PROGRAM BOOK

BERNOULLI - IMS

10th WORLD CONGRESS in PROBABILITY and STATISTICS

JULY 19 - 23, 2021
Virtual Congress

www.wc2020.org

HOSTED BY   Seoul National University
The Korean Statistical Society

ORGANIZED BY   Bernoulli Society
Institute of Mathematical Statistics

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past President of the Korean Statistical Society

PROGRAM AT GLANCE _ JULY 19 (MON)

Session time in KST	A	B	C	D	E	F	G	H
09:00 - 10:00	IMS Presidential Address Regina Liu / Susan Murphy							
11:30 -12:00	IS30 Functional Estimation, Testing and Clustering under Sparsity		IS39 KSS Invited Session: Interactive Particle Systems and Urn Models		OCS02 Nonlocal Operators Related to Probability	OCS15 Network-related Statistical Methods and Analysis	OCS23 Recent Advances in Statistical Methods for Large Scale Complex Data	

Session time in KST	A	B	C	D	E	F	G	H
19:00 - 20:00	Wald Lecture Martin Barlow							
20:00 - 21:00	Bernoulli Lecture Alison Etheridge							
21:30 - 22:00	IS17 Approximate Bayesian Computation		IS20 Heavy Tailed Phenomena		IS33 Integrable Probability		OCS01 Coulomb Gases	OCS04 Interacting Particle Systems and Inclusion Process
	CS01 Stochastic Partial Differential Equations	CS06 Various Aspects of Diffusion Processes	CS18 Inference on Dependence	CS24 Time Series Analysis I	CS30 Spatio-temporal Data Analysis	CS34 Stochastic Process / Modeling	OCS22 Recent Progress of Statistical Inference for Economics and Social Science	
22:30 - 23:00	IS13 Critical Phenomena in Statistical Mechanics Models		IS15 Privacy		IS24 Random Planar Geometries			
	OCS14 Multivariate and Object-Oriented Data Analysis	OCS26 Recent Advances in Network Learning: Theory and Practice	CS05 Potential Theory in Probability Theory	CS15 Advanced Stochastic Processes	CS22 Bayesian Inference	CS33 Novel Statistical Approaches In Genetic Association Analyses	CS36 Statistical Inference	

Plenary Talks   Invited Session   Organized Contributed Session   Contributed Session   Poster Session

PROGRAM AT GLANCE _ JULY 20 (TUE)

Session time in KST	A	B	C	D	E	F	G	H	I	J
09:00 - 10:00	IMS Medallion Lecture — Laurent Saloff-Coste									
10:00 - 11:00	IMS Medallion Lecture — Elchanan Mossel									
11:30 -12:00	IS04 Mathematical Population Genetics and Computational Statistics		IS18 Deep Learning		OCS07 Anomalous Diffusions and Related Topics	OCS17 The Advances in Time Series and Spatial Statistics	OCS24 Advanced Statistical Methods for Complex Data	CS25 Time Series Analysis II	Poster Session I-1	

Session time in KST	A	B	C	D	E	F	G	H	I	J
19:00 - 20:00	Levy Lecture — Massimiliano Gubinelli									
20:00 - 21:00	Doob Lecture — Nicolas Curien									
21:30 - 22:00	IS16 Bootstrap for High-dimensional Data		IS27 Random Matrices and Related Fields		IS28 Statistical Inference for Graphs and Networks		IS31 Information Theory and Concentration Inequalities			
21:30 - 22:00	OCS12 Recent Developments for Dependent Data	OCS16 Non-Euclidean Statistical Inference	CS02 Financial Mathematics and Probabilistic Modeling	CS07 SDEs and Fractional Brownian Motions	CS28 Neural Networks and Deep Learning	Poster Session I-2				
22:30 - 23:00	IS02 Scaling Limits of Disordered Systems and Disorder Relevance		IS07 High-dimensional Robustness		IS08 Functional Data Analysis		IS32 Statistical Learning		IS41 Bernoulli Paper Award	
22:30 - 23:00	OCS06 Theoretical Analysis of Random Walks, Random Graphs and Clustering	OCS13 Recent Advances in Complex Time Series Analysis	CS10 Reflecting Diffusion Processes, Stochastic Networks and Their Applications	CS16 Probability Theory and Statistical Mechanics	CS19 Detection and Segmentation	CS23 Bayesian Nonparametric Inference				

Plenary Talks   Invited Session   Organized Contributed Session   Contributed Session   Poster Session

PROGRAM AT GLANCE _ JULY 21 (WED)

Session time in KST	A	B	C	D	E	F	G	H	I	J
09:00 - 10:00	Laplace Lecture — Tony Cai									
10:00 - 11:00	Public Lecture — Young Han Kim									
11:30 -12:00	IS05 — Recent Advances in Shape Constrained Inference		IS06 — Optimization in Statistical Learning		OCS09 — Random Matrices and Infinite Particle Systems	OCS18 — Advanced Learning Methods for Complex Data Analysis	OCS27 — Bayesian Inference for Complex Models	OCS28 — Recent advances in Time Series Analysis	CS29 — Spatial Data Analysis	Poster Session II-1

Session time in KST	A	B	C	D	E	F	G	H	I	J
19:00 - 20:00	Wald Lecture — Martin Barlow									
20:00 - 21:00	IMS Medallion Lecture — Gerard Ben Arous									
21:30 - 22:00	IS01 — Conformal Invariance and Related Topics		IS14 — Optimal Transport		IS21 — Probabilistic Theory of Mean Field Games		IS35 — Stochastic Analysis in Mathematical Finance and Insurance		IS40 — KSS Invited Session: Nonparametric and Semi-parametric Approaches in Survival Analysis	
	OCS03 — Gaussian Processes	OCS20 — Theories and Applications for Complex Data Analysis	CS13 — Random Structures	CS20 — Copula Modeling	CS26 — Multivariate Data Analysis	CS31 — Statistical Prediction				
22:30 - 23:00	IS03 — Potential Theory for Non-local Operators and Jump Processes		IS10 — Change-point Problems for Complex Data		IS12 — Statistics for Data with Geometric Structure		IS25 — Random Graphs		IS36 — Problems and Approaches in Multi-Armed Bandits	
	OCS29 — Sequential Analysis and Applications	CS03 — Numerical Study of Stochastic Processes / Stochastic Interacting Systems	CS08 — Study of Various Distributions	CS12 — Optimal Transport	CS27 — Machine Learning / Structural Equation	Poster Session II-2				

Plenary Talks   Invited Session   Organized Contributed Session   Contributed Session   Poster Session

PROGRAM AT GLANCE _ JULY 22 (THU)

Session time in KST	A	B	C	D	E	F	G	H	I	J
09:00 - 10:00	IMS Medallion Lecture Daniela Witten									
10:00 - 11:00	IMS Medallion Lecture Andrea Montanari									
11:30 -12:00	IS38 IMS Lawrence D. Brown Ph. D Student Award	OCS11 Random Growth, Spatial Processes, and Related Models	OCS19 Recent Advances in Complex Data Analysis	OCS25 Recent Advances in Biostatistics	OCS31 BOK Contributed Session: Finance and Contemporary Issues	Poster Session III-1			

Session time in KST	A	B	C	D	E	F	G	H	I	J
19:00 - 20:00	Blackwell Lecture Gabor Lugosi									
20:00 - 21:00	Tukey Lecture Sara van de Geer									
21:30 - 22:00	IS09 Quantum Statistics		IS22 Random Trees		IS29 High Dimensional Data Inference		IS34 Random Walks on Random Media		IS37 Bernoulli Society New Researcher Award	
	OCS08 Rough Path Theory	OCS21 Recent Advances in Statistics	CS09 Topics Related to RMT	CS11 Topics Related to KPZ Universality	CS21 Dimension Reduction and Model Selection	CS35 Financial Data Analysis				
22:30 - 23:00	IS11 Analysis of Dependent Data		IS19 Randomized Algorithms		IS23 Stochastic Partial Differential Equations		IS26 Pathwise Stochastic Analysis			
	OCS10 Random Conformal Geometry and Related Fields	OCS30 Stochastic Adaptive Optimization Algorithms and their Applications to Neural Networks	CS04 Stochastic Processes and Related Topics	CS17 Various Limit Theorems	CS32 Statistical Modeling and Prediction					

Plenary Talks   Invited Session   Organized Contributed Session   Contributed Session   Poster Session

PROGRAM AT GLANCE _ JULY 23 (FRI)

Session time in KST	A	B	C	D	E	F	G	H	I	J
09:00 - 10:00	Schramm Lecture Omer Angel									
10:00 - 11:00	Kolmogorov Lecture Persi Diaconis									
19:00 - 20:00	Wald Lecture Martin Barlow									
20:00 - 21:00	Presentation of the Inaugural Willem van Zwet Medal and Closing Remarks Claudia Klüppelberg (Past President of the Bernoulli Society) Invitation to the Bernoulli-IMS 11th WC2024 Herold Dehling									

Plenary Talks   Invited Session   Organized Contributed Session   Contributed Session   Poster Session

VIRTUAL CONGRESS WEBSITE INFORMATION

Registration

>> Walk-in Registration: From July 19 (Mon) to 23 (Fri)

[For Overseas] Click here to Register	[For Domestic] Click here to Register

>> Walk-in Registration Fees

 - Overseas

CATEGORY	WALK-IN REGISTRATION FEES
BS / IMS member-individual	€ 180
BS / IMS member-student	€ 70
Organizer / Presenter in Invited Session	€ 200
Non - BS / IMS member-individual	€ 280
Non - BS / IMS member-student	€ 110

 - Reduced fees for permanent resident of the countries designated by the IMS Council

CATEGORY	WALK-IN REGISTRATION FEES
BS / IMS member-individual	€ 70
BS / IMS member-student	€ 30
Non - BS / IMS member-individual	€ 100
Non - BS / IMS member-student	€ 40

* Please confirm the country list at https://imstat.org/designated-countries

- Domestic

CATEGORY	WALK-IN REGISTRATION FEES
BS / IMS / KMS / KSS member-individual	₩ 220,000
BS / IMS / KMS / KSS member-student	₩ 90,000
Organizer / Presenter in Invited Session	₩ 250,000
Non - BS / IMS / KMS / KSS member-individual	₩ 350,000
Non - BS / IMS / KMS / KSS member-student	₩ 140,000

* During the congress, only credit card payment is allowed.
* Admission to the virtual site will only be permitted after administrator approval. (About 10 min.)
* Working Hours : July 19(Mon) - 23(Fri), 08:00 - 23:00 (KST / UTC +9)

VIRTUAL CONGRESS WEBSITE INFORMATION

How to Access the Virtual Website

https://wc2021.info

Sign Up

Click the **"Sign Up"** to
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* If you do not register previously, you cannot sign-up at virtual website, so please register first at the 10th World Congress in Probability and
 Statistics Website (www.wc2020.org).
* Please use the same 'Name / ID / PW / Affiliation' as the 10th World Congress website.
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How to use the Virtual Website

- All participants can see the session information by Date, by Type of the session, and by Time Zone.
- All abstracts, slides, and videos will be available On-Demand at the virtual website.
- All participants can leave the comments or vote to the sessions, abstracts and presentation videos.
- Live Q&A session will run according to the session time and participants can join through the ZOOM.

