

Curriculum Vitæ

Amaury Lambert

January 11, 2023

AMAURY LAMBERT

Professeur (classe exceptionnelle)

École Normale Supérieure

Institut de Biologie de l'ENS (IBENS) – CNRS UMR8197 – INSERM U1024

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Center for Interdisciplinary Research in Biology (CIRB) – CNRS UMR7241 – INSERM U1050

SMILE group (Stochastic models for the inference of life evolution)

Collège de France

EMAIL: [amaury.lambert -- at -- college-de-france.fr](mailto:amaury.lambert@college-de-france.fr)

URL: <https://smile.cnrs.fr/>

Research Interests

1. Evolution, Ecology & Genetics: population genetics, molecular evolution, somatic evolution, phylogenetics, speciation, macro-evolution;
2. Stochastic Processes: branching processes, Lévy processes, coalescent theory, excursion theory, measure-valued processes.

Education and professional experience

Co-Principal Investigator of SMILE group (Stochastic models for the inference of life evolution), CIRB, Collège de France, jun 2022–

Dean of education, biology department of École Normale Supérieure (ENS), jan 2022–

‘Professeur’ École Normale Supérieure de Paris, sep 2021–

Founder and Principal Investigator of SMILE group, LPSM & CIRB, Collège de France, jan 2012–may 2022

Founder and head of Stochastics & Biology Group of LPSM, nov 2011–dec 2018

‘Professeur chargé de cours’ at ENS, biology department, sep 2010–aug 2021

‘Professeur’ Sorbonne Université, LPSM (Sorbonne U and CNRS), sep 2008–aug 2021
(‘1st class’ sep 2014, ‘exceptional class’ sep 2019)

‘Professeur chargé de cours’ at École Polytechnique, sep 2007–jul 2009

‘Maître de Conférences’ Sorbonne Université, Laboratoire Écologie et Évolution (ENS and UPMC), sep 2001–aug 2008

‘Habilitation à diriger des recherches’, *Branching processes, population genetics and random genealogies*, UPMC, dec 2007

PhD Thesis, *Trees, excursions and completely asymmetric Lévy processes* (dir. Jean Bertoin), Laboratoire de Probabilités, UPMC, oct 1998–jan 2001

MSc of Probability and Stochastic Processes, Laboratoire de Probabilités, UPMC, oct 1997–jun 1998

École Polytechnique, aug 1994–jun 1997.

List of publications

I. Submitted manuscripts

- a. LAMBERT, A., URIBE BRAVO, G. Totally ordered measured trees and splitting trees with infinite variation II: Prolific skeleton decomposition. Eprint arXiv:1803.05421
- b. GANDON, S., LAMBERT, A., DAY, T., PARSONS, T. The speed of vaccination rollout and the risk of pathogen adaptation.

II. Articles in minor revision

90. FREUND, F., KERDONCUFF, E., MATUSZEWSKI, S., LAPIERRE, M., HILDEBRANDT, M., JENSEN, J.D., FERRETTI, L., LAMBERT, A., SACKTON, T.B., ACHAZ, G. (2023) Interpreting the pervasive observation of U-shaped Site Frequency Spectra. Eprint bioRxiv:2022.04.12.488084

III. Articles published or in press

89. GAMBLIN, J., GANDON, S., BLANQUART, F., LAMBERT, A. (2023) Bottlenecks can constrain and channel evolutionary paths. *Genetics* (in press)
Eprint bioRxiv:2022.07.15.500205
88. JOHNSTON, S.G.G., LAMBERT, A. (2023) The coalescent structure of uniform and Poisson samples from multitype branching processes. *Ann. Appl. Prob.* (in press)
Eprint arXiv:1912.00198
87. OVERCAST, I., ACHAZ, G., AGUILÉE, R., ANDÚJAR, C., ARRIBAS, P., CREEDY, T.J., ECONOMO, E.P., ETIENNE, R.S., GILLESPIE, R., JACQUET, C., JAY, F., KENNEDY, S., KREHENWINKEL, H., LAMBERT, A., MERAMVELIOTAKIS, E., NOGUERALES, V., PEREZ-LAMARQUE, B., RODERICK, G., ROGERS, H., RUFLEY, M., SANMARTIN, I., VOGLER, A.P., PAPADOPOULOU, A., EMERSON, B.C., MORLON, H. (2023) Toward a genetic theory of island biogeography: Inferring processes from multi-dimensional community-scale data. *Glob. Ecol. Biogeog.* **32**(1) 4–23

86. PÉNISSON, S., LAMBERT, A., TOMASETTI, C. (2022) Evaluating cancer etiology and risk with a mathematical model of tumor evolution. *Nature Communications* **13**(7224)
85. FOUTEL-RODIER*, F., BLANQUART, F., COURAU, P., CZUPPON, P., DUCHAMPS, J., GAMBLIN, J., KERDONCUFF, E., KULATHINAL, R., RÉGNIER, L., VUDUC, L., LAMBERT**, A., SCHERTZER**, E. (2022) From individual-based epidemic models to McKendrick-von Foerster PDEs: A guide to modeling and inferring COVID-19 dynamics. *J. Math. Biol.* **85**(43).
This manuscript was realized with the whole SMILE group and shows how a representation of the macroscopic evolution of the epidemic by structuring the infectious population by age, in the sense of the time elapsed since infection, leads to a classical McKendrick-von Foerster PDE that decouples the dependencies between types and with respect to time.
84. BEHDENNA, A., GODFROID, M., PETOT, P., POTHIER, J., LAMBERT, A., ACHAZ, G. (2022) A minimal yet flexible likelihood framework to assess correlated evolution. *Syst. Biol.* **71**(4) 823–838.
83. BIENVENU, F., LAMBERT, A., STEEL, M. (2022) Combinatorial and stochastic properties of ranked tree-child networks. *Rand. Struct. Algo.* **60**(4) 653–689
82. LAMBERT, A. (2021) A mathematical assessment of the efficiency of quarantining and contact tracing in curbing the COVID-19 epidemic. *Math. Mod. Nat. Phenom.* **16**(53)
This work shows that contact tracing by a mobile app has a non-linear effectiveness that requires an adoption rate of $\approx 70\%$ to curb the COVID-19 epidemic.
81. FOUTEL-RODIER, F., LAMBERT, A., SCHERTZER, E. (2021) Exchangeable coalescents, ultrametric spaces, nested interval-partitions: A unifying approach. *Ann. Appl. Prob.* **31**(5) 2046–2090
80. LAMBERT, A., MIRÓ PINA, V., SCHERTZER, E. (2021) Chromosome painting: How recombination mixes ancestral colors. *Ann. Appl. Prob.* **31**(2) 826–864
79. LAMBERT, A. (2020) L'Évolution face au hasard. In: *Le hasard, le calcul et la vie* — colloque de Cerisy, Grandcolas, P., Maurel, M.C. & Pomerol, J.C. (eds). ISTE Éditions.
78. MANCEAU*, M., MARIN*, J., MORLON, H., LAMBERT, A. (2020) Model-based inference of punctuated molecular evolution. *Mol. Biol. Evol.* **37**(11) 3308–3323
This paper presents for the first time a genomic version of Gould and Eldredge's punctuated equilibrium theory and a method for inferring substitution burst events (jumps in sequence space).
77. MARIN, J., ACHAZ, G., CROMBACH, A., LAMBERT, A. (2020) The genomic view of diversification. *J. Evol. Biol.* **33** 1387–1404
This article realizes a breakthrough in the modeling of the joint evolution of genomes and species and proposes a new inference method from multiple a sequence alignment, allowing simultaneously for pervasive gene flow between species, incomplete lineage sorting and the progressive emergence of reproductive isolation.

