Random Matrix EurAsia 2022
(18 Apr 2022–13 May 2022)

Please click here for the playlist to the Workshop Talks.

Please click here for the playlist to the Tutorial Talks.

Name and Affiliation	Talk Title
Alexander I. Aptekarev Keldysh Institute of Applied Mathematics, Russia	Multiple orthogonal polynomials ensembles and determinantal processes
Zhigang Bao Hong Kong University of Science and Technology, China	Phase transition of eigenvector for spiked random matrices
Guillaume Barraquand École Normale Supérieure, France	Pinning of directed polymers and the Baik-Ben Arous-Péché phase transition
Anirban Basak Tata Institute of Fundamental Research, India	Spectral properties of random perturbations of non-self-adjoint operators
Gordon Blower Lancaster University, UK	Hashimoto frames and the Gibbs measure of NLS
Mattia Cafasso Université d'Angers, France	Integrability of integro-differential Painlevé equation
Yang Chen University of Macau, China	Tutorial 1: Gap probability distribution with background weight Tutorial 2: The smallest eigenvalue distributions of the Jacobi and related ensembles
Prathapasinghe Dharmawansa University of Moratuwa, Sri Lanka	The eigenvectors of single-spiked complex Wishart matrices: finite and asymptotic analyses
Victor Didenko Southern University of Science and Technology, China	Toeplitz and Toeplitz plus Hankel operators on lp-spaces
Anton Dzhamay University of Northern Colorado, USA	Orthogonal polynomials and discrete Painlevé equations *Tutorial* Talk 1: Introduction to geometric aspects of autonomous discrete integrable systems (QRT maps) Talk 2: Deautonomization of QRT maps and discrete Painlevé equations Talk 3: Painlevé equations and their symmetries (Bäcklund transformations) from the geometric point of view Talk 4: Geometric theory of discrete Painlevé equations
Galina Filipuk University of Warsaw, Poland	Nonlinear differential equations and the geometric approach On the Painleve XXV –– Ermakov equation

Name and Affiliation	Talk Title
Subhro Ghosh National University of Singapore, Singapore	Stochastic geometry beyond independence and its applications
Alexey Glazyrin University of Texas Rio Grande Valley, USA	Optimal measures for p-frame energies on spheres
Vadim Gorin University of Wisconsin–Madison, USA	Addition of matrices at high and low temperatures
Tamara Grava University of Bristol, UK	Gibbs ensemble for integrable systems, a case study: the discrete nonlinear Schrodinger equation
F. Alberto Grünbaum The University of California, Berkeley, USA	Commuting integral and differential operators: ome extensions of the work of Slepian, Landau and Pollak and the master symmetries of KdV
Takashi Imamura Chiba University, Japan	Exact analyses of the KPZ models by the periodic and free boundary Schur measures
Eugene Kanzieper Holon Institute of Technology, Israel	Power Spectrum of the Circular Unitary Ensemble
Xiangdong Li Chinese Academy of Sciences, China	On the Dyson Brownian motion in a general external potential
Dang-Zheng Liu University of Science and Technology of China, China	Duality and phase transition in non-Hermitian random matrix theory
Zhipeng Liu The University of Kansas, USA	One-point distribution of the geodesic in directed last passage percolation
Shulin Lyu Sun Yat Sen University, China	Laguerre unitary ensembles with jump discontinuities, PDEs and the coupled Painlevé V system
András Mészáros University of Toronto Scarborough, Canada	The distribution of sandpile groups of random regular graphs *Tutorial*: The cokernels of random matrices
Chao Min Hua Qiao University, China	Hankel determinant and orthogonal polynomials for a perturbed Gaussian weight: from finite n to large n asymptotics
Soumendu Sundar Mukherjee Indian Statistical Institute, India	An O(n)-bit random matrix model for circular operators
Hoi Nguyen Ohio State University, USA	A universality result for the cokernel of random integral matrices

Name and Affiliation	Talk Title
Maciej A. Nowak Jagiellonian University, Poland	Eikonal formulation of large dynamical random matrix models
Sean O'Rourke University of Colorado Boulder, USA	Random perturbations of non-normal matrices *Tutorial*: Introduction to non-Hermitian random matrices
Zhijun Qiao University of Texas Rio Grande Valley, USA	Integrable peakon models in scalar form
Tomohiro Sasamoto Tokyo Institute of Technology, Japan	Connecting the q-Whittaker measure to the periodic Schur measure by skew RSK dynamics *Tutorial*: Basic tools to study KPZ models Part 1: Determinantal point process and free fermion Part 2: RSK correspondence Part 3: Markov duality and Bethe ansatz Part 4: Crystal theory
Gregory Schehr Sorbonne Université, France	Non-intersecting Brownian bridges in the flat-to-flat geometry
Boris Shapiro Stockholm University, Sweden	Rodrigues' descendants of a polynomial and Boutroux curves
Hao Shen University of Wisconsin–Madison, USA	Lattice Yang-Mills and a dynamical approach
Jack Silverstein North Carolina State University, USA	On the eigenvectors of large dimensional sample covariance matrices
Alexander Soshnikov University of California, Davis, USA	On pair counting statistics in circular beta ensembles of random matrices
Jacobus Johannes Maria Verbaarschot Stony Brook University, USA	The integrable Sachdev-Ye-Kitaev model
Van Vu Yale University, USA	Matrices with random perturbation
Lun Zhang Fudan University, China	Local universality in the Muttalib-Borodin ensembles
Mengkun Zhu Qilu University of Technology (Shandong Academy of Sciences), China	Asymptotics for a singularly perturbed GUE, Painlevé III and double-confluent Heun equations, small eigenvalues