XVI Brunel–Bielefeld Workshop on RMT and Applications

Organisers: G. Akemann (Bielefeld), I. Krasovsky (Imperial), D. Savin (Brunel), I. Smolyarenko (Brunel)

Zoom Meeting link: https://bruneluniversity.zoom.us/j/95743822189

Friday, 18 December 2020:

09:00 – 09:15	(London Time, UTC+0)	WELCOME & OPENING	Zoom (link above)
09:15 – 10:00	Arno Kuijlaars	*The spherical ensemble with external sources*	
10:00 – 10:45	Benjamin Fahs	*On the probability of finding two large gaps in the spectrum of random matrices*	
10:45 – 11:30		COFFEE BREAK	
11:30 – 12:15	Sandrine Péché	*Some nonlinear random matrix models*	
12:15 – 13:00	Christophe Texier	*Exponential functional of the matrix Brownian motion: matrix Dufresne identity and Wigner-Smith time delay matrix*	
13:00 – 14:00		LUNCH BREAK	
14:00 – 15:30	POSTER SESSION I:	*Live preview talks (14:00 – 14:30)* *Poster presentations (14:30 – 15:30)*	
15:30 – 16:00		COFFEE BREAK	
16:00 – 16:45	Nick Simm	*Secular coefficients and the holomorphic multiplicative chaos*	
16:45 – 17:30	Alexander Minakov	*Gap probabilities in the Freud random matrix ensemble*	
17:30 – 18:00		INFORMAL AFTER-TALK DISCUSSIONS	
19:00	DINNER AT HOME		

Saturday, 19 December 2020:

09:00 – 09:15	(London Time, UTC+0)	JOINING IN	Zoom (link above)
09:15 – 10:00	Gregory Schehr	*Exact persistence exponent for the 2d-diffusion equation: from random polynomials to truncated random matrices*	
10:00 – 10:45	Jon Keating	*Symmetric function theory and moments of characteristic polynomials*	
10:45 – 11:30		COFFEE BREAK	
11:30 – 13:00	POSTER SESSION II:	*Live preview talks (11:30 – 12:00)* *Poster presentations (12:00 – 13:00)*	
13:00 – 14:00		LUNCH BREAK	
14:00 – 14:45	Mariya Shcherbina	*Sigma model approximation for block band random matrices*	
14:45 – 15:30	Thomas Bothner	*Structural universality in random matrix theory*	
15:30 – 16:00		COFFEE BREAK	
16:00 – 16:45	Miguel Tierz	*Random matrix solutions to some problems in gauge theory, statistical mechanics, and statistical learning*	
16:45 – 17:30	Tamara Grava	*Correlation functions for unitary invariant ensembles*	
17:30 – 18:00		CONCLUDING DISCUSSION & CLOSING	

Poster Session I: Fri, 18 Dec @ 14:00

Breakout Room 1:	***Nick Baskerville*** *Studying the loss surfaces of large neural networks with random matrix theory*
Breakout Room 2:	***Dan Betea*** *Discrete and continuous Muttalib–Borodin processes, the hard-edge of random matrix ensembles, and last passage percolation*
Breakout Room 3:	***Wouter Buijsman*** *Breit-Wigner statistics and ergodicity breaking in quantum many-body systems*
Breakout Room 4:	***Theo-Harris Maroudas*** *Airy-kernel determinant on a union of large intervals*
Breakout Room 5:	***Lucas Oliveira*** *On the immanants of blocks from random matrices in some unitary ensembles*
Breakout Room 6:	***Lucas Seara Sá*** *Toric ensembles, complex spacing ratios, and their role in dissipative quantum chaos*
Breakout Room 7:	***Joshua Sumpter*** *Pair dependent linear statistics for the circular beta ensembles*
Breakout Room 8:	***Mikhail Tikhonov*** *Parameter symmetry in perturbed GUE corners process*
Breakout Room 9:	***Ward Vleeshouwers*** *Spectral form factors for unitary matrix models using Toeplitz minors*

Poster Session II: Sat, 19 Dec @ 11:30

Breakout Room 1:	***Sung-Soo Byun*** *A non-Hermitian generalisation of the Marchenko–Pastur distribution: from the circular law to multi-criticality*
Breakout Room 2:	***Johannes Forkel*** *The classical compact groups and Gaussian multiplicative chaos*
Breakout Room 3:	***Aritra Laha*** *Spectral statistics for weighted sum of an arbitrary number of Wishart matrices*
Breakout Room 4:	***Adam Mielke*** *Territorial behaviour of birds of prey versus random matrix theory*
Breakout Room 5:	***Leonardo Santilli*** *Exact equivalences and phase discrepancies between random matrix ensembles*
Breakout Room 6:	***Ayana Sarkar*** *Random matrix theory based study of spin chains*
Breakout Room 7:	***Wojciech Tarnowski*** *Transient dynamics in balanced neural networks*
Breakout Room 8:	***Harriet Walsh*** *Multicritical random partitions with higher-order Tracy–Widom edge statistics*