

## Publications & Talks

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### 29 PUBLICATIONS

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**Phase transition in the density of states of quantum spin glasses** 2014

L. ERDŐS UND D. SCHRÖDER

*Math. Phys. Anal. Geom.*, 17, 441–464, (2014)

arXiv:1407.1552, 10.1007/s11040-014-9164-3.

**Fluctuations of rectangular Young diagrams of interlacing Wigner eigenvalues** 2016

L. ERDŐS UND D. SCHRÖDER

*Int. Math. Res. Not. IMRN*, 3255–3298, (2018)

arXiv:1608.05163, 10.1093/imrn/rnw330.

**Fluctuations of functions of Wigner matrices** 2016

L. ERDŐS UND D. SCHRÖDER

*Electron. Commun. Probab.*, 21, Paper no. 86, 15, (2016)

arXiv:1610.07084, 10.1214/16-ECP38.

**Random matrices with slow correlation decay** 2017

L. ERDŐS, T. KRÜGER UND D. SCHRÖDER

*Forum Math. Sigma*, 7, Paper No. e8, 89, (2019)

arXiv:1705.10661, 10.1017/fms.2019.2.

**Correlated random matrices: band rigidity and edge universality** 2018

J. ALT, L. ERDŐS, T. KRÜGER UND D. SCHRÖDER

*Ann. Probab.*, 48, 963–1001, (2020)

arXiv:1804.07744, 10.1214/19-AOP1379.

**Cusp universality for random matrices I: local law and the complex Hermitian case** 2018

L. ERDŐS, T. KRÜGER UND D. SCHRÖDER

*Comm. Math. Phys.*, 378, 1203–1278, (2020)

arXiv:1809.03971, 10.1007/s00220-019-03657-4.

**Cusp universality for random matrices, II: The real symmetric case** 2018

G. CIPOLLONI, L. ERDŐS, T. KRÜGER UND D. SCHRÖDER

*Pure Appl. Anal.*, 1, 615–707, (2019)

arXiv:1811.04055, 10.2140/paa.2019.1.615.

**Edge universality for non-Hermitian random matrices** 2019

G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER

*Probab. Theory Related Fields*, 179, 1–28, (2021)

arXiv:1908.00969, 10.1007/s00440-020-01003-7.

**Optimal lower bound on the least singular value of the shifted Ginibre ensemble** 2019

G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER

*Probab. Math. Phys.*, 1, 101–146, (2020)

arXiv:1908.01653, 10.2140/pmp.2020.1.101.

- Central limit theorem for linear eigenvalue statistics of non-Hermitian random matrices** 2019  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Comm. Pure Appl. Math.*, **76**, 946–1034, (2023)  
 arXiv:1912.04100, 10.1002/cpa.22028.
- Fluctuation around the circular law for random matrices with real entries** 2020  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Electron. J. Probab.*, **26**, Paper No. 24, 61, (2021)  
 arXiv:2002.02438, 10.1214/21-EJP591.
- Eigenstate thermalization hypothesis for Wigner matrices** 2020  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Comm. Math. Phys.*, **388**, 1005–1048, (2021)  
 arXiv:2012.13215, 10.1007/s00220-021-04239-z.
- Functional central limit theorems for Wigner matrices** 2020  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Ann. Appl. Probab.*, **33**, 447–489, (2023)  
 arXiv:2012.13218, 10.1214/22-aap1820.
- Thermalisation for Wigner matrices** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*J. Funct. Anal.*, **282**, Paper No. 109394, 37, (2022)  
 arXiv:2102.09975, 10.1016/j.jfa.2022.109394.
- Normal fluctuation in quantum ergodicity for Wigner matrices** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Ann. Probab.*, **50**, 984–1012, (2022)  
 arXiv:2103.06730, 10.1214/21-aop1552.
- Analysis of one-hidden-layer neural networks via the resolvent method** 2021  
 V. PICCOLO UND D. SCHRÖDER  
*Advances in Neural Information Processing Systems*, Bd. 34, S. 5225–5235, (2021)  
 arXiv:2105.05115.
- On the condition number of the shifted real Ginibre ensemble** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*SIAM J. Matrix Anal. Appl.*, **43**, 1469–1487, (2022)  
 arXiv:2105.13719, 10.1137/21M1424408.
- Density of Small Singular Values of the Shifted Real Ginibre Ensemble** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Ann. Henri Poincaré*, **23**, 3981–4002, (2022)  
 arXiv:2105.13720, 10.1007/s00023-022-01188-8.
- Quenched universality for deformed Wigner matrices** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Probab. Theory Related Fields*, **185**, 1183–1218, (2023)  
 arXiv:2106.10200, 10.1007/s00440-022-01156-7.
- On the spectral form factor for random matrices** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Comm. Math. Phys.*, **401**, 1665–1700, (2023)  
 arXiv:2109.06712, 10.1007/s00220-023-04692-y.

