

Joint Meeting of  
The 2011 Taipei International Statistical Symposium and  
7th Conference of the Asian Regional Section of the IASC

*7<sup>th</sup> IASC-ARS*  
 **$\Sigma$  joint 2011**  
*Taipei Symposium*

*December 16 - 19, 2011*  
*Academia Sinica, Taipei, Taiwan*



<http://joint2011.stat.sinica.edu.tw/>



# Conference Program Schedule





## List of Sessions

<b>HSS1:</b>	Humanities and Social Sciences Center 1st Conference Room	<b>AC1:</b>	Activity Center 1 <sup>st</sup> Conference Room
<b>HSS2:</b>	Humanities and Social Sciences Center 2nd Conference Room	<b>AC2:</b>	Activity Center 2 <sup>nd</sup> Conference Room
<b>HSSM:</b>	Humanities and Social Sciences Center Media Conf. Room	<b>AC3:</b>	Activity Center 3 <sup>rd</sup> Conference Room
<b>ISS:</b>	Institute of Statistical Science	<b>AC4:</b>	Activity Center 4 <sup>th</sup> Conference Room

### December 16 (Friday)

Humanities and Social Science Center International Conference Hall							
<b>Tutorial (I): Gene Mapping in Experimental Genetics and in Humans</b> <i>Speaker: David O. Siegmund, Chair: Chao A. Hsiung</i>							
Tea Break							
<b>Tutorial (II): Detection of Local Signals with Genomic Applications</b> <i>Speaker: David O. Siegmund, Chair: Chao A. Hsiung</i>							
Lunch Break							
<b>Opening Ceremony</b>							
<b>Keynote Speech (I): Isotonic Nonparametric Regression in the Presence of Measurement Error</b> <i>Speaker: Peter Hall, Chair: Genshiro Kitagawa</i>							
Tea Break							
Time							
14:40 – 16:10	16a1 Innovative Statistical Methods for Translational Research in Clinical Trials	16a2 Biostatistics and Others	16a3 Applied Probability	16a4 Genomics and Personalized Medicine	16a5 Machine Learning	16a6 Clinical Trials (I)	16a7 Mathematical Statistics (I)
16:10 – 16:30	Tea Break						
16:30 – 18:00	16b1 Shrinkage in Statistics and Machine Learning	16b2 Multiple Endpoints in Clinical Trials	16b3 Copula and Its Applications	16b4 Genomic Statistics	16b5 Computational Neuroscience	16b6 Statistical Computing	16b7 Mathematical Statistics (II)
18:30 –	<b>Reception</b> (Humanities and Social Sciences Center Recreation Hall)						

## December 17 (Saturday)





Humanities and Social Science Center International Conference Hall										
Keynote Speech (II): Statistical Issues in Personalized Genomics & Medicine Speaker: Wing Hung Wong, Chair: Chuhsing Kate Hsiao										
The StatisticaSinica Special Invited Session (I): Dictionary models for Item Association with Applications to Chinese Text Analysis Speaker: Jun Liu, Chair: Naisyin Wang										
Tea Break										
Time		HSS1	HSS2	HSSM	17a4	AC1	17a5	AC2	AC3	AC4
08:30 – 09:30		17a1 Statistical Genetics	17a2 Statistical Methods for Large Scale Data: from Gene to Sun	17a3 Medical Statistics	17a4 Analysis of Social Networks: Detecting Patterns and Rules of Interaction in Humans		17a5 CSA/JSS/KSS International Session Time Series Analysis and Stochastic Processes		17a6 Statistical Modeling And Analysis for Suicide Data	17a7 Computer Experiments
10:30 – 12:00										
12:00 – 13:00		Lunch Break / ISI EAOC Meeting (HSS Reception Room)				Poster Session (HSS 4th Floor)				
13:00 – 14:30		17b1 Industrial Statistics	17b2 Statistical Genetics	17b3 Advances in Functional Data Analysis	17b4 IASC Committee on CS & DM in KD Special Invited Session Massive Data Analysis focused on Symbolic Data Analysis		17b5 CSA/JSS/KSS International Session Modeling and Inference for Biomedical/ High Dimensional Data		17b6 Time Series and Spatial Data Analysis	17b7 Statistical Computing in Multisensory Network Systems
14:30 – 14:40		Tea Break								
14:40 – 16:10		17c1 ISBIS Special Invited Session Reliability Evaluation	17c2 Statistical Bioinformatics	17c3 Machine Learning and Its Applications	17c4 Statistics in Systems Biology		17c5 CSA/JSS/KSS International Session Multivariate Analysis		17c6 The Bernoulli Society Special Invited Session Mathematical Finance, Applied and Theoretical Developments	17c7 Statistical Graphics and Visualization
16:10 – 16:30		Tea Break								
16:30 – 17:30		17d1 Algorithmic Trading Methods and Models	17d2 Finance	17d3 Mathematical Statistics(III)	17d4 Clinical Trials(II)		17d5 Applications (I)		17d6 Applications(II)	17d7 Clinical Trials (III)
18:30 –		Welcome Party & Dinner Speech: How Statistica Sinica is Started. Speaker: George C. Tiao (National Taiwan University Hospital International Convention Center)								

