



# ims-APRM2012

## Program

9:45 – 10:35	Opening Ceremony
10:35 – 10:55	Coffee Break

10:55 – 12:15

Methodology and Theory for Partial Least Squares Applied to Functional Data.

PL-1 【Main Convention Hall】

Peter Hall\* (University of Melbourne, Australia)

Chair: Byeong U. Park (Seoul National University, Korea)

Large Deviations - Some Unusual Examples.

PL-2 【Convention Hall 200】

S.R.S. Varadhan\* (New York University, USA)

Chair: Tadahisa Funaki (University of Tokyo, Japan)

12:15 – 13:30	Lunch break
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13:30 – 15:15

Sponsor: Korea/KSS

IP – 12 【101】

Multiscale Modeling.

Organizer: Hee-Seok Oh (Seoul National University, Korea)

Chair: Kyusang Yu (Konkuk University, Korea)

- Speakers:
1. Time-Threshold Maps: Using Information from Wavelet Reconstructions with All Threshold Values Simultaneously. Piotr Fryzlewicz\* (London School of Economics, UK)

2. A Tour for Empirical Mode Decomposition. Hee-Seok Oh\* (Seoul National University, Korea), Donghoh Kim (Sejong University, Korea)

3. Generalized Fiducial Inference for Modern Statistical Problems. Jan Hanning\* (University of North Carolina at Chapel Hill, USA), Thomas C.M. Lee (The University of California Davis, USA)

4. Testing the Equality of Regression Curves in Multiple Scale. Cheolwoo Park (University of Georgia, USA), Jan Hannig (University of North Carolina at Chapel Hill, USA), Kee-Hoon Kang\* (Hankuk U. Foreign Studies, Korea)

Sponsor: Korea/KSS

IP – 11 【102】

Statistical Tools for Genome-wide Association Study.

Co-Organizers: Jaewon Lee (Korea University, Korea), Sungho Won (Chung-Ang University, Korea)

Chair: Makoto Aoshima (University of Tsukuba, Japan)

- Speakers:
1. Detecting Rare Variants in Admixed Populations. Xiaofeng Zhu\* (Case Western Reserve University, USA), Huizhen Qin (Case Western Reserve University, USA)

2. Efficient Strategy to Detect Gene x Gene Interaction and Its Application to Schizophrenia. Sungho Won\* (Chung-Ang University, Korea), Christoph Lange (Harvard School of Public Health, USA)

3. Homozygosity Disequilibrium and Its Applications. Hsin-Chou Yang\* (Academia Sinica, Taiwan)

4. Association Analysis of Recurrent Gap Time Data via Multivariate Kendall's Tau. Shu-Hui Chang\* (National Taiwan University, Taiwan), Tsung-Chiang Fu (National Taiwan University, Taiwan)

Sponsor: IMS

DL – 03 【Convention Hall 200】

Statistical Inference with Large Covariance Matrices.

Chair: Runze Li (Penn State University, USA)

Adaptive Estimation of Large Covariance Matrices.

DL speaker: Tony Cai\* (University of Pennsylvania, USA)

- Invited speakers:
1. Minimax Lower Bounds in Covariance Matrices Estimation. Harrison Zhou\* (Yale University, USA)

2. High Dimensional Covariance Matrix Estimation with Group Structures. Ming Yuan\* (Georgia Institute of Technology, USA)

Sponsor: Bernoulli Society

IP – 30 【201A】

Interface of Probability and Mathematical Statistics I.

Organizer: Edward Waymire (Oregon State University, USA)

Chair: S.R.S. Varadhan (New York University, USA)

- Speakers:
1. Cramer Type Moderate Deviations for Self-normalized Processes. Qi-Man Shao\* (Hong Kong University of Science and Technology, Hong Kong), Wenxin Zhou (Hong Kong University of Science and Technolgy, Hong Kong)

2. Modelling Genetic Variations Using Fragmentation-Coagulation Processes. Yee Whye Teh\* (University College London, UK), Charles Blundell (University College London, UK), Lloyd T. Elliott (University College London, UK)

3. Structured Selection in Partial Likelihood. Jelena Bradic\* (University of California, San Diego, USA), Rui Song (Colorado State University, USA)

Sponsor: Japan/JSS

IP – 16 【201B】

Stochastic Analysis on Large Scale Interacting Systems.

Organizer/Chair: Tadahisa Funaki (University of Tokyo, Japan)

- Speakers:
1. Ginibre Random Point Field. Hirofumi Osada\* (Kyushu University, Japan)

2. Scaling Limit for Multi-species Exclusion Process. Yukio Nagahata\* (Osaka University, Japan)

3. A Singular 1-D Hamilton-Jacobi Equation, with Application to Large Deviation of Diffusions. Xiaoxue Deng (Tsinghua University, China), Jin Feng (Kansas University, USA), Yong Liu\* (Peking University, China)

Sponsor: IMS

IP – 03 【202A】

Recent Advance in Multiple Testing, Regularization Method and Network.

Organizer: Runze Li (Penn State University, USA)

Chair: Ying Wei (Columbia University, USA)

- Speakers:
1. Modeling Multiple Relationships in Social Network Data. Tyler McCormick\* (University of Washington, USA), Natesh S. Pillai (Harvard University, USA)

2. A Penalized EM Algorithm for Multivariate Gaussian Parameter Estimation with Non-ignorable Missing Data. Lin Chen\* (University of Chicago, USA), Ross L. Prentice (Fred Hutchinson Cancer Research Center, USA), Pei Wang (Fred Hutchinson Cancer Research Center, USA)

3. Robust High Dimensional Statistical Inference. Yunda Zhong (University of Chicago, USA), Hongyuan Cao\* (University of Chicago, USA), Wei-Biao Wu (University of Chicago, USA)

4. Joint Linear Trend Recovery Using L1 Regularization. Xiaoli Gao\* (Oakland University,USA), Yuan Wu (University of California at San Diego, USA), S. Ejaz Ahmed (University of Windsor and Brock University, USA)

Sponsor: IMS	DL – 04 [Convention Hall 300]
<b>Functional Data Analysis.</b>	
Chair: Ming-Yen Cheng (National Taiwan University, Taiwan)	
<b>Dimension Reduction for Functional Data.</b>	
DL speaker: Jane-Ling Wang* (University of California at Davis, USA)	
Invited speakers:	
1. <b>Smooth Backfitting: Additive Models for Longitudinal Data.</b> Xiaoke Zhang (University of California, USA), Jane-Ling Wang (University of California, USA), Byeong U. Park* (Seoul National University, Korea)	
2. <b>Robust Estimators under a Functional Common Principal Components Model.</b> Lucas Bali (Universidad de Buenos Aires and CONICET, Argentina), Graciela Boente* (University of Bueno Aires, Argentina)	

Sponsor: India	IP – 21 [303]
<b>Design of Experiments.</b>	
Organizer/Chair: Alope Dey (Indian Statistical Institute, India)	
Speakers:	
1. <b>Combinatorics on Resolvability of Incomplete Block Designs.</b> Sanpei Kageyama* (Hiroshima Institute of Technology, Japan)	
2. <b>Efficient Row-Column Designs for 2-colour Single Factor Microarray Experiments.</b> Rajender Parsad* (Indian Agricultural Statistics Research Institute, India), Sukanta Dash (IASRI, Library Avenue, India), VK Gupta (IASRI, Library Avenue, India)	
3. <b>Optimal Supersaturated Designs.</b> Ashish Das* (Indian Institute of Technology, India), Chung-Yi Suen (Cleveland State University, USA), Kashinath Chatterjee (Visva Bharati University, India), Feng-Shun Chai (Institute of Statistical Science Academia Sinica, Taiwan)	
4. <b>Discussant's Remarks in the Session on Design of Experiments.</b> Discussant: Alope Dey* (Indian Statistical Institute, India)	

<b>Recent Development in Joint Models and Their Applications.</b>	TCP – 03 [401]
Co-organizers: Yangxin Huang (University of South Florida, USA), Lang Wu (University of British Columbia, UK)	
Chair: Lang Wu (University of British Columbia, UK)	
Speakers:	
1. <b>Joint Spatial Modeling of Longitudinal and Survival Data.</b> Farouk Nathoo* (University of Victoria, Canada)	
2. <b>Joint Modeling of Survival and Functional Data Association.</b> Jimin Ding* (Washington University in St. Louis, USA)	
3. <b>Time-varying Functional Regression for Predicting Risk of Event Using Past History of Longitudinal Covariate Trajectories.</b> Wen Ye* (University of Michigan, USA), Jeremy Taylor (University of Michigan, USA), Lu Wang (University of Michigan, USA)	

<b>Financial Risk Managements.</b>	TCP – 21 [402]
Organizer/Chair: Ryozyo Miura (Hitotsubashi University, Japan)	
Speakers:	
1. <b>Default Timing and Recovery Rate.</b> Yuki Itoh* (Yokohama National University, Japan)	
2. <b>Valuation of Constant Maturity Credit Default Swaps.</b> Hidetoshi Nakagawa (Hitotsubashi University, Japan), Meng-Lan Yueh* (National Chengchi University, Taiwan), Ming-Hua Hsieh (National Chengchi University, Taiwan)	
3. <b>Calibrating the Level of Capital: The Way We See It.</b> Ryo Kato (Bank of Japan, Japan), Shun Kobayashi* (Bank of Japan, Japan), Yumi Saita (Tohmatu, Japan)	
4. <b>A Statistical Model for Hedge Fund Returns.</b> Daisuke Yokouchi* (Hitotsubashi University, Japan), Yoshimitsu Aoki (The Graduate University for Advanced Studies, Japan), Takeshi Kato (Sophia University, Japan), Ryozyo Miura (Hitotsubashi University,Japan)	
5. <b>On Portfolio Optimization with Levy Processes.</b> Olivier Le Courtois* (Ecole de Management de Lyon, France)	

Sponsor: Bernoulli Society	TCP – 30 [403]
<b>Biostatistics.</b>	
Organizer: Choongrak Kim (Pusan National University, Korea)	
Chair: Hwan Chung (Korea University, Korea)	

Speakers:	
1. <b>Issues in Temperature-mortality Studies.</b> Ho Kim* (Seoul National University, Korea)	
2. <b>Analyzing the Clustered and Interval-censored Data Based on the Semiparametric Frailty Model.</b> Jinheum Kim* (University of Suwon, Korea)	
3. <b>Detection of Gene-gene Interactions in Family-based Genetic Association Study.</b> Hyojung Lee (Korea University, Korea), Seohoon Jin (Korea University, Korea), Wonseok Woo (Korea University, Korea), Mira Park* (Eulji University, Korea)	
4. <b>A Logistic Regression Method in Estimating Median Survival Time in Interval-censored Data.</b> Choongrak Kim* (Pusan National University, Korea), Eunyoung Yoon (Pusan National University, Korea)	

<b>Survival Analysis.</b>	CP – 03 [404]
Chair: Katsuto Tanaka (Hitotsubashi University, Japan)	

Speakers:	
1. <b>Use of Alternative Time Scales in Cox Proportional Hazard Models.</b> Beth Ann Griffin* (RAND Corporation, USA), Garnet Anderson (Fred Hutchinson Cancer Research Center, USA), Regina Shih (RAND Corporation, USA), Eric Whitsel (University of North Carolina at Chapel Hill, USA)	
2. <b>Maximum Penalized Likelihood Estimation to Baseline Hazard and Regression Coefficients in Proportional Hazard Models.</b> Jun Ma* (Macquarie University, Australia), Stephane Heritier (George Institute, The University of Sydney, Australia), Serigne Lo (George Institute, The University of Sydney, Australia)	
3. <b>Marginal Additive Hazards Model for Case-cohort Studies with Multiple Disease Outcomes.</b> Sangwook Kang* (University of Connecticut, USA), Jianwen Cai (University of North Carolina, USA), Lloyd Chambless (University of North Carolina, USA)	
4. <b>Estimation of Kendall's Tau for Bivariate Survival Data with Truncation.</b> Hong Zhu* (The Ohio State University, USA)	
5. <b>Consistent Estimations in the Accelerated Failure Time Model When Covariates are Subject to Measurement Errors.</b> Yih-Huei Huang* (Tamkang University, Taiwan)	
6. <b>Explicit Solution for Ruin Probabilities in the Renewal Risk Model with Constant Interest Force.</b> K.K. Thampi* (Mahatma Gandhi University, India)	

Sponsor: IMS	IP – 07 [405]
<b>Time Series Analysis.</b>	
Organizer: Qiwei Yao (London School of Economics, UK)	
Chair: Wai Keung Li (University of Hong Kong, Hong Kong)	

Speakers:	
1. <b>Poisson Threshold Autoregression.</b> Abdullah Almarashi (University of Strathclyde, UK), Jiazhu Pan* (University of Strathclyde, UK)	
2. <b>Asymptotic Properties of Time Series Non-life Insurance Model.</b> Kentaro Kobayashi (Niigata University, Japan), Junichi Hirukawa* (Niigata University, Japan)	
3. <b>Least Absolute Deviation Estimation for Nonstationary Vector Autoregressive Time Series Models with Pure Unit Roots.</b> Guodong Li* (Hong Kong University, Hong Kong), Jianhong Wu (Zhejiang Gongshang University, China), Wai Keung Li (University of Hong Kong, Hong Kong)	
4. <b>On the Quasi-maximum Likelihood Estimation of a Threshold Double AR Model.</b> Li Dong (University of Iowa, USA), Shiqing Ling* (Hong Kong University of Science and Technology, Hong Kong)	

15:30 - 17:15

Sponsor: IISA

Some Recent Advances in Nonparametric Statistics.

Organizer: Bodhisattva Sen (Columbia University, USA)

Chair: Johan Lim (Seoul National University, Korea)

Speakers:

1. **Properties of the Adjusted Empirical Likelihood.** Jiahua Chen\* (University of British Columbia, Canada)

2. **Log-concave Densities and Bi-log-concave Distribution Functions.** Lutz Dümbgen\* (University of Bern, Switzerland), Petro Kolesnyk (University of Bern, Switzerland), Kaspar Rufibach (University of Zürich, Switzerland), Dominic Schuhmacher (University of Bern, Switzerland)

3. **Nonparametric Least Squares Estimation of a Multivariate Convex Regression Function.** Emilio Seijo\* (Columbia University, USA)

IP - 23 [101]

Sponsor: China

Biostatistics and Related Topics.