How to Participate the Live Zoom Q&A

- All participants can join the live Q&A time through the ZOOM by clicking the " Enter Zoom ".
- ZOOM will be only opened at the session time.
- All ZOOM Participants except chairs and speakers join the Zoom meeting room with both video and audio turned off, and if you have
 questions, you may participate by chat box or raise hand according to the chair's instruction.

DAILY PROGRAM

DAILY PROGRAM _ JULY 19 (MON)

*All times are KST (UTC+9)

09:00 - 10:00   **IMS Presidential Address**

Chair   Siva Athreya (Indian Statistical Institute) / Hee-Seok Oh (Seoul National University)

IMS Presidential Address

Regina Liu (Rutgers University), Susan Murphy (Harvard University)

11:30 - 12:00   **IS30. Functional Estimation, Testing and Clustering under Sparsity**

Organizer   Jiashun Jin (Carnegie Mellon University)
Chair   Jiashun Jin (Carnegie Mellon University)

Optimal network testing by the signed-polygon statistics

Tracy Ke (Harvard University)

Statistical inference for linear mediation models with high-dimensional mediators

Runze Li (Penn State University)

Perturbation bounds for tensors and their applications in high dimensional data analysis

Ming Yuan (Columbia University)

11:30 - 12:00   **IS39. KSS Invited Session: Interactive Particle Systems and Urn Models**

Organizer   Woncheol Jang (Seoul National University)
Chair   Panki Kim (Seoul National University)

Convergence of randomized urn models with irreducible and reducible replacement

Li-Xin Zhang (Zhejiang University)

Condensation phenomenon and metastability in interacting particle systems

Insuk Seo (Seoul National University)

Time correlation exponents in planar last passage percolation

Riddhipratim Basu (International Centre for Theoretical Sciences-TIFR)

11:30 - 12:00   **OCS02. Nonlocal Operators Related to Probability**

Organizer   Ildoo Kim (Korea University)
Chair   Ildoo Kim (Korea University)

A Sobolev space theory for time-fractional stochastic PDE driven by Levy processes

Daehan Park (Korea Advanced Institute of Science and Technology (KAIST))

DAILY PROGRAM _ JULY 19 (MON)

A regularity theory for stochastic modified Burgers' equation driven by multiplicative space-time white noise
Beom-Seok Han (Pohang University of Science and Technology)

General Law of iterated logarithm for Markov processes
Jaehun Lee (Korea Institute for Advanced Study)

Heat kernel estimates for subordinate Markov processes and their applications
Soobin Cho (Seoul National University)

A maximal L_p-regularity theory to initial value problems with time measurable nonlocal operators generated by additive processes
Jae-Hwan Choi (Korea University)

11:30 - 12:00	**OCS15. Network-related Statistical Methods and Analysis**
Organizer	Donghyeon Yu (Inha University)
Chair	Donghyeon Yu (Inha University)

Estimation of particulate levels using deep Dehazing network and temporal prior
SungHwan Kim (Konkuk University)

Graph-regularized contextual bandits with scalable Thompson sampling and semi-parametric reward models
Young-Geun Choi (Sookmyung Women's University)

INN: A stable method identifying clean-annotated samples via consistency effect in deep neural networks
Dongha Kim (Sungshin Women's University)

An efficient parallel block coordinate descent algorithm for large-scale precision matrix estimation using graphics processing units
Donghyeon Yu (Inha University)

11:30 - 12:00	**OCS23. Recent Advances in Statistical Methods for Large Scale Complex Data**
Organizer	Seyoung Park (Sungkyunkwan University)
Chair	Seyoung Park (Sungkyunkwan University)

Multivariate responses quantile regression for regional quantiles with applications to CCLE data
Seyoung Park (Sungkyunkwan University)

On sufficient graphical models
Kyongwon Kim (Ewha Womans University)

DAILY PROGRAM _ JULY 19 (MON)

Principal component analysis in the wavelet domain
Yaeji Lim (Chung Ang University)

Bayesian inference of evolutionary models from genomic data
Yujin Chung (Kyonggi University)

19:00 - 20:00	**Wald Lecture 1**
Chair	Takashi Kumagai (Kyoto University)

Random walks and fractal graphs
Martin Barlow (University of British Columbia)

20:00 - 21:00	**Bernoulli Lecture**
Chair	Ellen Baake (Bielefeld University)

Some models of spatially distributed populations: the effect of crowding
Alison Etheridge (University of Oxford)

21:30 - 22:00	**IS17. Approximate Bayesian Computation**
Organizer	Yanan Fan (University of New South Wales)
Chair	Yanan Fan (University of New South Wales)

Approximate inference for ordinal linear regression
Jean-Luc Dortet-Bernadet (Université de Strasbourg)

Generalized Bayesian likelihood-free inference using scoring rules estimators
Ritabrata Dutta (University of Warwick)

21:30 - 22:00	**IS20. Heavy Tailed Phenomena**
Organizer	Stilian A Stoev (University of Michigan, Ann Arbor)
Chair	Stilian A Stoev (University of Michigan, Ann Arbor)

Random linear functions of regularly varying vectors
Bikramjit Das (Singapore University of Technology and Design)

DAILY PROGRAM _ JULY 19 (MON)

Power laws and weak convergence of the Kingman coalescent

Henrik Hult (KTH Royal Institute of Technology)

Limit theorems for topological invariants of extreme sample cloud

Takashi Owada (Purdue University)

21:30 - 22:00	**IS33. Integrable Probability**
Organizer	Tomohiro Sasamoto (Chiba University)
Chair	Tomohiro Sasamoto (Chiba University)

Reversing nonequilibrium systems

Leonid Petrov (University of Virginia)

Mapping KPZ models to free fermions at positive temperature

Takashi Imamura (Chiba University)

Relaxation time limit of TASEP on a ring

Jinho Baik (University of Michigan)

21:30 - 22:00	**OCS01. Coulomb Gases**
Organizer	Paul Jung (Korea Advanced Institute of Science and Technology (KAIST))
Chair	Paul Jung (Korea Advanced Institute of Science and Technology (KAIST))

Outliers for Coulomb gases

David Garcia-Zelada (Aix-Marseille University)

Edge behaviors of 2D Coulomb gases with boundary confinements

Seong-Mi Seo (Korea Institute for Advanced Study)

Large deviations in the quantum quasi-1D jellium

Christian Hirsch (University of Groningen)

Lemniscate ensembles with spectral singularities

Sung-Soo Byun (Seoul National University)

DAILY PROGRAM _ JULY 19 (MON)

21:30 - 22:00   **OCS04. Interacting Particle Systems and Inclusion Process**

Organizer   Cristian Giardinà (University of Modena and Reggio Emilia)

Chair   Cristian Giardinà (University of Modena and Reggio Emilia)

Metastability in the reversible inclusion process
Sander Dommers (University of Hull)

Metastability in the reversible inclusion process II: Toward the characterization of the relaxation time
Alessandra Bianchi (Università di Padova)

Condensation and metastability of general inclusion processes
Seonwoo Kim (Seoul National University)

Condensation of SIP particles and sticky Brownian motion
Gioia Carinci (Università di Modena e Reggio Emilia)

Condensed phase structure in inclusion processes
Watthanan Jatuviriyapornchai (Faculty of Science, Mahidol University)

21:30 - 22:00   **OCS22. Recent Progress of Statistical Inference for Economics and Social Science**

Organizer   Eun Ryung Lee (Sungkyunkwan University)

Chair   Eun Ryung Lee (Sungkyunkwan University)

A Spline-based modeling approach for time-indexed multilevel data
Eun Ryung Lee (Sungkyunkwan University)

Impulse response analysis for sparse high-dimensional time series
Carsten Trenkler (University of Mannheim)

Revealing cluster structures based on mixed sampling frequencies: with an application to the state-level labor markets
Yeonwoo Rho (Michigan Technological University)

Semiparametric efficient estimators in heteroscedastic error models
Mijeong Kim (Ewha Womans University)

DAILY PROGRAM _ JULY 19 (MON)

21:30 - 22:00   **CS01. Stochastic Partial Differential Equations**

Chair   Kunwoo Kim (Pohang University of Science and Technology)

A sobolev space theory for SPDEs with space-time nonlocal operotors
Junhee Ryu (Korea University)

Improved stability for linear SPDEs using mixed boundary/internal controls
Dan Goreac (University Shandong Weihai, China and University Gustave Eiffel, France)

Law of the large numbers and central limit theorems for stochastic heat equations
Kunwoo Kim (Pohang University of Science and Technology)

The stochastic heat equation with Lévy noise: Existence, moments and intermittency
Carsten Chong (Columbia University)

21:30 - 22:00   **CS06. Various Aspects of Diffusion Processes**

Chair   Insuk Seo (Seoul National University)

On nonlinear filtering of jump diffusions
Fabian Germ (University of Edinburgh)