## December 18 (Sunday)

Time	Humanities and Social Science Center International Conference Hall						
08:30 – 10:10	<b>The Future Research and Education in Statistics</b> <i>Organizer: Jing-Shiang Hwang, Chair: George C. Tiao</i> <b>Statisticians at work: Inspiration, Aspiration, Ambition</b> <b>Statistical Education and Educating Statisticians: Producing Wine Connoisseurs and Master Winemakers</b> <b>Graduation Education in Biostatistics: My Personal Viewpoint</b>						
10:10 – 10:30	Tea Break						
Time	HSS1	HSS2	HSSM	AC1	AC2	AC3	AC4
10:30 – 12:00	18a1 Bayesian Modeling and Computation	18a2 Financial Time Series Analysis	18a3 Robustness and Diagnostics toward Data Analysis	18a4 Statistics in Systems Biology	18a5 Distribution Theory	18a6 Cure Models in Event History Analysis	18a7 Model/Variable Selection
12:00 – 13:00	Lunch Break / IASC-ARS BoD Meeting (HSS Reception Room) / The Chinese Institute of Probability and Statistics Meeting (ISS R208)						
13:00 – 14:30	18b1 IASC-ERS Special Invited Session Feature Selection and Extraction in Predictive Modeling	18b2 Financial Statistics	18b3 Knowledge Creation from a Statistical Viewpoint	18b4 IASC Committee on CS & DM in KD Special Invited Session Model-based Approach to Knowledge Discovery	18b5 Design of Experiments	18b6 Applications (II)	18b7 Financial Statistics and Others
14:30 – 14:40	Tea Break						
14:40 – 16:10	18c1 Bioinformatics and Translational Medicine	18c2 Simulation Techniques in Quantitative Finance	18c3 Statistics Education	18c4 Statistics and Visualization	18c5 Recent Advances in Transformation Methods	18c6 Time Series	18c7 Statistical Meta-Analysis
16:10 – 16:30	Tea Break						
16:30 – 18:00	18d1 Environmental Statistics	18d2 Analysis of Financial Time Series	18d3 Recent Developments in Biostatistics	18d4 Applications of Clustering Techniques	18d5 Statistical Methods for Social Studies	18d6 Bayesian Statistics and Computing	
18:20 – 19:20	<b>Concert – National Chinese Orchestra Taiwan</b> (Humanities and Social Sciences Center International Conference Hall)						
19:30 –	<b>Banquet &amp; Dinner Speech: The ISI and National Statistical Societies</b> Speaker: Jae Chang Lee, Host: Yutaka Tanaka (Humanities and Social Sciences Center Recreation Hall)						

December 19 (Monday)

Time	HSS1	HSS2	HSSM	AC1	AC2	AC3	AC4
09:00 – 10:30	19a1 Recent Advances in Analysis of Dependent Data	19a2 Recent Advances in Statistical Model Selection	19a3 Interface Special Invited Session Visualization	19a4 Time Series	19a5 Advances in Computational Biology	19a6 Statistics in Finance	
10:30 – 10:50	Tea Break (Human and Social Sciences Center ONLY)						
Time	Humanities and Social Sciences Center International Conference Hall						
10:50 – 11:40	<b>The StatisticaSinica Special Invited Session (II): Dynamic Empirical Bayes Models and Their Applications to Finance and Insurance</b> <i>Speaker: Tze Leung Lai, Chair: Ngai Hang Chan</i>						
11:40 – 12:00	<b>Closing Ceremony</b>						
12:30 –	<b>Local Tour</b>						