Organizers: Dayue Chen (Peking University, China)

Chair: Geng Zhi (Peking University, China)

Speakers:

1. **Construction of Orthogonal Latin Hypercubes of Orders One and Two.** Mingyao Ai\* (Peking University, China), Yuanzhen He (Peking University, China), Senmao Liu (Peking University, China)

2. **Construction of Nested Orthogonal Latin Hypercube Designs.** Jinyu Yang (Nankai University, China), Min-Qian Liu\* (Nankai University, China), Dennis K. J. Lin (The Pennsylvania State University, USA)

3. **Asymptotic Behavior of the Level Set Estimate for Censored Data.** Yangfeng Wang (Tsinghua University, China), Ying Yang\* (Tsinghua University, China)

4. **Test Conditional Independence Based on a Likelihood Ratio Process.** Xiaogang Duan (Beijing Normal University, China), Qihua Wang\* (Chinese Academy of Sciences, China), Jing Qin (National Institute of Allergy and Infectious Diseases, NIH, USA), Bingyi Jing (Hong Kong University of Science and Technology, China)

IP – 38 [102]

Sponsor: Singapore

Recent Advances on High-dimensional Data Analysis.

Chair: Jin-Ting Zhang (National University of Singapore, Singapore)

A ROAD to Nonparametric Classification.

DL speaker: Jianqing Fan\* (Princeton University, USA)

Yang Feng (Columbia University, USA), Xin Tong (Princeton University, USA)

Invited Speakers:

1. **Constrained Lasso Optimization.** Gareth James\* (University of South California, USA), Paat Rusmevichientong (University of Southern California, USA), Courtney Paulson (University of Southern California, USA)

DL - 12 [Convention Hall 200]

Sponsor: IMS

Applications of Mathematical Statistics in the Behavioral Sciences.

Organizer: Linda Collins (Pennsylvania State University, USA)

Chair: John W. Graham (Penn State University, USA)

Speakers:

1. **Fractional Factorial Experiments and Cluster Randomization: An Integration of Engineering Research Methods and Educational Research Methods.** John J. Dziak (The Pennsylvania State University, USA), Inbal Nahum-Shani (University of Michigan, USA), Linda M. Collins\* (Pennsylvania State University, USA)

2. **Statistical Models for Longitudinal Zero-inflated Count Data with Applications to the Substance Abuse Field.** Anne Buu\* (University of Michigan, USA), Runze Li (Pennsylvania State University, USA), Xianming Tan (Pennsylvania State University, USA), Robert A. Zucker (University of Michigan, USA)

3. **A Dynamical Systems Approach for Adaptive Behavioral Intervention Development.** Jessica Trail\* (Pennsylvania State University, USA), Linda M. Collins (The Pennsylvania State University, USA), Daniel E. Rivera (Arizona State University, USA), Megan E. Piper (University of Wisconsin, USA)

4. **A Structural Model for Examining Time-varying Effect Moderation: Estimating the Effect of Additional Substance Use Treatment as a Function of Time-varying Severity.** Daniel Almirall\* (University of Michigan, USA), Daniel F. McCaffrey (RAND, USA), Beth Ann Griffin (RAND, USA), Rajeev Ramchand (RAND, USA), Susan A. Murphy (University of Michigan, USA)

IP - 01 [201A]

Sponsor: IMS

Spatial Statistics.

Organizer: Marc G. Genton (Texas A&M University, USA)

Chair: Hidetoshi Shimodaira (Tokyo Institute of Technology, Japan)

Speakers:

1. **Nonstationary Random Fields and the Gravitational Lensing of the Cosmic Microwave Background.** Ethan Anderes\* (University of California at Davis, USA)

2. **Hierarchical Spatial Model for Precipitation Data from Multiple Satellites.** Avishek Chakraborty (Texas A&M University, USA), Huiyan Sang\* (Texas A&M University, USA), Bani Mallick (Texas A&M University, USA), Kenneth Bowman (Texas A&M University, USA)

3. **Geostatistical Regression Model Selection.** Chih-Hao Chang (National Chiao Tung University, Taiwan), Hsin-Cheng Huang\* (Academia Sinica, Taiwan), Ching-Kang Ing (Academia Sinica, Taiwan)

IP - 43 [201B]

Sponsor: Japan/JSS

Inference for Stochastic Processes from High-Frequency Data.

Organizer/Chair: Takaki Hayashi (Keio University, Japan)

Speakers:

1. **Limit Theorems and Estimation for Diffusions.** Nakahiro Yoshida\* (University of Tokyo, Japan)

2. **Adaptive Estimation for Discretely Observed Ergodic Diffusion Processes.** Masayuki Uchida\* (Osaka University, Japan)

3. **Nonparametric Estimation for Quadratic Covariation of Two-dimensional Diffusion under Nonsynchronous High Frequency Observations.** Keiji Nagai\* (Yokohama National University, Japan), Yoshihiko Nishiyama (Kyoto University, Japan), Kotaro Hitomi (Kyoto Institute of Technology, Japan)

4. **Empirical Spectral Measure Approach to Econometric Analysis of High Frequency Financial Data.** Shinsuke Ikeda\* (National Graduate Institute for Policy Studies, Japan)

IP - 13 [202A]

Sponsor: IISA

Bayesian Nonparametrics.

Chair: Lanslot James (Hong Kong University of Science and Technology, Hong Kong)

Bayesian Nonparametrics - A Survey of New Priors, Consistency Issues in Estimation and Testing, Applications to Clustering.

DL speaker: J. K. Ghosh\* (Purdue University, USA)

Invited speakers:

1. **On Some Asymptotic Features of Semi-Parametric Bayesian Models.** Judith Rousseau\* (Université Paris Dauphine, France)

2. **Posterior Consistency of Species Sampling Priors.** Gun Ho Jang (University of Pennsylvania, USA), Jaeyong Lee\* (Seoul National University, Korea), Sangyeol Lee (Seoul National University, Korea)

DL - 15 [Convention Hall 300]

Sponsor: IMS

Depth, Extreme Quantiles and Classification.

Organizer: Regina Liu (Rutgers University, USA)

Chair: John Einmahl (Tilburg University, the Netherlands)

Speakers:

1. **Bridging Centrality and Extremity: Refining Empirical Data Depth Using Extreme Value Theory.** John Einmahl (Tilburg University, The Netherlands), Jun Li (University of California, Riverside, USA), Regina Liu\* (Rutgers University, USA)

2. **Wild Bootstrap for Quantile Regression.** Xingdong Feng\* (Shanghai University of Finance and Economics, China), Xuming He (University of Michigan, USA), Jianhua Hu (MD Anderson Cancer Center, USA)

3. **Classification Using Localized Spatial Depth with Multiple Levels of Localization.** Subhajit Dutta\* (Indian Statistical Institute, Calcutta, India), Probal Chaudhuri (Indian Statistical Institute, Kolkata., India), Anil K. Ghosh (Indian Statistical Institute, Kolkata., India)

4. **Local Depth.** Claudio Agostinelli (Ca'Foscari University of Venice, Italy), Mario Romanazzi\* (Ca'Foscari University of Venice, Italy)

Spatial and Environmental Statistics.

Organizer: Yoshihiro Yajima (University of Tokyo, Japan)

Chair: Kentaro Tanaka (Tokyo Institute of Technology, Japan)

Speakers:

1. **Covariance Tapering for Statistical Analysis of Large Spatial Data Sets.** Yoshihiro Yajima\* (University of Tokyo, Japan), Toshihiro Hirano (University of Tokyo, Japan)

2. **Statistical Issues in Evaluating Radiation Health Risk.** Yoshisada Shibata\* (Nagasaki University, Japan)

3. **Spatial Clustering Based on Hierarchical Structure of Lattice Data and Its Applications.** Koji Kurihara\* (Okayama University, Japan)

4. **Mapping Radiation Dose with Spatio-Temporal Random Effects Model.** Kazuki Tamesue\* (University of Tsukuba, Japan), Morito Tsutsumi (University of Tsukuba, Japan)

5. **Statistical Inference on Varying Coefficient Surface and Its Application to Spatial Survival Data.** Tetsuji Tonda\* (Hiroshima University, Japan), Kenichi Satoh (Hiroshima University, Japan), Keiko Otani (Hiroshima University, Japan), Megu Ohtaki (Hiroshima University, Japan)

Symbolic Data Analysis and Related Topics.

Organizer: Mika Sato-Ilic (University of Tsukuba, Japan)

Chair: Kiyotaka Yoshida (Seikei University, Japan)

Speakers:

1. **Regression Analysis for Aggregated Symbolic Data.** Junji Nakano\* (Institute of Statistical Mathematics, Japan)

2. **Similarity Measures Between Series of Candlesticks.** Yoji Yamashita\* (Doshisha University, Japan), Hiroshi Yadohisa (Doshisha University, Japan)

3. **Cluster Analysis for Interval-valued Functional Data.** Nobuo Shimizu\* (Institute of Statistical Mathematics, Japan)

4. **Symbolic Nonlinear Fuzzy Clustering Model.** Mika Sato-Ilic\* (University of Tsukuba, Japan)

Structural Modeling and High Dimensional Data Analysis.

Organizer: Young Kyung Lee (Kangwon National University, Korea)

Chair: Kee-Hoon Kang (Hankuk University of Foreign Studies, Korea)

Speakers:

1. **Flexible Generalized Varying Coefficient Regression Modes and Locally Additive Interaction Models.** Young Kyung Lee\* (Kangwon National University, Korea), Enno Mammen (University of Mannheim, Germany), Byeong U. Park (Seoul National University, Korea)

2. **Non-linear Taylor Rules by Using Semi-parametric Additive Regression.** Christian Conrad (University of Heidelberg, Germany), Michael J. Lamla (ETH, Switzerland), Kyusang Yu (Konkuk University, Korea)

3. **Component Selection in Additive Quantile Regression Models.** Hohsuk Noh (Université catholique de Louvain, Belgium), Eun Ryung Lee\* (University of Mannheim, Germany)

4. **An SVM Classifier with Labeling Errors.** Hosik Choi\* (Hoseo University, Korea), Yongdai Kim (Seoul National University, Korea), Sunghoon Kwon (University of Minnesota, USA)

5. **Observation-level Diagnostics Using Random Forests.** Choongsoon Bae\* (Google Inc., USA), Adam Ghobarah (Google Inc., USA), Jim Koehler (Google Inc., USA)

Time Series and Spatial Data Analysis.

Chair: Masanobu Taniguchi (Waseda University, Japan)

Speakers:

1. **On a Student t-mixture Autoregressive Conditional Heteroscedastic Model.** Chun Shan Wong\* (The Chinese University of Hong Kong, Hong Kong SAR)

2. **Asymptotic Normality of the Estimators under Moderate Deviation from a Unit Root in MA(1).** Ryota Yabe\* (Hitotsubashi University, Japan)

3. **A Spatio-temporal Filtering Method Based on AR Type Model for the Analysis of Single-trial Biological Imaging Data.** Fumikazu Miwakeichi\* (The Institute of Statistical Mathematics, Japan), Yoshitaka Oku (Hyogo College of Medicine, Japan), Yasumasa Okada (National Hospital Organization Murayama Medical Center, Japan), Shigeharu Kawai (The Institute of Statistical Mathematics, Japan), Yoshiyasu Tamura (The Institute of Statistical Mathematics, Japan), Makio Ishiguro (The Institute of Statistical Mathematics, Japan)

4. **Nonstationary Semiparametric Spatio-temporal Bayesian Modeling Using Kernel Convolution of Order-based Dependent Dirichlet Process.** Moumita Das\* (Indian Statistical Institute, India), Sourabh Bhattacharya (Indian Statistical Institute, India)

5. **Improving the Robustness of the Sample Spatial Outlyingness Functions Through “Spatial Trimming”.** Satyaki Mazumder\* (Indian Institute of Science Education and Research Kolkata, India), Robert Serfling (The University of Texas at Dallas, USA)

6. **Composite Quantile Periodogram.** Yaeji Lim\* (Seoul National University, Korea), Hee-Seok Oh (Seoul National University, Korea)

Sponsor: IMS

Recent Developments in Statistical Machine Learning and High Dimensional Data Analysis.

Co-Organizers: Yichao Wu (North Carolina State University, USA), Yufeng Liu (University of North Carolina, USA)

Chair: Yang Feng (Columbia University, USA)

Speakers:

1. **Dimension Reduction in Functional Regression Based on Canonical Correlations.** Guochang Wang (Northeast Normal University, China), Nan Lin\* (Washington University, St. Louis, USA), Baoxue Zhang (Northeast Normal University, China)

2. **A Cluster Identification Framework Illustrated by a Filtering Model for Earthquake Occurrences.** Zhengxiao Wu\* (National University of Singapore, Singapore)

3. **Estimation and Variable Selection for Complex Longitudinal Surveys.** Li Wang (University of Georgia, USA), Suojin Wang\* (Texas A&M University, USA)

4. **On the Robustness of Adaptive LASSO to Model Misspecification.** Jason Fine\* (University of North Carolina, USA), Wenbin Lu (North Carolina State University, USA), Yair Goldberg (Haifa University, Israel)

8:30 – 10:15

Sponsor: Japan/JSS

IP - 14 [101]

Nonparametric and Semiparametric Methods in Econometrics.

