

# Random Matrix EurAsia 2022

## Workshop

(28, 29 April 2022  
&  
4, 9–12 May 2022)



\*[Registration](#) is required for this program.

### Venue

Virtual: The details and link will be sent to you before the program commences after registration has been processed.



## ORGANIZING COMMITTEE

### Co-Chairs

Yang Chen  
University of Macau

Dong Wang  
University of Chinese Academy of  
Sciences

For more information: [Click here](#)

**Random Matrix EurAsia 2022**  
**Workshop**  
**(28, 29 April 2022 & 4, 9–12 May 2022)**

All times are indicated in **GMT+8**.  
 For time zones conversion: [Click Here](#)

GMT Time Reference							
Greenwich Mean Time (GMT+0)	Canada USA (NYC) (GMT -4)*	UK (GMT +1)	Israel France Poland (GMT +2)	Russia (GMT +3)	India Sri Lanka (GMT +5.30)	China Singapore (GMT +8)	Japan (GMT +9)
0100	2100	0200	0300	0400	0630	0900	1000
0600	0200	0700	0800	0900	1130	1400	1500

\*(GMT -4) is the day before the stated date of the morning talks (GMT+8).

**Thursday, 28 April 2022**

Time (GMT +8)	Title	Speaker
0900–1000	Optimal measures for p-frame energies on spheres	Alexey Glazyrin University of Texas Rio Grande Valley, USA
1000–1100	Integrable peakon models in scalar form	Zhijun Qiao University of Texas Rio Grande Valley, USA
1100–1200	Random perturbations of non-normal matrices	Sean O'Rourke University of Colorado Boulder, USA
1200–1500	Lunch Break	
1500–1600	Stochastic geometry beyond independence and its applications	Subhro Ghosh National University of Singapore, Singapore
1600–1700	Integrability of integro-differential Painlevé equation	Mattia Cafasso Université d'Angers, France

**Friday, 29 April 2022**

Time (GMT +8)	Title	Speaker
1000–1100	The distribution of sandpile groups of random regular graphs	András Mészáros University of Toronto Scarborough, Canada

Friday, 29 April 2022		
Time (GMT +8)	Title	Speaker
1100–1200	Toeplitz and Toeplitz plus Hankel operators on $\ell^p$ -spaces	Victor Didenko Southern University of Science and Technology, China
1200–1400	Lunch Break	
1400–1500	Duality and phase transition in non-Hermitian random matrix theory	Dang-Zheng Liu University of Science and Technology of China, China
1500–1600	Asymptotics for a singularly perturbed GUE, Painlevé III and double-confluent Heun equations, small eigenvalues	Mengkun Zhu Qilu University of Technology (Shandong Academy of Sciences), China

Wednesday, 04 May 2022		
Time (GMT +8)	Title	Speaker
1400–1500	An $O(n)$ -bit random matrix model for circular operators	Soumendu Sundar Mukherjee Indian Statistical Institute, India
1500–1600	Nonlinear differential equations and the geometric approach	Galina Filipuk University of Warsaw, Poland
1600–1700	Rodrigues descendants of a polynomial and Boutroux curves	Boris Shapiro Stockholm University, Sweden

Monday, 09 May 2022		
Time (GMT +8)	Title	Speaker
0900–1000	Lattice Yang-Mills and a dynamical approach	Hao Shen University of Wisconsin, Madison, USA
1000–1100	One-point distribution of the geodesic in directed last passage percolation	Zhipeng Liu The University of Kansas, USA
1100–1200	Laguerre unitary ensembles with jump discontinuities, PDEs and the coupled Painlevé V system	Shulin Lyu Qilu University of Technology (Shandong Academy of Sciences), China
1200–1300	Hankel determinant and orthogonal polynomials for a perturbed Gaussian weight: from finite $n$ to large $n$ asymptotics	Chao Min Hua Qiao University, China
1300–1400	Lunch Break	

Monday, 09 May 2022		
Time (GMT +8)	Title	Speaker
1400–1500	Multiple orthogonal polynomials ensembles and determinantal processes	Alexander I. Aptekarev Keldysh Institute of Applied Mathematics, Russia
1500–1600	Non-intersecting Brownian bridges in the flat-to-flat geometry	Gregory Schehr Sorbonne Université, France
1600–1700	Hashimoto frames and the Gibbs measure of NLS	Gordon Blower Lancaster University, UK

Tuesday, 10 May 2022		
Time (GMT +8)	Title	Speaker
0900–1000	A universality result for the cokernel of random integral matrices	Hoi Nguyen Ohio State University, USA
1000–1100	On pair counting statistics in circular beta ensembles of random matrices	Alexander Soshnikov University of California, Davis, USA
1100–1200	Addition of matrices at high and low temperatures	Vadim Gorin University of Wisconsin–Madison, USA
1200–1400	Lunch Break	
1400–1500	Power Spectrum of the Circular Unitary Ensemble	Eugene Kanzieper Holon Institute of Technology, Israel
1500–1600	Pinning of directed polymers and the Baik-Ben Arous-Péché phase transition	Guillaume Barraquand École Normale Supérieure, France
1600–1700	Gibbs ensemble for integrable systems, a case study: the discrete nonlinear Schrodinger equation	Tamara Grava University of Bristol, UK

Wednesday, 11 May 2022		
Time (GMT +8)	Title	Speaker
0900–1000	The integrable Sachdev-Ye-Kitaev model	Jacobus Johannes Maria Verbaarschot Stony Brook University, USA
1000–1100	On the eigenvectors of large dimensional sample covariance matrices	Jack Silverstein North Carolina State University, USA
1100–1200	Connecting the q-Whittaker measure to the periodic Schur measure by skew RSK dynamics	Tomohiro Sasamoto Tokyo Institute of Technology, Japan
1200–1300	Exact analyses of the KPZ models by the periodic and free boundary Schur measures	Takashi Imamura Chiba University, Japan

Wednesday, 11 May 2022		
Time (GMT +8)	Title	Speaker
1300–1400	Lunch Break	
1400–1500	<b><i>Distinguished Visitor Lecture Series</i></b> Matrices with random perturbation  Chair: Prof. Yang Chen (University of Macau)	Van Vu Yale University, USA
1500	Group Photo	ZOOM ONLINE
1500–1600	Eikonal formulation of large dynamical random matrix models	Maciej A. Nowak Jagiellonian University, Poland
1600–1700	On the Painleve XXV -- Ermakov equation	Galina Filipuk University of Warsaw, Poland

Thursday, 12 May 2022		
Time (GMT +8)	Title	Speaker
0900–1000	Orthogonal polynomials and discrete Painlevé equations	Anton Dzhamay University of Northern Colorado, USA
1000–1100	Theeigenvectors of single-spiked complex Wishart matrices: finite and asymptotic analyses	Prathapasinghe Dharmawansa University of Moratuwa, Sri Lanka
1100–1200	Local universality in the Muttalib-Borodin ensembles	Lun Zhang Fudan University, China
1200–1300	On the Dyson Brownian motion in a general external potential	Xiangdong Li Chinese Academy of Sciences, China
1300–1400	Lunch Break	
1400–1500	Phase transition of eigenvector for spiked random matrices	Zhigang Bao Hong Kong University of Science and Technology, China
1500–1600	Spectral properties of random perturbations of non-self-adjoint operators	Anirban Basak Tata Institute of Fundamental Research, India
1600–1700	Commuting integral and differential operators: ome extensions of the work of Slepian, Landau and Pollak and the master symmetries of KdV	F. Alberto Grünbaum The University of California, Berkeley, USA