

Curriculum Vitae¹
Linglong Yuan

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Research Interests

Coalescent theory, branching processes, random trees, measure-valued processes;
Condensation phenomena in stochastic models;
Exchangeability and extendibility of complex networks;
Stochastic modelling and computing.

Work Experience

- **Lecturer at Department of Mathematical Sciences**
University of Liverpool, Liverpool, UK. 2020-now
- **Lecturer at Department of Mathematical Sciences**
Xi'an Jiaotong-Liverpool University (XJTLU), Suzhou, China. 2017-2020
- **Post-doctoral Researcher**
Johannes-Gutenberg-Universität, Mainz, Germany. 2015-2017
Team Stochastics (*Stochastik*), Institute of Mathematics.
- **Post-doctoral Researcher**
Uppsala Universitet, Uppsala, Sweden. 2013-2015
Team Analysis and Probability (*Analys och sannolikhets teori*), Department of Mathematics.

Education

- **PhD**
Université Paris 13, Villetaneuse, France 2010-2013
 - **Place:** Supervised by Prof. Jean-Stéphane Dherin in the laboratory [LAGA](#), in the team Probability-Statistics of [Galilei Institute](#). Defended on 03.12.2013 in Université Paris 13, Villetaneuse, France.

¹Please note that hyperlinks are clickable

- **Title :** Small-time behaviours of Λ n -coalescents with emphasis to the external branch lengths.
(*Comportements en temps petits des Λ n -coalescents avec l'accent sur les longueurs des branches externes*).
- **Mention:** Very honorable.
- **Jury :** Prof. Jean-François Delmas (President), Prof. Julien Berestycki (Reporter), Prof. Götz Kersting (Reporter), Prof. Sylvie Méléard (Examiner), Prof. Yueyun Hu (Examiner), Prof. Jean-Stéphane Dhersin (Supervisor).

- **Master**

Université Pierre et Marie Curie, Paris, France

2009 - 2010

- **Programme:** Probability and random models.
(*Probabilités et Modèles aléatoires*).
- **Master thesis:** Asymptotic behaviours of an external branch length of certain coalescent processes, supervised by Prof. Jean-Stéphane Dhersin.
(*Comportement asymptotique de la longueur d'une branche externe de certains processus de coalescence*).

- **Engineering education**

Ecole Polytechnique, Palaiseau, France

2006 - 2010

- **Major:** Mathematical engineering for finance and ecological systems.
(*Ingénierie mathématique pour la finance et les systèmes écologiques*).

- **Bachelor**

Tongji University, Shanghai, China

2003 - 2006

- **Major:** Statistics (quitted in the third academic year to pursue education in France).

Grants

- **National Natural Science Foundation of China (Youth Program): 200,000 CNY (22,731 GBP).**
PI, project code: 11801458. Duration: 01.01.2019 - 30.12.2021.
- **Research Development Fund, Xi'an Jiaotong-Liverpool University: 82,000 CNY (9,319 GBP).**
PI, reference code: RDF-17-01-39. Duration: 01.06.2018 - 31.05.2021.

Awards

- **Fellow of The Higher Education Academy.** In recognition of attainment against the UK Professional Standards Framework for teaching and learning support in higher education. Recognition reference: PR148198. Date of recognition: 29.06.2018.
- **Itô Prize 2017.** The Prize was awarded in the [39th Conference on Stochastic Processes and their Applications](#) (25.07.2017), in Moscow, to

An individual-based model for the Lenski experiment and the deceleration of the relative fitness.
Stochastic Processes and their Applications 126(8), 2211-2252, 2016.
Joint work with Adrian Gonzalez-Casanova, Noemi Kurt and Anton Wakolbinger.

The Prize is given biennially to the best article in *Stochastic Process and Their Applications* together with 5000 USD.

- **One of the three best Collective Scientific Projects of the 2006 promotion in Ecole Polytechnique.** The Prize was given to

Chaos, mélange, ordre et structure: de quelques charmes des systèmes dynamiques.
(Chaos, mixture, order and structure: some charms of dynamical systems)
Joint work with Lee Antony, Mattei Arnaud, Nguyen Hoang-Nguyen, Pascal Ambroise.

Review for Journals

- American Institute of Mathematical Sciences
- Electronic Journal of Probability
- Latin American Journal of Probability and Mathematical Statistics
- Mathematical Population Studies
- Science China Mathematics
- Statistics & Probability Letters
- The Brazilian Journal of Probability and Statistics
- Journal of Applied Probability
- Journal of Mathematical Analysis and Applications
- Journal of Statistical Physics

Research Publications

19. (with Q. Berger, M. Birkner) [Collective vs. individual behaviour for sums of i.i.d. random variables: appearance of the one-big-jump phenomenon.](#)
Preprint.
18. (with C. Foucart) [Extremal shot noise processes and random cutout sets.](#)
Preprint.
17. (with V.Bansaye, C.Gu) [A growth-fragmentation-isolation process on random recursive trees and contact tracing.](#)
To appear in Annals of Applied Probability.
16. (with C.Foucart, C.Ma) [Limit theorems for continuous-state branching processes with immigration.](#)
Advances in Applied Probability. 54(2), 599-624, 2022.