Uniqueness and superposition of the distribution-dependent Zakai equations
Huijie Qiao (Southeast University)

Quadratic variation and quadratic roughness
Purba Das (University of Oxford)

Eyring-Kramers formula for non-reversible metastable diffusion processes
Jungkyoung Lee (Seoul National University)

21:30 - 22:00   **CS18. Inference on Dependence**

Chair   Minsun Song (Sookmyung Women's University)

Covariance networks for functional data on multidimensional domains
Soham Sarkar (Ecole Polytechnique Federale de Lausanne)

Large dimensional sample covariance matrices with independent columns and diagonalizable simultaneously population covariance matrices
Tianxing Mei (The University of Hong Kong)

Random surface covariance estimation by shifted partial tracing
Tomas Masak (EPFL)

DAILY PROGRAM _ JULY 19 (MON)

21:30 - 22:00   **CS24. Time Series Analysis I**

Chair   Kyongwon Kim (Ewha Womans University)

Statistical modelling of rainfall time series using ensemble empirical mode decomposition and generalised extreme value distribution
Willard Zvarevashe (University of Zululand)

Regularity of multifractional moving average processes with random Hurst exponent
Fabian Mies (RWTH Aachen University)

High-frequency instruments and identification-robust inference for stochastic volatility models
Md. Nazmul Ahsan (Concodia University)

21:30 - 22:00   **CS30. Spatio-temporal Data Analysis**

Chair   Seoncheol Park (Chungbuk National University)

Statistical inference for mean function of longitudinal imaging data over complicated domains
Jie Li (Tsinghua University)

Gaussian linear dynamic spatio-temporal models and time asymptotics
Suman Guha (Presidency University, Kolkata)

High-dimensional spectral analysis
Jonas Krampe (University of Mannheim)

Extreme value analysis for mixture models with heavy-tailed impurity
Ekaterina Morozova (HSE University)

21:30 - 22:00   **CS34. Stochastic Process / Modeling**

Chair   Jaehong Jeong (Hanyang University)

Ruin probabilities in the presence of risky investments and random switching
Konstantin Borovkov (The University of Melbourne)

Wasserstein convergence rates for random bit approximations of continuous Markov processes
Thomas Kruse (University of Giessen)

The discrete membrane model on trees
Biltu Dan (Indian Institute of Science)

On a two-server queue with consultation by main server with protected phases of service
Resmi Thekkiniyedath (KKTM Govternment College)

DAILY PROGRAM _ JULY 19 (MON)

22:30 - 23:00	**IS13. Critical Phenomena in Statistical Mechanics Models**
Organizer	Akira Sakai (Hokkaido University)
Chair	Akira Sakai (Hokkaido University)

Recent results for critical lattice models in high dimensions
Mark Holmes (University of Melbourne)

Near-critical avalanches in 2D frozen percolation and forest fires
Pierre Nolin (City University of Hong Kong)

Quenched and annealed Ising models on random graphs
Cristian Giardinà (Modena & Reggio Emilia University)

22:30 - 23:00	**IS15. Privacy**
Organizer	Angelika Rohde (University of Freiburg)
Chair	Angelika Rohde (University of Freiburg)

The right complexity measure in locally private estimation: It is not the Fisher information
John Duchi (Stanford University)

Sequentially interactive versus non-interactive local differential privacy: estimating the quadratic functional
Lukas Steinberger (University of Vienna)

Gaussian differential privacy
Weijie Su (University of Pennsylvania)

22:30 - 23:00	**IS24. Random Planar Geometries**
Organizer	Nina Holden (ETH Zurich)
Chair	Nina Holden (ETH Zurich)

Markovian infinite triangulations
Thomas Budzinski (ENS Lyon)

Rotational invariance in planar FK-percolation
Ioan Manolescu (Université de Fribourg)

Brownian half-plane excursions, CLE_4 and critical Liouville quantum gravity
Ellen Powell (Durham University)

DAILY PROGRAM _ JULY 19 (MON)

22:30 - 23:00   **OCS14. Multivariate and Object-Oriented Data Analysis**

Organizer   Cheolwoo Park (Korea Advanced Institute of Science and Technology (KAIST))

Chair   Cheolwoo Park (Korea Advanced Institute of Science and Technology (KAIST))

Bayesian spatial binary regression for label fusion in structural neuroimaging

Andrew Brown (Clemson University)

Convex clustering analysis for histogram-valued data

Cheolwoo Park (Korea Advanced Institute of Science and Technology (KAIST))

A geometric mean for multivariate functional data

Juhyun Park (ENSIIE)

A confidence region for the elastic shape mean of planar curves

Justin Strait (University of Georgia)

22:30 - 23:00   **OCS26. Recent Advances in Network Learning: Theory and Practice**

Organizer   Kyoungjae Lee (Inha University)

Chair   Kyoungjae Lee (Inha University)

Scalable Bayesian high-dimensional local dependence learning

Kyoungjae Lee (Inha University)

Fast and flexible estimation of effective migration surfaces

Wooseok Ha (UC Berkeley)

Statistical inference for cluster trees

Jisu Kim (Inria)

Autologistic network model on binary data for disease progression study

Yei Eun Shin (National Cancer Institute)

22:30 - 23:00   **CS05. Potential Theory in Probability Theory**

Chair   Panki Kim (Seoul National University)

Heat contents for time-changed killed Brownian motions

Hyunchul Park (SUNY New Paltz)

Heat kernel bounds for nonlocal operators with singular kernels

Kyung-Youn Kim (National Chengchi University)

DAILY PROGRAM _ JULY 19 (MON)

The full characterization of the expected supremum of infinitely divisible processes

Rafal Martynek (University of Warsaw)

The e-property of asymptotically stable Markov-Feller operators

Hanna Wojewódka-Ściążko (Institute of Mathematics, University of Silesia in Katowice)

| 22:30 - 23:00 | **CS15. Advanced Stochastic Processes** |
| Chair | Jaehun Lee (Korea Institute of Advanced Study) |

A multi-species Ehrenfest process and its diffusion approximation

Serena Spina (University of Salerno)

Limit theorems for the realised semicovariances of multivariate Brownian semistationary processes

Yuan Li (Imperial College London)

A Yaglom type asymptotic result for subcritical branching Brownian motion with absorption

Jiaqi Liu (University of California, San Diego)

| 22:30 - 23:00 | **CS22. Bayesian Inference** |
| Chair | Seongil Jo (Inha University) |

Bayesian and stochastic modeling of polysomnography data from children using pacifiers for improved estimation of the apnea-hypopnea index

Sujay Datta (University of Akron (Ohio))

Asymmetric prior in wavelet shrinkage

Alex Rodrigo dos Santos Sousa (University of São Paulo)

Semiparametric Bayesian regression analysis of multi-typed matrix-variate responses

Inkoo Lee (Florida State University)

Bayesian phylogenetic inference of stochastic block models on infinite trees

Wenjian Liu (Queensborough Community College, CUNY)

Order-restricted Bayesian inference for the simple step-stress accelerated life tests

David Han (The University of Texas at San Antonio)

DAILY PROGRAM _ JULY 19 (MON)

22:30 - 23:00	**CS33. Novel Statistical Approaches in Genetic Association Analyses**

Chair   Saurabh Ghosh (Indian Statistical Institute)

An extended model for phylogenetic maximum likelihood based on discrete morphological characters
David Spade (University of Wisconsin--Milwaukee)

Combined linkage and association mapping integrating population-based and family-based designs using multinomial regression
Saurabh Ghosh (Indian Statistical Institute)

An alternative to intersection-union test for the composite null hypothesis used to identify shared genetic risk of disease outcomes
Debashree Ray (Johns Hopkins University)

Efficient SNP-based heritability estimation using Gaussian predictive process in large-scale cohort studies
Saonli Basu (University of Minnesota)

Data-adaptive groupwise test for genomic studies via the Yanai's generalized coefficient of determination
Masao Ueki (Nagasaki University)

22:30 - 23:00	**CS36. Statistical Inference**

Chair   Mijeong Kim (Ewha Womans University)

Density deconvolution with non-standard error distributions: Rates of convergence and adaptive estimation
Taeho Kim (University of Haifa)

Moments of the doubly truncated selection elliptical distributions: recurrence, existence and applications
Christian Galarza Morales (Escuela Superior Politécnica del Litoral)

Characterization of probability distributions by a generalized notion of sufficiency and Fisher information
Atin Gayen (Indian Institute of Technology Palakkad, India)

DAILY PROGRAM _ JULY 20 (TUE)

*All times are KST (UTC+9)

09:00 - 10:00   **IMS Medallion Lecture**

Chair   Qi-Man Shao (Chinese University of Hong Kong)

Gambler's ruin problems

Laurent Saloff-Coste (Cornell University)

10:00 - 11:00   **IMS Medallion Lecture**

Chair   Krzysztof Burdzy (University of Washington)

Simplicity and complexity of belief-propagation

Elchanan Mossel (MIT)

11:30 - 12:00   **IS04. Mathematical Population Genetics and Computational Statistics**

Organizer   Paul Jenkins (University of Warwick)
Chair   Paul Jenkins (University of Warwick)

Mapping genetic ancestors

Graham Coop (University of California at Davis)

Cellular point processes: quantifying cell signaling

Barbara Engelhardt (Princeton University)

Fitting stochastic epidemic models to gene genealogies using linear noise approximation

Vladimir Minin (University of California, Irvine)

11:30 - 12:00   **IS18. Deep Learning**

Organizer   Johannes Schmidt-Hieber (University of Twente)
Chair   Johannes Schmidt-Hieber (University of Twente)

Dynamics and phase transitions in deep neural networks

Yasaman Bahri (Google Research)

Theoretical understanding of adding noises to deep generative models

Yongdai Kim (Seoul National University)

Adversarial examples in random deep networks

Peter Bartlett (University of California at Berkeley)

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11:30 - 12:00	**OCS07. Anomalous Diffusions and Related Topics**
Organizer	Zhen-Qing Chen (University of Washington)
Chair	Zhen-Qing Chen (University of Washington)

