and C. Monier** *Applied Mathematics and Neurosciences. Dynamic Textures Synthesis for Probing Vision in Psychophysics and Electrophysiology.* [Link](#) Dauphine University (Paris Sciences Lettres), Paris. Unité Neuroscience, Information et Complexité (UNIC-CNRS), Gif-sur-Yvette.
- 2011–2012 **Research internship under the supervision of J-M. Morel and B. Coll** *Texture synthesis : the Portilla-Simoncelli algorithm (statistical tools, optimization, C implementation).* Universitat de les Illes Balears, Mallorca. Centre de Mathématiques et de Leurs Applications (CMLA), Cachan.

List of Contributions

Vacher J., Meso A. I., Perrinet L. U., Gabriel P., Bayesian Modeling of Motion Perception using Dynamical Stochastic Textures *arXiv preprint, submitted to Neural Computation (under review since 07/2017)* [Link](#)

Briand T., Vacher J., How to Apply a Filter Defined in the Frequency Domain by a Continuous Function? *Image Processing On Line* 6, 183-211, 2016 [Link](#)

Vacher J., Meso A. I., Perrinet L. U., Gabriel P., Biologically Inspired Dynamic Textures For Probing Motion Perception *Advances in Neural Information Processing Systems, 1918-1926, 2015* [Link](#)

Briand T., Vacher J., Galerne B., Rabin J., The Heeger-Bergen Pyramid Based Texture Synthesis Algorithm *Image Processing On Line* 4, 276–299, 2014 [Link](#)

Participation in Conferences

- June 2016 Poster : Supervised Learning Estimation of Functional Maps from VSD Imaging *International Conference on Mathematical NeuroScience (ICMNS)* [Link](#)
- Dec. 2015 Poster and spotlight presentation : Biologically Inspired Dynamic Textures for Probing Motion Perception *Neural Information Processing Systems (NIPS)* [Link](#)
- June 2015 Poster : A Mathematical Account of Dynamic Texture Synthesis for Probing Visual Perception *International Conference on Mathematical NeuroScience (ICMNS)* [Link](#)
- Oct. 2014 Poster : Dynamic Textures for Probing Visual Perception *Workshop on Geometrical Models in Vision* [Link](#)

Reviewer

Image Processing On Line Journal (IPOL) : <http://www.ipol.im/>

Education

2013–2017	PhD in Applied Mathematics Dauphine University (Paris Sciences Lettres), Paris.
2011–2013	Master's degree in mathematics <i>Mathematics, Vision and Learning. Graduated with honours.</i> École Normale Supérieure de Cachan.
2010–2011	Bachelor's degree in mathematics <i>Applied Mathematics. Graduated with honours.</i> École Normale Supérieure de Cachan.
2007–2010	Classe Préparatoire aux Grandes Écoles (CPGE) <i>Three years intensive undergraduate program - training for highly selective competitive exams to enter French engineering schools, specialized in Mathematics</i> Pierre De Fermat high school, Toulouse.

Teaching Activities

Oct. 2016	French tenured civil servant as teacher in mathematics <i>Availability for postdoctoral research.</i>
2013–2015	Lecturer in Analysis, Linear Algebra, Differential Calculus <i>Three hours a week. Mid to high level students.</i> Dauphine University, Paris.
July 2013	Highest mathematics competitive exam for academic teaching <i>Agrégation de mathématiques. French trainee civil servant as teacher in mathematics.</i>
2011–2013	Examiner in mathematics <i>Oral exam training. Two hours a week. High level students.</i> Classes Préparatoires aux Grandes Écoles, Janson de Sailly high school, Paris.

Professional Society Membership

since 2015	Société de Mathématiques Appliquées et Industrielles Link
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Awards and Scholarships

2012–2013	Excellence Master's Scholarship <i>Funding (10 000 euros) from the Fondation de Mathématiques Jacques Hadamard (FMJH)</i> Link
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Languages

French : native / English : fluent / Spanish : basic
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Computer Science

Operating systems : Linux, Windows
Languages : Python (parallel/GPU computing), Matlab, basic knowledge in C/C++

Interests and other activities

Sports : handball, hiking, tennis, ...
Video/Board Games : hearthstone, megawatt, smallworld, 7 wonders, ...
Music, cinema, sciences, social sciences, economy, politics, ...
President of the association "Les sENS de l'Art" in 2012 : in charge of the organization of the annual art and music festival of ENS Cachan (budget : 40 000 euros).