Claire Launay

Postdoctoral researcher

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Background

2020–...	**Postdoctoral researcher**, Albert Einstein College of Medicine, *Supervisor: Ruben Coen Cagli*.
2016–2020	**PhD in Applied Mathematics**, Université de Paris.
	Discrete determinantal point processes and image processing. Supervisors: Bruno Galerne (Institut Denis Poisson) and Agnès Desolneux (Centre Borelli).
2015–2016	**Master of Mathematics, Computer Vision and Machine Learning**, ENS Paris Saclay, with highest honors.
2014–2015	**Master of Applied Mathematics**, Université Paris Descartes, with highest honors.
2012–2014	**Bachelor in Applied Mathematics**, Université Paris Descartes, with highest honors.
2010–2012	**Undergraduate studies**, Humanities and social science, Lycée Guist'hau, Nantes.

Research experience

Publications

2021	Flexibly Regularized Mixture Models and Application to Image Segmentation, J. Vacher, C. Launay, R. Coen-Cagli. Submitted. [pdf]
2020	Determinantal Point Processes for Image Processing, C. Launay, B. Galerne, A. Desolneux. Accepted for publication in the SIAM Journal on Imaging Sciences. [pdf]
2020	Exact Sampling of Determinantal Point Processes without Eigendecomposition, C. Launay, B. Galerne, A. Desolneux. To appear in the Journal of Applied Probability (JAP 57.4, Dec. 2020). [pdf]
2019	Determinantal Patch Processes for Texture Synthesis, C. Launay, A. Leclaire, proceedings of GRETSI 2019. [pdf]
2017	Etude de la répulsion des processus pixelliques déterminantaux, A. Desolneux, B. Galerne, C. Launay, proceedings of GRETSI 2017. [pdf]

Talks and poster presentations

Aug. 2021	**MAS20 Conference**, *Determinantal pixel processes: Texture synthesis and inference*, (remotely) Université d'Orléans, France.
Feb 2021	**LMA Seminar**, *Determinantal Point Processes, exact sampling and application*, (remotely) Université de Poitiers, France.
June 2020	**PhD Defense**, *Determinantal point processes applied to image processing*, Université de Paris, France.
March 2020	**Coen-Cagli Laboratory**, *Determinantal Point Processes for Image Processing*, (remotely) Einstein College of Medicine, New York, United States.

Aug. 2019	**GRETSI Conference**, *Determinantal Patch Processes for Texture Synthesis*, Lille, France.
May 2019	**SMAI Conference**, *Determinantal point processes and the patches of an images*, Guidel, France.
April 2019	**IOP Seminar**, *Determinantal point processes and some applications to images*, Université de Bordeaux, France.
March 2019	**Jean Leray laboratory Seminar**, *Determinantal point processes and some applications to images*, Université de Nantes, France.
Nov. 2018	**Forum for young mathematicians**, *Determinantal pixel processes and repulsion*, Women and Mathematics, Orléans, France.
Nov. 2018	**Mokaplan Seminar**, *Determinantal point processes and images: some applications*, INRIA, Paris, France.
Nov. 2018	**Work group on Repulsive Point Processes**, *Determinantal point processes and images : some applications*, MAP5, Université Paris Descartes, Paris, France.
Juin 2018	**SIAM Conference**, *Sampling in the space of image patches with determinantal point processes*, (poster), Bologna, Italy.
Oct. 2017	**Welcome day for PhD students**, Fondation Sciences Mathématiques de Paris, Paris, France.
Sept. 2017	**GRETSI Conference**, *Study of the repulsion in determinantal pixel processes*, (poster), Juan-les-Pins, France.
May 2017	**Spring school MENAVO 2017 on Numerical methods and algorithms for computer vision**, *Study of the repulsion in determinantal pixel processes*, (poster), Albas, France.
2016–2019	**Image Processing Lab Seminar**, (March 2017, Nov. 2017, Nov. 2018, March 2019), CMLA, ENS Cachan, France.

Research internship

April–Sept. 2016	**Multi image dynamic range extension**, DxO Labs, 6 months, supervised by Wolf Hauser (DxO) and Julie Delon (MAP5).
	Prototype implementation of an High Dynamic Range (HDR) feature for the company's camera and software.

Teaching experience

2019–2020	**Temporary teacher and researcher**, *(192 hours)*, for the courses of Prof. Nathael Gozlan (Introduction to probability) and Prof. Marcela Szopos (Mathematics and Arithmetics), Bachelor projects supervision, Université Paris Descartes.
2016–2019	**Teaching assistant**, *(64 hours per year)*, for the courses of Prof. Annie Raoult, Prof. Florent Benaych-Georges and Prof. Marcela Szopos (Mathematics and Arithmetics), Bachelor projects supervision, Université Paris Descartes.

Scholarships

2016–2019	PhD fellowship from the program DIM RDM-IdF - Région Ile-de-France.
2014–2016	Master scholarship from the Paris Graduate School of Mathematics (PGSM) program, Fondation Sciences Mathématiques de Paris.

Miscellaneous

○ PhD students representative in the MAP5 laboratory

○ Social media representative in the Einstein Postdoctoral Association

Languages

○ French   Mother tongue

○ English   Fluent

○ Spanish   Basic

Computer skills

○ Matlab, Python, LaTeX

○ Notions in R, C++

Hobbies

○ Photography, Theatre

○ Travels : Europe, Tanzania, United States