L^p-Kato class measures for symmetric Markov processes under heat kernel estimates
Kazuhiro Kuwae (Fukuoka University)

Green function estimates and boundary Harnack principles for non-local operators whose kernels degenerate at the boundary
Panki Kim (Seoul National University)

Heat kernel upper bounds for symmetric Markov semigroups
Jian Wang (Fujian Normal University)

Inverse local time of one-dimensional diffusions and its comparison theorem
Lidan Wang (Nankai University)

Archimedes' principle for ideal gas
Krzysztof Burdzy (University of Washington)

11:30 - 12:00	**OCS17. The Advances in Time Series and Spatial Statistics**
Organizer	Wei-Ying Wu (National Dong Hwa University)
Chair	Wei-Ying Wu (National Dong Hwa University)

Interpretable, predictive spatio-temporal models via enhanced pairwise directions estimation
ShengLi Tzeng (National Sun Yat-sen University)

Model selection with a nested spatial correlation structurekernels degenerate at the boundary
Chun-Shu Chen (National Central University)

Consistent order selection for ARFIMA models
Kun Chen (Southwestern University of Finance and Economics)

Whittle likelihood for irregularly spaced spatial data
Soutir Bandyopadhyay (Colorado School of Mines)

11:30 - 12:00	**OCS24. Advanced Statistical Methods for Complex Data**
Organizer	Jongho Im (Yonsei University)
Chair	Seung Hwan Park (Kangwon National University)

On the verifiable identification condition in NMAR missing data analysis
Kosuke Morikawa (Osaka University and The University of Tokyo)

DAILY PROGRAM _ JULY 20 (TUE)

Bayesian hierarchical spatial model for small-area estimation with non-ignorable nonresponses and its application to the NHANES dental caries data

Ick Hoon Jin (Yonsei University)

Raking-based relabeling classification method for highly imbalanced data

Seunghwan Park (Kangwon National University)

Imputation approach for outcome dependent sampling design

Jongho Im (Yonsei University)

| 11:30 - 12:00 | **CS25. Time Series Analysis II** |
| Chair | Joungyoun Kim (Yonsei University) |

Robust Bayesian analysis of multivariate time series

Yixuan Liu (The University of Auckland)

Posterior consistency for the spectral density of non-Gaussian stationary time series

Yifu Tang (The University of Auckland)

ARMA models for zero inflated count time series

Vurukonda Sathish

Time-series data clustering via thick pen transformation

Minji Kim (Seoul National University)

| 11:30 - 12:00 | **Poster I-1** |

GMOTE: Gaussian-based minority oversampling technique for imbalanced classification adapting tail probability of outliers

Seung Jee Yang (Hanyang University)

Exact inference for an exponential parameter under generalized progressive type II hybrid censored competing risk data

Subin Cho (Daegu University)

Meta-analysis methods for multiple related markers: Applications to microbiome studies with the results on multiple α-diversity indices

Hyunwook Koh (The State University of New York, Korea)

Estimation for a nonlinear regression model with non-zero mean errors and an application to a biomechanical model

Hojun You (Seoul National University)

DAILY PROGRAM _ JULY 20 (TUE)

Neural network-based clustering for ischemic stroke patients
Su Hoon Choi (Chonnam National University)

Principal component analysis of amplitude and phase variation in multivariate functional data
Soobin Kim (Seoul National University)

Clustering non-stationary advanced metering infrastructure data
Donghyun Kang (Chung-Ang University)

19:00 - 20:00	**Levy Lecture**
Chair	Martin Hairer (Imperial College London)

A variational method for Euclidean quantum fields
Massimiliano Gubinelli (University of Bonn)

20:00 - 21:00	**Doob Lecture**
Chair	Wendelin Werner (ETH Zurich)

Parking on Cayley trees and Frozen Erdös-Rényi
Nicolas Curien (Paris-Saclay University)

21:30 - 22:00	**IS16. Bootstrap for High-dimensional Data**
Organizer	Kengo Kato (Cornell University)
Chair	Kengo Kato (Cornell University)

Inference for nonlinear inverse problems
Vladimir Spokoinyi (WIAS and HU Berlin)

Change point analysis for high-dimensional data
Xiaohui Chen (University of Illinois at Urbana-Champaign)

Bootstrap test for multi-scale lead-lag relationships in high-frequency data
Yuta Koike (University of Tokyo)

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21:30 - 22:00	**IS27. Random Matrices and Related Fields**
Organizer	Manjunath Krishnapur (Indian Institute of Science)
Chair	Ji Oon Lee (Korea Advanced Institute of Science and Technology (KAIST))

The scaling limit of the characteristic polynomial of a random matrix at the spectral edge
Elliot Paquette (McGill University)

Strong asymptotics of planar orthogonal polynomials: Gaussian weight perturbed by finite number of point charges
Seung Yeop Lee (University of South Florida)

Secular coefficients and the holomorphic multiplicative chaos
Joseph Najnudel (University of Bristol)

21:30 - 22:00	**IS28. Statistical Inference for Graphs and Networks**
Organizer	Betsy Ogburn (Johns Hopkins University)
Chair	Betsy Ogburn (Johns Hopkins University

A goodness-of-fit test for exponential random graphs
Gesine Reinert (University of Oxford)

Networks in the presence of informative community structure
Alexander Volfovsky (Duke University)

Motif estimation via subgraph sampling: The fourth-moment phenomenon
Bhaswar Bhattacharya (University of Pennsylvania)

21:30 - 22:00	**IS31. Information Theory and Concentration Inequalities**
Organizer	Chandra Nair (Chinese University of Hong Kong)
Chair	Chandra Nair (Chinese University of Hong Kong)

Algorithmic optimal transport in Euclidean spaces
Salman Beigi (Institute for Research in Fundamental Sciences (IPM))

Entropy bounds for discrete log-concave distributions
Sergey Bobkov (University of Minnesota)

Entropy and convex geometry
Tomasz Tkocz (Carnegie Mellon University)

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21:30 - 22:00	**OCS12. Recent Developments for Dependent Data**
Organizer	Mikyoung Jun (University of Houston)
Chair	Mikyoung Jun (University of Houston)

DeepKriging: Spatially dependent deep neural networks for spatial prediction
Ying Sun (KAUST)

A model-free subsampling method based on minimum energy criterion
Wenlin Dai (Renmin University of China)

Global wind modeling with transformed Gaussian processes
Jaehong Jeong (Hanyang University)

Threshold estimation for continuous three-phase polynomial regression models with constant mean in the middle regime
Chih-Hao Chang (National University of Kaohsiung)

21:30 - 22:00	**OCS16. Non-Euclidean Statistical Inference**
Organizer	Young Kyung Lee (Kangwon National University)
Chair	Young Kyung Lee (Kangwon National University)

Functional linear regression model with randomly censored data: predicting conversion time to Alzheimer's disease
Seong Jun Yang (Jeonbuk National University)

Deconvolution estimation on hyperspheres
Jeong Min Jeon (KU Leuven)

Confidence band for persistent homology of KDEs
Jisu Kim (Inria)

Analysis of chemical-gene bipartite network via a user-based collaborative filtering method incorporating chemical structure information
Namgil Lee (Kangwon National University)

21:30 - 22:00	**CS02. Financial Mathematics and Probabilistic Modeling**
Chair	Hyungbin Park (Seoul National University)

How to detect a salami slicer: a stochastic controller-stopper game with unknown competition
Kristoffer Lindensjö (Stockholm University

DAILY PROGRAM _ JULY 20 (TUE)

Solving the selection-recombination equation: Ancestral lines and duality

Frederic Alberti (Bielefeld University)

Short time asymptotics for modulated rough stochastic volatility models

Barbara Pacchiarotti (Università degli studi di Roma "Tor Vergata")

21:30 - 22:00	**CS07. SDEs and Fractional Brownian Motions**
Chair	Ildoo Kim (Korea University)

Weak rough-path type solutions for singular Lévy SDEs

Helena Katharina Kremp (Freie Universität Berlin)

Functional limit theorems for approximating irregular SDEs, general diffusions and their exit times

Mikhail Urusov (University of Duisburg-Essen)

21:30 - 22:00	**CS28. Neural Networks and Deep Learning**
Chair	Jong-June Jeon (University of Seoul)

Simulated annealing-backpropagation algorithm on parallel trained maxout networks (SABPMAX) in detecting credit card fraud

Sheila Mae Golingay (University of the Philippines-Diliman)

The smoking gun: Statistical theory improves neural network estimates

Sophie Langer (Technische Universität Darmstadt)

Stochastic block model for multiple networks

Tabea Rebafka (Sorbonne Université)

Deep neural networks for faster nonparametric regression models

Mehmet Ali Kaygusuz (The Middle East Technical University)

Generative model for fbm with deep ReLU neural networks

Michael Allouche (Ecole Polytechnique)

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21:30 - 22:00   **Poster I-2**

Geometrically adapted Langevin algorithm (GALA) for Markov Chain Monte Carlo (MCMC) simulations
Mariya Mamajiwala (University College London)

Bayes estimation for the Weibull distribution under generalized adaptive hybrid progressive censored competing risks data
Yeongjae Seong (Daegu University)

Large deviations of mean-field interacting particle systems in a fast varying environment
Sarath Yasodharan (Indian Institute of Science)

Stochastic homogenisation of Gaussian fields
Leandro Chiarini (Utrecht University)

Concentration inequality for U-statistics for uniformly ergodic Markov chains, and applications
Quentin Duchemin (LAMA, Univ Gustave Eiffel, CNRS, Marne-la-Vallée, France)

A Bayesian illness-death model to approach the incidence of recurrent hip fracture and death in elderly patients
Fran Llopis-Cardona (Foundation for the Promotion of Health and Biomedical Research of Valencia Region(FISABIO))

The contact process with two types of particles and priority: metastability and convergence in infinite volume
Mariela Pentón Machado (Instituto de Matemática e Estatística, Universidade de São Paulo)

A nonparametric instrumental approach to endogeneity in competing risks models
Jad Beyhum (ORSTAT, KU Leuven)