-  2011 Taipei International Statistical Symposium
-  7th Conference of the Asian Regional Section of the IASC
-  CSA/JSS/KSS International Session
-  Contributed Sessions (Oral Presentation / Poster Session)



## Invited Guest Speakers Biographies

### Peter Hall

*Department of Mathematics and Statistics, University of Melbourne, Australia*

Keynote Speech (I) @ December 16 (Friday) 13:20 – 14:20

Professor Hall is an ARC Federation Fellow and Professor of Statistics in the Department of Mathematics and Statistics, and has a fractional appointment as Distinguished Professor of Statistics at the University of California at Davis. By developing a leading-edge research program in modern statistics, Professor Hall aims to produce a new generation of world-class Australian statistical scientists. The availability of modern computer technology has had a dramatic impact on statistical methods and thinking. The nature and volume of data that are collected have changed and continuously require new nonparametric statistical techniques to deal with increasing complexity. His research enjoys a range of applications, in areas such as economics, defence, health science, engineering, astronomy and image analysis. Professor Hall completed his DPhil in Probability Theory at Oxford University. He has been elected to fellowship of the Australian Academy of Science, the Royal Society of London, the Royal Society of Edinburgh, the American Statistical Association and the Institute of Mathematical Statistics. He has received numerous prestigious international awards and honours in recognition of his contributions to his field of research. These include the Committee of Presidents of Statistical Societies Award (1989), a Centennial Professorship at the London School of Economics (2000-02), the American Statistical Association Award for an Outstanding Paper on Statistical Applications (2002), the Gottfried E. Noether Senior Researcher Award from the American Statistical Association (2007), and honorary doctorates from the Université Catholique de Louvain (1997), the University of Glasgow (2005) and the University of Sydney (2009). Professor Hall has delivered a number of distinguished lectures, including the Kolmogorov Lecture for the Bernoulli Society (1996); the H.O. Hartley Lectures, Texas A&M University (2001); the Stephen Corcoran Memorial Lectures, Oxford University (2001); the Wald Lectures for the Institute of Mathematical Statistics (2006); the Bahadur Lectures, University of Chicago (2009); and the Challis Lectures, University of Florida (2009). Currently he is co-editor of *Statistica Sinica* (2008-2011), a Vice President of the Australian Academy of Science (2008-2012) and President-elect of the Institute of Mathematical Statistics (2009-2010).

Edited from <http://research.science.unimelb.edu.au/profile/eminent/hall>

### Tze Leung Lai

*Department of Econometrics and Statistics, University of Chicago, U.S.A.*

The Statistica Sinica Special Invited Session (II) @ December 19 (Monday) 10:50 – 11:40

Professor Lai's present research areas include sequential experimentation, adaptive design and control, stochastic optimization, time series analysis and forecasting, change-point detection, hidden Markov models and particle filters, empirical Bayes modeling, multivariate survival analysis, probability theory and stochastic processes, biostatistics, econometrics, quantitative finance and risk management. His methodological research in these areas has been motivated by and is closely related to his applied interests in engineering, finance, and the biomedical sciences. As director of the Financial Mathematics Program and co-director of the Biostatistics Shared Resource of the Stanford Cancer Institute, he is involved in several research projects in these fields.

Edited from <http://www.stat.stanford.edu/people/faculty/lai/index.html>

## Jae Chang Lee

*ISI President; Department of Statistics, Korea University, Korea*

Banquet Dinner Speech @ December 18 (Sunday) 19:30 –

Professor Lee received his Ph.D. in statistics from the Ohio State University, Columbus, Ohio, U.S.A. in 1972. He served as chief in the Statistical Engineering Lab of Korea Standard Research Institute as a founding member. Since 1979 he was a professor of statistics at Korea University until he retired from the position in 2007. His research interests include nonparametric inference, multivariate analysis and combining data from different sources. He is an elected member of Korean Academy of Science and Technology. He was President of the Korean Statistical Society, President of IASC and Vice President of ISI. He serves currently as the President of The International Statistical Institute (ISI) and a Co-Editor of Computational Statistics & Data Analysis.