76. CLUZEL, N., LAMBERT, A., MADAY, Y., TURINICI, G., DANCHIN, A. (2020) Biochemical and statistical lessons from the evolution of the SARS-CoV-2 virus: paths for novel antiviral warfare. *C.R. Acad. Sci. Biol.* **343**(2) 177–209
75. KERDONCUFF, E., LAMBERT, A., ACHAZ, G. (2020) Testing for population decline using maximal linkage disequilibrium blocks. *Theoret. Popul. Biol.* **134** 171–181
This article proposes an innovative statistical method detecting a recent demographic decline from a small number (≈ 10) of whole genomes.
74. DOULCIER, G., LAMBERT, A., DE MONTE, S. RAINEY, P.B. (2020) Eco-evolutionary dynamics of nested Darwinian populations and the emergence of community-level heredity. *eLife* **9** e53433
Where we show that subjecting a population of cells containing particles of two types (dividing and interacting within the cell) to selection pressure on the abundance ratio of the two types in the cell, promotes the robustness of the ecological dynamics of the intracellular particles, ensuring that daughter cells resemble their mother cell — a form of heredity.
73. DAY, T., PARSONS, T.L., Lambert, A., GANDON, S. (2020) The Price equation and evolutionary epidemiology. *Philos. Trans. Roy. Soc. B* **375** 20190357
72. FOUTEL-RODIER, F., LAMBERT, A., SCHERTZER, E. (2020) Kingman’s coalescent with erosion. *Elec. J. Probab.* **25**(56) 1–33
71. DINH, K.D., JAKSIK, R., KIMMEL, M., LAMBERT, A., TAVARÉ, S. (2020) Statistical inference for the evolutionary history of cancer genomes. *Stat. Sci.* **35**(1) 129–144
70. LAMBERT, A., SCHERTZER, E. (2020) Coagulation-transport equations and the nested coalescents. *Probab. Theory Relat. Fields* **176**(1), 77–147
This article, published in the most prestigious journal of probability theory, proposes two probabilistic, dual characterizations of solutions to coagulation-transport type PDEs and gives in particular the speed of coming down from infinity of a large class of nested coalescents.
69. ANCIAUX, Y., LAMBERT, A., RONCE, O., ROQUES, L., MARTIN, G. (2019) Population persistence under high mutation rate: from evolutionary rescue to lethal mutagenesis. *Evolution* **73**(8) 1517–1532
68. BIENVENU, F., DÉBARRE, F., LAMBERT, A. (2019) The split-and-drift random graph, a null model for speciation. *Stoch. Proc. Appl.* **129**(6) 2010–2048
67. LAMBERT, A., SCHERTZER, E. (2019) Recovering the Brownian coalescent point process from the Kingman coalescent by conditional sampling. *Bernoulli* **25**(1) 148–173
66. MANCEAU M., LAMBERT, A. (2019) The species problem from the modeler’s point of view. *Bull. Math. Biol.* **81**(3) 878–898
65. ACHAZ, G., LAMBERT, A., SCHERTZER, E. (2019) The sequential loss of allelic diversity. *Adv. Appl. Probab.* **50**(A) 13–29
Festschrift in honor of Peter Jagers
64. LAMBERT, A., URIBE BRAVO G. (2018) Totally ordered, measured trees and splitting trees with infinite variation. *Elec. J. Probab.* **23**(120) 1–41

63. PARSONS, T.L., LAMBERT, A., DAY, T., GANDON, S. (2018) Pathogen evolution: Slow and steady spreads the best. *J. Roy. Soc. Interface* **15**(147) 20180135
62. MALIET, O., GASCUEL, F., LAMBERT, A. (2018) Ranked tree shapes, non-random extinctions and the loss of phylogenetic diversity. *Syst. Biol.* **67**(6) 1025–1040
61. DÁVILA FELIPE, M., LAMBERT, A. (2018) Branching processes seen from their extinction time via path decompositions of reflected Lévy processes. *Elec. J. Probab.* **23**(98) 1–30
60. BLANCAS, A., DUCHAMPS, J.J., LAMBERT, A., SIRI-JÉGOUSSE, A. (2018) Trees within trees: Simple nested coalescents. *Elec. J. Probab.* **23**(94) 1–27
Where we introduce and characterize nested coalescents, inspired by phylogenomics where the species tree contains the gene trees.
59. DUCHAMPS, J.J., LAMBERT, A. (2018) Mutations on a random binary tree with measured boundary. *Ann. Appl. Probab.* **28**(4) 2141–2187
58. AGUILÉE, R., GASCUEL, F., LAMBERT, A., FERRIÈRE, R. (2018) Clade diversification dynamics and the biotic and abiotic controls of speciation and extinction rates. *Nature Communications* **9** 3013
This article published in a prestigious journal gives an accurate description of the way macroscopic variables like rates of speciation and extinction vary in the course of diversification.
57. LAMBERT, A. (2018) The genealogy of a sample from a binary branching process. *Theoret. Popul. Biol.* **122** 30–35
Festschrift in the memory of Paul Joyce.
56. LAMBERT, A. (2018) Random ultrametric trees and applications. *ESAIM: Proceedings & Surveys* **60** 70–89
This review article is the proceeding of a plenary talk given in 2016 at the biennial probability conference of the French Society of Applied Mathematics (SMAI).
55. TOMASETTI, C., DURRETT, R., KIMMEL, M., LAMBERT, A., PARMIGIANI, G., ZAUBER, A., VOGELSTEIN, B. (2017) Role of stem-cell divisions in cancer risk. *Nature* **548** E13–E14
This article published in the very prestigious journal *Nature* is a focus concerning the analysis of epidemiological data for assessing the role of chance (‘bad luck’) in cancer risk.
54. MANCEAU, M., LAMBERT, A., MORLON, H. (2017) A unifying comparative phylogenetic framework including traits coevolving across interacting lineages. *Syst. Biol.* **66**(4) 551–568
53. LAMBERT, A. (2017) Probabilistic models for the (sub)tree(s) of life. *Brazil. J. Probab. Statist.* **31**(3) 415–475
Lecture notes of an invited lecture series given in 2015 at the 19th Brazilian school of probability (70 pages).
52. LAPIERRE, M., LAMBERT, A., ACHAZ, G. (2017) Accuracy of demographic inferences from Site Frequency Spectrum: The case of the Yoruba population. *Genetics* **206**(1) 439–449

