

## XIV Brunel–Bielefeld Workshop on Random Matrix Theory

Brunel University London – Hamilton Centre

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

### Friday, 14 December 2018:

08:45 – 09:30	REGISTRATION	Newton Room
09:30 – 10:10	Simone Warzel <i>Hierarchical random matrices and operators</i>	
10:10 – 10:50	Tom Claeys <i>Optimal global rigidity estimates in unitary invariant ensembles</i>	
10:50 – 11:20	COFFEE BREAK	
11:20 – 12:00	Sasha Sodin <i>The KPZ equation and moments of random matrices</i>	
12:00 – 12:40	Ivan Nourdin <i>Asymptotic behavior of large Gaussian correlated Wishart matrices</i>	
12:40 – 14:30	LUNCH BREAK	
14:30 – 15:10	Philippe Loubaton <i>Large random matrix methods for high-dimensional statistical signal processing</i>	
15:10 – 15:50	Tim Rogers <i>Sparse non-Hermitian random matrices</i>	
15:50 – 16:20	COFFEE BREAK	
16:20 – 17:00	Yan Fyodorov <i>On the loss function landscape in the simplest constrained least-square optimization</i>	
17:00 – 19:00	POSTER SESSION & RECEPTION	Newton Room
19:30	DINNER	<i>Zizzi, 223 High St, Uxbridge, tel. 01895 233100</i>

### Saturday, 15 December 2018:

09:20 – 10:00	Giusi Alfano <i>Error exponents in MIMO communications and matrix integrals</i>	
10:00 – 10:40	Martin Sieber <i>Eigenvector distribution for certain random matrix models in the intermediate regime</i>	
10:40 – 11:10	COFFEE BREAK	
11:10 – 11:50	Diane Holcomb <i>On the centered maximum of the Sine-beta process</i>	
11:50 – 12:30	Maurice Duits <i>Periodically weighted tilings and (matrix) orthogonal polynomials</i>	
12:30 – 14:00	LUNCH BREAK	
14:00 – 14:40	Satya Majumdar <i>Rotating trapped fermions in 2d and the complex Ginibre ensemble</i>	
14:40 – 15:20	Pierpaolo Vivo <i>Universality of the third-order pushed-to-pulled transition</i>	
15:20 – 15:50	COFFEE BREAK	
15:50 – 16:30	Antti Knowles <i>Mesosopic eigenvalue correlations of random matrices</i>	

## Poster Presentations:

Newton Room

Tomas Berggren	<i>Determinantal point process from infinite block Toeplitz minors</i>
Wouter Buijsman	<i>Level statistics of the Gaussian beta ensemble across the many-body localization transition</i>
Christophe Charlier	<i>Generalisation of Tracy-Widom distributions at the soft and hard edges</i>
Fabio Deelan Cunden	<i>Moments of random matrices and hypergeometric orthogonal polynomials</i>
Alfredo Deano-Cabrera & Nick Simm	<i>Non-Hermitian ensembles and hypergeometric integrals</i>
Markus Ebke	<i>Cauchy-transform of orthogonal Hermite and Laguerre polynomials in the complex plane</i>
Benjamin Fahs	<i>Uniform asymptotics of Toeplitz determinants with Fisher-Hartwig singularities</i>
Yanik-Pascal Foerster	<i>Eigenvector correlations of the quaternionic Ginibre ensemble</i>
Tristan Gautié	<i>Non-intersecting Brownian motions in presence of a moving boundary</i>
Aurélien Grabsch	<i>Fluctuations of observables for free fermions in a harmonic trap at finite temperature</i>
Gabriele Gradoni	<i>Non-Gaussian models for MIMO communications in enclosures</i>
Bertrand Lacroix-A-Chez-Toine	<i>Trapped fermions and RMT models</i>
Anna Maltsev	<i>Covariance for linear spectral statistics of half-heavy-tailed matrices</i>
Riccardo Margiotta	<i>Walks in rough energy landscapes: a network model</i>
Alexander Minakov	<i>On a class of unbounded classical solutions to the Korteweg-de Vries equation</i>
Leslie Molag	<i>Riemann-Hilbert approach to the Muttalib-Borodin ensemble</i>
Ivan Parra	<i>Gegenbauer and other orthogonal polynomials on ellipses in the complex plane</i>
Mihail Poplavskiy	<i>On the persistence probability for Kac polynomials and truncated orthogonal matrices</i>
Martin Richter	<i>Microwave graphs: Transition from symplectic to orthogonal symmetry</i>
Roman Riser	<i>Eigenvalue distribution of a quasi-hermitian random matrix model</i>
Marco Stevens	<i>Universality of the conditional measure of the Bessel point process</i>
Vito Susca	<i>Top Eigenpair statistics for sparse symmetric random matrices</i>
Wojciech Tarnowski	<i>Synaptic interactions in random neural networks: critical role of eigenvectors and transients</i>
Christophe Texier	<i>Time-delay matrix for chaotic cavities with non-ideal contacts</i>
Piotr Warchoř	<i>Universal spectral properties of the input-output Jacobian of deep residual networks</i>
Tim Würfel	<i>Expectation values of ratios of characteristic polynomials in polynomial ensembles</i>