## Kung-Yee Liang

*President, National Yang-Ming University, Taiwan, R.O.C.*

The Future Research and Education in Statistics @ December 18 (Sunday) 08:30 – 10:10

Dr. Liang received his Ph.D. in Biostatistics from University of Washington in 1982 and has been faculty at the Department of Biostatistics, Johns Hopkins University since then until July, 2010. He served as the Graduate Program Director for the department from 1996 to 2003. Dr. Liang has served as the Vice President, National Health Research Institutes (NHRI), Taiwan from July, 2003 to August, 2006 and was NHRI's Acting President for six months beginning in January, 2006. In August, 2010, Liang was appointed as the President of the National Yang-Ming University, the first medically oriented university in Taiwan. His research interest has primarily been on developing new statistical methods for analyzing correlated data derived from longitudinal and genetic epidemiological studies. He is an internationally renowned epidemiologist and biostatistician. His innovative works in the developments and applications of Generalized Estimating Equations are well known among statisticians, epidemiologists and health Sciences researchers. He is a co-author of the book on Analysis of Longitudinal Data published by the Oxford University Press in 1994 (2002 for the second edition). Among the honors and awards, Dr. Liang has received the Snedecor Award (with Scott Zeger) in 1987 by the American Statistical Association for best publication in biometry for 1986 and the Spiegelman Award by the American Public Health Association in 1990 for outstanding accomplishments in the field of health statistics. He is the Elected Fellow of the American Statistical Association in 1995 and the Elected Academician, Academia Sinica, Taiwan in 2002. In 2010, Dr. Liang was the recipient of the RemaLaPouse Award by the American Public Health Association for significant contributions to the scientific understanding of the epidemiology and control of mental disorders.

Edited from <http://www.icsa.org/awards/distinguish/2011.html>



## Jun Liu

*Department of Statistics and Department of Biostatistics, Harvard University, U.S.A.*

The Statistica Sinica Special Invited Session (I) @ December 17 (Saturday) 09:30 – 10:10

Dr. Liu is currently interested in the following topics: (a) predicting gene regulatory binding motifs; (b) homology modeling and sequence-based protein analysis; (c) linkage disequilibrium studies; and (d) phylogenetic studies. He and his collaborators started to explore the utility of the statistical missing data formulation and Gibbs sampling strategies for biological sequence analysis since 1993. Over the years, they have developed a number of algorithms, including the Gibbs motif sampler, PROBE, Bayes Aligner, BioProspector, and MDscan, suitable for detecting subtle sequence relationships and weak repetitive patterns. In particular, the Gibbs motif sampler has been adopted by many other research groups and become a standard tool for finding DNA regulatory binding motifs. Dr. Liu's long-term goals in computational gene regulation analysis are to develop strategies to efficiently combine sequence information, cross-species comparisons, and microarray analysis; to design new statistical models for eukaryotic gene regulation modules; to investigate the use of Bayesian network in understanding gene regulation. Besides bioinformatics, Dr. Liu is also keenly interested in the general Monte Carlo methods (e.g., sequential Monte Carlo, Markov chain Monte Carlo, importance sampling) for integration and optimization in complex systems, and statistical applications in finance and engineering.

Edited from <http://www.hsph.harvard.edu/faculty/jun-liu/>

## Xiao-Li Meng

*Department of Statistics, Harvard University, U.S.A.*

The Future Research and Education in Statistics @ December 18 (Sunday) 08:30 – 10:10

Dr. Meng is Professor and Chairman of the Department of Statistics at Harvard University. He was the recipient of the 2001 COPSS Award, and the recipient of the 2003 Distinguished Achievement Award and the 2006 Distinguished Service Award from ICSA. He was ranked (by Science Watch) among the world top 25 most cited authors for articles published and cited during 1991-2001 in mathematical sciences. His degrees include BS (Fudan Mathematics Department, 1982), Master of Science Diploma (Fudan Mathematics Institute, 1986), Master of Art (Harvard Statistics, 1987), and Ph.D. (Harvard Statistics, 1990). He taught at The University of Chicago from 1991-2001 before joining Harvard University. He has served on editorial boards for leading statistical journals such as The Annals of Statistics, Biometrika, Journal of The American Statistical Association, and Bernoulli. He was the editor of "Bayesian Analysis" and co-chair editor of Statistica Sinica. He has served on numerous national and international professional committees, including chairing the 2004 Joint Statistical Meetings. He is also an elected fellow of American Statistical Association and of Institute of Mathematical Statistics. His research interests include wavelet modelling for signal and image data, statistical issues in astronomy and astrophysics, modelling and imputation for mental health survey data, Bayesian ranking and mapping, statistical principles and foundational issues, and Markov chain Monte Carlo, especially perfect sampling.

