Thibaut Lemoine

Né le 10/07/1991 à Beaumont (63). Address : 3, rue de la Marnière, 95280 Jouy-le-Moutier
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Education & Professional Experience

CRIStAL, CNRS & Université de Lille — *Villeneuve-d'Ascq (France)*
Postdoc — *2022 - en cours*
- Mentor: Rémi Bardenet
- Subject: determinantal point processes and applications

IRMA, Université de Strasbourg — *Strasbourg (France)*
Postdoc — *2020 - 2022*
- Mentor: Semyon Klevtsov
- Subject: geometric aspects of the quantum Hall effect

LPSM, Sorbonne Université — *Paris (France)*
PhD in mathematics — *2016 - 2020*
- Title: Asymptotic representation theory and applications to Yang–Mills theory
- Advisor: Thierry Lévy (Sorbonne Université)

Sorbonne Université — *Paris (France)*
MSc in Mathematics — *2014 - 2016*
- Specialization in "probability and random models"

EDHEC Business School — *Lille, Nice (France)*
Business School Diploma — *2010 - 2014*
- Specialization in "financial markets"

Papers

Publications

2023. Antoine Dahlqvist, Thibaut Lemoine, *Large N limit of Yang–Mills partition function and Wilson loops on compact surfaces*, to appear in *Probability and Mathematical Physics*

2021. Thibaut Lemoine, *Large N behaviour of the two-dimensional Yang–Mills partition function*, *Combinatorics, Probability and Computing*, 1-22

Preprints

2023. Thibaut Lemoine, *Almost flat highest weights and application to Wilson loops on compact surfaces*, arXiv:2303.11286

2022. Thibaut Lemoine, *Determinantal point processes associated with Bergman kernels: construction and limit theorems*, arXiv:2211.06955

2022. Antoine Dahlqvist, Thibaut Lemoine, *Large N limit of the Yang–Mills measure on compact surfaces II: Makeenko–Migdal equations and planar master field*, arXiv:2201.05886

In preparation

Thibaut Lemoine, Rémi Bardenet, *Monte Carlo methods on compact complex manifolds using Bergman kernels*

Presentations

2023. *Determinantal point processes associated with Bergman kernels: construction and asymptotics*. Seminar in mathematical modelling and analysis, Umeå (Sweden)

2023. *Boucles de Wilson dans la théorie de Yang–Mills en deux dimensions*. Séminaire d'équipe, CRIStAL, Lille (France)

2022. *Effet Hall quantique, une approche probabiliste*. GDT "processus ponctuels", Laboratoire Painlevé, Lille (France)

2022. *Grandes déviations de mesures empiriques de mesures de Gibbs sur une surface de Riemann compacte*. GDT "Une approche probabiliste des métriques de Kähler–Einstein", IRMA, Strasbourg (France)

2022. *Large N Limit of Yang–Mills partition function*. Spectra/moduli seminar, Durham (UK)

2022. *The master field on the torus*. 14e rencontres du GDR Dynamique Quantique, IMT, Toulouse (France)

2021. *Introduction aux probabilités non-commutatives*. Séminaire de calcul stochastique, IRMA, Strasbourg (France)

2020. *Noncommutative harmonic analysis of $\mathrm{U}(N)$ and application to $2D$ Yang–Mills theory*. Séminaire d'analyse, IRMA, Strasbourg (France)

2020 *Asymptotics of two-dimensional Yang–Mills partition function*. Bernoulli-IMS One World Symposium (séminaire en ligne)

2018. *Calcul stochastique libre par rapport au q-mouvement Brownien*. GDT "probabilités non-commutatives et chemins rugueux", LPSM, Sorbonne Université, Paris (France)

2017. *L'algorithme RSK appliqué aux permutations aléatoires*. GDT "Combinatorics and random matrix theory", Université Paris 7, Paris (France)

Teaching

2019 - 2020	**Tutoring in Probability (L3)**, Sorbonne Université, Paris (France)
2019 - 2020	**Tutoring in Probability (1styear)**, ISUP, Paris (France)
2019 - 2020	**Tutoring in General Mathematics (L1)**, Sorbonne Université, Paris (France)
2016 - 2019	**Tutoring in C++ Programming for mathematicians (M1)**, Sorbonne Université, Paris (France)
2016 - 2018	**Tutoring in Vector calculus (L2)**, Polytech' Paris, Paris (France)

Other Activities

Scientific Duties

2022	**Conference on quantum Hall effect and topological phases**, Co-organization of the conference and making of the website	*Strasbourg (France)*

Extracurricular activities

Since 2015	**Volunteer Firefighter**, Rank : sergeant	*Magny-en-Vexin (France)*

Skills

Languages: Franch (native), English (fluent), German (read and written)

Computer Science: C++, LaTeX, Python, Excel/VBA, Matlab/Scilab, Maple