Organizer/Chair: Yoshihiko Nishiyama (Kyoto University, Japan)

Speakers:

1. **Model Selection Criterion for Infinite Dimensional Instrumental Variable Models.** Naoya Sueishi\* (Kyoto University, Japan)

2. **Model Averaging without Non-negative Constraints.** Guido Kuersteiner (Georgetown University, USA), Ryo Okui\* (Kyoto University, Japan)

3. **Bayesian Analysis of Moment Restriction Models Using Nonparametric Priors.** Yuichi Kitamura (Yale University, USA), Taisuke Otsu\* (Yale University, USA)

4. **Testing Monotonicity of Quantile Regression.** Sokbae Lee\* (Seoul National University, Korea), Kyungchul Song (University of British Columbia, Canada), Yoon-Jae Whang (Seoul National University, Korea)

Sponsor: Singapore

IP - 32 [102]

Model Selection and High Dimensional Data Analysis.

Organizer: Chenlei Leng (University of Singapore, Singapore)

Chair: Xiaoli Gao (Oakland University, USA)

Speakers

1. **Two Tales of Variable Selection for High Dimensional Data: Screening and Model Building.** Cong Liu (Ohio State University, USA), Tao Shi (Ohio State University, USA), Yoonkyung Lee\* (Ohio State University, USA)

2. **Sequential Lasso for Feature Selection with Ultra-high Dimensional Feature Space.** Zehua Chen\* (National University of Singapore, Singapore), Shan Luo (National University of Singapore, Singapore)

3. **Variable Selection with Error Control: Another Look at Stability Selection.** Rajen D. Shah (University of Cambridge, UK), Richard Samworth\* (University of Cambridge, UK)

4. **Simultaneous Variable Selection and Constant Coefficient Identification in Varying-coefficient Models.** Heng Lian\* (Nanyang Technological University, Singapore)

Sponsor: Taiwan

DL - 11 [Convention Hall 200]

High-Dimensional and Functional Data Analysis.

Chair: Shu-Hui Chang (National Taiwan University, Taiwan)

Statistical Issues Arising from Large Scale Genomic Data Exploration: Nonlinearity, High Dimensionality and Complex Interaction.

DL Speaker: Ker-Chau Li\* (Academia Sinica, Taiwan)

Invited Speakers:

1. **Parameter Estimation for Ordinary Differential Equations: An Alternative View on Penalty.** Yun Li (University of Michigan, USA), Ji Zhu (University of Michigan, USA), Naisyin Wang\* (University of Michigan, USA)

2. **Functional Data Analysis for Volatility.** Hans-Georg Müller\* (University of California at Davis, USA), Rituparna Sen (UC Davis, USA), Ulrich Stadtmüller (University of Ulm, Germany)

Foundation of Tensor Data Analysis and Design Theory.

TCP - 09 [201A]

Organizer/Chair: Toshio Sakata (Kyushu University, Japan)

Speakers:

1. **Tensor Rank for Classifying Tripartite States in Quantum Information Science.** Lin Chen\* (University of Waterloo, Canada, National University of Singapore, Singapore), Masahito Hayashi (Tohoku University, Japan)

2. **A Research on Spherical Designs and Anticoherent Spin States.** Eiichi Bannai (Shanghai Jiaotong University, China), Makoto Tagami\* (Niigata University, Japan)

3. **Absolutely Full Column Rank Tensors and Typical Ranks of Tensors.** Mitsuhiro Miyazaki\* (Kyoto University of Education, Japan), Toshio Sumi (Kyushu Univeristy, Japan), Toshio Sakata (Kyushu Univeristy, Japan)

4. **Gröber Bases of Contraction Ideals.** Takafumi Shibuta\* (Rikkyo University, Japan)

5. **An Application of Spherical Designs to Numerical Integration for Invariants of Absolutely Nonsingular Tensors.** Hirotake Kurihara\* (Tohoku University, Japan), Akihiro Munemasa (Tohoku University, Japan), Makoto Tagami (Niigata Institute of Technology, Japan)

Sponsor: Korea/KSS

IP - 10 [201B]

Inference for Time Series Models and Stochastic Processes.

Organizer/Chair: Sangyeol Lee (Seoul National University, Korea)

Speakers:

1. **Estimated Quasi-maximum Likelihood Estimator for GARCH Models Based on Non-parametric MLE.** Taewook Lee\* (Hankuk University of Foreign Studies, Korea), Byoungtae Seo (Sungkyunkwan University, Korea)

2. **Change Point Detection in Copula Models.** Okyoung Na\* (Kyonggi University, Korea), Jiyeon Lee (Seoul National University, Korea), Sangyeol Lee (Seoul National University, Korea)

3. **Penalized Likelihood Method for Factor Analysis of Time Series Data.** Timothy Chi Tim Ng\* (The Chinese University of Hong Kong, Hong Kong)

4. **Non-Gaussian Quasi Likelihood in Estimating Jump SDE.** Hiroki Masuda\* (Kyushu University, Japan)

Sponsor: IISA

IP - 22 [202A]

Heavy Tails and Extreme Value Theory.

Organizer: Parthanil Roy (Michigan State University, USA)

Chair: George Michailidis (University of Michigan, USA)

Speakers:

1. **Seeking Hidden Risks with Multivariate Regular Variation.** Bikramjit Das\* (ETH Zürich, Switzerland), Abhimanyu Mitra (Cornell University, USA), Sidney Resnick (Cornell University, USA)

2. **Extremes of Random Patterned Matrices.** Rajat Subhra Hazra\* (University of Zürich, Switzerland)

3. **Free Subexponentiality.** Rajat Subhra Hazra (Universität Zürich, Switzerland), Krishanu Maulik\* (Indian Statistical Institute, India)

Sponsor: IMS

DL - 05 [Convention Hall 300]

Expanding the MCMC Kingdom on All Fronts: Theory, Methods, and Applications.

Chair: Jaeyong Lee (Seoul National University, Korea)

Quasi-Monte Carlo for Markov Chain Monte Carlo.

DL speaker: Art Owen\* (Stanford University, USA)

S.Chen (Stanford University, USA), Josef Dick (University of New South Wales, Australia), Makoto Matsumoto (University of Toyko, Japan), Takuji Nishimura (Yamagata University, Japan)

Invited speakers:

1. **Realized Stochastic Volatility Models and Their Applications Using High Frequency Financial Time Series.** Yasuhiro Omori\* (The University of Tokyo, Japan)

2. **Hyperparameter and Model Selection for Nonparametric Bayes Problems via Radon-Nikodym Derivatives.** Hani Doss\* (University of Florida, USA)

Sponsor: Japan/JSS

IP - 15 [303]

Incomplete Data Analysis and Latent Variable Model.

Organizer: Yutaka Kano (Osaka University, Japan)

Chair: Kosuke Imai (Princeton University, USA)

Speakers:

1. **A Bayesian Analysis of Mixture Structural Equation Models with Non-ignorable Missing Data.** Jingheng Cai (Sun Yat-Sen University, China), Xinyuan Song\* (Chinese University of Hong Kong, HK)

2. **Bias and Efficiency for SEM with Missing Data and Auxiliary Variables: Robust Method Versus Normal Distribution Based ML.** Ke-Hai Yuan\* (University of Notre Dame, USA), Xin Tong (University of Notre Dame, USA), Zhiyong Zhang (University of Notre Dame, USA)

3. **Simulation Methods for Structural Equation Modeling with Missing Data.** John W. Graham\* (Pennsylvania State University, USA)

4. **NMARness and Approximate Population Bias of the Direct MLE in the Analysis of Missing Data.** Yutaka Kano\* (Osaka University, Japan)

Recent Advances in Multivariate Analysis.

TCP - 15 [401]

Organizer: Hidehiko Kamiya (Nagoya University, Japan)  
Chair: Nobuaki Hoshino (Kanazawa University, Japan)

Speakers:

1. **Ranking Patterns of Unfolding Models of Codimension One.** Hidehiko Kamiya\* (Nagoya University, Japan), Akimichi Takemura (University of Tokyo, Japan), Hiroaki Terao (Hokkaido University, Japan)

2. **Principal Points of a Multivariate Distribution and Their Reduced-dimension Version.** Shun Matsuura\* (Aoyama Gakuin University, Japan), Hiroshi Kurata (The University of Tokyo, Japan)

3. **On Formulas for Moments of the Noncentral Wishart Distributions as Weighted Generating Functions of Matchings.** Satoshi Kuriki (Institute of Statistical Mathematics, Japan), Yasuhide Numata\* (University of Tokyo, Japan)

4. **Dual Saddlepoint Equalities in Model Averaging and Their Implication.** Toshio Ohnishi\* (Kyushu University, Japan), Takemi Yanagimoto (Chuo University, Japan), Peter Dunn (University of the Sunshine Coast, Australia)

5. **Modified Estimator of the Contribution Rates of Population Eigenvalues.** Yo Sheena\* (Shinshu University, Japan)

High-Dimensional Inference and Methodologies.

TCP - 17 [402]

Organizer: Makoto Aoshima (University of Tsukuba, Japan)  
Chair: Kanta Naito (Shimane University, Japan)

Speakers:

1. **Effective PCA for High-dimension, Low-sample-size Data with Geometric Representations.** Kazuyoshi Yata\* (University of Tsukuba, Japan)

2. **Boundary Behavior in High Dimension, Low Sample Size Asymptotics of PCA.** Sungkyu Jung\* (University of Pittsburgh, USA), Arusharka Sen (Concordia University, Canada), J. S. Marron (University of North Carolina, USA)

3. **Shrinkage Estimators for Large Covariance Matrices in Multivariate Normal Distributions.** Yoshihiko Konno\* (Japan Women's University, Japan)

4. **Effective Classification for High-dimension, Non-Gaussian Data.** Makoto Aoshima\* (University of Tsukuba, Japan)

Exact and Approximate Distribution Theory in Multivariate Analysis.

TCP - 29 [403]

Organizer: Hiroki Hashiguchi (Saitama University, Japan)  
Chair: Masahiro Kuroda (Okayama University of Science, Japan)

Speakers:

1. **Moments of Resampling Distributions.** Naoto Niki\* (Tokyo University of Science, Japan), Yoko Ono (Yokohama City University, Japan)

2. **Asymptotic Distribution for Unbiased Estimator of Covariance Matrix under 2-step Monotone Incomplete Sample.** Shin-ichi Tsukada\* (Meisei University, Japan)

3. **On a Bivariate Density Function for the Distribution of the Skewness and Kurtosis Statistics.** Shigekazu Nakagawa\* (Kurashiki University of Science and the Arts, Japan), Hiroki Hashiguchi (Saitama University, Japan), Naoto Niki (Tokyo University of Science, Japan)

4. **Approximating the Distribution of Latent Roots for High Dimensional Principal Component Analysis in Genome Association Studies.** Takakazu Sugiyama\* (Soka University, Japan), Takahiro Nakamura (National Defence Medical College, Japan), Hiroki Hashiguchi (Saitama University, Japan)

5. **Approximate Gamma Distributions for the Distribution of the Smallest Latent Root of a Real or Complex Wishart Matrix.** Hiroki Hashiguchi\* (Saitama University, Japan), Takakazu Sugiyama (Soka University, Japan)

Parametric Statistical Inference.

CP - 06 [404]

Chair: Mika Sato-Ilic (University of Tsukuba, Japan)

Speakers:

1. **Loss of Information Associated with the Statistic in a Class of Non-regular Cases.** Masafumi Akahira (University of Tsukuba, Japan), Hyo Gyeong Kim (University of Tsukuba, Japan), Nao Ohyauchi\* (University of Tsukuba, Japan)

2. **On Decomposition of Point-symmetry for Cross-classifications.** Kouji Tahata\* (Tokyo University of Science, Japan), Sadao Tomizawa (Tokyo University of Science, Japan)

3. **Decompositions of Asymmetry Models for Cumulative Probabilities in Square Contingency Tables.** Kouji Yamamoto\* (Osaka University, Japan), Sadao Tomizawa (Tokyo University of Science, Japan)

4. **A Broad Class of Estimators for Ordered Means of Two Normal Distributions with Ordered Variances.** Yuan-Tsung Chang\* (Mejiro University, Japan), Youhei Oono (Actuarial Division, Sony Life Insurance Co., Ltd., Japan), Nobuo Shinozaki (Keio University, Japan)

5. **Normalized Estimating Equation for Robust Parameter Estimation.** Hironori Fujisawa\* (The Institute of Statistical Mathematics, Japan)

Sponsor: IMS

Advances in Spatial and Spatial-Temporal Statistics and Their Application to Climate Problems.

IP - 08 [405]

Organizer: Mikyoungh Jun (Texas A&M University, USA)  
Chair: Huiyan Sang (Texas A&M University, USA)

Speakers:

1. **Climate Projections Based on Regional/Global Model Chains.** Christian Kerkhoff (Seminar für Statistik, ETH Zurich, Switzerland), Hans Künsch\* (ETH Zurich, Switzerland), Christoph Schär (ETH Zurich, Switzerland)

2. **Statistical Issues in Catchment-scale Hydrology.** Cari Kaufman\* (University of California, Berkeley, USA)

3. **Changepoints in the North Atlantic Tropical Cyclone Record.** Michael Robbins\* (University of Missouri, USA), Robert Lund (Clemson University, USA), Colin Gallagher (Clemson University, USA), QiQi Lu (Virginia Commonwealth University, USA)

4. **Blending Ensembles of Climate Model Predictions.** Bruno Sansó\* (University of California at Santa Cruz, USA)

10:15 - 10:30

Coffee Break

10:30 - 12:15

Sponsor: Japan/JSS

Bootstrap Methods.

IP - 17 [101]

Organizer: Hidetoshi Shimodaira (Tokyo Institute of Technology, Japan)  
Chair: Yoshihiko Maesono (Kyushu University, Japan)

Speakers:

1. **Bootstrap in Two Non-standard Semi-parametric Problems.** Emilio Seijo (Columbia University, USA), Bodhisattva Sen\* (University of Cambridge, UK)

2. **Semiparametric Model-based Bootstrap.** Guang Cheng\* (Purdue University, USA)

3. **Bootstrap for Adaptive Lasso Estimators in Increasing Dimensions.** Arindam Chatterjee\* (Indian Statistical Institute, India)

4. **Converting a Bayesian Confidence Value into a Frequentist by Reversing the Sign of the Data Length.** Hidetoshi Shimodaira\* (Tokyo Institute of Technology, Japan)

Sponsor: Singapore

Statistical Theory and Applications for High Dimensional Data.

