Elias VENTRE

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Postdoctoral fellow at UBC

EDUCATION

2019-2022	**ENS Lyon – PhD in applied mathematics**. ▪ *Analysis, calibration and evaluation of stochastic models of gene expression, supervised by Thibault Espinasse, Olivier Gandrillon and Thomas Lepoutre*
2017-2019	**UCBL Lyon 1** – Master in applied mathematics, *with highest honor (2/39)*.
2013-2015	**ENSA Paris-Belleville** – Master in Architecture. ▪ *One-year exchange program in UC, Santiago de Chile (2014).*
2010-2013	**ESTP Paris –** Master in Building Engineering.
2008-2010	**Lycée Fénelon –** Classes préparatoires aux grandes écoles.
2008	**Lycée Louis Le Grand** – High School Diploma, *with honor*.

TEACHING & PROFESSIONAL ACTIVITIES

Since 2022	**UBC Vancouver, Postodoctoral fellow.** ▪ *Trajectory inference from single-cell data with lineage tracing, supervised by Geoffrey Schiebinger and Young-Heon Kim.* ▪ *In charge of the course of Integral Calculus for 1st-year students.*
2019-2022	**UCBL, Teaching assistant.** ▪ *In charge of the course of General Mathematics for 1st-year and 2nd-year students.*
2018-2019	**LBMC, Internships in applied mathematics.** ▪ *Mathematical formulation of Wadddington Landscape for a stochastic hybrid model of gene expression (4 months).* ▪ *Computation of transfer entropy for a Piecewise Deterministic Markovian Process (1 month).*
2015-2017	**SYNTESIA, Project manager in Building Information Modeling – 22 months.**
2013	**ARTER, Engineering of ephemeral art – 6 months.**

LANGUAGES

French	Mother tongue.
English & Spanish	Fluent.
Informatics	Python & C, Latex.

PUBLICATIONS

arXiv, 2022	**Convergence of the Sinkhorn algorithm when the Schrödinger problem has no solution** Aymeric Baradat, Elias Ventre
bioRxiv, 2022	**One model fits all: combining simulation and inference of gene regulatory networks** Elias Ventre, Ulysse Herbach, Thibault Espinasse, Gérard Benoît, Olivier Gandrillon

BMC Biology, 2022	**Evidence for close molecular proximity between reverting and undifferentiated cells** Souad Zreika, Camille Fourneaux, Elodie Vallin, Laurent Modolo, Rémi Seraphin, Alice Moussy, Elias Ventre, Matteo Bouvier, Anthony Ozier-Lafontaine, Arnaud Bonnaffoux, Franck Picard, Olivier Gandrillon, Sandrine Giraud
In Silico Biology, 2021	**Reverse engineering of a mechanistic model of gene expression using metastability and temporal dynamics** Elias Ventre
J. Math. Biol., 2021	**Reduction of a stochastic model of gene expression: Lagrangian dynamics gives access to basins of attractions as cell types and metastability** Eias Ventre, Thibault Espinasse, Charles-Edouard Bréhier, Vincent Calvez, Thomas Lepoutre, Olivier Gandrillon

TALKS & POSTERS

01/2022	**Université de Lyon, MMCS group** – Lyon.
12/2021	**NETBIOS research group** – virtual.
12/2021	**MAMOVI research group** – Paris.
06/2021	**Université de Lorraine, Probability group** – Nancy.
05/2021	**SMAI, Congress** – Poster.
12/2020	**SinCellMod-2020** – Virtual.
10/2020	**ANR SingleStatOmics** – Virtual.
02/2020	**CIRM, Research School** – Poster.
10/2019	**INRIA-Bio Workshop** – Lyon.

SCHOOLS AND CONFERENCES

February, 03-07, 2020: School – PDE and Probability for biology – CIRM.
June, 21-25, 2021: Conference – Congress of SMAI – La grande motte.
July, 18-22th, 2022: School – Transport in physics, biology and urban traffic – CEMRACS (CIRM).

PERSONAL

Violin and Guitar.
Acting in lay theatre.
Tennis in competition, hiking.