22:30 - 23:00   **IS02. Scaling Limits of Disordered Systems and Disorder Relevance**

Organizer   Rongfeng Sun (National University of Singapore)
Chair   Rongfeng Sun (National University of Singapore)

Exceptional geodesic pairs in the directed landscape
Erik Bates (University of Wisconsin-Madison)

Disorder relevance and the continuum random field Ising model
Adam Bowditch (University College Dublin)

A CLT for KPZ on torus
Yu Gu (Carnegie Mellon University)

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22:30 - 23:00 **IS07. High-dimensional Robustness**

Organizer Stanislav Minsker (University of Southern California)

Chair Stanislav Minsker (University of Southern California)

Distribution-free robust linear regression

Nikita Zhivotovskiy (ETH Zurich)

Algorithmic high-dimensional robust statistics

Ilias Diaconicolas (University of Wisconsin-Madison)

Robust estimation of a mean vector with respect to any norm : a minimax MOM and a Stahel-Donoho Median of means estimators

Guillaume Lecué (Laboratoire de statistiques at CREST)

22:30 - 23:00 **IS08. Functional Data Analysis**

Organizer Aurore Delaigle (University of Melbourne)

Chair Yunjin Choi (University of Seoul)

Partially specified covariance operators and intrinsically functional graphical models

Victor Panaretos (EPFL)

Domain selection for functional linear models: a dynamic RKHS approach

Jane Ling Wang (University of California at Davis)

Simultaneous Inference for function-valued parameters: A fast and fair approach

Dominik Liebl (University of Bonn)

22:30 - 23:00 **IS32. Statistical Learning**

Organizer Yichao Wu (University of Illinois at Chicago)

Chair Yichao Wu (University of Illinois at Chicago)

Equivariant variance estimation for multiple change-point model

Ning Hao (University of Arizona)

A forward approach for sufficient dimension reduction in binary classification

Seung Jun Shin (Korea University)

Variable selection for global Fréchet regression

Dani Tucker (University of Illinois at Chicago)

DAILY PROGRAM _ JULY 20 (TUE)

22:30 - 23:00 **IS41. Bernoulli Paper Prize Session**

Organizer   Bernoulli Society

Chair   Ofer Zeitouni (Weizmann Institute of Science) / Richard Samworth (University of Cambridge)

Bernoulli Prize for an outstanding survey article in Probability: From infinite random matrices over finite fields to square ice

Leonid Petrov (University of Virginia)

Bernoulli Journal Read Paper Award: A general frequency domain method for assessing spatial covariance structures

Soutir Bandyopadhyay (Colorado School of Mines)

22:30 - 23:00 **OCS06. Theoretical Analysis of Random Walks, Random Graphs and Clustering**

Organizer   Ji Oon Lee (Korea Advanced Institute of Science and Technology (KAIST))

Chair   Ji Oon Lee (Korea Advanced Institute of Science and Technology (KAIST))

Spectral large deviations for sparse random matrices

Kyeongsik Nam (University of California, Los Angeles)

Robust hypergraph clustering via convex relaxation of truncated MLE

Hye Won Chung (Korea Advanced Institute of Science and Technology (KAIST))

Convergence rate to the Tracy-Widom laws for the largest eigenvalue of Wigner matrices

Kevin Schnelli (KTH Royal Institute of Technology)

Attributed graph alignment

Lele Wang (University of British Columbia)

Minkowski content for the scaling limit of loop-erased random walk in three dimensions

Xinyi Li (Peking University)

22:30 - 23:00 **OCS13. Recent Advances in Complex Time Series Analysis**

Organizer   Haeran Cho (University of Bristol)

Chair   Haeran Cho (University of Bristol)

Change points detection for high dimensional time series

Likai Chen (Washington University in Saint Louis)

Asymptotics of large autocovariance matrices

Monika Bhattacharjee (Indian Institute of Technology Bombay)

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Factor models for matrix-valued high-dimensional time series
Xialu Liu (San Diego State University)

Multi-level changepoint inference for periodic data sequences
Anastasia Ushakova (Lancaster University)

22:30 - 23:00	**CS10. Reflecting Diffusion Processes Stochastic Networks and Their Applications**
Organizer	Amber Puha (California State University, San Marcos)
Chair	Ruth J. Williams (University of California at San Diego)

Measure valued processes characterized by a field of reflecting Brownian motions arising from certain queuing problems
Amarjit Budhiraja (University of North Carolina)

Asymptotic behavior of a critical fluid model for bandwidth sharing with general file size distributions
Yingjia Fu (University of California San Diego)

Error bounds for the one-dimensional constrained langevin approximation for density dependent Markov chains
Felipe Campos (University of California, San Diego)

Obliquely reflecting diffusions in nonsmooth domains: Some new uniqueness results
Cristina Costantini (University of Chieti-Pescara)

22:30 - 23:00	**CS16. Probability Theory and Statistical Mechanics**
Chair	HyunJae Yoo (Hankyong National University

Coexistence of localized Gibbs measures and delocalized gradient Gibbs measures on trees
Florian Henning (Ruhr-University Bochum)

Inhomogeneous gradient Gibbs measures on regular trees with homogeneous interactions
Christof Kuelske (Ruhr-University Bochum)

Statistical mechanical model of adsorption at the surface interface contacting with an ideal gas
Changho Kim (University of California, Merced)

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22:30 - 23:00	**CS19. Detection and Segmentation**

Chair   Myung Hee Lee (Weil Cornell Medicine)

Detection of outliers in compositional data on disabled people in the São Paulo State
Paulo Oliveira (University of São Paulo)

Consistent change-point detection for general distributions
Florencia Leonardi (University of São Paulo)

Change point detection under linear model: Use of MOSUM approach
Joonpyo Kim (Seoul National University)

Interval-censored least-squares regressions
Taehwa Choi (Korea University)

22:30 - 23:00	**CS23. Bayesian Nonparametric Inference**

Chair   Kyoungjae Lee (Inha University)

Bernstein - von Mises type theorem for a scale hyperparameter in Bayesian nonparametric inference
Natalia Bochkina (University of Edinburgh)

Convergence of unadjusted Hamiltonian Monte Carlo for mean-field models
Katharina Schuh (University Bonn)

Nonparametric Bayesian volatility estimation for gamma-driven stochastic differential equations
Peter Spreij (University of Amsterdam)

Hamiltonian Monte Carlo in high dimensions
Andreas Eberle (University of Bonn)

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09:00 - 10:00	**Laplace Lecture**
Chair	Runze Li (Pennsylvania State University)

Transfer learning: optimality and adaptive algorithms

Tony Cai (University of Pennsylvania)

10:00 - 11:00	**Public Lecture**
Chair	Joong-Ho Won (Seoul National University)

Structure and randomness in data

Young-Han Kim (UCSD and Gauss Labs Inc.)

11:30 - 12:00	**IS05. Recent Advances in Shape Constrained Inference**
Organizer	Bodhisatva Sen (Columbia University)
Chair	Bodhisatva Sen (Columbia University)

Global rates of convergence in mixture density estimation

Arlene Kyoung Hee Kim (Korea University)

Convex regression in multidimensions

Adityanand Guntuboyina (University of California Berkeley)

Multiple isotonic regression: limit distribution theory and confidence intervals

Qiyang Han (Rutgers University)

11:30 - 12:00	**IS06. Optimization in Statistical Learning**
Organizer	Garvesh Raskutti (University of Wisconsin-Madison)
Chair	Garvesh Raskutti (University of Wisconsin-Madison)

Statistical inference on latent network growth processes using the PAPER model

Min Xu (Rutgers University)

Adversarial classification, optimal transport, and geometric flows

Nicolas Garcia Trillos (University of Wisconsin-Madison)

Capturing network effect via fused lasso penalty with application on shared-bike data

Yunjin Choi (University of Seoul)

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11:30 - 12:00	**OCS09. Random Matrices and Infinite Particle Systems**
Organizer	Hirofumi Osada (Kyushu University)
Chair	Hirofumi Osada (Kyushu University)

Dynamical universality for random matrices
Hirofumi Osada (Kyushu University)

Signal processing via the stochastic geometry of spectrogram level sets
Subhroshekhar Ghosh (National University of Singapore)

Logarithmic derivatives and local densities of point processes arising from random matrices
Shota Osada (Kyushu University)

Stochastic differential equations for infinite particle systems of jump type with long range interactions
Hideki Tanemura (Keio university)

11:30 - 12:00	**OCS18. Advanced Learning Methods for Complex Data Analysis**
Organizer	Xinlei Wang (Southern Methodist University
Chair	Xinlei Wang (Southern Methodist University

Peel learning for pathway-related outcome prediction
Rui Feng (University of Pennsylvania)

Principal boundary for data on manifolds
Zhigang Yao (National University of Singapore)

Probabilistic semi-supervised learning via sparse graph structure learning
Li Wang (University of Texas at Arlington)

Bayesian modeling for paired data in genome-wide association studies with application to breast cancer
Min Chen (University of Texas at Dallas)

11:30 - 12:00	**OCS27. Bayesian Inference for Complex Models**
Organizer	Joungyoun Kim (Yonsei Univesity)
Chair	Joungyoun Kim (Yonsei Univesity)

Nonparametric Bayesian latent factor model for multivariate functional data with covariate dependency
Yeonseung Chung (Korea Advanced Institute of Science and Technology (KAIST))

Bayesian model selection for ultrahigh-dimensional doubly-intractable distributions
Jaewoo Park (Yonsei University)

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Post-processed posteriors for banded covariances

Kwangmin Lee (Seoul National University)

Adaptive Bayesian inference for current status data on a grid

Minwoo Chae (Pohang University of Science and Technology)

11:30 - 12:00	**OCS28. Recent Advances in Time Series Analysis**
Organizer	Changryong Baek (Sungkyunkwan University)
Chair	Changryong Baek (Sungkyunkwan University)

Resampling long-range dependent time series

Shuyang Bai (University of Georgia)

Robust test for structural instability in dynamic factor models

Changryong Baek (Sungkyunkwan University)