IP - 49 [102]

Organizer/Chair: Annie Qu (University of Illinois at Urbana-Champaign, USA)

Speakers:

1. **Network Granger Causality with Inherent Group Structure.** George Michailidis\* (University of Michigan, USA)

2. **On Estimation of the Number of Factors from Large-dimensional Data.** Jian-Feng Yao\* (University of Hong Kong, Hong Kong), Damien Passemier (Université de Rennes 1, France)

3. **Time-variant Clustering.** Wei Huang (University of Illinois, USA), Xiaoyi Cao (University of Illinois, USA), Pengfei Yu (University of Illinois, USA), Sheng Zhong\* (University of Illinois, USA)

Sponsor: Japan/JSSDL - 07 [Convention Room Hall 200]

Statistical Estimation of Portfolios.

Chair: Hiroshi Shiraishi (Jikei Medical University, Japan)

Optimal Statistical Estimation of Portfolios for Non-Gaussian Dependent Returns.

DL speaker: Masanobu Taniguchi\* (Waseda University, Japan)

Discussants:

1. Discussion of the Distinguished Lecture “Statistical Estimation of Optimal Portfolios for Dependent Returns” by Masanobu Taniguchi. Valentin Patilea\* (INSA Rennes, France)

2. Portfolio Estimation: Discussion. Alexandre Petkovic\* (Waseda University, Japan)

Sponsor: Bernoulli SocietyIP - 40 [201A]

Interface of Probability and Mathematical Statistics II.

Organizer: Edward Waymire (Oregon State University, USA)

Chair: Peter Hall (University of Melbourne, Australia)

Speakers:

1. High-frequency Data and Statistical Methods. Takaki Hayashi\* (Keio University, Japan)

2. Discovering Disease Causing Mutations with High Throughput DNA Sequencing Data. Melanie Bahlo\* (Walter and Eliza Hall Institute of Medical Research, Australia)

3. Nonparametric Inference on Manifolds with Applications. Rabi Bhattacharya\* (University of Arizona, USA)

Sponsor: Australia and New ZealandIP - 29 [201B]

Interaction of Geometry, Set-valued Analysis and Spatial Statistics.

Organizer: Estate Khmaladze (Victoria University of Wellington, New Zealand)

Chair: Ethan Anderes (University of California at Davis, USA)

Speakers:

1. Grain Distortions and Rotations in the Asymptotic Variance of Vacancy of the Boolean Model. Christian Rau (Monash University, Australia), Sung Nok Chiu\* (Hong Kong Baptist University, Hong Kong)

2. Dimension Walks and Schoenberg Spectral Measures for Isotropic Random Fields. D.J. Daley (The University of Melbourne, Australia)

3. First- and Second-order Residual Analysis of Spatiotemporal Point Processes and Applications in Model Evaluation. Jiansang Zhuang\* (Institute of Statistical Mathematics, Japan)

Sponsor: IndiaIP - 20 [202A]

Multivariate Quantiles and Related Statistical Methods.

Organizer: Biman Chakraborty (University of Birmingham, UK)

Chair: Juerg Huesler (University of Bern, Switzerland)

Speakers:

1. On Multivariate Generalized Spatial Quantiles, Regression and Applications. Snigdhanu Chatterjee\* (University of Minnesota, USA)

2. Growth Charts for Individual Growth Pathes. Wenfei Zhang (Columbia University, USA), Ying Wei\* (Columbia University, USA)

3. Robust Dimension Reduction and Coefficient Estimation in Multivariate Multiple Regression Using LAD-Lasso. Jyrki Möttönen\* (University of Helsinki, Finland), Mikko J. Sillanpää (University of Oulu, Finland)

4. Halfspace Depth: Low-dimensional Computation Revisited. Ivan Mizera\* (University of Alberta, Canada)

Sponsor: ChinaDL - 10 [Convention Hall 300]

Causal Inference and Model Selection.

Chair: Dayue Chen (Peking University, China)

Causal Inference and Learning Along Paths.

DL speaker: Geng Zhi\* (Peking University, China)

Invited speakers:

1. Statistical Inference for Single-index Models with Missing Response at Random. Liugen Xue\* (Beijing University of Technology, China)

2. Robust Estimation for Partially Linear Models with Large-dimensional Covariates. Liping Zhu (Shanghai University of Finance and Economics, China), Runze Li (The Pennsylvania State University at University Park, USA), Heng-jian Cui\* (Capital Normal University, China)

Sponsor: ChinaIP - 37 [303]

Applied Statistics in China.

Organizer/Chair: Jianhua Guo (Northeastern Normal University, China)

Speakers:

1. Penalized Weighted Least Squares Approach to Small Area Estimation. Rong Zhu (Chinese Academy of Sciences, China), Guohua Zou\* (Chinese Academy of Sciences, China), Hua Liang (University of Rochester Medical Center, USA)

2. Learning the Regulatory Network of Transcriptional Factor and MicroRNA Using Gaussian Graphical Model with Adaptive Lasso. Naifang Su (Peking University, China), Mingping Qian (Peking University, China), Deng Minghua\* (Peking University, China)

3. A Direct Semiparametric Receiver Operating Characteristic Curve Regression with Unknown Link and Baseline Functions. Huazhen Lin\* (Southwest University of Finance and Economy, China), Xiao-Hua Zhou (University of Washington, USA), Gang Li (University of California at Los Angeles, China)

4. Nonparametric Covariate-Adjusted Association Tests Based on the Generalized Kendall's Tau. Wensheng Zhu\* (Northeastern Normal University, China), Yuan Jiang (Yale University, USA), Heping Zhang (Yale University, USA)

Sponsor: Taeryon Choi (Korea University, Korea)Chair : Seongbaek Yi (Pukyong National University, Korea)

Contemporary Bayesian Methods and Their Applications.

Organizer: Taeryon Choi (Korea University, Korea)

Chair : Seongbaek Yi (Pukyong National University, Korea)

Speakers:

1. Nonparametric Bayes Variable Selection in Predictor-dependent Random Coefficient Regression. Yeonseung Chung\* (Korea Advanced Institute of Science and Technology, Korea), Brent Coull (Harvard School of Public Health, USA)

2. Robust Bayesian Variable Selection with Sub-harmonic Priors. Yuzo Maruyama\* (University of Tokyo, Japan), William E. Strawderman (Rutgers University, USA)

3. Penalized Gaussian Process Regression and Classification for High-dimensional Nonlinear Data. G. Yi (Newcastle University, UK), Jian Q. Shi\* (Newcastle University, UK), T. Choi (Korea University, Korea)

4. Error Analysis for Small Angle Neutron Scattering Datasets Using Bayesian Inference. Charles R. Hogg (Carnegie Mellon University, USA), Joseph B. Kadane (Carnegie Mellon University, USA), Jong Soo Lee\* (University of Delaware, USA), Sara A. Majetich (Carnegie Mellon University, USA)

5. Bayesian Inference for the Proportion of True Null Hypothesis Using Minimum Hellinger Distance. Moonsu Kang\* (Korea University, Korea)

Sponsor: Nobuaki Hoshino (Kanazawa University, Japan)Chair: Atsushi Taki (Hiroshima University, Japan)

Statistical Disclosure Control.

Co-Organizers: Shido Sai (Okayama Shoka University, Japan), Nobuaki Hoshino (Kanazawa University, Japan)

Chair: Atsushi Taki (Hiroshima University, Japan)

Speakers:

1. Invitation to Mathematical Statistical Disclosure Control. Nobuaki Hoshino\* (Kanazawa University, Japan)

2. Nonparametric Estimation for Population Size Indices. Shido Sai\* (Okayama Shoka University, Japan)

3. Random Partition of Number and Multi-index. Masaaki Sibuya\* (Keio University, Japan)

4. Random Partitions of Integers Based on Mixtures of Dirichlet Processes. Hajime Yamato\* (Kagoshima University, Japan)

5. The Poisson-Dirichlet Distribution: An Approach from the Theory of Point Processes. Kenji Handa\* (Saga University, Japan)

Sponsor: DL - 13 [402]

Statistical Disclosure Control.

Co-Organizers: Shido Sai (Okayama Shoka University, Japan), Nobuaki Hoshino (Kanazawa University, Japan)

Chair: Atsushi Taki (Hiroshima University, Japan)

Speakers:

1. Invitation to Mathematical Statistical Disclosure Control. Nobuaki Hoshino\* (Kanazawa University, Japan)

2. Nonparametric Estimation for Population Size Indices. Shido Sai\* (Okayama Shoka University, Japan)

3. Random Partition of Number and Multi-index. Masaaki Sibuya\* (Keio University, Japan)

4. Random Partitions of Integers Based on Mixtures of Dirichlet Processes. Hajime Yamato\* (Kagoshima University, Japan)

5. The Poisson-Dirichlet Distribution: An Approach from the Theory of Point Processes. Kenji Handa\* (Saga University, Japan)

Bayesian Modeling and Its Applications in Social Science.

TCP - 23 [403]

Organizer: Jun Lu (American University, USA)  
Chair: Jeff Gill (Washington University, St. Louis, USA)

Speakers:  
1. **Adjusting Nonresponse Bias in Small Area Estimation via a Bayesian Hierarchical Spatial Model.** Chong Z. He\* (University of Missouri-Columbia, USA)  
2. **A Bayesian Analysis to Explicit and Implicit Memory.** Jun Lu\* (American University, USA), Paul Speckman (University of Missouri-Columbia, USA), Dongchu Sun (University of Missouri-Columbia, USA), Jeff Rouder (University of Missouri-Columbia, USA)  
3. **Bayesian Analysis of Variance.** Dongchu Sun\* (University of Missouri, Columbia, USA), Xiaoyi Min (University of Missouri-Columbia, USA), Paul Speckman (University of Missouri-Columbia, USA)  
4. **Monte Carlo Inference for Partial Orders.** Alexis Muir Watt\* (Oxford University, UK), Geoff K. Nicholls (University of Oxford, UK)  
5. **How to Model Like a Bayesian without Prior Distributions with Application to Consumer Response to TV Ads.** Samaradasa Weerahandi\* (Pfizer, USA)

Nonparametric Inference.

CP - 01 [404]

Chair: Hee-Seok Oh (Seoul National University, Korea)

Speakers:  
1. **Efficient Estimation for Partially Linear Varying Coefficient Models.** Seong J. Yang\* (Seoul National University, Korea), Byeong U. Park (Seoul National University, Korea)  
2. **Semiparametric Penalized Spline Regression.** Takuma Yoshida\* (Shimane University, Japan), Kanta Naito (Shimane University, Japan)  
3. **Kernel Machine Quantile Regression of Multi-dimensional Genetic Data.** Dehan Kong\* (North Carolina State University, USA), Arnab Maity (North Carolina State University, USA), Jung-Ying Zeng (North Carolina State University, USA)  
4. **Copula-based Regression Estimation and Inference.** Hohsuk Noh\* (Université catholique de Louvain, Belgium), Anouar El Ghouch (Université catholique de Louvain, Belgium), Taoufik Bouezmarni (Université de Sherbrooke, Canada)  
5. **Pooled Local Whittle Estimation in Panel Long-memory Models.** Masaki Narukawa\* (Tohoku University, Japan), Yasumasa Matsuda (Tohoku University, Japan)

Sponsor: IISA

IP - 24 [405]

Statistical Methods in Genetic Epidemiology.

Organizer: Nilanjan Chatterjee (National Cancer Institute, USA)  
Chair: Satoshi Kuriki (Institute of Statistical Mathematics, Japan)

Speakers:  
1. **Joint Analysis of SNPs and Gene Expression Data in Genome-wide Association Studies.** Xihong Lin\* (Harvard School of Public Health, USA)  
2. **Distribution of the Number of False Discoveries in Large-scale Family-based Association Testing with Applications.** I-Shou Chang\* (National Health Research Institutes, Taiwan), Chao Agnes Hsuing (National Health Research Institutes, Taiwan)  
3. **A Flexible Bayesian Model for Studying Gene-environment Interaction.** Kai Yu\* (National Cancer Institute, USA)

12:15 – 13:30	Lunch Break
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13:30 – 15:15

Sponsor: Korea/KSS

IP - 44 [101]

Recent Progress in Nonparametric Function Estimation.

Organizer/Chair: Kyusang Yu (Konkuk University, Korea)

Speakers:  
1. **Semiparametric Transformation Models with Endogeneity: a Control Function Approach.** Anne Vanhems (Université de Toulouse, Toulouse Business School and Toulouse School of Economics, France), Ingrid Van Keilegom\* (Université Catholique de Louvain, Belgium)  
2. **Inference on Distribution Function from the Ranked Set Samples.** Johan Lim\* (Seoul National University, Korea), Min Chen (U. Texas South Western Medical Center, USA), Xinlei Wang (Southern Methodist University, USA), Sangun Park (Yonsei University, Korea)  
3. **Nonparametric Estimation of Distribution Functions with Incomplete Data.** Byungtae Seo\* (Sungkyunkwan University, Korea)  
4. **Semiparametric Estimation with Generated Covariates.** Enno Mammen (Mannheim University, Germany), Christoph Rothe (Toulouse University, France), Melanie Schienle\* (Humboldt University Berlin, Germany)

Sponsor: IMS

IP - 50 [102]

New Directions on Statistical Modeling of High Dimensional and Complex Data.

Organizer: Fang Yao (University of Toronto, Canada)  
Chair: Jiahua Chen (University of British Columbia, Canada)

Speakers:  
1. **Statistical Issues of Trial Design and Personalized Medicine.** Feifang Hu\* (University of Virginia, USA)  
2. **High-dimensional Multivariate Regression with Grouped Variables via Convex Regularization.** Yanming Li (University of Michigan, USA), Bin Nan\* (University of Michigan, USA), Ji Zhu (University of Michigan, USA)  
3. **Nonparametric Survival Probability Estimation for High-dimensional Data.** Geng Yuan (North Carolina State University, USA), Helen Zhang\* (University of Arizona, USA), Wenbin Lu (North Carolina State University, USA)

Sponsor: India

DL - 13 [Convention Hall 200]

Random Matrix Theory.