51. LAMBERT, A., URIBE BRAVO G. (2017) The comb representation of compact ultrametric spaces. *p-Adic Numbers, Ultrametric Anal. Appl.* **9**(1) 22–38
50. LAPIERRE, M., BLIN, C., LAMBERT, A., ACHAZ, G., ROCHA, E.P.C. (2016) The impact of selection, gene conversion, and biased sampling on the assessment of microbial demography. *Mol. Biol. Evol.* **33**(7) 1711–1725
49. BEHDENNA, A., POTHIER, J., ABBY, S., LAMBERT, A., ACHAZ, G. (2016) Testing for independence between evolutionary processes. *Syst. Biol.* **65**(5) 812–823
48. DELAPORTE, C., ACHAZ, G., LAMBERT, A. (2016) Mutational pattern of a sample from a critical branching population. *J. Math. Biol.* **73**(3), 627–664
47. ALEXANDER, H.K., LAMBERT, A., STADLER, T. (2016) Quantifying age-dependent extinction from species phylogenies. *Syst. Biol.* **65**(1) 35–50
46. DÁVILA FELIPE, M., LAMBERT, A. (2015) Time-reversal dualities for some random forests. *ALEA, Lat. Am. J. Probab. Math. Stat.* **12**(1) 399–426
45. GASCUEL, F., FERRIÈRE, R., AGUILÉE, R., LAMBERT, A. (2015) How ecology and landscape dynamics shape phylogenetic trees. *Syst. Biol.* **64**(4) 590–607
44. RÉGNIER, C., ACHAZ, G., LAMBERT, A., COWIE, R.H., BOUCHET, P., FONTAINE, B. (2015) Mass extinction in poorly known taxa. *Proc. Nat. Acad. Sci. USA* **112**(25) 7761–7766.
- This publication in a high-impact journal proposes the first quantitative approach of extinction risk. It had a strong media response.**
43. MANCEAU, M., LAMBERT, A., MORLON, H. (2015) Phylogenies support out of equilibrium models of biodiversity. *Ecology Letters* **18**(4) 347–356
42. MARTIN, G., LAMBERT, A. (2015) A simple, semi-deterministic approximation to the distribution of selective sweeps in large populations. *Theoret. Popul. Biol.* **101** 40–46
41. LAMBERT, A., MA, C. (2015) The coalescent in peripatric metapopulations. *J. Appl. Prob.* **52**(2) 538–557
40. LAMBERT, A., MORLON, H., ETIENNE, R.S. (2015) The reconstructed tree in the lineage-based model of protracted speciation. *J. Math. Biol.* **70**(1) 367–397
39. LAMBERT, A., SIMATOS, F. (2015) Asymptotic behavior of local times of compound Poisson processes with drift in the infinite variance case. *J. Theoret. Prob.* **28**(1) 41–91
38. LAMBERT, A. (2014) Vers une approche formelle des origines évolutives de la simplicité. In: Complexité-Simplicité, Berthoz, A. & Petit, J.L. (eds)
37. ETIENNE, R.S., MORLON, H., LAMBERT, A. (2014) Estimating the duration of speciation from phylogenies *Evolution* **68**(8) 2430–2440.
36. LAMBERT, A., ALEXANDER, H.K., STADLER, T. (2014) Phylogenetic analysis accounting for age-dependent death and sampling with applications to epidemics *J. Theoret. Biol.* **352** 60–70.
35. LAMBERT, A., SIMATOS, F. (2014) The weak convergence of regenerative processes using some excursion path decompositions. *Ann. Inst. H. Poincaré.* **50**(2) 492–511.