Edited from [http://www.stat.harvard.edu/Faculty\\_Content/Meng-cv.pdf](http://www.stat.harvard.edu/Faculty_Content/Meng-cv.pdf)

## David O. Siegmund

*Department of Statistics, Stanford University, U.S.A.*

Tutorial (I) @ December 16 (Friday) 09:00 – 10:20, (II) @ December 16 (Friday) 10:40 – 12:00

As a statistician interested in probability theory, Professor Siegmund focuses his research on statistical problems that arise in concrete scientific applications and require novel probability theory for their resolution. Until 1985 his research was primarily in sequential analysis, especially problems of the design and analysis of sequential clinical trials. A related interest was sequential “change-point” detection, motivated by problems of monitoring a continuous production process for changes that can only be inferred from noisy measurements on its output. This led to several years of research on a variety of change-point-like problems and related problems of nonlinear regression, which have found a wide variety of applications. Recently Professor Siegmund has concentrated on statistical aspects of genetic mapping. From the modern viewpoint of a “genome scan” based on hundreds of mapped markers to search for anonymous genes, genetic mapping is very similar to change-point problems with the location of the gene as change-point. He has also used techniques developed to study change-point problems to give approximate p-values for gapped pairwise local sequence alignments.

Edited from <http://stat.stanford.edu/people/faculty/siegmund/index.html>

## George C. Tiao

*Department of Econometrics and Statistics, University of Chicago, U.S.A.*

Welcome Party Dinner Speech @ December 17 (Saturday) 18:30 –

Dr. Tiao is W. Allen Wallis Professor of Econometrics and Statistics (emeritus), University of Chicago. He earned his B.S. in Economics from National Taiwan University in 1955, MBA from New York University in 1958 and Ph.D. in Economics from the University of Wisconsin-Madison in 1962. He was Assistant, Associate, Full, and Bascom Professor of Statistics and Business from 1962 to 1982 at the University of Wisconsin - Madison, and served as Chairman of the Statistics Department from 1973 to 1975. He joined the Graduate School of Business, University of Chicago as W. Allen Wallis Professor of Statistics and retired in 2003. His research covers Bayesian inference, time series analysis, and environmental study of stratospheric ozone/temperature and air pollution data. He has authored, co-authored and co-edited 6 books and more than 120 articles in leading econometric, environmental and statistical journals. He has supervised more than 25 Ph.Ds. and served on numerous academic committees in the United States, China, Hong Kong, and Taiwan. He was the founding president of the International Chinese Statistical Association, and the founding editor of *Statistica Sinica*. He has received many honors, including Fellow of ASA and IMS, elected member of Academia Sinica, Taiwan in 1976, the 2001 Wilks Memorial Medal and the Shiskin Award of the American Statistical Association, and honorary doctorates from Universidad Carlos III de Madrid and National Tsinghua University in 2003. He also received the Statistician of the Year Award in 2005 from the Chicago Chapter of the American Statistical Association.

Edited from <http://www.icsa.org/awards/distinguish/2009.html>

## Wing Hung Wong

*Department of Statistics, Stanford University, U.S.A.*

Keynote Speech (II) @ December 17 (Saturday) 08:30 – 09:30

Dr. Wong is a Professor of Statistics and of Health Research and Policy. Dr. Wong's lab develops methods and software for the analysis of the data from high throughput genomics projects. They developed the software dChip for the analysis microarray data and the programs CisGenome, SeqMap and SpliceMap for the analysis of next generation sequencing data. Their methodological work is motivated by close collaborations with biology groups on problems arising from cancer and developmental biology. Of particular interest is the combined use of experimental and computational analysis to clarify the cis-regulatory mechanisms underlying several developmental processes. More generally, they employ and develop tools from exploratory data analysis, multivariate analysis, information theory, machine learning, Monte Carlo, graph theory, linear and nonlinear differential equations, and applied them to problems in computational biology and system biology.

