

# Cosco Clément

Weizmann Institute of Science

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## POSITION

2022 - *Maître de Conférence (Associate Professor). CEREMADE, Université Paris-Dauphine*

## EDUCATION

2019 - 2022 Postdoctoral student in Mathematics. Advisor: Prof. Ofer Zeitouni  
Faculty of Mathematics and Computer Science, Weizmann Institute of Science, Israel

2016 - 2019 Ph.D. in Mathematics. Subject: *directed polymers in random environment*  
Advisor: Prof. Francis Comets. LPSM, Université Paris-Diderot

2015 - 2016 Master's degree M2: Probabilités et Modèles Aléatoires  
Université Pierre et Marie Curie, Paris

2015 Agrégation Externe de Mathématiques  
Competitive examination in the French public educational system. Rank: 19/274

2012 - 2014 Master's degree M1 and undergraduate degree in Mathematics  
École Normale Supérieure de Cachan

## PREPRINTS AND PUBLICATIONS

2022 *Law of large numbers and fluctuations in the sub-critical and  $L_2$  regions for SHE and KPZ equation in dimension  $d \geq 3$ , with Shuta Nakajima and Makoto Nakashima.*  
*Stoch. Process. and Appl. Vol.151, pp.127-173*

2021 *Moments of 2D Gaussian polymers in the weak disorder regime, with Ofer Zeitouni.*  
*Sent to Comm. Math. Phys.*

*Asymptotics of the  $p$ -capacity in the critical regime, with shuta Nakajima and Florian Schweiger.*  
*Sent to Potential Analysis*

*A variational formula for large deviations in first-passage percolation under tail estimates, with Shuta Nakajima. To appear in Ann. Appl. Prob.*

*Directed polymers on infinite graphs, with Inbar Seroussi and Ofer Zeitouni.*  
*Comm. Math. Phys. Vol.386(4), pp.1-38*

*Gaussian fluctuations for the directed polymer partition function for  $d \geq 3$  and in the whole  $L_2$ -region, with Shuta Nakajima. Ann. Inst. Poincaré Probab. Statist. Vol.57(2), pp.872-889*

*Topologically induced metastability in periodic XY chain, with Assaf Shapira.*  
*Jour. Math. Phys. Vol.62(4), p.43301*

2020 *Renormalizing the Kardar-Parisi-Zhang equation in  $d \geq 3$  in weak disorder, with Francis Comets and Chiranjib Mukherjee. Jour. Stat. Phys. Vol.179, pp.713-728*

2019 *Space-time fluctuation of the Kardar-Parisi-Zhang equation in  $d \geq 3$  and the Gaussian free field, with Francis Comets and Chiranjib Mukherjee. To appear in Ann. Inst. Poincaré Probab. Statist.*

*The intermediate disorder regime for Brownian directed polymers in Poisson environment. Indagationes Mathematicae. Vol.30(5), pp.805-839*

2018 Hausdorff dimension of the record set of a fractional Brownian motion, with Lucas Benigni, A. Shapira, and K. J. Wiese. *Electron. Commun. Probab. Vol.23*

*Brownian Polymers in Poissonian Environment: a survey, with Francis Comets.*