15. [Kingman's model with random mutation probabilities: convergence and condensation I.](#)
Advances in Applied Probability. 54(1), 311-335, 2022.
14. (with T. Konstantopoulos) [Does the ratio of Laplace transforms of powers of a function identify the function?](#)
Journal of Mathematical Analysis and Applications. 494(1), 124568, 2021.
13. [Kingman's Model with Random Mutation Probabilities: Convergence and Condensation II.](#)
Journal of Statistical Physics. 181(1), 870-896, 2020.
12. (with T. Konstantopoulos) [On the extendibility of finitely exchangeable probability measures.](#)
Transactions of the American Mathematical Society. 7371(10), 7067-7092, 2019.
11. (with A. Siri-Jégousse) [A note on small-time behaviour of the largest block size of beta \$n\$ -coalescent.](#)
XII Symposium of Probability and Stochastic Processes. 219-234. Birkhäuser, Cham, 2018.
10. (with T. Konstantopoulos and M. Zazanis) [A fully stochastic approach to limit theorems for iterates of Bernstein operators.](#)
Expositiones Mathematicae. 36(2), 143-165, 2018.
9. (with T. Konstantopoulos) [A probabilistic interpretation of the Gaussian binomial coefficients.](#)
Journal of Applied Probability. 54, 1295-1298, 2017.
8. [A generalization of Kingman's model of selection and mutation and the Lenski experiment.](#)
Mathematical Biosciences, 285, 61-67, 2017.
7. (with S. Janson and T. Konstantopoulos) [On a representation theorem for finitely exchangeable random vectors.](#)
Journal of Mathematical Analysis and Applications. 442(2), 703-714, 2016.
6. (with A. Gonzalez-Casanova, N. Kurt, A. Wakolbinger) [An individual-based model for the Lenski experiment, and the deceleration of the relative fitness.](#)
Stochastic Processes and Their Applications 126(8), 2211-2252, 2016.
5. (with A. Siri-Jégousse) [Asymptotics of the minimal clade size and related functionals of certain beta-coalescents.](#)
Acta Applicandae Mathematicae. 142(1), 127-148, 2016.
4. (with J.-S. Dhersin) [On the total length of external branches for beta-coalescents.](#)
Advances in Applied Probability. 47(3), 693-714, 2015.
3. [On the measure division construction of \$\Lambda\$ -coalescents.](#)
Markov Processes and Related Fields 20, 229-264, 2014.
2. (with V. Bansaye, J-F. Delmas, O. Hénard and P. Vallois) [Probabilités et biologie.](#)
European Series in Applied and Industrial Mathematics Proceedings 44, 197-213, 2014.
1. (with J.-S. Dhersin, A. Siri-Jégousse and F. Freund) [On the length of an external branch in the Beta-coalescent.](#)
Stochastic Processes and Their Applications 123(5), 1691-1715, 2013.

Selected Recent Talks

- 06.12.2022. Seminar talk in Université Sorbonne Paris Nord invited by Dr. Clément Foucart.
- 23-26.08.2022. Mini-course speaker at the Summer School 2022 at the Academy of Mathematics and Systems Science China, organised by Prof. Zhan Shi and Dr. Quan Shi (Beijing, China).
- 21.12.2021. Online seminar talk in Nankai University invited by Prof. Chunhua Ma (Tianjin, China).
- 27.10.2021. Talk in the North-West MathBio Seminiar invited by Prof. Rachel Bearon (Liverpool, UK).
- 03.05.2021. Talk in the Oberseminar at TU Berlin invited by Prof. Jochen Blath (Berlin, Germany).
- 14.11.2020. Talk in the online conference organized by Prof. Kainan Xiang in Xiangtan University (Hunan, China).
- 22.09.2020. Talk in the online conference organized by Prof. Matthias Birkner in Johannes-Gutenberg-University at Mainz (Mainz, Germany).
- 03.09.2020. Online seminar talk in Ritsumeikan University invited by Prof. Jiro Akahori (Shiga, Japan).

Workshop Organisation

- Organiser of a **2-day international workshop**: [Stochastic processes with applications in finance and related fields](#). 13.09.2018 - 14.09.2018, XJTLU.
Guest speakers: Prof. Jiro Akahori, Dr. Yuri Imamura, Dr. Nienlin Liu, Dr. Bo Li, Prof. Takis Konstantopoulos, Prof. Corina Constantinescu.
- Organiser of a **1-day international workshop**: Stochastic processes with emphasis to coalescents and branching. 2015, Uppsala, Sweden.
Guest speakers: Dr. Adrian Gonzalez-Casanova, Prof. Ingemar Kaj, Dr. Clément Foucart.

Computing skills

- Scientific computing: Matlab, Maple and R
- Programming languages: Java, C

Languages

- Chinese (mother tongue)
- English (fluent)
- French (fluent)
- German (beginner)