Chair: Jack Silverstein (North Carolina State University, USA)

Limiting Spectral Distribution of Patterned Random Matrices.

DL speaker: Arup Bose\* (Indian Statistical Institute, India)

Invited Speakers:  
1. **Distributions of Eigenvalues of Real Symmetric m-Circulant Matrices.** Murat Kologlu (Williams College, USA), Gene Kopp (University of Michigan, USA), Steven Miller\* (Williams College, USA), Karen Shen (Stanford University, USA)  
2. **Random Toeplitz Matrices.** Arnab Sen\* (University of Cambridge, UK), Bálint Virág (University of Toronto, Canada)

Asymptotic Theory for Stochastic Processes and Related Topics.

TCP - 02 [201A]

Organizer/Chair: Masayuki Uchida (Osaka University, Japan)

Speakers:  
1. **Asymptotics of L-statistics with Dependent Data and Their Applications to Risk Measure Estimation.** Hideatsu Tsukahara\* (Seijo University, Japan)  
2. **Stratified Doubly Robust Estimators for the Average Causal Effect.** Satoshi Hattori\* (Kurume University, Japan), Masayuki Henmi (The Institute of Statistical Mathematics, Japan)  
3. **Market Variance Risk Premiums in Japan as Predictor Variables and Indicators of Risk Aversion.** Masato Ubukata\* (Kushiro Public University of Economics, Japan), Toshiaki Watanabe (Hitotsubashi University, Japan)  
4. **Markov Chain Monte Carlo Methods for Simple Mixture Model.** Kengo Kamatani\* (Osaka University, Japan)  
5. **Parametric Estimation for Diffusion Processes from Non-synchronous Observations.** Teppei Ogihara\* (Mitsubishi UFJ Trust Investment Technology institute, Japan), Nakahiro Yoshida (University of Tokyo, Japan)

Sponsor: Taiwan

IP - 26 [201 B]

Advances in Survival Analysis.

Organizer: Yi-Hau Chen (Academia Sinica, Taiwan)

Chair: Sunggho Won (Chung-Ang University, Korea)

Speakers:

1. Regression Analysis for Recurrent Events Data under Dependent Censoring. Jin-Jian Hsieh (National Chiao-Tung University, Taiwan), A. Adam Ding (National Chiao-Tung University, Taiwan), Weijing Wang\* (National Chiao Tung University, Taiwan)

2. An Extended Hazard Model with Longitudinal Covariates. Yi-Kuan Tseng\* (National Central University, Taiwan), Meng Mao (University of California, USA), Jane-Ling Wang (University of California, USA)

3. Analysis of Prevalent Survival Data. Yu-Jen Cheng\* (National Tsing Hua University, Taiwan)

4. Survival Predication with High Dimensional Covariates. Emura Takeshi (National Central University, Taiwan), Yi-Hau Chen\* (Academia Sinica, Taiwan)

Sponsor: Hong Kong

IP - 27 [202A]

Recent Development in Semiparametric Time Series Models.

Organizer: Yingcun Xia (National University of Singapore, Singapore)

Chair: Junichi Hirukawa (Niigata University, Japan)

Speakers:

1. Nonparametric Estimation for a Class of Levy Processes. Song Xi Chen (Guanghua School of Management, Peking University, China), Aurore Delaigle\* (University of Melbourne, Australia), Peter Hall (University of Melbourne, Australia)

2. Semi-parametric Quantile Estimation for Double Threshold Autoregressive Models with Exogenous Variables and Heteroskedasticity. Cathy Chen\* (Feng Chia University, Taiwan), Richard Gerlach (University of Sydney, Australia)

3. Analysis of Deviance in Generalized Partial Linear Models. Wolfgang Karl Härdle (Humboldt University, Germany), Li-Shan Huang\* (National Tsinghua University, Taiwan)

Sponsor: Korea/KSS

DL - 06 [Convention Hall 300]

Bayesian Nonparametrics for Complex Models.

Chair: Yoonkyung Lee (Ohio State University, USA)

Bayesian Bootstrap for Survival Analysis.

DL speaker: Yongdai Kim\* (Seoul National University, Korea)

Invited speakers:

1. Hierarchical Neutral to the Right Processes. Lancelot James\* (Hong Kong University of Science and Technology, Hong Kong)

2. Remarks on Consistency of Bayesian Regression Problems. Taeyon Choi\* (Korea University, Korea)

Sponsor: Taiwan

IP - 25 [303]

Non- and Semi-parametric Methods and Applications.

Organizer: Ming-Yen Cheng (National Taiwan University, Taiwan)

Chair: Sokbae Lee (Seoul National University, Korea)

Speakers:

1. A Semiparametric Model for a Functional Behavioural Response to Capture in Capture-recapture Experiments. Wen-Han Hwang\* (National Chung Hsing University, Taiwan), Richard Huggins (University of Melbourne, Australia)

2. Local Linear Regression on Manifolds and Its Geometric Interpretation. Ming-Yen Cheng\* (National Taiwan University, Taiwan), Hau-Tieng Wu (Princeton University, USA)

3. A Group Lasso Approach for Nonstationary Spatial-temporal Covariance Estimation. Nan-Jung Hsu\* (National Tsing Hua University, Taiwan), Ya-Mei Chang (Tamkang University, Taiwan), Hsin-Cheng Huang (Academia Sinica, Taiwan)

4. Clustering and Prediction of Functional Data. Jeng-Min Chiou\* (Academia Sinica, Taiwan)

Multivariate Asymptotic Theory.

TCP - 05 [401]

Organizer: Yasunori Fujikoshi (Hiroshima University, Japan)

Chair: Takashi Seo (Tokyo University of Science, Japan)

Speakers:

1. Computable Error Bounds for Asymptotic Expansion Formulas for Several Statistics. Hirofumi Wakaki\* (Hiroshima University, Japan)

2. Higher-order Asymptotics of Improved Chi-squared Tests in the Presence of a Nuisance Parameter. Yoshihide Kakizawa\* (Hokkaido University, Japan)

3. Dependence Structures and Asymptotic Properties of Baker's Distributions with Fixed Marginals. Xiaoling Dou\* (Institute of Statistical Mathematics, Japan), Satoshi Kuriki (The Institute of Statistical Mathematics, Japan), Gwo Dong Lin (Academia Sinica, Taiwan)

4. Asymptotic Approximation for the EPMC in Linear Discriminant Function with k-step Monotone Missing Training Data. Nobumichi Shutoh\* (Tokyo University of Science, Japan)

5. High-dimensional Approximations of the Characteristic Roots and Vectors in Discriminant Analysis and Canonical Correlation Analysis. Yasunori Fujikoshi\* (Hiroshima University, Japan)

Design of Experiments and Group Testing.

TCP - 12 [402]

Organizer/Chair: Masakazu Jimbo (Nagoya University, Japan)

Speakers:

1. Algorithm for Calculating D-optimal Design for Polynomial and Trigonometric Regression with Prior Information. Hiroto Sekido\* (Kyoto University, Japan)

2. Optimalities of Designs and Configurations of Points on the Sphere. Masatake Hirao (Nagoya University, Japan), Masakazu Jimbo (Nagoya University, Japan), Masanori Sawa\* (Nagoya University, Japan)

3. Learning a Hidden Graph. Hung-Lin Fu\* (National Chiao Tung University, Taiwan)

4. Mapping Protein-protein Interactions with the Shifted Transversal Design. Nicolas Thierry-Mieg\* (CNRS, France)

Computational Statistical Analysis.

TCP - 24 [403]

Organizer: Kentaro Tanaka (Tokyo Institute of Technology, Japan)

Chair: Tomonari Sei (Keio University, Japan)

Speakers:

1. Analysis of Epsilon-uncertainty Intervals Using the Grouped Likelihood Method. Jinfang Wang\* (Chiba University, Japan)

2. Optimization Problems for Intervention Effects in Structural Equation Models. Kentaro Tanaka\* (Tokyo Institute of Technology, Japan), Masami Miyakawa (Tokyo Institute of Technology, Japan)

3. Asymptotic Estimation Theory via Algebraic Computation. Kei Kobayashi\* (Institute of Statistical Mathematics, Japan), Henry P. Wynn (London School of Economics, UK)

4. Estimation and Use of Mean under Monotone Missingness. Keiji Takai\* (Kansai University, Japan)

5. Graver Basis for an Undirected Graph and Its Application to Testing the Beta Model of Random Graphs. Mitsunori Ogawa\* (University of Tokyo, Japan), Hisayuki Hara (Niigata University, Japan), Akimichi Takemura (University of Tokyo, Japan)

Application.

Chair: Hiroki Hashiguchi (Saitama University, Japan)

CP - 08 [404]

Speakers:

1. **Evaluation of Corporate Brand Power.** Hiroshi Tsuda\* (Doshisha University, Japan)

2. **Consensus Formation for Branding of Environment-conscious Products and Enterprises by Using Web LCA System.** Koji Okuhara\* (Osaka University, Japan), Hiroshi Tsuda (Doshisha University, Japan), Kazuhiko Shibuya (Doshisha University, Japan), Hiroe Tsubaki (Institute of Statistical Mathematics, Japan), Genshiro Kitagawa (Research Organization of Information and Systems, Japan)

3. **A Study on the Spatial Distribution of Consent Forms Submitted from Residents Vulnerable to Disasters and Its Characteristics.** Masahiro Arima (University of Hyogo, Japan), Takuya Ueno (University of Hyogo, Japan), Michitaka Arima\* (University of Hyogo, Japan), Masatoshi Fukunaga (University of Hyogo, Japan)

Sponsor: IMS

IP - 09 [405]

Nonparametric Inference with Applications to Climate and Astronomy.

Organizer: Woncheol Jang (University of Georgia, USA)

Chair: Jie Peng (University of California at Davis, USA)

Speakers:

1. **Detection of Spatial Clusters.** Guenther Walther\* (Stanford University, USA)

2. **Computer Model Calibration with High Dimensional Multivariate Space-time Observations.** K. Sham Bhat (Los Alamos National Laboratories, USA), Murali Haran\* (Penn State University, USA), Roman Olson (Pennsylvania State University, USA), Won Chang (Pennsylvania State University, USA), Klaus Keller (Pennsylvania State University, USA)

3. **Analysis of Long Period Variable Stars with Nonparametric Tests for Trend Detection.** Cheolwoo Park (University of Georgia, USA), Jeongyoun Ahn (University of Georgia, USA), Martin Hendry (University of Glasgow, UK), Woncheol Jang\* (University of Georgia, USA)

15:15 – 15:30	Coffee Break
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15:30 – 17:15

Sponsor: IMS

IP - 06 [101]

Statistical Methods for High-dimensional Data.

Organizer: Yi Li (Harvard University, USA)

Chair: Taeryon Choi (Korea University, Korea)

Speakers:

1. **Estimating Equations with Decomposable Norm-based Regularizers.** Dave Zhao (Harvard University, USA), Yi Li\* (University of Michigan, USA)

2. **Regularized Semiparametric Mixed-effects Models for High-dimensional Longitudinal Data.** Yu Li (University of Michigan, USA), Peter Song\* (University of Michigan, USA), Naisyin Wang (University of Michigan, USA), Sijian Wang (University of Wisconsin-Madison, USA), Ji Zhu (University of Michigan, USA)

3. **Alternating Linearization for Structured Regularization Problems.** Xiaodong Lin\* (Rutgers University, USA), Minh Pham (Rutgers University, USA), Andrzej Ruszczynski (Rutgers University, USA)

Sponsor: ICSA

IP - 35 [102]

Statistical Methods for High Dimensional Genomic Data.

Organizer: Michael Wu (University of North Carolina, USA)

Chair: Jack J. Lee (MD Anderson, USA)

Speakers:

1. **Detecting Common and Rare Variants for General Traits - Gene-trait Similarity Regression for Gene-level Analysis.** Jung-ying Tzeng\* (North Carolina State University, USA), Daowen Zhang (Department of Statistics, North Carolina State University, USA), Wenbin Lu (North Carolina State University, USA)

2. **Asymptotics in GWAS: When Do We Need Non-standard Methods?.** Kenneth Rice\* (University of Washington, USA)

3. **A New Bayesian Algorithm for Interaction Mapping in Genome-wide Association Studies.** Yu Zhang\* (Penn State University, USA)

4. **Kernel Machine Based Methods for Gene-environment Interaction Testing in Genetic Association Studies.** Michael Wu\* (University of North Carolina at Chapel Hill, USA)

Sponsor: IMS

DL - 01 [Convention Hall 200]

Nonparametric Econometrics.

Chair: Ingrid Van Keilegom (Universite Catholique de Louvain, Belgium)

Asymptotics for GARCH-in-Mean Models with Application to Semiparametric Specification Testing.

DL speaker: Enno Mammen\* (Universitaet Mannheim, Germany)

Invited speakers:

1. **Testing Functional Inequalities.** Sokbae Lee (Seoul National University, Korea), Kyungchul Song (University of British Columbia, Canada), Yoon-Jae Whang\* (Seoul National University, Korea)

2. **Sieve Inference for Weakly Dependent Data.** Xiaohong Chen\* (Yale University, USA), Zhipeng Liao (UCLA, USA), Yixiao Sun (UCSD, USA)

Sponsor: IMS

IP - 52 [201A]

Object Oriented Data Analysis.

Organizer: Alicia Nieto-Reyes (Universidad de Cantabria, Spain)

Chair: Juan Antonio Cuesta-Albertos (Universidad de Cantabria, Spain)

Speakers:

1. **Generalized Gaussian Process Functional Regression Model for Non-Gaussian Functional Data.** Bo Wang\* (University of Leicester, UK), Jian Qing Shi (University of Newcastle upon Tyne, UK) Taeryon Choi (Korea University, Korea)

2. **Distribution of Sea-Waves.** José B. Hernández (Universidad Central de Venezuela), Alicia Nieto-Reyes\* (Universidad de Cantabria, Spain), Joaquín Ortega (CIMAT A.C., Mexico)

3. **A Simple Multiway ANOVA for Functional Data.** Juan Cuesta-Albertos (Univ. of Cantabria, Spain), Manuel Febrero-Bande\* (Universidad de Santiago de Compostela, Spain)

Sponsor: Australia and New Zealand

IP - 31 [201B]

Mixed Models.