On scaling in high dimensions

Gustavo Didier (Tulane University)

Thresholding and graphical local Whittle estimation

Marie Duker (Cornell University)

Cotrending: testing for common deterministic trends in varying means model

Vladas Pipiras (University of North Carolina at Chapel Hill)

11:30 - 12:00	**CS29. Spatial Data Analysis**
Chair	Yaeji Lim (Chung-Ang University)

Wild bootstrap for high-dimensional spatial data

Daisuke Kurisu (Tokyo Institute of Technology)

Lifting scheme for streamflow data in river networks

Seoncheol Park (Chungbuk National University)

Optimal designs for some bivariate cokriging models

Subhadra Dasgupta (IITB-Monash Research Academy)

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11:30 - 12:00	**Poster II-1**

Nonconstant error variance in generalized propensity score model

Doyoung Kim (Sungkyunkwan University)

Causal mediation analysis with multiple mediators of general structures

Youngho Bae (Sungkyunkwan University)

A fuzzy clustering ensemble based Mapper algorithm

SungJin Kang (Chung-Ang University)

Analysis of the association between suicide attempts and meteorological factors

Seunghyeon Kim (Chonnam National University)

Spectral clustering with the Wasserstein distance and its application

SangHun Jeong (Pusan National University)

Robust covariance estimation for partially observed functional data

Hyunsung Kim (Chung-Ang University)

Fast Bayesian functional regression for non-Gaussian spatial data

Yeo Jin Jung (Yonsei University)

19:00 - 20:00	**Wald Lecture 2**
Chair	Takashi Kumagai (Kyoto University)

Low dimensional random fractals

Martin Barlow (University of British Columbia)

20:00 - 21:00	**IMS Medallion Lecture**
Chair	Arup Bose (Indian Statistical Institute)

Random determinants and the elastic manifold

Gerard Ben Arous (New York University)

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21:30 - 22:00	**IS01. Conformal Invariance and Related Topics**
Organizer	Hao Wu (Yau Mathematical Sciences Center, Tsinghua University)
Chair	Hao Wu (Yau Mathematical Sciences Center, Tsinghua University)

Asymptotics of determinants of discrete Laplacians
Konstantin Izyurov (University of Helsinki)

On Loewner evolutions with jumps
Eveliina Peltola (Rheinische Friedrich-Wilhelms-Universität Bonn)

Extremal distance and conformal radius of a CLE_4 loop
Titus Lupu (CNRS / Sorbonne Université)

21:30 - 22:00	**IS14. Optimal Transport**
Organizer	Philippe Rigollet (Massachusetts Institute of Technology)
Chair	Panki Kim (Seoul National University)

Density estimation and conditional simulation using triangular transport
Youssef Marzouk (Massachusetts Institute of Technology)

Estimation of Wasserstein distances in the spiked transport model
Jonathan Niles-Weed (Courant Institute of Mathematical Sciences, New York University)

Statistical estimation of barycenters in metric spaces and the space of probability measures
Quentin Paris (Higher School of Economics)

21:30 - 22:00	**IS21. Probabilistic Theory of Mean Field Games**
Organizer	Xin Guo (University of California, Berkeley)
Chair	Xin Guo (University of California, Berkeley)

Portfolio liquidation games with self-exciting order flow
Ulrich Horst (Humboldt University Berlin)

A mean-field game approach to equilibrium pricing in renewable energy certificate markets
Sebastian Jaimungal (University of Toronto)

Entropic optimal transport
Marcel Nutz (Columbia University)

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21:30 - 22:00	**IS35. Stochastic Analysis in Mathematical Finance and Insurance**
Organizer	Marie Kratz (ESSEC)
Chair	Marie Kratz (ESSEC)

From signature based models in finance to affine and polynomial processes and back
Christa Cuchiero (University of Vienna)

Optimal dividends with capital injections at a level-dependent cost
Ronnie Loeffen (University of Manchester)

Exponential Lévy-type change-point models in mathematical finance
Lioudmila Vostrikova (University of Angers

21:30 - 22:00	**IS40. KSS Invited Session: Nonparametric and Semi-parametric Approaches in Survival Analysis**
Organizer	Woncheol Jang (Seoul National University)
Chair	Woncheol Jang (Seoul National University)

Smoothed quantile regression for censored residual lifetime
Sangwook Kang (Yonsei University)

Superefficient estimation of future conditional hazards based on marker information
Enno Mammen (Heidelberg University)

On a semiparametric estimation method for AFT mixture cure models
Ingrid Van Keilegom (KU Leuven)

21:30 - 22:00	**OCS03. Gaussian Processes**
Organizer	Naomi Feldheim (Bar-Ilan University)
Chair	Naomi Feldheim (Bar-Ilan University)

Gaussian determinantal processes: A new model for directionality in data
Subhro Ghosh (National University of Singapore)

Persistence exponents of Gaussian stationary functions
Ohad Noy Feldheim (Hebrew University of Jerusalem)

Connectivity of the excursion sets of Gaussian fields with long-range correlations
Stephen Muirhead (University of Melbourne)

Overcrowding estimates for the nodal volume of stationary Gaussian processes on R^d
Lakshmi Priya (Indian Institute of Science)

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21:30 - 22:00	**OCS20. Theories and Applications for Complex Data Analysis**
Organizer	Arlene K.H. Kim (Korea University)
Chair	Arlene K.H. Kim (Korea University)

Partly interval-censored rank regression
Sangbum Choi (Korea University)

Two-sample testing of high-dimensional linear regression coefficients via complementary sketching
Tengyao Wang (University College London)

Optimal rates for independence testing via U-statistic permutation tests
Tom Berrett (University of Warwick)

Empirical Bayes PCA in high dimensions
Zhou Fan (Yale University)

21:30 - 22:00	**CS13. Random Structures**
Chair	Namgyu Kang (Korea Institute of Advanced Study)

Universal phenomena for random constrained permutations
Jacopo Borga (University of Zurich)

The scaling limit of the strongly connected components of a uniform directed graph with an i.i.d. degree sequence
Serte Donderwinkel (University of Oxford)

Spherical principal curves
Jongmin Lee (Seoul National University)

21:30 - 22:00	**CS20. Copula Modeling**
Chair	Daewoo Pak (Yonsei University)

Estimation of multivariate generalized gamma convolutions through Laguerre expansions
Oskar Laverny (Université Lyon 1 - SCOR SE)

Copula-based Markov zero-inflated count time series models
Mohammed Alqawba (Qassim University)

Bi-factor and second-order copula models for item response data
Sayed H. Kadhem (University of East Anglia)

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21:30 - 22:00	**CS26. Multivariate Data Analysis**
Chair	Yunjin Choi (University of Seoul)

A nonparametric test for paired data
Grzegorz Wyłupek (Institute of Mathematics, University of Wrocław)

Inference for Generalized Multivariate Analysis of Variance (GMANOVA) models, under Multivariate Skew t distribution for modelling skewed and heavy-tailed data
Sayantee Jana (Indian Institute of Management Nagpur)

Multiscale representation of directional scattered data: Use of anisotropic radial basis functions
Junhyeon Kwon (Seoul National University)

21:30 - 22:00	**CS31. Statistical Prediction**
Chair	Changwon Lim (Chung-Ang University)

Robust geodesic regression
Ha-Young Shin (Seoul National University)

A multi-sigmoidal logistic model: statistical analysis and first-passage-time application
Paola Paraggio (Università degli Studi di Salerno (UNISA))

Statistical inference for functional linear problems
Tim Kutta (Ruhr University Bochum)

22:30 - 23:00	**IS03. Potential Theory for Non-local Operators and Jump Processes**
Organizer	Panki Kim (Seoul National University)
Chair	Panki Kim (Seoul National University)

SDEs driven by multiplicative stable-like Levy processes
Zhen-Qing Chen (University of Washington)

Periodic homogenization of non-symmetric Lévy-type processes
Takashi Kumagai (Kyoto University)

Optimal Hardy identities and inequalites for the fractional Laplacian on L^P
Krzysztof Bogdan (Wrocław University of Science and Technology)

DAILY PROGRAM _ JULY 21 (WED)

22:30 - 23:00	**IS10. Change-point Problems for Complex Data**
Organizer	Claudia Kirch (Otto von Guericke University Magdeburg)
Chair	Claudia Kirch (Otto von Guericke University Magdeburg)

Two-sample tests for relevant differences in the eigenfunctions of covariance operators
Alexander Aue (UC Davis)

Multiple change point detection under serial dependence
Haeran Cho (University of Bristol)

An asymptotic test for constancy of the variance in a time series
Herold Dehling (Ruhr-University Bochum)

22:30 - 23:00	**IS12. Statistics for Data with Geometric Structure**
Organizer	Sungkyu Jung (Seoul National University)
Chair	Sungkyu Jung (Seoul National University)

Wasserstein regression
Hans-Georg Müller (University of California, Davis)

Finite sample smeariness for Fréchet means
Stephan Huckemann (Georg-August-Universitaet Goettingen)

Score matching for microbiome compositional data
Janice Scealy (Australian National University)

22:30 - 23:00	**IS25. Random Graphs**
Organizer	Christina Goldschmidt (University of Oxford)
Chair	Christina Goldschmidt (University of Oxford)

An unexpected phase transition for percolation on scale-free networks
Souvik Dhara (Massachusetts Institute of Technology)

Recent results for the graph alignment problem
Marc Lelarge (INRIA)

Local law and Tracy-Widom limit for sparse stochastic block models
Ji Oon Lee (Korea Advanced Institute of Science and Technology (KAIST)

DAILY PROGRAM _ JULY 21 (WED)

22:30 - 23:00	**IS36. Problems and Approaches in Multi-Armed Bandits**
Organizer	Vianney Perchet (ENSAE)
Chair	Vianney Perchet (ENSAE)

Dynamic pricing and learning under the Bass model

Shipra Agrawal (Columbia University)

TensorPlan: A new, flexible, scalable and provably efficient local planner for huge MDPs

Csaba Szepesvari (Deepmind & University of Alberta)