34. LAMBERT, A., SIMATOS, F., ZWART, B. (2013) Scaling limits via excursion theory: Interplay between Crump-Mode-Jagers branching processes and Processor-Sharing queues. *Ann. Appl. Prob.* **23**(6) 2357–2381.
33. LAMBERT, A., STEEL, M. (2013) Predicting the loss of phylogenetic diversity under non-stationary diversification models. *J. Theoret. Biol.* **337** 111–124.
32. LAMBERT, A., STADLER, T. (2013) Birth-death models and coalescent point processes: The shape and probability of reconstructed phylogenies. *Theoret. Popul. Biol.* **90** 113–128.
- Highlighted as one of 12 all-time important papers published in TPB for its 50th anniversary in 2019.**
31. BANSAYE, V., LAMBERT, A. (2013) Past, growth and persistence of source-sink metapopulations. *Theoret. Popul. Biol.* **88** 31–46.
30. AGUILÉE, R., CLAESSEN, D., LAMBERT, A. (2013) Adaptive radiation driven by the interplay of eco-evolutionary and landscape dynamics. *Evolution* **67**(5) 1291–1306.
29. CHAMPAGNAT, N., LAMBERT, A. (2013) Splitting trees with neutral Poissonian mutations II: Largest and oldest families. *Stoch. Proc. Appl.* **123**(4) 1368–1414.
28. LAMBERT, A., TRAPMAN, P. (2013) Splitting trees stopped when the first clock rings and Vervaat’s transformation. *J. Appl. Prob.* **50**(1) 208–227.
27. CHAPRON, G., WIELGUS, R., LAMBERT, A. (2013) Overestimates of maternity and population growth rates in multi-annual breeders. *Eur. J. Wildl. Res.* **59** 237–243.
26. LAMBERT, A., POPOVIC, L. (2013) The coalescent point process of branching trees. *Ann. Appl. Prob.* **23**(1) 99–144.
25. CHAMPAGNAT, N., LAMBERT, A., RICHARD, M. (2012) Birth and death processes with neutral mutations. *Int. J. Stoch. Anal.* Article ID 569081.
24. PULLANDRE, N., LAMBERT, A., BROUILLET, S., ACHAZ, G. (2012) ABGD, Automatic Barcode Gap Discovery for primary species delimitation. *Mol. Ecol.* **21**(8) 1864–1877.
- Species delimitation method from genomic data. Cited more than 2000 times.**
23. CHAMPAGNAT, N., LAMBERT, A. (2012) Splitting trees with neutral Poissonian mutations I: Small families. *Stoch. Proc. Appl.* **122**(3) 1003–1033.
22. AGUILÉE, R., LAMBERT, A., CLAESSEN, D. (2011) Ecological speciation in dynamic landscapes. *J. Evol. Biol.* **24** 2663–2677.
21. TULLY, T., LAMBERT, A. (2011) The evolution of post-reproductive lifespan as an insurance against developmental indeterminacy. *Evolution* **65** 3013–3020.
20. LAMBERT, A. (2011) Species abundance distributions in neutral models with immigration or mutation and general lifetimes. *J. Math. Biol.* **63** 57–72.
19. AGUILÉE, R., DE BECELIÈVRE, B., LAMBERT, A., CLAESSEN, D. (2011) Under which conditions is character displacement a likely outcome of secondary contact? *J. Biol. Dyn.* **5** 135–146.

18. LAMBERT, A. (2010) Population genetics, ecology and the size of populations. *J. Math. Biol.* **60** 469–472.
17. LAMBERT, A. (2010) The contour of splitting trees is a Lévy process. *Ann. Probab.* **38** 348–395.
16. CABALLERO, M.E., LAMBERT, A., URIBE BRAVO, G. (2009) Proof(s) of the Lamperti representation of continuous-state branching processes. *Probab. Surveys* **6** 62–89.
15. LAMBERT, A. (2009) The allelic partition for coalescent point processes. *Markov Proc. Relat. Fields* **15** 359–386.
14. CATTIAUX, P., COLLET, P., LAMBERT, A., MARTINEZ, S., MÉLÉARD, S., SAN MARTIN, J. (2009) Quasi-stationary distributions and diffusion models in population dynamics. *Ann. Probab.* **37** 1926–1969.
13. AGUILÉE, R., CLAESSEN, D., LAMBERT, A. (2009) Allele fixation in a dynamic metapopulation: Founder effects vs refuge effects. *Theoret. Popul. Biol.* **76** 105–117.
12. LAMBERT, A. (2008) Population Dynamics and Random Genealogies. *Stoch. Models* **24** 45–163.
Lecture notes of an invited lecture series given in 2006 at the 9th Mexican symposium of probability (117 pages)
11. CHAPRON, G., MIQUELLE, D.G., LAMBERT, A., GOODRICH, J. M., LEGENDRE, S., CLOBERT, J. (2008) The impact on tigers of poaching versus prey depletion. *J. Appl. Ecology* **45** 1667–1674.
10. RICCIARDI, A., GONZALEZ, A., LAMBERT, A. (2008) When does ecosystem engineering cause invasion and species replacement? *Oikos* **117** 1247–1257.
9. RAQUIN, A.L., F. DEPAULIS, A. LAMBERT, N. GALIC, P. BRABANT AND I. GOLDRINGER (2008) Experimental estimation of mutation rates in a wheat population with a gene genealogy approach. *Genetics* **179** 2195–2211.
8. LAMBERT, A. (2007) Quasi-stationary distributions and the continuous-state branching process conditioned to be never extinct. *Elec. J. Prob.* **12** 420–446.
7. CHAMPAGNAT, N., LAMBERT, A. (2007) Evolution of discrete populations and the canonical diffusion of adaptive dynamics. *Ann. Appl. Prob.* **17** 102–155.
6. LAMBERT, A. (2006) Probability of fixation under weak selection: a branching process unifying approach. *Theor. Popul. Biol.* **69** 419–441.
5. LAMBERT, A. (2005) The branching process with logistic growth. *Ann. Appl. Prob.* **15** 1506–1535.
4. LAMBERT, A. (2003) Coalescence times for the branching process. *Adv. Appl. Prob.* **35** 1071–1089.
3. LAMBERT, A. (2002) The genealogy of continuous-state branching processes with immigration. *Probab. Theory Relat. Fields* **122** 42–70.
2. LAMBERT, A. (2001) The joint law of ages and residual lifetimes for two schemes of regenerative sets. *Elec. J. Prob.* **6** 1–23.
1. LAMBERT, A. (2000) Completely asymmetric Lévy processes confined in a finite interval. *Ann. Inst. H. Poincaré* **36**(2) 251–274.

PhD students

- 2022– Éliisa Couvert. *Evolutionary processes leading to species diversification*. Co–advisor: Amandine Véber.
- 2022– Antoine Aragon. *Modeling and inferring antibody affinity maturation*. Co–advisors: Aleksandra Walczak and Thierry Mora.
- 2022– Philibert Courau. *Individual-based models of quantitative genetics*. Co–advisor: Emmanuel Schertzer.
- 2022– Augustin Chen. *The evolving body: investigating how Darwinian evolution shapes somatic evolution*. Co–advisors: Guillaume Achaz, Sara Bizzotto and Stéphanie Baulac.
- 2020– Jasmine Gamblin. *Modeling and inference of the evolution of the accessory genome of *E. coli**. Co–advisor: François Blanquart.
- 2020– Guillaume Thomas. *Reconstruction of phylogenetic networks from whole-genome data*. Co–advisor: Celine Scornavacca.
- 2020– Thomas Forest. *Inference of extinction risk from genomic data*. Co–advisors: Guillaume Achaz and Jérôme Fuchs.
- 2018–20 Félix Foutel–Rodier. *Scaling limits of branching and coalescing models arising in population biology*. Co–advisor: Emmanuel Schertzer.
- 2017–21 Éliise Kerdoncuff. *Methods of inference of recent demography using polymorphisms and their genetic linkage*. Co–advisor: Guillaume Achaz.
- 2017–19 Jean-Jil Duchamps. *Random structured phylogenies*.
- 2016–19 François Bienvenu. *Random graphs in evolution*.
- 2015–18 Marc Manceau. *Prospecting for unconventional hypotheses in biodiversity macroevolution modeling*. Co–advisor: Hélène Morlon.
- 2015–18 Verónica Miró Pina. *Equilibrium patterns of genetic diversity shuffled by migration and recombination*. Co–advisor: Emmanuel Schertzer.
- 2014–17 Marguerite Lapière. *Confronting null models of population genetics to analyze genetic diversity*. Co–advisor: Guillaume Achaz.
- 2013–16 Fanny Gascuel. *Emergence of supra-specific diversity patterns in evolutionary radiations*. Co–advisor: Régis Ferrière.
- 2012–16 Miraine Dávila. *Multiscale modelling and reconstruction of epidemiological dynamics*.
- 2012–16 Abdelkader Behdenna. *Inference of interactions between evolutionary processes*. Co–advisor: Guillaume Achaz.
- 2010–14 Cécile Delaporte. *Inhomogeneous random trees and applications to population genetics*.