Co-organizers: Samuel Muller (University of Sydney, Australia), Alan Welsh (Australian National University, Australia)

Chair: Alan Welsh (Australian National University, Australia)

Speakers:

1. **Conditional Inference Functions for Mixed-effects Models with Unspecified Random-effects Distribution.** Peng Wang (Bowling Green State University, USA), Guei-feng Tsai (Center of Drug Evaluation, Taiwan), Annie Qu\* (University of Illinois at Urbana and Champaign, USA)

2. **Mixed Effects Models for Longitudinal and Survival Data.** Lang Wu\* (University of British Columbia, Canada)

3. **Model Selection in Linear Mixed Models with the LASSO.** Samuel Muller (University of Sydney, Australia), Janice Scealy\* (Australian National University, Australia), Alan Welsh (Australian National University, Australia)

4. **How are BLUEs and BLUPs for Linear Models and Linear Mixed Models Linked?** Stephen Haslett\* (Massey University, New Zealand), Simo Puntanen (University of Tampere, Finland)

Sponsor: IMS

Statistical Inference for Large Complex Networks.

Organizer: Jie Peng (University of California at Davis, USA)

Chair: Jimin Ding (Washington University in St. Louis, USA)

Speakers:

1. **Modeling Collections of Networks Using Nonparametric Mixtures.** Abel Rodriguez\* (University of California, Santa Cruz, USA)

2. **Fast Graphical Model Estimation and Its Applications.** Daniela Witten\* (University of Washington, USA), Jerome Friedman (Stanford University, USA), Noah Simon (Stanford University, USA), Pei Wang (Fred Hutchinson Cancer Research Center, USA), Patrick Danaher (University of Washington, USA)

3. **Network of Interactions Underlying Complex Phenotypes.** Jun Zhu\* (Mount Sinai School of Medicine, USA)

4. **High-dimension Network Inference with Re-sampling Methods.** Jie Peng\* (University of California at Davis, USA), Ru Wang (University of California, USA), Pei Wang (Fred Hutchinson Cancer Research Center, USA), Shuang Li (Fred Hutchinson Cancer Research Center, USA), Li Hsu (Fred Hutchinson Cancer Research Center, USA)

Sponsor: Australia and New Zealand

Spatial Point Processes.

Chair: D.J. Daley (University of Melbourne, Australia)

Residuals, Diagnostics and Score Tests for Spatial Point Processes.

DL speaker: Adrian Baddeley\* (University of Western Australia, Australia)

Invited speakers:

1. **Residual Analysis in Statistical Seismology and Discovering Seismicity Anomalies.** Yosihiko Ogata\* (Institute of Statistical Mathematics, Japan)

2. **Inverse Problems in Econometrics.** Laurent Cavalier\* (Université Aix-Marseille, France)

Sponsor: Japan/JSS

Volume-of-Tube Method and Its Applications to Multiple Comparisons.

Organizer: Satoshi Kuriki (ISM, Japan)

Chair: Kei Kobayashi (Institute of Statistical Mathematics, Japan)

Speakers:

1. **Likelihood Ratio Tests for Positivity in Polynomial Regressions.** Naohiro Kato (The Graduate University for Advanced Studies, Japan), Satoshi Kuriki\* (ISM, Japan)

2. **Discrete Tube Theory via Alpha Complexes and Monomial Ideals.** Eduardo Sáenz-de-Cabezón (Universidad de la Rioja, Spain), Henry Wynn\* (London School of Economics, UK)

3. **Improving a Geometrical Approach for Multiple Testing Problems.** Yoshiyuki Ninomiya\* (Kyushu University, Japan)

4. **Wonders of Tube Formulae and Modern Applications.** Jianyang Sun\* (Case Western Reserve University, USA), F. Richard Y Fan (Cleveland State University, USA), William McCormick (University of Georgia, USA), Z. Jacob Zhang (The Wistar Institute, USA)

Developments in Computational Algebraic Statistics.

Organizer/Chair: Takayuki Hibi (Osaka University/JST CREST)

Speakers:

1. **Configurations and Ideals Arising in Designed Experiments.** Satoshi Aoki\* (Kagoshima University/JST CREST, Japan)

2. **Estimating the Number of Zero-one Multi-way Tables via Sequential Importance Sampling.** Jing Xi (University of Kentucky, USA), Ruriko Yoshida\* (University of Kentucky, USA), David Haws (University of Kentucky, USA)

3. **Markov Chain Monte Carlo Test of Homogeneity of Markov Chains.** Hisayuki Hara\* (Niigata University, Japan), Akimichi Takemura (University of Tokyo, Japan)

4. **Toric Rings and Ideals of Nested Configurations.** Hidefumi Ohsugi\* (Rikkyo University/JST CREST, Japan)

5. **Holonomic Gradient Descent and Its Application to Fisher-Bingham Integral.** Tamio Koyama (Kobe University,Japan), Hiromasa Nakayama (Kobe University, Japan), Kenta Nishiyama (Osaka University, Japan), Masayuki Noro (Kobe University, Japan), Katsuyoshi Ohara (Kanazawa University, Japan), Tomonari Sei (Keio University, Japan), Nobuki Takayama\* (Kobe University/JST CREST, Japan), Akimichi Takemura (University of Tokyo, Japan)

Quantile Regression and Related Topics.

Organizer: Kengo Kato (Hiroshima University, Japan)

Chair: Hideatsu Tsukahara (Seijo University)

Speakers:

1. **Nonparametric LAD Cointegrating Regression.** Toshio Honda\* (Hitotsubashi University, Japan)

2. **Nonparametric Intermediate Order Regression Quantiles.** Joseph G. Altonji (Yale University, USA), Hidehiko Ichimura\* (University of Tokyo, Japan), Taisuke Otsu (Yale University, USA)

3. **Group Lasso for High Dimensional Sparse Quantile Regression Models.** Kengo Kato\* (Hiroshima University, Japan)

4. **Nonparametric Confidence Intervals for Quantiles for Moderate Sample Sizes.** Yoshihiko Maesono\* (Kyushu University, Japan), Spiridon Penev (The University of New South Wales, Australia)

5. **Joint Estimation of Conditional Quantile Functions Using Multi-task Learning Approaches.** Ichiro Takeuchi\* (Nagoya Institute of Technology, Japan)

Selection and Classification.

Organizer: Hiroshi Kurata (University of Tokyo, Japan)

Chair: Yuki Itoh (Yokohama National University, Japan)

Speakers:

1. **Dealing with Rotational Indeterminacy in Multivariate Bayesian Models.** Kensuke Okada\* (Senshu University, Japan) Shin-ichi Mayekawa (Tokyo Institute of Technology, Japan)

2. **An Inequality of the Eigenvalues of Euclidean Distance Matrices.** Hiroshi Kurata\* (University of Tokyo, Japan)

3. **Nonparametric Density Estimation of Inhomogeneous Smooth Probability Distributions.** Satoshi Miyata\* (Japanese Foundation for Cancer Research, Japan)

4. **Odds Theorem in Bernoulli Sequences of Random Length with Multiple Selections.** Katsunori Ano (Shibaura Institute of Technology, Japan), Aiko Kurushima\* (Sophia University, Japan)

5. **Optimal Assignment of Items for a Vending Machine.** Junichiro Fukuchi\* (Gakushuin University, Japan), Hajime Itoh (Otaru University of Commerce, Japan), Toshiko Takeuchi (Gakushuin University, Japan)

Biostatistics and Others.

Chair: Manabu Iwasaki (Seikei University, Japan)

Speakers:

1. **Voting Approaches to Feature Selection for Biomarker Discovery.** Sandra L Taylor (University of California Davis School of Medicine, USA), Kyoungmi Kim\* (University of California Davis School of Medicine, USA)

2. **Phase II Oncology Trial Design to Evaluate Assay-based Drug Assignment.** Motomi Mori\* (Oregon Health and Science University, USA), Yiyi Chen (Oregon Health and Science University, USA), Byung S. Park (Oregon Health and Science University, USA), Jeff Tyner (Oregon Health and Science University, USA), Marc Loriaux (Oregon Health and Science University, USA), Tibor Kovacsovics (Oregon Health and Science University, USA), Brian Druker (Oregon Health and Science University, USA)

3. **The Joint Statistical Models for Longitudinal Data with Semi-continuous Outcomes and Missing not at Random.** Depeng Jiang\* (University of Manitoba, Canada)

4. **Modified Method of Non-overlapping Template Matching Test.** Yuichi Takeda\* (Kanagawa Institute of Technology, Japan), Mituaki Huzii (Chuo University, Japan), Toshinari Kamakura (Chuo University, Japan), Norio Watanabe (Chuo University, Japan)

5. **On the Statistical Consistency of Multipartite Ranking.** Kazuki Uematsu\* (Ohio State University, USA), Yoonkyung Lee (The Ohio State University, USA)

Random Matrix Theory  
Organizer/Chair: Arup Bose (Indian Statistical Institute, India)

Speakers:  
1. Esfahani, Amir, and Amir Dembo. "Large deviations from the semicircle law for sample covariance matrices." *International Mathematics Research Notices* 2019 (2019): 1-24.

8:30 – 10:15

Sponsor: ICSA

Statistical Inference under High Dimensionality.

Organizer: Hui Zou (University of Minnesota, USA)

Chair: Richard Samworth (University of Cambridge, UK)

Speakers:

1. **Likelihood Adaptively Modified Penalties and Its Properties.** Yang Feng\* (Columbia University, USA), Tengfei Li (Fudan University, China), Zhiliang Ying (Columbia University, USA)

2. **Selecting Biomarkers for Personalized Medicine in Randomized Clinical Trials via Statistical Learning Methods.** Jack J. Lee\* (MD Anderson, USA), Soyeon Kim (Rice University, USA)

3. **A General Theory of Nonlinear Sufficient Dimension Reduction: Formulation and Estimation.** Kuang-Yao Lee (The Pennsylvania State University, USA), Bing Li\* (Penn State University, USA), Francesca Chiaromonte (The Pennsylvania State University, USA)

4. **Variable Selection in Linear Mixed Effects Models.** Yingying Fan (University of Southern California, USA), Runze Li\* (Penn State University, USA)

Sponsor: Singapore

Recent Advances in the Analysis of Interval-censored Failure Time Data.

Organizer/Chair: (Tony) Jianguo Sun (University of Missouri, USA)

Speakers:

1. **Regression Analysis of Bivariate Current Status Data Using a Multi-state Model.** Yangjin Kim\* (Sookmyung Women’s University, Korea)

2. **Generalized Odds-rate Hazards Models for Interval-censored Failure Time Data.** Bin Zhang\* (University of Alabama at Birmingham, USA), Lianming Wang (University of South Carolina, USA)

3. **A Large Sample Study of Some Smooth or Non-smooth Functionals of the NPMLE When Interval Censoring Is Present.** Zhigang Zhang\* (Memorial Sloan-Kettering Cancer Center, USA)

Sponsor: Japan/ISM

Statistical Methods with Positive Definite Kernels.

Chair: Yutaka Kano (Osaka University, Japan)

Nonparametric Inference with Positive Definite Kernels.

DL speaker: Kenji Fukumizu\* (Institute of Statistical Mathematics, Japan)

Discussants:

1. **Kernel Methods for Distribution Comparison: Theory and Applications.** Arthur Gretton\* (University College London, UK)

2. **Robust Non-convex Support Vector Machines.** Su-Yun Huang\* (Academia Sinica, Taiwan), Chia-Hsiang Yu (National Central University, Taiwan), Shinto Eguchi (Institute of Statistical Mathematics, Japan)

Quantum Statistical Inference.

Organizer: Masaki Owari (NTT Communication Science Laboratories, Japan)

Chair: Yu Watanabe (The University of Tokyo, Japan)

Speakers:

1. **Asymptotic Local Hypothesis Testing Between a Pure Bipartite State and the Completely Mixed State.** Masaki Owari\* (NTT Communication Science Laboratories, Japan), Masahito Hayashi (Tohoku University and National University of Singapore, Japan)

2. **Quantum Hypothesis Testing for Quantum Gaussian States.** Wataru Kumagai\* (Tohoku University, Japan), Masahito Hayashi (Tohoku University, National University of Singapore, Japan)

3. **Asymptotic Inference in System Identification for Quantum Markov Processes.** Madalin Guta\* (University of Nottingham, UK)

4. **The Environment Tomography.** Go Kato\* (NTT Communication Science Laboratories, Japan), Kouji Maruyama (Osaka City University, Japan), Masaki Owari (NTT Communication Science Laboratories, Japan)

5. **Inferring Superposition and Entanglement in Evolving Systems.** William J. Munro\* (NTT Basic Research, Japan)

Sponsor: Hong Kong

Recent Advances in Time Series Analysis.

Organizer/Chair: Shiqing Ling (Hong Kong University of Science and Technology, Hong Kong)

Speakers:

1. **Refitted Cross-validation with Applications to Variance Estimation in Ultrahigh Dimensional Regression.** Jianqing Fan (Princeton University, USA), Shaojun Guo\* (Academia Sinica, China), Ning Hao (The University of Arizona, USA)

2. **Volatility Inference in the Presence of Both Endogenous Time and Microstructure Noise.** Yingying Li (Hong Kong University of Science and Technology, Hong Kong), Zhiyuan Zhang\* (Shanghai University of Finance and Economics, China), Xinghua Zheng (Hong Kong University of Science and Technology, Hong Kong)

3. **Risk-parameter Estimation in Volatility Models.** C.Francq (Crest and Lille 3 University, France), Jean-Michel Zakoian\* (CREST, France)

Sponsor: China

Random Walks and Particle Systems.

