



Hong-Quan Tran

Curriculum vitae

 <https://www.ceremade.dauphine.fr/~tran/>
 hong-quan.tran [AT] unige.ch

Employment

2024– **Postdoctoral researcher**, *University of Geneva*, in the group of Antti Knowles.

Education

2020–2024 **Ph.D student under the supervision of Justin Salez**, *Université Paris Dauphine*, Ph.D. defense on May 28, 2024.

2017–2020 **Student, major in Mathematics**, *Ecole normale supérieure*, Paris.

2020 **Master 2 in Probabilities and Statistics**, *Université Paris Sud*.
with highest honors

2019 **Master 1 of Mathematics**, *Université Paris Dauphine*.
with highest honors

2018 **Bachelor of Science in Mathematics**, *Université Paris Dauphine*.
with highest honors

2014–2017 **Student, major in Mathematics (Talented program)**, *Hanoi University of Science, Vietnam*.

2011–2014 **High School Student, Specialized in Mathematics**, *Thai Binh High School for Gifted Students, Vietnam*.

Awards and distinctions

2015 **Vietnam Algebra Olympiads for University Students**.
First Prize

2015 **Le Van Thiem Award from Vietnam Mathematical Society**.

2014 **International Mathematical Olympiad (IMO)**.
Gold Medal

Research papers

2021 **The mean-field Zero-Range process with unbounded monotone rates: mixing time, cutoff, and Poincaré constant**, [arXiv](#), *Annals of Applied Probability*, **33** (2023).

2022 **Cutoff for the non reversible SSEP with reservoirs**, [arXiv](#), *Electronic Journal of Probability*, **28** (2023).

2023 **Cutoff for the Glauber-Exclusion process in the full high-temperature regime: an information percolation approach**, [arXiv](#), submitted to *Annals of Probability*.

Talks

- April 2nd, 2024 **Information percolation and cutoff for the Glauber Exclusion process**, *Séminaire de Probabilités*, Université de Paris-Est Créteil.
- March 21st, 2024 **Information percolation and cutoff for the Glauber Exclusion process**, *Seminar Proba and Stats*, VAST Institute of Mathematics.
- February 7th, 2024 **Information percolation and cutoff for the Glauber Exclusion process**, *Séminaire Modélisation Stochastique*, Université Paris Cité.
- January 23rd, 2024 **Information percolation and cutoff for the Glauber Exclusion process**, *Matinée du CEREMADE*, Université Paris Dauphine.
- November 15th, 2023 **Information percolation and cutoff for the Glauber Exclusion process**, *Abu Dhabi Stochastics seminar*, NYU Abu Dhabi.
- April 11th, 2023 **Mixing time of the Symmetric Simple Exclusion Process with reservoirs**, *Seminar dedicated to PhD students of CEREMADE*, Paris.
- July 15, 2022 **Mixing time of the Glauber-Exclusion process at sufficiently high temperature**, *50th Saint Flour Probability summer school*, Saint Flour.
- March 3rd, 2022 **Mixing times and Zero-Range process**, *CEREMADE Winter school for Young Researchers*, Saint-Pierre-Canivet.

Teaching

- 2023–2024 **TA: Probability 2**, L2, Université Paris Dauphine, Paris.
- 2023–2024 **TA: Probability 1**, L2, Université Paris Dauphine, Paris.
- 2020–2023 **TA: Time series**, M1, Université Paris Dauphine, Paris.
- 2021–2023 **TA: Introduction to Probabilities**, L1, Université Paris Dauphine, Paris.
- 2020–2021 **TA: Lebesgue integration and Probabilities**, L3, Université Paris Dauphine, Paris.

Conferences and Summer Schools

- 2024 **Participant**, *52nd Saint-Flour Probability summer school*, Saint Flour, France.
- 2023 **Participant**, *ALEA Days 2023*, Marseille, France.
- 2022 **Participant**, *50th Saint-Flour Probability summer school*, Saint Flour, France.
- 2022 **Participant**, *Probability and Mathematical Physics*, Helsinki, Finland.
- 2022 **Participant**, *100 Years of the Ising Model*, IHES, Bures-sur-Yvettes, France.
- 2021 **Participant**, *Oberwolfach Seminar: The Cutoff Phenomenon for Finite Markov Chains*, online participant, Oberwolfach.
- 2018 **Participant**, *PCMI Summer School in Harmonic analysis*, Park City, Utah.
- 2016 **Participant**, *CIMPA-ICTP research School in Lattices*, Ho Chi Minh City.

Experience

- 2017 **Mentor**, *Math and Science Summer Program (MaSSP)*, a summer school for high school students, Hanoi.

2015 **Coach**, *prepare the regional team for the Vietnam National Mathematical Olympiads*,
Thai Binh High School for Gifted Students.

 **Languages**

Vietnamese Mother tongue

French Fluent

English Fluent