Renaud Dessalles

General

Birth	1989
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Presentation

My education background brought me a broad knowledge of many scientific and cultural areas. I'm specialized in mathematics applied to Biology using mainly (but not exclusively) stochastic analysis and simulations. The area of applications of these models are diverse: Ecology, Evolution, Microbiology, Immunology. My other skills include a strong taste for teaching and popularizing different areas of science through courses, presentations or online articles.

Education & Work experiences

2017-current – Visiting Assistant Project Scientist at UCLA Biomathematics: stochastic modeling of T cell diversity.

2017-current – Teaching workshops: *Introduction to Python* and *Machine Learning with Python* at QCBio collaboratory (UCLA)

2013-2016 - PhD in Applied Mathematics, *Stochastic models for protein production in bacteria* (INRA and INRIA – Paris)

2015-2016 - Teaching Mathematics and Computer Science (IUT Sceaux)

2012-2013 – Master degree, *Mathematics for Biology* (Université ParisSud)

April-July 2013 - Internship in LCQB lab (UPMC -Paris) in theoretical microbiology

2011-2012 – Engineering degree, with specialty *Systems Modeling* (ENSTA ParisTech)

2009-2012 – Master degree in parallel of the third year of ENSTA ParisTech, *Numerical Analysis and Partial Differential Equations* (UPMC – Paris)

April-July 2012 - Internship in SMILE lab (Collège de France - Paris) in ecology and evolution

May-August 2011 - Internship in INSERM lab U1001 on systemic biology

2007-2009 – Classes Préparatoires: intensive studies in Mathematics, Physics, Chemistry and Humanities to prepare for selective exams.

2007 - Baccalauréat of science (with highest honors).

Grants and Awards

September 2017: Best poster award at UCLA QcBio Annual Retreat

January 2017: Fellowship from the Institute for Quantitative and Computational Biosciences at UCLA

December 2013: Highly selective grant *Contrat Jeune Scientifique* (INRA–INRIA) for five years

July 2013: Selective PhD grant of Labex Calsimlab (UPMC), (declined)

Scientific papers and conferences

2018 - Dessalles, R., D'Orsogna, M., and Chou, T.. Exact Steady-State Distributions of Multispecies Birth–Death–Immigration Processes: Effects of Mutations and Carrying Capacity on Diversity. J Stat Phys.

2018 - Dessalles, R., Fromion, V., & Robert, P.. Models of protein production with cell cycle. arXiv preprint arXiv:1711.06378.

2018 - APS March Meeting 2018

2017 - Dessalles, R. Stochastic Models for Protein Production: the Impact of Autoregulation, Cell Cycle and Protein Production Interactions on Gene Expression. Doctoral dissertation.

2017 - Cloez, B., Dessalles, R., Genadot, A., Malrieu, F., Marguet, A., & Yvinec, R. Probabilistic and Piecewise Deterministic models in Biology. ESAIM: Proceedings and Surveys, 60, 225-245.

2017 - Dessalles, R., Fromion, V., & Robert, P. A stochastic analysis of autoregulation of gene expression. Journal of mathematical biology, 75(5), 1253-1283.

2016 - Journées Modélisation Aléatoire et Statistique
2015 - INFORMS Applied Probability Conference
For current work and future conferences, see my webpage (https://dessalles.github.io/)

Foreign Languages

French	Native language
English	Fluent
German	Working knowledge
Spanish	Beginner (continuing education)

Computer skills

UNIX – Python – C – C++ – LaTeX	Competent
XHTML – Julia – Matlab	Working knowledge

Creator of the software *RFigure*, for the creation and edition of figures with Python, and *AthenaWriter*, a word processor for short stories (the sources are on Github).

Associative Experiences

Current - Author, Editor and Translator on the web magazine *Kinea* (https://kinea.media)
Tutoring students from disadvantaged backgrounds for 3 years
Vice-president of artistic festival of ParisTech: *Les Arts en Scène*

Leisure

Swimming, Running, Climbing, Trekking, Astronomy, Writing, History, Popular Sciences...

References – Available on request.