Organizer/Chair: Dayue Chen (Peking University, China)

Speakers:

1. **Infinite Collisions of Two Random Walks on Some Wedge Comb.** Xinxing Chen\* (Shanghai Jiaotong University, China), Chen Dayue (Peking University, China)

2. **Asymptotic Normality for Random Integer Partitions.** Zhonggen Su\* (Zhejiang University, China)

3. **Some Topics in Reinforced Random Walks.** Masato Takei\* (Osaka Electro-Communication University, Japan)

4. **A Phase Transition for Measure-valued SIR Epidemic Processes.** Steven P. Lalley (University of Chicago, USA), Edwin A. Perkins (University of British Columbia, Canada), Xinghua Zheng\* (Hong Kong University of Science and Technology, Hong Kong)

Sponsor: Japan/JSS

Predictive Inference and Information Geometry.

Chair: Yuzo Maruyama (University of Tokyo, Japan)

Bayesian Inference from a Predictive Perspective.

DL speaker: Fumiyasu Komaki\* (University of Tokyo, Japan)

Invited speakers:

1. **Nonparametric Bayes Predictive Density Estimation.** Edward I. George\* (University of Pennsylvania, USA), Feng Liang (University of Illinois, USA), Xinyi Xu (Ohio State University, USA)

2. **Information Geometry in Statistics.** Shinto Eguchi\* (Institute of Statistical Mathematics, Japan), Osamu Komori (Institute of Statistical Mathematics, Japan)

Sponsor: ICSCA

Recent Advances for Functional and fMRI Data.

Organizer/Chair: Jane-Ling Wang (University of California at Davis, USA)

Speakers:

1. **Functional Single Index Models for Longitudinal Data.** Ciren Jiang\* (SAMSI, Taiwan), Jane-Ling Wang (University of California at Davis, USA)

2. **A Semi-parametric Model for Hemodynamic Response with Latency Differences.** Tingting Zhang\* (University of Virginia, USA), Fan Li (Duke University, USA), Lane Beckes (University of Virginia, USA), James Coan (University of Virginia, USA)

4. **Color Independent Component Analysis with an Application to Functional Magnetic Resonance Imaging.** Seonjoo Lee (NIH, USA), Haipeng Shen\* (University of North Carolina, Chapel Hill, USA), Young Truong (University of North Carolina at Chapel Hill, USA)

Sponsor: ICSCA

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Ensemble Learning for Statistics.

TCP - 08 [401]

Organizer: Osamu Komori (Institute of Statistical Mathematics, Japan)  
Chair: Yoichi Nishiyama (Institute of Statistical Mathematics, Japan)

Speakers:

1. **Weight Optimization for Ensemble of Learners by Information Minimization.** Hideitsu Hino\* (Waseda University, Japan), Kazuki Miura (Waseda University, Japan), Noboru Murata (Waseda University, Japan)

2. **Approximate Bayesian Learning Using Bregman Divergence,** Kazuho Watanabe\* (Nara Institute of Science and Technology, Japan)

3. **A Class of Safe Semi-supervised Regression Based on Density Ratio Estimation.** Masanori Kawakita\* (Kyushu University, Japan)

4. **Density Estimation Based on U-divergence with Volume-mass-one,** Osamu Komori\* (Institute of Statistical Mathematics, Japan), Kanta Naito (Shimane University, Japan), Shinto Eguchi (The Institute of Statistical Mathematics, Japan)

5. **Density Estimation with Minimization of U-divergence.** Kanta Naito\* (Shimane University, Japan), Shinto Eguchi (The Institute of Statistical Mathematics, Japan)

Statistical Methods in Health Science.

TCP - 26 [402]

Organizer/Chair: Donguk Kim (Sungkyunkwan University, Korea)

Speakers:

1. **Empirical Performance of AIC in Selecting Models for Crossover Designs.** Yonghee Lee\* (University of Seoul, Korea)

2. **Statistical Method for Epidemic Model Estimation Using Kinetic Reaction Model.** Boseung Choi\* (Daegu University, Korea), Grzegorz A. Rempala (Georgia Health Science University, USA)

3. **A Bayesian Approach to a Latent Class-profile Analysis: the Timing of Drinking Onset and Subsequent Drinking Behaviors among U.S. Adolescents.** Hwan Chung\* (Korea University, Korea), James C. Anthony (Michigan State University, USA)

4. **A Novel Semiparametric Method for Modeling Interval-censored Data.** Seungbong Han\* (Asan Medical Center, Korea)

5. **Bayesian Analysis of Repeated Count Data with Many Zeros: Application to the Longitudinal Adolescent Substance Abuse Study.** Hyonggin An\* (Korea University, Korea)

Directional Statistics.

TCP - 27 [403]

Organizer: Shogo Kato (Institute of Statistical Mathematics, Japan)  
Chair: Jeff Gill (Washington University, St. Louis, USA)

Speakers:

1. **Cosine Perturbation of Bimodal Circular Distributions.** Toshihiro Abe\* (Institute of Statistical Mathematics, Japan), Arthur Pewsey (University of Extremadura, Spain)

2. **Stereographic Projection as a Method for Constructing Probability Distributions in Directional Statistics.** Kunio Shimizu\* (Keio University, Japan)

3. **Robust Estimation of Location and Concentration Parameters for the von Mises-Fisher Distribution.** Shogo Kato\* (Institute of Statistical Mathematics, Japan), Shinto Eguchi (Institute of Statistical Mathematics, Japan)

4. **Construction of Directional Distributions Using Gradient Maps.** Tomonari Sei\* (Keio University, Japan)

High-dimensional Models.

CP - 02 [404]

Chair: Yongdai Kim (Seoul National University, Korea)

Speakers:

1. **Multi-class Discriminant Function Based on Canonical Correlation in High Dimension Low Sample Size.** Mitsuru Tamatani\* (Shimane University, Japan), Kanta Naito (Department of Mathematics, Shimane University, Japan), Inge Koch (University of Adelaide, Australia)

2. **Bayesian Factor Clustering.** Jaeseok Kim\* (Seoul National University, Korea), Yongdai Kim (Seoul National University, Korea)

3. **Asymptotic Distributions of Several Test Statistics for High-dimensional Mean Vector.** Shota Katayama\* (Osaka University, Japan), Yutaka Kano (Osaka University, Japan), Muni S. Srivastava (University of Toronto, Canada)

4. **Structural Variable Selection with q-values and the Lasso.** Raymond J Carroll (Texas A&M University, USA), Tanya Garcia (Texas A&M University, USA), Samuel Müller\* (The University of Sydney, Australia)

5. **Pairwise Comparison Model with a Diverging Number of Nuisance Parameters.** Jong-June Jeon\* (Seoul National University, Korea), Yongdai Kim (Seoul National University, Korea)

6. **Generalized Cp Model Averaging for Heteroskedastic Models.** Qingfeng Liu\* (Otaru University of Commerce, Japan), Ryo Okui (Kyoto University, Japan)

Sponsor: India

IP - 47 [405]

Inference Methods for Complex Data Settings.

Organizer: Minge Xie (Rutgers University, USA)  
Chair: Regina Liu (Rutgers University, USA)

Speakers:

1. **Semiparametric Functional Regression with Applications in Quantitative Ultrasound Analysis.** Nathaniel R. Hirtz (University of Illinois at Urbana-Champaign, USA), William D. O'Brien Jr., (University of Illinois at Urbana-Champaign, USA), Douglas Simpson\* (University of Illinois at Urbana-Champaign, USA)

2. **Statistical Challenges in Protein Folding.** Samuel Kou\* (Harvard University, USA)

3. **A Nonparametric Functional Method for Automatic Signature Recognition.** Gery Geenens\* (University of New South Wales, Australia)

4. **Confidence Intervals and Hypothesis Tests for Order Statistics of Parameters.** Minge Xie\* (Rutgers University, USA)

10:15 - 10:30	Coffee Break
10:30 - 12:15	

Sponsor: IMS

IP - 41 [101]

Nonparametric Multivariate Mixtures – Their Identifiability and Estimation.

Organizer: Michael Levine (Purdue University, USA)  
Chair: Guang Cheng (Purdue University, USA)

Speakers:

1. **Minimax Estimation for Mixtures of Wishart Distributions.** Leonard R. Haff (University of California at San Diego, USA), Peter T. Kim (University of Guelph, Canada), Ja-Yong Koo\* (Korea University, Korea), Donald St. P. Richards (Pennsylvania State University, USA)

2. **Mixture of Regression Models with Varying Mixing Proportions: A Semiparametric Approach.** Mian Huang (Shanghai University of Finance and Economics, China), Weixin Yao\* (Kansas State University, USA)

3. **Algebraic Perspectives on Mixture Models.** Elizabeth Allman (University of Alaska Fairbanks, USA), Catherine Matias (CNRS, Laboratoire Statistique et Génome, France), John Rhodes\* (University of Alaska-Fairbanks, USA)

4. **Nonparametric Identification of Multivariate Mixtures.** Hiroyuki Kasahara (University of British Columbia, Canada), Katsumi Shimotsu\* (Hitotsubashi University, Japan)

Sponsor: Korea/KSS

IP - 45 [102]

Statistical Learning Methods in Functional/High Dimensional Data Analysis.

Organizer: Cheolwoo Park (University of Georgia, USA)  
Chair: Woncheol Jang (University of Georgia, USA)

Speakers:

1. **An Analysis of Pulsation Periods of Long-period Variable Stars.** Jeffrey D. Hart\* (Texas A&M University, USA), Chris Koen (University of the Western Cape, South Africa), Fred Lombard (University of Johannesburg, South Africa)

2. **Robust, Adaptive Functional and Image Regression in Functional Mixed Models.** Hongxiao Zhu (Duke University, USA), Philip J. Brown (University of Kent, UK), Jeffrey Morris\* (MD Anderson, USA)

3. **Shape Invariant Modelling of Pricing Kernels and Risk Aversion.** Maria Grith (Humboldt University zu Berlin, Germany), Wolfgang Härdle (Humboldt University zu Berlin, Germany), Juhyun Park\* (Lancaster University, UK)

Sponsor: ICSA

DL - 14 [Convention Hall 200]

Quantitative Methods for Stratified (Personalized) Medicine.

Chair: Xihong Lin (Harvard University, USA)

Effectively Selecting a Target Population for a Future Comparative Study.

DL speaker: Lee-Jen Wei\* (Harvard University, USA)

- Invited speakers:
1. **Modified Covariate Approach for Personalized Medicine.** Lu Tian\* (Stanford University, USA), Robert Tibshirani (Stanford University, USA)
  2. **Inference for Optimal Dynamic Treatment Regimes Using an Adaptive m-out-of-n Bootstrap Scheme.** Bibhas Chakraborty\* (Columbia University, USA), Eric B. Laber (North Carolina State University, USA)

New Developments in Sufficient Dimension Reduction and Semi-parametric Estimation.

TCP - 14 [201A]

Organizer: Bo Kai (College of Charleston, USA)

Chair: Kenji Fukumizu (Institute of Statistical Mathematics, Japan)

- Speakers:
1. **Principal Support Vector Machines for Linear and Nonlinear Sufficient Dimension Reduction.** Bing Li (Pennsylvania State University, USA), Andreas Artemiou (Michigan Technological University, USA), Lexin Li\* (North Carolina State University, USA)
  2. **Semiparametric Quantile Regression with High Dimensional Covariates.** Liping Zhu (Shanghai University of Finance and Economics, China), Mian Huang\* (Shanghai University of Finance and Economics, China), Runze Li (Penn State University, USA)
  3. **Inference of Gene Associations Using Model-based Clustering and Permutation Test in Time-course Gene Expression Data.** Le Bao\* (The Pennsylvania State University, USA), Ka Yee Yeung (University of Washington, USA)
  4. **A Covariance Regression Model.** Peter Hoff (University of Washington, USA), Xiaoyue Niu\* (The Pennsylvania State University, USA)

Sponsor: Japan/ISM

IP - 18 [201B]

Entropy Methods in Statistics.

Organizer: Yoichi Nishiyama (ISM, Japan)

Chair: Shinto Eguchi (Institute of Statistical Mathematics, Japan)

- Speakers:
1. **Fast Learning Rate of Non-Sparse Multiple Kernel Learning and Optimal Regularization Strategies.** Taiji Suzuki\* (University of Tokyo, Japan)
  2. **Applications of Entropy Methods to Some Statistical Tests for Diffusion Processes.** Ilia Negri\* (University of Bergamo, Italy), Yoichi Nishiyama (The Institute of Statistical Mathematics, Japan)
  3. **Adaptive Semiparametric Estimation for Diffusion Processes.** Yoichi Nishiyama\* (Institute of Statistical Mathematics, Japan)
  4. **Entropy Methods in Bayesian Nonparametrics.** Harry van Zanten\* (Eindhoven University of Technology, Netherlands)

Sponsor: India

IP - 46 [202A]

Advances in Nonparametric Multivariate Statistics.

Organizer: John Einmahl (Tilburg University, Netherlands)

Chair: Probal Chaudhuri (Indian Statistical Institute, India)

- Speakers:
1. **Nonparametric Multivariate Longitudinal Data Analysis.** Jürg Hüsler\* (University of Bern, Switzerland), Moser André (Dept. of math. Statistics, Univ. of Bern, Switzerland)
  2. **Distributional Properties of Wavelet Thresholding.** Markus Haltmeier (Max Planck Institute for Biophysical Chemistry, Germany), Andrea Krajina\* (Institute for Mathematical Stochastics, Germany), Axel Munk (Institute for Mathematical Stochastics and Max Planck Institute for Biophysical Chemistry, Germany)
  3. **Central Limit Theorems for Level Set Estimators.** Philippe Berthet (University Paul Sabatier, France), John Einmahl\* (Tilburg University, Netherlands)
  4. **Supervised Classification for a Family of Gaussian Functional Models.** Amparo Baillo (Universidad Autonoma de Madrid, Spain), Juan A. Cuesta-Albertos\* (Universidad de Cantabria, Spain), Antonio Cuevas (Universidad Autonoma de Madrid, Spain)

Sponsor: Hong Kong

DL - 17 [Convention Hall 300]

What Next in Time Series?