Edited from <http://biox.stanford.edu/clark/wong.html>

## C.F. Jeff Wu

*School of Industrial and Systems Engineering, Georgia Institute of Technology, U.S.A.*

The Future Research and Education in Statistics @ December 18 (Sunday) 08:30 – 10:10

Dr. Wu is a professor in ISyE and holds the Coca-Cola Chair in Engineering Statistics. His honors include membership on the National Academy of Engineering (2004), Member (Academician) of Academia Sinica (2000), COPSS (Committee of Presidents of Statistical Societies) Presidents Award in 1987, honorary professor at Chinese Academy of Sciences, and an honorary doctor of mathematics at U. of Waterloo. (COPSS Award is presented annually to the best researcher under the age of 40.) He is a Fellow of the American Society for Quality, of the Institute of Mathematical Statistics, and of the American Statistical Association. Dr. Wu has won numerous awards, including Taiwan's Penwenyuan Technology Award in 2008, the 1990 Wilcoxon Prize for the best paper in Technometrics, the 1992 Brumbaugh Award for the single most important paper to quality control among the publications sponsored by the American Society for Quality Control, and the Jack Youden Prize twice (1997, 2004) for best paper in Technometrics. He was the 1998 P. C. Mahalanobis Memorial Lecturer at the Indian Statistical Institutes with widely cited research work and a listing as an "ISI Highly Cited Researcher" in 2002. Dr. Wu's work is widely cited in professional journals as well as in magazines, including a feature article about his work in Canadian Business and a special issue of Newsweek on quality. He has served as editor or associate editor for several prestigious statistical journals like Annals of Statistics, Journal of American Statistical Association, Technometrics, and Statistica Sinica. Professor Wu has published more than 130 research articles in peer review journals. He has supervised 35 Ph.D.'s, many of which are teaching in major research departments in statistics/engineering/business in US/ Canada/Asia and two were senior VP in major US companies. He co-authors with Mike Hamada the award-winning book "Experiments: Planning, Analysis, and Optimization" and with R Mukerjee the book "A Modern Theory of Factorial Designs".

Edited from <http://www2.isye.gatech.edu/~jeffwu/>



## Daily Schedule

- ♠: 2011 Taipei International Statistical Symposium
- ♥: 7th Conference of the Asian Regional Section of the IASC
- ♣: CSA/JSS/KSS International Session
- ♦: Contributed Sessions (Oral Presentation / Poster Session)

### December 16 (Friday):

#### ***Tutorials (I) [09:00 – 10:20] & (II) [10:40 – 12:00]:***

Location: HSS International Conference Hall  
Title (I): Gene Mapping in Experimental Genetics and in Humans  
Title (II): Detection of Local Signals with Genomic Applications  
Speaker: David O. Siegmund (Stanford University, U.S.A.)  
Chair: Chao A. Hsiung (National Health Research Institutes, Taiwan, R.O.C.)

#### ***Keynote Speech (I) [13:20 – 14:20]:***

Location: HSS International Conference Hall  
Title: Isotonic Nonparametric Regression in the Presence of Measurement Error  
Speaker: Peter Hall (University of Melbourne, Australia)  
Chair: Genshiro Kitagawa (The Institute of Statistical Mathematics, Japan)

#### ***Parallel Sessions [14:40 – 16:10]:***

- ♠ **16a1 - Innovative Statistical Methods for Translational Research in Clinical Trials**  
Location: HSS 1<sup>st</sup> Conference Room  
Organizer: Chen-Hsin Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)  
Chair: Jen-Pei Liu (National Taiwan University, Taiwan, R.O.C.)
  - 2:40 p.m. Sample Size Estimation in Phase III Clinical Trials  
K. K. Gordon Lan (Johnson & Johnson, U.S.A.)
  - 3:10 p.m. Right Medicines for Right Patients  
Christy Chuang-Stein (Pfizer Inc, Kalamazoo, Michigan, U.S.A.)
  - 3:40 p.m. Sequential Treatment Selection in Early Phase Clinical Trials Using a Prognostic Biomarker: a Simple SPRT Approach  
Ying Kuen (Ken) Cheung (Columbia University, U.S.A.)
- ♥ **16a2 - Biostatistics & Other**  
Location: HSS 2<sup>nd</sup> Conference Room  
Organizer: Lianwen Zhao (Southwest Jiaotong University, China)  
Chair: Lianwen Zhao (Southwest Jiaotong University, China)
  - 2:40 p.m. Oracle Inequalities and Model Selection  
Lianwen Zhao (Southwest Jiaotong University, China)
  - 3:10 p.m. Bayes Lasso for Detecting Gene-gene Interaction in Case-control Study  
Haitao Zheng (Southwest Jiaotong University, China)