- 2010–13 Cyril Labbé. *Genealogies of flows and flows of partitions*. Co–advisor: Julien Berestycki.
- 2008–11 Anton Camacho. *Stochastic modelling in epidemiology of emerging diseases*. Co–advisor: Bernard Cazelles.
- 2008–11 Mathieu Richard. *Trees, non-Markovian branching processes and Lévy processes*.
- 2007–10 Robin Aguilée. *Fusion and fission of speciating populations*. Co–advisor: David Claessen.
- 2005–08 Vincent Bansaye. *Applications of stochastic processes to ecology and computer science*. Co–advisor: Jean Bertoin.

Invited professors and postdoctoral fellows

- 2022–24 Viktor Senderov, postdoc, LabEx MemoLife
- 2020–21 Thuy Vo, postdoc, Institut des Mathématiques pour la Planète Terre (IMPT)
- 2020–22 Maxime Godfroid, ANR Inception
- 2019–20 **Prof. Rob Kulathinal** (Temple U, Philadelphia, USA), invited professor
- 2019–20 Alejandro Hernández Wences, postdoc, UNAM (Mexico City, Mexico)
- 2017–19 Julie Marin, postdoc, LabEx MemoLife
- 2018 **Prof. Marek Kimmel** (Rice U, Houston, USA), invited professor, LabEx MemoLife and FSMP (Fondation des Sciences Mathématiques de Paris)
- 2015 **Prof. Sabin Lessard** (U de Montréal, Canada), invited professor, CNRS
- 2013–14 Airam Blancas, postdoc, CIMAT (Guanajuato, Mexico)
- 2012–13 Todd Parsons, postdoc, FSMP
- 2012 **Prof. Nicolas Lartillot** (CNRS), invited professor, UPMC
- 2012 Patrick Hoscheit, postdoc ENS
- 2011 Chunhua Ma, postdoc, Chinese Research Council.

PhD & Habilitation committees

- jan 2023 **Bertrand Cloez (reviewer)**. *Contribution to the study of stochastic models and algorithms in population dynamics*. Habilitation à Diriger des Recherches de l’U. Montpellier.
- dec 2022 Corentin Clerc (pdt of committee). *Representation of zooplankton in models of marine biogeochemistry and implications for the carbon cycle in the ocean*. Thèse de l’U. PSL. Advisor: Laurent Bopp.

- sep 2022 **Charline Smadi (reviewer)**. *Branching processes in random environment, frequent mutations in eco-evolution and evolution of sexual preferences*. Habilitation à Diriger des Recherches de l'U. Grenoble-Alpes.
- dec 2021 Josué Corujo Rodriguez. *Multiallelic Moran models and quasistationary distributions*. Thèse de l'U. Paris Dauphine-PSL. Advisors: Djalil Chafaï and Simona Grusea.
- jun 2021 Maxime Berger. *The critical behavior of the quasispecies model*. Thèse de l'U. PSL. Advisor: Raphaël Cerf.
- dec 2019 Salomé Bourg (pdt of committee). *The evolution of mechanisms underlying the allocation of resources and consequences on the shape of trade-offs in multicellular organisms*. Thèse de l'U. Claude Bernard Lyon 1. Advisors: Frédéric Menu, Étienne Rajon and Natacha Kremer.
- oct 2019 **Emmanuel Schertzer**. *Branching-coalescing structures in statistical mechanics and biology*. Habilitation à Diriger des Recherches de Sorbonne Université.
- nov 2018 Tristan Roget (pdt of committee). *Selection-mutation dynamics in age-structured populations: large time behavior and application to life history trait evolution*. Thèse de l'École Polytechnique. Advisors: Michaël Rera and Sylvie Méléard.
- jan 2018 Samuel Johnston (**reviewer**). *The coalescent structure of continuous-time Galton-Watson trees*. PhD thesis of the **U. of Bath**. Advisors: Matthew Roberts and Simon Harris.
- dec 2017 **Amandine Véber (reviewer)**. *Structured models of transmission*. Habilitation à Diriger des Recherches de l'U. Paris-Sud.
- oct 2017 Paul Bastide. *Shifted stochastic processes evolving on trees: application to models of adaptive evolution on phylogenies*. Thèse de l'U. Paris-Sud. Advisors: S. Robin and M. Mariadassou.
- sep 2017 Mircea Sofonea (**reviewer**). *Evolution of virulence and multiple infections*. Thèse de l'U. Montpellier. Advisors: S. Alizon and Y. Michalakis.
- avr 2017 Éric Adjakossa. *Multivariate longitudinal analysis by mixed models and application to the malaria epidemic*. Thèse de l'UPMC. Advisor: Grégory Nuel.
- nov 2016 Benoît Henry (pdt of committee). *Non Markovian branching processes in population dynamics and genetics*. Thèse de l'U. de Lorraine. Advisor: Nicolas Champagnat.
- oct 2016 Giacomo Plazzotta (**reviewer**). *Linking tree shapes to the spread of infection using generalised branching processes*. PhD thesis of **Imperial College, London**. Advisor: Caroline Colijn.
- sep 2016 Sarah Eugène (pdt of committee). *Stochastic modeling in molecular biology: A probabilistic analysis of protein polymerization and telomere shortening*. Thèse de l'UPMC. Advisors: Marie Doumic and Philippe Robert.