- Optimal multi-resolvent local laws for Wigner matrices** 2021  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Electron. J. Probab.*, 27, Paper No. 117, 38, (2022)  
 arXiv: 2112.13693, 10.1214/22-ejp838.
- Rank-uniform local law for Wigner matrices** 2022  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Forum Math. Sigma*, 10, Paper No. e96, 43, (2022)  
 arXiv: 2203.01861, 10.1017/fms.2022.86.
- Directional extremal statistics for Ginibre eigenvalues** 2022  
 G. CIPOLLONI, L. ERDŐS, D. SCHRÖDER UND Y. XU  
*J. Math. Phys.*, 63, Paper No. 103303, 11, (2022)  
 arXiv: 2206.04443, 10.1063/5.0104290.
- On the rightmost eigenvalue of non-Hermitian random matrices** 2022  
 G. CIPOLLONI, L. ERDŐS, D. SCHRÖDER UND Y. XU  
*Ann. Probab.*, 51, 2192–2242, (2023)  
 arXiv: 2206.04448, 10.1214/23-aop1643.
- Mesoscopic central limit theorem for non-Hermitian random matrices** 2022  
 G. CIPOLLONI, L. ERDŐS UND D. SCHRÖDER  
*Probab. Theory Related Fields*, 188, 1131–1182, (2024)  
 arXiv: 2210.12060, 10.1007/s00440-023-01229-1.
- Optimal lower bound on eigenvector overlaps for non-Hermitian random matrices** 2023  
 G. CIPOLLONI, L. ERDŐS, J. HENHEIK UND D. SCHRÖDER  
*Journal of Functional Analysis*, 110495, (2024)  
 arXiv: 2301.03549, 10.1016/j.jfa.2024.110495.
- Deterministic equivalent and error universality of deep random features learning** 2023  
 D. SCHRÖDER, H. CUI, D. DMITRIEV UND B. LOUREIRO  
*ICML 2023*, (2023)  
 arXiv: 2302.00401.
- Asymptotics of Learning with Deep Structured (Random) Features** 2024  
 D. SCHRÖDER, D. DMITRIEV, H. CUI UND B. LOUREIRO  
*ICML 2024*, (2024)  
 arXiv: 2402.13999.
- Matrix Concentration Inequalities and Free Probability II. Two-sided Bounds and Applications** 2024  
 A. S. BANDEIRA, G. CIPOLLONI, D. SCHRÖDER UND R. VAN HANDEL  
*Preprint*, (2024)  
 arXiv: 2406.11453.

## TALKS

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- IAS Park City Mathematics Institute** Park City, USA  
 PCMI SUMMER SCHOOL (POSTER PRESENTATION) 2017
- University of Warwick** Warwick, UK  
 PROBABILITY SEMINAR 2017
- TU München** Munich  
 SEMINAR *ANALYSIS UND ZUFALL* 2018

<b>Universität Wien</b>	<i>Vienna</i>
WAHRSCHEINLICHKEITSTHEORIE SEMINAR	2018
<b>Universität Basel</b>	<i>Basel</i>
WAHRSCHEINLICHKEITSTHEORIE SEMINAR	2018
<b>Random Physical Systems</b>	<i>Puerto Natales, Chile</i>
KONFERENZ	2018
<b>University of Geneva</b>	<i>Les Diablerets, Switzerland</i>
WORKSHOP <i>STATISTICAL MECHANICS</i>	2019
<b>Institut Henri Poincaré</b>	<i>Paris</i>
MEGA-SEMINAR, WORKING GROUP ON RANDOM MATRICES AND GRAPHS	2019
<b>KTH Royal Institute of Technology</b>	<i>Stockholm</i>
RANDOM MATRIX THEORY SEMINAR	2019
<b>QMath14</b>	<i>Aarhus, Denmark</i>
RANDOM SYSTEMS SESSION	2019
<b>ETH Zürich</b>	<i>Zürich</i>
WAHRSCHEINLICHKEITSTHEORIE SEMINAR	2019
<b>University Geneva</b>	<i>Geneva</i>
MATHEMATISCHE PHYSIK SEMINAR	2019
<b>Universität Erlangen</b>	<i>Erlangen</i>
MATHEMATISCHE PHYSIK SEMINAR	2019
<b>MFO Oberwolfach</b>	<i>Oberwolfach</i>
WORKSHOP RANDOM MATRICES	2019
<b>University of Melbourne</b>	<i>Melbourne</i>
RANDOM MATRIX THEORY SEMINAR	2020
<b>Universität Basel</b>	<i>Basel</i>
MACHINE LEARNING SEMINAR	2020
<b>ICMP (International Congress on Mathematical Physics)</b>	<i>Geneva</i>
CONTRIBUTED TALK, SESSION PROBABILITY & RANDOM STRUCTURES	2021
<b>NeurIPS (Conference on Neural Information Processing Systems)</b>	<i>Sydney</i>
POSTER PRESENTATION	2021
<b>ICTP Trieste</b>	<i>Trieste</i>
YOUTH IN HIGH DIMENSIONS	2022
<b>ICML (International Conference on Machine Learning)</b>	<i>Hawaii, USA</i>
POSTER PRESENTATION	2023
<b>ICML (International Conference on Machine Learning)</b>	<i>Vienna, Austria</i>
POSTER PRESENTATION	2024