3:40 p.m. Adaptive Estimation and Model Selection in Stationary Sequence  
Cheng Liu (Southwest Jiaotong University, China)

♠ **16a3 - Applied Probability**

Location: HSS Media Conference Room

Organizer: Ting-Li Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Ting-Li Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

2:40 p.m. On the Optimal Transition Matrix for Mcmc Sampling  
Hui-Ming Pai (National Taipei University, Taiwan, R.O.C.)

3:10 p.m. On the Stochastic Heat Equations  
Shang-Yuang Shiu (Institute of Mathematics, Academia Sinica, Taiwan, R.O.C.)

3:40 p.m. Generative Models for Image Analysis: Data Likelihood versus Feature Likelihood  
Lo-Bin Chang (National Chiao Tung University, Taiwan, R.O.C.)

♠ **16a4 - Genomics and Personalized Medicine**

Location: AC 1<sup>st</sup> Conference Room

Organizer: James J. Chen (Food and Drug Administration, U.S.A.)

Chair: Huey-Miin Hsueh (National Chengchi University, Taiwan, R.O.C.)

2:40 p.m. Application of Principal Component Analysis on Evaluation of Gene Signature's  
Clinical Association  
Dung-Tsa Chen (Moffitt Cancer Center, U.S.A.)

3:10 p.m. A Powerful Association Test of Rare Variants Using a Random-Effects Model  
Kuang-Fu Cheng (China Medical University, Taichung, Taiwan, R.O.C.)

♦ **16a5 - Machine Learning**

Location: AC 2<sup>nd</sup> Conference Room

Chair: Hong-Wei Chuang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

2:40 p.m. Effect of Unlabeled Data and Labeling Strategy on Error Rate in Linear Discriminant  
Analysis  
Kenichi Hayashi (Osaka University, Japan)

2:58 p.m. Visualization Tools for Feature Extraction of Order Fluctuations  
Tomokazu Fujino (Fukuoka Women's University, Japan)

3:16 p.m. Text Mining Application to Internet Shopping Mall Customers' Reviews  
Seohoon Jin (Korea University, Korea)

3:34 p.m. Analysis of Influence Pattern at Training Samples in Discrimination  
Kuniyoshi Hayashi (Okayama University, Japan)

3:52 p.m. Text Mining with Extraction of Similar Expression Patterns by Using Signed  
Bipartite Graph  
Michiharu Kitano (Doshisha University, Japan)

♦ **16a6 - Clinical Trials (I)**

Location: AC 3<sup>rd</sup> Conference Room

Chair: Chi-Sheng Chang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

2:40 p.m. Semiparametric Stochastic Modeling for Epidemic Data  
Chia-Hui Huang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 3:02 p.m. Sample Size Re-Estimation without Breaking the Blind in Clinical Trial  
Chien-Hua Wu (Chung-Yuan Chirstian University, Taiwan, R.O.C.)
- 3:25 p.m. Futility Stopping in Clinical Trials: Theory and Applications  
Olivia Liao (Stanford University, U.S.A.)
- 3:47 p.m. A Consistency Approach to Evaluation of Biosimilar Products  
Hsiao-Hui Tsou (National Health Research Institutes, Taiwan, R.O.C.)

◆ **16a7 - Mathematical Statistics (I)**

Location: AC 4<sup>th</sup> Conference Room

Chair: Hung-Yi Lu (Fu Jen Catholic University, Taiwan, R.O.C.)