- jul 2016 Elma Nassar (pdt of committee). *Probabilistic models for a population evolving in a variable environment*. Thèse de l'U. Aix-Marseille. Advisors: Étienne Pardoux and Michael Kopp.
- jul 2016 Étienne Adam (pdt of committee). *Persistence and rate of extinction of multi-type stochastic population models in discrete time*. Thèse de l'U. Paris-Saclay. Advisors: Vincent Bansaye and Jean-René Chazottes.
- may 2016 **Olivier Rivoire (reviewer)**. *Evolution, Physics and Information*. Habilitation à Diriger des Recherches de l'U. de Grenoble-Alpes.
- feb 2016 Airam Aseret Blancas Benítez (**reviewer**). *Two contributions to the theory of stochastic population dynamics*. Tesis de la U. de Guanajuato. Advisor: Victor Rivero.
- nov 2015 **Sébastien Lion** (pdt of committee). *Evolution of structured host-parasite interactions*. Habilitation à Diriger des Recherches de l'U. Montpellier.
- oct 2015 Florian Massip (pdt of committee). *The statistical fate of eukaryotic DNA: Modelling match statistics in different evolutionary scenarios*. Thèse de l'U. Paris-Saclay. Advisors: Sophie Schbath and Peter Arndt.
- jan 2015 Xan Duhalde (pdt of committee). *On some fractal and path wise properties of continuons branching processes*. Thèse de l'UPMC. Advisor: Thomas Duquesne.
- nov 2014 Vi Lê (pdt of committee). *Branching processes with interactions*. Thèse de l'U. Aix-Marseille. Advisor: Étienne Pardoux.
- may 2014 Vincent Le Bourlot (pdt of committee). *Competition by interference, temperature and population dynamics*. Thèse de l'UPMC. Advisors: David Claessen and Thomas Tully.
- dec 2013 Stephan Fischer (**reviewer**). *Modeling the evolution of genome size and of gene content by local mutations and large chromosomic rearrangements*. Thèse de l'U. Lyon 1. Advisors: Guillaume Beslon, Carole Knibbe and Samuel Bernard.
- dec 2013 Camille Coron (pdt of committee). *Probabilistic modeling and eco-evolution of diploid populations*. Thèse de l'École Polytechnique. Advisor: Sylvie Méléard.
- dec 2013 **Nicolas Lartillot**. *Probabilistic models for molecular and macro-evolution*. Habilitation à Diriger des Recherches de l'U. Lyon 1.
- nov 2013 **Peggy Cénac**. *Recursivity at the intersection of DNA sequence modeling, random trees, stochastic algorithms and martingales*. Habilitation à Diriger des Recherches de l'U. de Bourgogne (Dijon).
- nov 2013 **Vincent Bansaye**. *Branching processes, Markov chains and random environment for population dynamics*. Habilitation à Diriger des Recherches de l'École Polytechnique.
- nov 2013 Alexandre Génadot. *Multiscale study of probabilistic models for excitable systems with a spatial component*. Thèse de l'UPMC. Advisor: Michèle Thioullien.

- oct 2013 Krzysztof Bartoszek. *Stochastic models in phylogenetic comparative methods: analytical properties and parameter estimation*. PhD of **U. of Gothenburg (Sweden)**. Advisor: Serik Sagitov.
- feb 2013 Romain Bourget (**reviewer**). *Stochastic modeling of pathogen adaptation to hosts carrying genetic resistances*. Thèse de l'U. Angers. Advisor: Loïc Chaumont.
- dec 2012 **Michaël Blum (reviewer)**. *Bayesian statistics and applications in population genetics*. Habilitation à Diriger des Recherches de l'U. Joseph Fourier (Grenoble).
- dec 2012 Patrick Hoscheit. *Continuum tree-valued stochastic processes*. Thèse de l'U. Paris-Est. Advisors: Romain Abraham and Jean-François Delmas.
- sep 2012 Clément Foucart. *Fleming–Viot processes with immigration*. Thèse de l'UPMC. Advisor: Jean Bertoin.
- sep 2012 Mamadou Ba (**reviewer**). *Exploration processes, binary trees and generalized Ray–Knight theorems*. Thèse de l'U. Aix–Marseille. Advisor: Étienne Pardoux.
- jan 2012 **David Claessen**. *Modelling the struggle for existence in structured populations*. Habilitation à Diriger des Recherches de l'UPMC.
- dec 2011 Hervé Le Nagard (pdt of committee). *Emergence and impact of phenotypic complexity*. Thèse de l'UPMC. Advisor: Olivier Tenaillon.
- dec 2010 Sandrine Adiba (pdt of committee). *Fluctuating selection and effects of genetic drift on polymorphism. Theoretical and experimental evolution*. Thèse de l'École Normale Supérieure. Advisors: Frantz Depaulis and Minus van Baalen.
- dec 2010 Bruno Jaffuel. *Branching random walks with absorption*. Thèse de l'UPMC. Advisor: Zhan Shi.
- oct 2010 Marco Andrello (pdt of committee). *Demo-genetic models for plant conservation*. Thèse de l'U. Joseph Fourier (Grenoble). Advisors: Oscar Gaggiotti and Irène Till-Bottraud.
- nov 2009 Arno Siri–Jégousse. *Asymptotic behaviour of the length of a coalescent tree. Applications to population genetics*. Thèse de l'U. Paris Descartes. Advisors: Jean-François Delmas and Jean-Stéphane Dhersin.
- dec 2006 Viêt-Chí Tràn. *Stochastic particle models for problems of adaptive evolution and for the approximation of statistical solutions*. Thèse de l'U. Paris 10. Advisor: Sylvie Méléard.