Chair: Shiqing Ling (Hong Kong University of Science and Technology, Hong Kong)

Some New Threshold Type Models.

DL speaker: Wai Keung Li\* (University of Hong Kong, Hong Kong)

- Invited speakers:
1. **Bayesian Inference of Panels of Threshold Autoregressive Time Series.** Noelle Samia\* (Northwestern University, USA), Osnat Stramer (University of Iowa, USA)
  2. **Dynamic Modeling and Prediction of Risk Neutral Densities.** Rong Chen\* (Rutgers University, USA), Kevin Lu (Rutgers University, USA)

Sponsor: IMS

IP - 42 [303]

Model Selection in Complex Problems.

Organizer/Chair: Snigdhanu Chatterjee (University of Minnesota, USA)

- Speakers:
1. **Restricted Fence Method for Covariate Selection in Longitudinal Data Analysis.** Thuan Nguyen (Oregon Health and Science University, USA), Jiming Jiang\* (University of California at Davis, USA)
  2. **Bootstrap Variable Selection for Small Area Estimation.** Snigdhanu Chatterjee (University of Minnesota, USA), Tapabrata Maiti\* (Michigan State University, USA), Hao Ren (CTB, USA)
  3. **A Sparse Conditional Graphical Model for Non-independent Measurements.** Hyonho Chun\* (Purdue University, USA)
  4. **On the Two-sample High-dimensional Behrens-Fisher Problem.** Jin-Ting Zhang\* (National University of Singapore, Singapore)

Emerging New Wave of Quantum Statistics from Practical Perspective.

TCP - 20 [401]

Organizer/Chair: Fuyuhiko Tanaka (University of Tokyo, Japan)

Chair: Fumiyasu Komaki (University of Tokyo, Japan)

- Speakers:
1. **Bayesian Predictive Method in Quantum Physics.** Fuyuhiko Tanaka\* (University of Tokyo, Japan)
  2. **Quantum Illumination: An Application of Quantum Hypothesis Test to Detection.** Si-Hui Tan\* (Data Storage Institute, Singapore)
  3. **Reliable Quantum State Tomography.** Philippe Faist\* (ETH Zurich, Switzerland), Cyril Stark (ETH Zurich, Switzerland), Christian Schütte-Nütgen (ETH Zurich, Switzerland), Matthias Christandl (ETH Zurich, Switzerland), Renato Renner (ETH Zurich, Switzerland)
  4. **Improvement of Estimation Preciseness via Adaptive Quantum Estimation Schemes.** Takanori Sugiyama\* (University of Tokyo, Japan), Peter S. Turner (The University of Tokyo, Japan), Mio Murao (The University of Tokyo, Japan)
  5. **Uncertainty Relation Revisited from Quantum Estimation Theory.** Yu Watanabe\* (University of Tokyo, Japan), Takahiro Sagawa (Kyoto University, Japan), Masahito Ueda (University of Tokyo, Japan)

Theory, Algorithms, and Applications of Density Ratio Estimation.

TCP - 22 [402]

Organizer: Masashi Sugiyama (Tokyo Institute of Technology, Japan)

Chair: Byungtae Seo (Sungkyunkwan University, Korea)

- Speakers:
1. **Overview of Recent Advances in Density Ratio Estimation.** Masashi Sugiyama\* (Tokyo Institute of Technology, Japan)
  2. **f-divergence Estimation and Two-sample Test under Semi-parametric Density Ratio Models.** Takafumi Kanamori\* (Nagoya University, Japan), Taiji Suzuki (University of Tokyo, Japan), Masashi Sugiyama (Tokyo Institute of Technology, Japan)
  3. **Covariate Shift Adaptation as a Missing Data Problem.** Masayuki Henmi\* (Institute of Statistical Mathematics, Japan)
  4. **Efficient Data Reuse in Robot Control Learning via Importance Sampling.** Tingting Zhao\* (Tokyo Institute of Technology, Japan)
  5. **Multimedia Information Processing with Mutual Information.** Makoto Yamada\* (Tokyo Institute of Technology, Japan), Masashi Sugiyama (Tokyo Institute of Technology, Japan)

Applications of Bayesian Statistics.

TCP - 28 [403]

Organizer: Kentaro Fukumoto (Gakushuin University, Japan)  
Chair: Yasuhiro Omori (University of Tokyo, Japan)

Speakers:

1. **A Bayesian Approach for Tandem Repeats Detection.** Xiaodan Fan\* (The Chinese University of Hong Kong, Hong Kong), Tong Liang (The Chinese University of Hong Kong, Hong Kong), Qiwei Li (The Chinese University of Hong Kong, Hong Kong)

2. **A Bayesian View of Party Systems.** Kentaro Fukumoto\* (Gakushuin University, Japan)

3. **Identifying Structure in Social Data Models Using Markov Chain Monte Carlo Algorithms.** Jeff Gill\* (Washington University, USA), George Casella (University of Florida., USA)

4. **Eliciting Truthful Answers to Sensitive Survey Questions: List and Endorsement Experiments.** Kosuke Imai\* (Princeton University, USA)

5. **Combining Computer Models for Stellar Evolution: From Sun-like Stars to White Dwarf Cinders.** David van Dyk\* (Imperial College London, UK), Nathan M. Stein (Harvard University, USA), Ted von Hippel (Embry-Riddle Aeronautical University, USA), Steven DeGennaro (University of Texas, Austin, USA), Elizabeth J. Jeffery (Space Telescope Science Institute, USA), William H. Jefferys (University of Texas, Austin and University of Vermont, USA)

Probability and Stochastic Processes.

CP - 05 [404]

Chair: Nakahiro Yoshida (University of Tokyo, Japan)

Speakers:

1. **Strong Large Deviations and Applications to Some Nonparametric Tests.** Cyrille Joutard\* (University Montpellier 3, France)

2. **Detection of Heterogeneous Structures with Power Entropy.** Akifumi Notsu\* (The Graduate University for Advanced Studies, Japan), Shinto Eguchi (The Institute of Statistical Mathematics, Japan)

3. **Functional Central Limit Theorem for Stochastic Integral Infinitely Divisible Processes Generated by Conservative Flows.** Takashi Owada\* (Cornell University, USA), Gennady Samorodnitsky (Cornell University, USA)

4. **Extinction of Superprocess Related to Stable Random Measure.** Isamu Dôku\* (Saitama University, Japan)

5. **Poisson Convergence of Eigenvalues of Circulant Type Matrices.** Arup Bose (Indian Statistical Institute, Kolkata, India), Rajat Subhra Hazra (University of Zurich, Switzerland), Koushik Saha\* (Bidhannagar Government College, India)

6. **Model Specification Tests for Discretely Observed Semimartingales with Microstructure Noise.** Zhi Liu\* (Xiamen University, China)

Sponsor: IMS

IP - 05 [405]

Optimal Designs for Nonlinear Models.

Organizer: Min Yang (University of Missouri, USA)  
Chair: J.K. Ghosh (Prudue University, USA)

Speakers:

1. **Geometry, Optimal Designs and Pharmacokinetic Models.** Holger Dette\* (Ruhr Universität Bochum, Germany)

2. **Developments on Optimal Designs for Generalized Linear Models.** John Stufken\* (University of Georgia, USA), Min Yang (University of Illinois at Chicago, USA)

3. **A New Algorithm for Deriving Optimal Designs: General and Efficient.** Min Yang\* (University of Missouri, Columbia, USA), Stefanie Biedermann (University of Southampton, UK)

# Poster Presentations

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Speakers:

1. **Estimating Network Graph Properties Throgh Random Sampling.** Jin Cao\* (Bell Labs, Alcatel-Lucent, USA), Zhi He (Bell Labs, Alcatel-Lucent, USA)
2. **Group Theoretic Dimension of Stationary Symmetric Stable Random Fields.** Arijit Chakrabarty\* (Indian Statistical Institute, India), Parthanil Roy (Indian Statistical Institute, Kolkata, India)
3. **Colorectal Cancer Mortality and Obesity Index: a Systematic Review and Meta Analysis.** Chia-Hao Chang\* (Chang Gung Institute of Technology, Taiwan)
4. **A Testing Problem in Functional Varying-coefficient Models with a Categorical Variable.** Kyunghye Han\* (Seoul National University, Korea), Hyejin Shin (Seoul National University, Korea)
5. **Approximation for Eigenvalue Distributions of a Real or Complex Wishart Matrix.** Masayoshi Hasegawa\* (Saitama University, Japan), Hitoshi Kato (Saitama University, Japan), Hiroki Hashiguchi (Saitama University, Japan)
6. **Tuning Parameter Selection in Sparse Regression Modeling.** Kei Hirose\* (Osaka University, Japan), Shohei Tateishi (Toyama Chemical Co., Ltd., Japan), Sadanori Konishi (Chuo University, Japan)
7. **A Two-stage Dimension Reduction Method for Transformed Responses and Its Applications.** Hung-Hung\* (National Taiwan University, Taiwan)
8. **Monitoring general Linear Profiles Using Simultaneous Confidence Bands Schemes.** Longcheen Huwang\* (Institute of Statistics, National Tsing Hua University, Taiwan), Yi-Hua Tina Wang (Tamkang University, Taiwan), Shuhan Xue (National Tsing Hua University, Taiwan)
9. **Asymmetry Based on Marginal Ridits for Square Contingency Tables.** Kiyotaka Iki\* (Tokyo University of Science, Japan), Kouji Tahata (Tokyo University of Science, Japan), Sadao Tomizawa (Tokyo University of Science, Japan)
10. **Bayesian Regression Model for Seasonal Forecast of Precipitation over Korea.** Seongil Jo\* (Seoul National University, Korea), Yaeji Lim (Seoul National University, Korea), Jaeyong Lee (Seoul National University, Korea), Hee-Seok Oh (Seoul National University, Korea), Hyun-Suk Kang (Korea Meteorological Administration, Korea)
11. **Statistical Inference in Structural Equation Modeling with a Near Singular Covariance Matrix.** Ami Kamada\* (Osaka University, Japan), Yutaka Kano (Osaka University, Japan)
12. **Adaptive Basis Expansions for Nonlinear Regression Models.** Daeju Kim\* (Kyushu University, Japan), Shuichi Kawano (Graduate School of Engineering, Osaka Prefecture University, Japan), Yoshiyuki Ninomiya (Institute of Mathematics for Industry, Kyushu University, Japan)
13. **On Marginal Cumulative Logistic Models for Multiway Contingency Tables.** Hiroyuki Kurakami\* (Tokyo University of Science, Japan), Kouji Tahata (Tokyo University of Science, Japan), Sadao Tomizawa (Tokyo University of Science, Japan)
14. **Generalized Simultaneous Confidence Sets for the Coefficients of a Linear Model and Their Ratios.** Chi-Rong Li\* (Chung Shan Medical University, Taiwan), Tsai-Yu Lin (Feng Chia University, Taiwan)
15. **Generalized Confidence Interval on the Abscissa of the Point of Intersection for Two Nonparallel Regression Lines.** Tsai Yu Lin\* (Feng Chia University, Taiwan), Li, Chi Rong (Chung Shan Medical University, Taiwan)
16. **Credit Risk Estimation with a Particle Filter.** Hiroumi Misaki\* (The University of Tokyo, Japan)
17. **Statistical Analysis of Neuronal Spike Data Based on a Point Process Model.** Sho Mizoe\* (University of Tokyo, Japan), Fumiyasu Komaki (University of Tokyo, Japan)
18.  **$\beta$ -empirical Bayes Inference and Model Diagnosis of Microarray Data.** Md. Manir Hossain Mollah\* (University of Tokyo, Japan), Md. Nurul Haque Mollah (University of Rajshahi, Bangladesh), Hirohisa Kishino (The University of Tokyo, Japan)
19. **Determining a BMDL of Lead Based on a Semiparametric Regression Model.** Jin Kyoong Moon\* (Yonsei University, Korea), Byung Soo Kim (Yonsei University, Korea)
20. **Bootstrapping Graphs for Computing Condence Levels of Identied Network Communities.** Haruhisa Nagata\* (Tokyo Institute of Technology, Japan), Hidetoshi Shimodaira (Tokyo Institute of Technology, Japan)
21. **Space-time Model for Repeating Earthquakes.** Shunichi Nomura\* (The Graduate University for Advanced Studies, Japan), Yosihiko Ogata (The Institute of Statistical Mathematics, Japan)
22. **Evaluation of Multivariate Gaussian Probability with Lattice Structured Procedure.** Noboru Nomura\* (National Institute of Advanced Industrial Science and Technology, Japan)
23. **Weighted Threshold Regression Model Applied to Friedewald Equation.** Hung-yu Pan\* (National Chiayi University, Taiwan)
24. **Ellipsoidal Modeling of Regression Analysis.** Toshiyuki Shimono\* (Picolab Co., LTD, Japan)
25. **Second-order Matching Priors Depending on Sample Sizes.** Toyoto Tanaka\* (University of Tokyo, Japan), Fumiyasu Komaki (University of Tokyo, Japan)
26. **The Relative R-squared Method for miRNA Target Prediction.** Hsiuying Wang\* (National Chiao Tung University, Taiwan)
27. **Profile Monitoring Using Artificial Neural Network.** Yi-Hua Tina Wang\* (Tamkang University, Taiwan), Jen Tang (Purdue University, USA)
28. **Haplotype Association Analysis Approach for Combining Family Triads and Population Case-control Data.** Shu-Hui Wen (Tzu-Chi University, Taiwan), Miao-Yu Tsai (National Changhua University of Education, Taiwan)
29. **Geneset Analysis of Korean Autism Data Using Generalized Linear Model with Random Effect.** Mira Park (Eulji University, Korea), WonSeok Woo (Korea University, Korea), HyoJung Lee (Korea University, Korea), SeoHoon Jin (Korea University, Korea)