On the importance of (linear) structure in contextual multi-armed bandit

Alessandro Lazaric (Facebook AI Research)

22:30 - 23:00	**OCS29. Sequential Analysis and Applications**
Organizer	Alexander Tartakovsky (Moscow Institute of Physics and Technology)
Chair	Alexander Tartakovsky (Moscow Institute of Physics and Technology)

Asymptotically optimal control of FDR and related metrics for sequential multiple testing

Jay Bartroff (University of Southern California)

Nearly optimal sequential detection of signals in correlated Gaussian noise

Grigory Sokolov (Xavier University)

A unified approach for solving sequential selection problems

Yaakov Malinovsky (University of Maryland)

Sequential change detection by optimal weighted l2 divergence

Yao Xie (Georgia Institute of Technology)

Detection of temporary disorders

Michael Baron (American University)

22:30 - 23:00	**CS03. Numerical Study of Stochastic Processes / Stochastic Interacting Systems**
Chair	Kyung-Youn Kim (National Chengchi University)

Splitting methods for SDEs with locally Lipschitz drift. An illustration on the FitzHugh-Nagumo model

Massimiliano Tamborrino (University of Warwick)

Simulation methods for trawl processes

Dan Leonte (Imperial College London)

DAILY PROGRAM _ JULY 21 (WED)

Stochastic optimal control of SDEs and importance sampling

Han Cheng Lie (University of Potsdam)

Opinion dynamics with Lotka-Volterra type interactions

Michele Aleandri (LUISS University)

22:30 - 23:00	**CS08. Study of Various Distributions**

Chair   Gunwoong Park (University of Seoul)

Orlicz norm and concentration inequalities for beta-heavy tailed distributions

Emmanuel Gobet (Ecole Polytechnique)

The Dickman-Goncharov distribution

Vladimir Panov (HSE University)

Continuous scaled phase-type distributions

Jorge Yslas (University of Bern)

22:30 - 23:00	**CS12. Optimal Transport**

Chair   Yeonwoo Rho (Michigan Technology University)

Stochastic-uniform-approximations of Wasserstein barycenters

Florian Heinemann (Georg-August-University Göttingen)

Measuring dependence between random vectors via optimal transport

Johan Segers (UCLouvain)

Transportation duality and reverse functional inequalities for Markov kernels

Nathaniel Eldredge (University of Northern Colorado)

22:30 - 23:00	**CS27. Machine Learning / Structural Equation**

Chair   Yoonsuh Jung (Korea University)

Replicability of statistical findings under distributional shift

Suyash Gupta (Stanford University)

Selection of graphical continuous Lyapunov models with Lasso

Philipp Dettling (Technical University of Munich)

DAILY PROGRAM _ JULY 21 (WED)

Identifiability of linear structural equation models with homoscedastic errors using algebraic matroids

Jun Wu (Technical University of Munich)

Convergence of stochastic gradient descent for Lojasiewicz-landscapes

Sebastian Kassing (Westfälische Wilhelms-Universität Münster)

22:30 - 23:00	**Poster II-2**

Busemann process and semi-infinite geodesics in Brownian last-passage percolation

Evan Sorensen (University of Wisconsin-Madison)

Application of kernel mean embeddings to functional data

George Wynne (Imperial College London)

SIR-based examination of the policy effects on the COVID-19 spread in U.S.

David Han (The University of Texas at San Antonio)

Cross-validation confidence intervals for test error

Alexandre Bayle (Harvard University)

Comparison of quantile regression curves under different settings with censored data

Lorenzo Tedesco (KU Leuven)

DAILY PROGRAM _ JULY 22 (THU)

*All times are KST (UTC+9)

09:00 - 10:00	**IMS Medallion Lecture**
Chair	Ja-Yong Koo (Korea University)

Selective inference for trees
Daniela Witten (University of Washington)

10:00 - 11:00	**IMS Medallion Lecture**
Chair	Myunghee Cho Paik (Seoul National University)

High-dimensional interpolators: From linear regression to neural tangent models
Andrea Montanari (Stanford University)

11:30 - 12:00	**IS38. IMS Lawrence D. Brown Ph.D. Student Award Session**
Organizer	Institute of Mathematical Statistics
Chair	Tracy Ke (Harvard University)

Efficient manifold approximation with Spherelets
Didong Li (Princeton University / University of California)

Toward instance-optimal reinforcement learning
Ashwin Pananjady (Georgia Institute of Technology)

Bayesian pyramids: Identifying interpretable discrete latent structures from discrete data
Yuqi Gu (Columbia University)

11:30 - 12:00	**OCS11. Random Growth, Spatial Processes and Related Models**
Organizer	Erik Bates (University of California Berkeley)
Chair	Erik Bates (University of California Berkeley)

Holes in first-passage percolation
Wai-Kit Lam (University of Minnesota)

Coalescence estimates for the corner growth model with exponential weights
Xiao Shen (University of Wisconsin-Madison)

Scaling limits of sandpiles
Ahmed Bou-Rabee (University of Chicago)

DAILY PROGRAM _ JULY 22 (THU)

11:30 - 12:00	**OCS19. Recent Advances in Complex Data Analysis**
Organizer	Seung Jun Shin (Korea University)
Chair	Seung Jun Shin (Korea University)

Kernel density estimation and deconvolution under radial symmetry

Kwan-Young Bak (Korea University)

Penalized poly gram regression for bivariate smoothing

Jae-Hwan Jhong (Chungbuk National University)

Penalized logistic regression using functional connectivity as covariates with an application to mild cognitive impairment

Eunjee Lee (Chungnam National University)

Resmax: Detecting voice spoofing attacks with residual network and max filter map

Il-Youp Kwak (Chung-Ang University)

Weighted validation of heteroscedastic regression models for better selection

Yoonsuh Jung (Korea University)

11:30 - 12:00	**OCS25. Recent Advances in Biostatistics**
Organizer	Sangwook Kang (Yonsei Univesity)
Chair	Sangwook Kang (Yonsei Univesity)

Bayesian nonparametric adjustment of confounding

Chanmin Kim (SungKyunKwan University)

Multivariate point process models for microbiome image analysis

Kyu Ha Lee (Harvard University)

Look before you leap: systematic evaluation of tree-based statistical methods in subgroup identification

Xiaojing Wang (University of Connecticut)

11:30 - 12:00	**OCS31. BOK Contributed Session: Finance and Contemporary Issues**
Organizer	BOK Economic Statistics Department
Chair	Changryong Baek (Sungkyunkwan University)

Multi-step reflection principle and barrier options

Seongjoo Song (Korea University)

DAILY PROGRAM _ JULY 22 (THU)

Change point analysis in Bitcoin return series: a robust approach

Junmo Song (Kyungpook National University)

A self-normalization test for correlation matrix change

Ji Eun Choi (Pukyong National University)

Volatility as a risk measure of financial time series : high frequency and realized volatility

Sun Young Hwang (Sookmyung Women's University)

11:30 - 12:00	**Poster III-1**

A penalized matrix normal mixture model for clustering matrix data

Jinwon Heo (Chonnam National University)

Univariate and multivariate normality tests using an entropy-based transformation

Shahzad Munir (Xiamen University)

Geum river network data analysis via weighted PCA

Seeun Park (Seoul National University)

Cauchy combination test with thresholding under arbitrary dependency structures

Junsik Kim (Seoul National University)

Control charts for monitoring linear profiles in the detection of network intrusion

Daeun Kim (Dankook University)

Benefits of international agreements as switching diffusions

Sheikh Shahnawaz (California State University)

Estimation of Hilbertian varying coefficient models

Hyerim Hong (Seoul National University)

Duality for a class of continuous-time reversible Markov models

Freddy Palma (Fundación Universidad de las Américas Puebla)

DAILY PROGRAM _ JULY 22 (THU)

19:00 - 20:00	**Blackwell Lecture**
Chair	Byeong Uk Park (Seoul National University)

Estimating the mean of a random vector

Gabor Lugosi (ICREA & Pompeu Fabra University)

20:00 - 21:00	**Tukey Lecture**
Chair	Adam Jakubowski (Nicolaus Copernicus University)

Max-margin classification and other interpolation methods

Sara van de Geer (ETH Zurich)

21:30 - 22:00	**IS09. Quantum Statistics**
Organizer	Cristina Butucea (ENSAE)
Chair	Cristina Butucea (ENSAE)

Estimation of quantum state and quantum channel

Masahito Hayashi (Southern University of Science and Technology)

Information geometry and local asymptotic normality for quantum Markov processes

Madalin Guta (University of Nottingham)

Optimal adaptive strategies for sequential quantum hypothesis testing

Marco Tomamichel (National University of Singapore)

21:30 - 22:00	**IS22. Random Trees**
Organizer	Anita Winter (University of Duisburg-Essen)
Chair	Anita Winter (University of Duisburg-Essen)

1d Brownian loop soup, Fleming-Viot processes and Bass-Burdzy flow

Elie Aidekon (Fudan University)

A new state space of algebraic measure trees for stochastic processes

Wolfgang Löhr (University of Duisburg-Essen)

Scaling limits of critical rank-1 inhomogeneous random graphs

Minmin Wang (University of Sussex)

DAILY PROGRAM _ JULY 22 (THU)

21:30 - 22:00	**IS29. High Dimensional Data Inference**
Organizer	Florentina Bunea (Cornell University)
Chair	Florentina Bunea (Cornell University)

Minimax rates for derivative-free stochastic optimization with higher order smooth objectives

Alexandre Tsybakov (CREST, ENSAE, IP Paris)

High-dimensional, multiscale online changepoint detection

Richard Samworth (University of Cambridge)

Optimal transport and inference for stationary processes

Andrew Nobel (The University of North Carolina at Chapel Hill)

21:30 - 22:00	**IS34. Random Walks on Random Media**
Organizer	Alexander Drewitz (Universität zu Köln)
Chair	Alexander Drewitz (Universität zu Köln)

Random walk on a barely supercritical branching random walk

Jan Nagel (TU Dortmund)