Grants and awards

- 2022–25 Holder of RIPEC C3 research incentive (ENS, 3 years)
- 2022–24 Co-PI of project *Correlated evolution of genes and phenotypes: Application to bird color patterns* (LabEx MemoLife)

2021–23 Co-PI of project *Micro-macro approach of the evolution of the diversity of phenotypic traits* (Institut des Mathématiques pour la Planète Terre)

2020–22 Member of project *Path2Resistance*, Institut de Convergence INCEPTION (dir. Guillaume Achaz, Philippe Glaser, Eduardo Rocha)

2020–22 Member of project *Mathematical tools for analysis of genomic diversity*, NSF RAPID COVID-19 (dir. Simon Tavaré)

2019– ‘Professeur de classe exceptionnelle’

2018–19 PI of project *Phylodynamics for Experimentally Evolving Viruses* (MITI, CNRS)

2018–22 Holder of PIR research incentive (Sorbonne Université, 4 years)

2017–19 PI of project *Genomics of Diversification* (LabEx MemoLife)

2016 Visiting professor, Dpt of mathematics, U. Pennsylvania (Philadelphia, USA)

2014–19 ‘Professeur de 1ère classe’

2014–17 Holder of PIR (UPMC, 4 years)

2013 CRCT (6 month sabbatical)

2012 Délégation CNRS (6 month sabbatical spent at CIRB, Collège de France)

2012– PI of project ‘Stochastic Models for the Inference of Life Evolution (SMILE), Collège de France

2011–12 CNRS: interdisciplinary grant PEPII (dir. Guillaume Martin)

2010–13 ANR (French National Research Agency) project *Modèles Aléatoires en Écologie, Génétique et Évolution* (MANEGE, dir. Sylvie Méléard). *Leader of the Paris team*

2010–13 ANR: project *6th Mass Extinction* (LOSERS, dir. Philippe Bouchet).

2009–11 ANR project *Arbres Aléatoires Continus et Applications* (A3, dir. Jean-François Delmas)

2009–13 Holder of PIR research incentive (prime d’investissement recherche, UPMC, 4 years)

2007–09 ANR project *Modèles Aléatoires de l’Évolution du Vivant* (MAEV, dir. Étienne Pardoux). *Leader of the Paris team.*

2006 Visiting professor, Instituto de Matemáticas, UNAM (Mexico City)

2006 Délégation CNRS (6 month sabbatical spent at Lab of Probability, UPMC)

2005–2007 ACI Informatique, Mathématiques et Physique pour la Biologie (IMPBio): project *Modèles Mutationnels* (dir. Frantz Depaulis)

2004–2006 ACI Nouvelles Interfaces des Mathématiques (NIM): project *Populations Structurées* (dir. Sylvie Méléard)

2005–2008 Holder of PEDR research incentive (‘prime d’encadrement doctoral et de recherche’, Ministry of Research, 4 years)

Scientific boards

- 2024, 2021 **President of steering committee of int'l triennial conference ‘*Probabilistic Models in Evolutionary Biology*’,** Centre International de Rencontres Mathématiques (CIRM), Luminy
- 2024, 2022, 2019, 2017, 2015 Permanent member of scientific board of int'l biennial conference ‘*Mathematical Models in Ecology & Evolution*’**
- 2021– Scientific board of *Centre Mersenne* (open access publications)
- 2018 Scientific board, international conference ‘*Probabilistic Models in Evolutionary Biology IV*’, CIRM Luminy, jun 25–29
- 2017 Scientific board, international conference ‘*Mathematical Approaches to Evolutionary Trees and Networks*’, **Banff Int'l Research Station (Canada)**, feb 12–17
- 2016–21 Permanent member of scientific advisory board, doctoral program ‘Interfaces for Life Sciences’, Sorbonne Université**
- 2015 Scientific board, international summer school ‘*Stochastic Analysis and its Applications Mongolia 2015*’, **Ulaanbaatar (Mongolia)**, jul 27–aug 7
- 2015 Scientific board, international conference ‘*Probabilistic Models in Evolutionary Biology III*’, CIRM Luminy, jun 15–19
- 2013 Scientific board, international workshop ‘*Mathematics for an Evolving Biodiversity*’, **Centre de Recherche Mathématiques de Montréal (Canada)**, sep 16–20
- 2012 Scientific advisory board, international conference on ‘*Stochastic Processes in Systems Biology, Genetics and Evolution*’, **Rice University, Houston (USA)**, aug 22–25
- 2012 Scientific board, international conference ‘*Probabilistic Models in Evolutionary Biology II*’, CIRM Luminy, jun 14–18
- 2011 Evaluation committee of *Biostatistics and Spatial Processes Lab* (UR BioSP, INRA)
- 2009 Scientific board, international conference ‘*Probabilistic Models in Evolutionary Biology*’, CIRM Luminy, may 25–29.

Expertise and refereeing service

- 2020– Co-Founder of *Peer Community in Mathematical & Computational Biology* (not-for-profit, diamond open access)
- 2018– Recommender for *Peer Community in Evolutionary Biology* (not-for-profit, diamond open access journal)
- 2017– Reviewer for tenured positions and group leader positions: U of Vienna (Austria), Johns Hopkins U (USA), U of Bern (Switzerland), U of Oregon (USA)
- 2014– **Associate Editor for *Theoretical Population Biology***

2007– Grant reviewer for research funds: Marsden Fund (New Zealand), National Security Agency (USA), DFG (Germany), FWF (Austria), John Templeton Foundation (USA)

Anonymous reviewer for probability journals: *Probability Theory and Related Fields*, *Annals of Probability*, *Annals of Applied Probability*, *Electronic Journal of Probability*, *Stochastic Processes and their Applications*, *J. of Theoretical Probability*, *J. of Applied Probability*...

Anonymous reviewer for biology journals: *Science*, *Nature*, *PNAS*, *eLife*, *PLoS Biology*, *Systematic Biology*, *Evolution*, *J. Royal Society Interface*, *Philosophical Transactions of the Royal Society*, *J. of Theoretical Biology*, *Mathematical Biosciences*, *Genetica*...

2005–16 Reviewer for *Mathematical Reviews–MathSciNet* (30 reports)

Organization of conferences, scientific animation

2021 co-organizer of conference for the **60th birthday of Jean Bertoin**, Paris, jul 5–9

2018 co-organizer of scientific day in memory of David Claessen, dec 17

2018 invited organizer of session *Stochastic models in phylogenetics*, 40th Conference on Stochastic Processes and their Applications, Gothenburg (Sweden), jun 11–15

2013–18 organizer of annual Journée ‘Biologie & Mathématiques sur la Montagne’, Collège de France, Paris

2016 co-organizer of workshop ‘Modeling and Predicting Ecological Transitions’, Collège de France, Paris, jun 9

2016 co-organizer of workshop ‘Mathematical models for Epidemiology and Phylogenetics’, University of Lille 1, may 30–31

2015 main organizer of **MMEE 2015 ‘Mathematical Models in Ecology & Evolution’**, Collège de France, Paris, jul 8–10, **250 participants**

2012 co-organizer of international conference ‘**Phylogenetic approaches to diversification**’, Collège de France, oct 22–23, **120 participants**

2011 invited organizer of ‘frontier session’ *Stochastic models in phylogenetics*, 16th Applied Probability Society Conference, KTH, Stockholm, jul 6–8

2008 invited organizer of session *Gènes, Individus, Populations*, Journées MAS (Modélisation Aléatoire et Statistique), U. Rennes 1, aug 28–30

2008–12 co-organizer of weekly workshop *Génétique des populations stochastique*, Paris

2007 organizer of session *Recent progress in the theory of adaptive dynamics*, Conference on Mathematical Models of Evolution and Ecology, U. Sussex, sep 7–9

2003–2006: organizer of the weekly team meetings of the unit of mathematical evolutionary biology, Laboratoire d’Écologie et Évolution, ENS.

jan 2000–jun 2001: founder and organizer of a weekly seminar for the PhD students in the Laboratoire de Probabilités et Modèles Aléatoires, UPMC.