Universality of cutoff for graphs with an added random matching

Perla Sousi (Cambridge University)

Invariance principle for a random walk among a Poisson field of moving traps

Rongfeng Sun (National University of Singapore)

21:30 - 22:00	**IS37. Bernoulli Society New Researcher Award Session**
Organizer	Bernoulli Society
Chair	Imma Curato (Ulm University)

Hydrodynamic large deviations of strongly asymmetric interacting particle systems

Li-Cheng Tsai (Rutgers University)

Conformal loop ensembles on Liouville quantum gravity with marked points

Nina Holden (ETH Zurich)

Integrability of Schramm-Loewner evolution and Liouville quantum gravity

Xin Sun (University of Pennsylvania)

DAILY PROGRAM _ JULY 22 (THU)

21:30 - 22:00	**OCS08. Rough Path Theory**
Organizer	Ilya Chevyrev (University of Oxford)
Chair	Ilya Chevyrev (University of Oxford)

Rough path theory and the stochastic Loewner equation
Vlad Margarint (NYU Shanghai)

Rough path with jumps and its application in homogenization
Huilin Zhang (Fudan University)

Probabilistic rough paths
William Salkeld (Universite Cote d'Azur)

Transport and continuity equations with (very) rough noise
Nikolas Tapia (Weierstrass Institute / TU Berlin)

Rough walks in random environment
Tal Orenshtein (TU Berlin, WIAS Berlin)

21:30 - 22:00	**OCS21. Recent Advances in Statistics**
Organizer	Yunjin Choi (University of Seoul)
Chair	Yunjin Choi (University of Seoul)

Identifiability of additive noise models using conditional variances
Gunwoong Park (University of Seoul)

Multivariate functional group sparse regression: functional predictor selection
Jun Song (University of North Carolina at Charlotte)

Causal foundations for fair and responsible machine learning
Joshua Loftus (London School of Economics)

Network change point detection
Yi Yu (University of Warwick)

21:30 - 22:00	**CS09. Topics Related to RMT**
Chair	Kyeongsik Nam (UCLA)

On eigenvalue distributions of large auto-covariance matrices
Wangjun Yuan (The University of Hong Kong)

DAILY PROGRAM _ JULY 22 (THU)

Linear spectral statistics of sequential sample covariance matrices

Nina Dörnemann (Ruhr University Bochum)

Couplings for Andersen dynamics and related piecewise deterministic Markov processes

Nawaf Bou-Rabee (Rutgers University Camden)

21:30 - 22:00	**CS11. Topics Related to KPZ Universality**

Chair   Jaehoon Kang (KAIST)

Upper tail decay of KPZ models with Brownian initial conditions

Balint Veto (Budapest University of Technology and Economics)

Bijective matching between q-Whittaker and periodic Schur measures

Matteo Mucciconi (Tokyo Institute of Technology)

A new approach to KPZ models by determinantal and Pfaffian measures

Tomohiro Sasamoto (Tokyo Institute of Technology)

21:30 - 22:00	**CS21. Dimension Reduction and Model Selection**

Chair   Jisu Kim (India Saclay)

Probabilistic principal curves on Riemannian manifolds

Seungwoo Kang (Seoul National University)

The elastic information criterion for multicollinearity detection

Kimon Ntotsis (University of the Aegean)

A bidimensional shock model driven by the space-fractional Poisson process

Alessandra Meoli (Università degli Studi di Salerno)

21:30 - 22:00	**CS35. Financial Data Analysis**

Chair   Jae Youn Ahn (Ewha Womans University)

Hedging portfolio for a degenerate market model

Ihsan Demirel (Koç University)

An optimal combination of proportional - excess of loss reinsurance with random premiums

Suci Sari (Statistics Research Division, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung)

A novel inventory policy for imperfect items with stock dependent demand rate

Praveen V P

DAILY PROGRAM _ JULY 22 (THU)

22:30 - 23:00	**IS11. Analysis of Dependent Data**
Organizer	Chae Young Lim (Seoul National University)
Chair	Chae Young Lim (Seoul National University)

Statistical learning with spatially dependent high-dimensional data

Taps Maiti (Michigan State University)

Large-scale spatial data science with ExaGeoStat

Marc Genton (King Abdullah University of Science and Technology (KAUST))

Multivariate spatio-temporal Hawkes process models of terrorism

Mikyoung Jun (University of Houston)

22:30 - 23:00	**IS19. Randomized Algorithms**
Organizer	Devdatt Dubhashi (Chalmers University)
Chair	Devdatt Dubhashi (Chalmers University)

Is your distribution in shape?

Ronitt Rubinfeld (Massachusetts Institute of Technology)

Beyond independent rounding: Strongly Rayleigh distributions and traveling salesperson problem

Shayan Oveis Gharan (University of Washington)

A survey of dependent randomized rounding

Aravind Srinivasan (University of Maryland, College Park)

22:30 - 23:00	**IS23. Stochastic Partial Differential Equations**
Organizer	Leonid Mytnik (Israel Institute of Technology)
Chair	Leonid Mytnik (Israel Institute of Technology)

Phase analysis for a family of stochastic reaction-diffusion equations

Carl Mueller (University of Rochester)

Regularization by noise for SPDEs and SDEs: a stochastic sewing approach

Oleg Butkovsky (Weierstrass Institute)

Stochastic quantization, Large N, and mean field limit

Hao Shen (University of Wisconsin-Madison)

DAILY PROGRAM _ JULY 22 (THU)

22:30 - 23:00   **IS26. Pathwise Stochastic Analysis**

Organizer   Hendrik Weber (University of Bath)

Chair   Hendrik Weber (University of Bath)

Sig-Wasserstein Generative models to generate realistic synthetic time series
Hao Ni (University College London)

State space for the 3D stochastic quantisation equation of Yang-Mills
Ilya Chevyrev (University of Edinburgh)

A priori bounds for quasi-linear parabolic equations in the full sub-critical regime
Scott Smith (Chinese Academy of Science)

22:30 - 23:00   **OCS10. Random Conformal Geometry and Related Fields**

Organizer   Nam-Gyu Kang (Korea Institute of Advanced Study)

Chair   Nam-Gyu Kang (Korea Institute of Advanced Study)

Loewner dynamics for the multiple SLE(0) process
Tom Alberts (The University of Utah)

Conformal field theory for annulus SLE
Sung-Soo Byun (Seoul National University)

Convergence of martingale observables in the massive FK-Ising model
S. C. Park (Korea Institute of Advanced Study)

Boundary Minkowski content of multi-force-point SLE $_\kappa(\rho)$ curves
Dapeng Zhan (Michigan State University)

22:30 - 23:00   **OCS30. Stochastic Adaptive Optimization Algorithms and their Applications to Neural Networks**

Organizer   Miklos Rasonyi (Alfréd Rényi Institute) & Sotirios Sabanis (University of Edinburgh)

Chair   Sotirios Sabanis (University of Edinburgh)

An adaptive strong order 1 method for SDEs with discontinuous drift coefficient
Larisa Yaroslavtseva (University of Passau)

Nonconvex optimization via TUSLA with discontinuous updating
Ying ZHANG (Nanyang Technological University)

Approximation of stochastic equations with irregular drifts
Konstantinos Dareiotis (University of Leeds)

DAILY PROGRAM _ JULY 22 (THU)

Neural SDEs: Deep generative models in the diffusion limit

Maxim Raginsky (University of Illinois at Urbana-Champaign)

Diffusion approximations and control variates for MCMC

Eric Moulines (Ecole Polytechnique)

22:30 - 23:00	**CS04. Stochastic processes and Related Topics**

Chair   Yeonwoo Rho (Michigan Technology University)

Parameter estimation for weakly interacting particle systems and stochastic McKean-Vlasov processes

Louis Sharrock (Imperial College London)

CLT for cyclic long-memory processes

Andriy Olenko (La Trobe University)

22:30 - 23:00	**CS17. Various Limit Theorems**

Chair   Chi Tim Ng (Hang Seng University of Hong Kong)

Limit theorems for non-stationary strongly mixing random fields

Cristina Tone (University of Louisville)

On the law of the iterated logarithm and strong invariance principles in stochastic geometry

Johannes Krebs (Heidelberg University)

Functional limit theorems for U-statistics

Mikolaj Kasprzak (University of Luxembourg)

Proving Liggett's FCLT via Stein's method

Wasamon Jantai (Oregon State University)

22:30 - 23:00	**CS32. Statistical Modeling and Prediction**

Chair   Eun Jeong Min (Catholic University)

An evolution of the beta regression for non-monotone relations

Gloria Gheno (Ronin Institute)

Robust censored regression with l1-norm regularization

Jad Beyhum (ORSTAT, KU Leuven)

DAILY PROGRAM _ JULY 22 (THU)

SPLVC modal regression with error-prone linear covariate

Tao Wang (University of California, Riverside)

Regularized double machine learning in partially linear models with unobserved confounding

Corinne Emmenegger (ETH Zurich)

DAILY PROGRAM _ JULY 23 (FRI)

*All times are KST (UTC+9)

09:00 - 10:00	**Schramm Lecture**
Chair	Maria Eulália Vares (Federal University of Rio de Janeiro)

Balloons in space(s)

Omer Angel (University of British Columbia)

10:00 - 11:00	**Kolmogorov Lecture**
Chair	Laurent Saloff-Coste (Cornell University)

From algorithm to theorem

Persi Diaconis (Stanford University)

19:00 - 20:00	**Wald Lecture 3**
Chair	Takashi Kumagai (Kyoto University)

Higher dimensional spaces

Martin Barlow (University of British Columbia)

20:00 - 21:00	**Presentation of the Inaugural Willem van Zwet Medal and Closing Remarks**
Chair	Siva Athreya (Indian Statistical Institute) / Hee-Seok Oh (Seoul National University)

Presentation of the Inaugural Willem van Zwet Medal. Closing Remarks

Claudia Klüppelberg (Past President of the Bernoulli Society)

Invitation to the Bernoulli-IMS 11th WC2024

Herold Dehling

10th World Congress secretariat [People-X, Inc.]

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