Hiring committees ¹

- 2019 PR probability (U Paris Est)
- 2018 MC probability (Sorbonne U)
- 2017 MC probability (U Grenoble)
- 2016 MC math/bio (U Toulouse)
- 2014 MC probability (UPMC)
- 2014 PR math/bio (UPMC)
- 2013 MC math/bio (UPMC)
- 2012 PR math/bio (UPMC)
- 2012 MC math (Institut Fourier, U Grenoble)

Invitations

1. Invited lecture series

- 2022 *Stochastic Models of Evolutionary Processes*. Journées Math-Bio-Santé and GDR MathSAV, Besançon
- 2020 *Evolutionary Processes and Patterns of Biodiversity*. IICD & Society Initiative Joint Seminar Series, **Columbia University, New York City** (online)
- 2019 *Quantitative Genetics in the Post-genomic Era*. Summer school ‘Data and Models in Ecology and Evolution’, Institut Pascal (Saclay)
- 2015 *Probabilistic Models for the (sub)Tree(s) of Life*. XIX Escola Brasileira de Probabilidade, **Sao Paulo (Brazil)**
- 2012 *Inference of Diversification Processes from Phylogenetic Trees*, **U. Católica, Santiago (Chile)**
- 2011 *Population Dynamics and Evolution in the Trait Space*. Young European Probabilists VIII, **Eurandom, Eindhoven (Netherlands)**
- 2010 *Modern Aspects of Discrete Branching Processes*. CIMPA School (Centre International de Mathématiques Pures et Appliquées), **St-Louis (Senegal)**, avr 12–23, 2010.
- 2008 *Branching Processes and Splitting Trees*. First Bath Postgraduate Workshop in Probability, **U. of Bath (UK)**
- 2006 *Population Dynamics and Random Genealogies*. IX Simposio de Probabilidad y Procesos Estocásticos, **Guanajuato (Mexico)**

2. Invited plenary lectures

¹Assistant Professors (Maître de conférences, MC) or Associate/Full Professors (Professeur, PR)

- 2022 Annual conference of the **Shesvie** (Society of history and epistemology of life sciences), Louvain (Belgium)
- 2022 Joint annual conference Alphy–AIEM, Rennes
- 2021 LXXXVIII **Annual Meeting of the Mathematical Society of Chile**, Talca (Chile, online)
- 2020 **One World Probability Seminar** (> 300 participants, online)
- 2018 Int'l Conference *Stochastic Models in Ecology and Evolutionary Biology*, Venice (Italy)
- 2016 **Biennial Probability Conference of the French Society of Applied Math** (SMAI), Grenoble
- 2016 **5th Int'l Workshop on Mathematical and Computational Evolutionary Biology** (MCEB), Montpellier
- 2013 Int'l Conference *Stochastic Models in Ecology, Evolution and Genetics*, Angers
- 2008 **4th International Workshop on Applied Probability** (IWAP), Compiègne
- 2008 **4th Cornell Summer School in Probability**, Cornell U. (USA)

3. Colloquia and other events with small speaker/public ratio

- 2023 Rhein–Main Kolloquiums Stochastik, Francfort
- 2022 Colloquium of the **European Society for Mathematical & Theoretical Biology** (ESMTB, online)
- 2019 Closing session of the annual conference of doctoral school ‘Step Up’, Paris
- 2018 Colloquium of the math department of U. of Rennes
- 2017 Colloquium of the math department of U. Paris-Sud
- 2015 Berliner Kolloquium Wahrscheinlichkeitstheorie, Berlin
- 2011 Inauguration of the Center for Interdisciplinary Research in Biology, Collège de France, Paris
- 2009 Swiss Probability Seminar, Bern
- 2006 Rhein–Main Kolloquiums Stochastik, Francfort

4. Invited conference lectures: ≈ 80 since 2000.

5. Invited departmental seminars: ≈ 70 since 2001 (half in math departments, half in biology departments or interdisciplinary labs).

Popularization activity

- 2022 **La Nuit de l'ENS**, talk ‘Chance, evolution and health: is cancer a matter of bad luck?’
- 2021 *TimeWorld* Conference, Conservatoire National des Arts & Métiers, talk ‘Is cancer a matter of bad luck?’
- 2020 **10 media interviews** (press, radio, TV) about the survey **Alcov2** conducted in French households to investigate the modes of transmission of the coronavirus

- 2018 *Pint of Science* festival, talk ‘Do our genes evolve?’
- 2018 Cross-interview with H el ene Morlon, filmed for **La Nuit des Sciences** (ENS)
<https://www.youtube.com/watch?v=olvjhAN1C1o>
- 2018 *Maths Club* seminar for U Paris-Diderot students, talk ‘The Chinese restaurant process’
- 2017 *Aromaths* seminar for UPMC students, talk ‘The Chinese restaurant process’
- 2014 Festival **Les Ernests** (ENS), talk ‘Decipher the laws of Evolution : the other secret of DNA’
<https://www.youtube.com/watch?v=u8Jcxjz5Quw>
- 2013 Workshop *Math ematiques en Mouvement* (FSMP)
- 2013 Interview on probabilistic modeling in evolution for an article published in the *Actualit es de la recherche* of UPMC
- 2012 Interview for an article titled ‘Les biologistes, allergiques aux maths ?’ published in **Le Monde** (June 30)
- 2012 Workshop at Fondation Hugot on ‘Complexity-Simplicity’, talk ‘Toward a formal approach of the evolutionary origins of simplicity’
- 2011 Interdisciplinary seminar of *Centre d’Alembert* on ‘Crises, catastrophes, out-of-equilibrium systems’
- 2010 Interview on math modeling in biology for an article published in **n 245 of ‘journal du CNRS’**