- 2:40 p.m. Abstract Tube Associated with a Perturbed Polyhedron and Multidimensional  
Normal Probability Calculation  
Satoshi Kuriki (Institute of Statistical Mathematics, Japan)
- 2:58 p.m. Test Statistics, Orbit, and Optimization  
Hsih-Chia Hsieh (Providence University, Taiwan, R.O.C.)
- 3:16 p.m. On the Two-step Estimator for the Shape Parameter of the Gamma Distribution  
Yoshiji Takagi (Nara University of Education, Japan)
- 3:34 p.m. Predicting Survival Outcomes Based on Compound Covariate Method under Cox  
Proportional Hazard Models with Microarrays  
Takeshi Emura (National Central University, Taiwan, R.O.C.)
- 3:52 p.m. Reconstruction of Individual Patient Data for Meta-analysis via Bayesian Approach  
Yusuke Yamaguchi (Osaka University, Japan)

***Parallel Sessions [16:30 – 18:00]:***

♣ **16b1 - Shrinkage in Statistics and Machine Learning**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Chen-Hai Andy Tsao (National Dong Hwa University, Taiwan, R.O.C.)

Chair: Chen-Hai Andy Tsao (National Dong Hwa University, Taiwan, R.O.C.)

- 4:30 p.m. Post Selection Statistical Inference and Empirical Bayes Confidence Intervals  
J. T. Gene Hwang (Cornell University, U.S.A. and National Cheng Kung University,  
Taiwan R.O.C.)
- 5:00 p.m. A Bayesian Rating System Using W-Stein's Identity  
Ruby Chiu-Hsing Weng (National Chengchi University, Taiwan, R.O.C.)
- 5:30 p.m. Dimension Reduction for Change Point Detection with Application to fMRI  
John Aston (University of Warwick, United Kingdom)

♥ **16b2 - Multiple Endpoints in Clinical Trials**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Toshimitsu Hamasaki (Osaka University Graduate School of Medicine, Japan)

Chair: Chin-Fu Hsiao (National Health Research Institutes, Taiwan, R.O.C.)

- 4:30 p.m. Testing Multiple Endpoints in Complex Clinical Trial Designs  
James Hung (Food and Drug Administration, U.S.A.)
- 5:00 p.m. Utility and Pitfalls of Endpoint Selection with an Adaptive Design  
Sue-Jane Wang (Food and Drug Administration, U.S.A.)
- 5:30 p.m. Sample Size Determination in Clinical Trials with Multiple Co-Primary Endpoints  
Sozu Takashi (Kyoto University School of Public Health, Japan)



♥ **16b3 - Copula and Its Applications**

Location: HSS Media Conference Room

Organizer: Ping He (Southwest Jiaotong University, China)

Chair: Ping He (Southwest Jiaotong University, China)

- 4:30 p.m. A New Algorithm to Generate Random Numbers with Some Classical Probability Distributions  
Ping He (Southwest Jiaotong University, China)
- 4:52 p.m. Dependent Analysis Based on Variable Structure Copula Model  
Qin Wang (Southwest Jiaotong University, China)
- 5:15 p.m. Copula Reliability Models for Typical Unrepairable System Involving Failure Correlation  
Jiayin Tang (Southwest Jiaotong University, China)
- 5:37 p.m. The Regime Switching Character on the Volatility Spillover Effect between Stock Market and Bond Market  
Lu Wang (Southwest Jiaotong University, China)

♠ **16b4 - Genomic Statistics**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Hsin-Chou Yang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Hsin-Chou Yang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. Functional Logistic Regression and Genome Wide Association Studies  
Richard M Huggins (University of Melbourne, Australia)
- 5:00 p.m. Estimation of Odds Ratios of Genetic Variants for the Secondary Phenotypes Associated with Primary Diseases  
Sanjay Shete (University of Texas M.D. Anderson Cancer Center, U.S.A.)
- 5:30 p.m. Statistical Method for Detecting Disease-Associated Deletions Using Case-Control Genome-Wide SNP Genotype Data  
Chih-Chieh Wu (MD Anderson Cancer Center, U.S.A.)

♠ **16b5 - Computational Neuroscience**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Michelle Liou (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Shuen-Lin Jeng (National Cheng Kung University, Taiwan, R.O.C.)

- 4:30 p.m. An Introduction to Mathematical Models of Neuronal Networks  
Chin-Yueh Liu (National University of Kaohsiung, Taiwan, R.O.C.)
- 5:00 p.m. Mismatch Negativity: Interaction between Cortical Networks and Serotonin Transporter Genotypes  
Arthur C. Tsai (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)
- 5:30 p.m. Recursive Kernel Function Approximation for Bio-Signal Clustering  
Jiann-Ming Wu (National Dong Hwa University, Taiwan, R.O.C.)

♦ **16b6 - Statistical Computing**

Location: AC 3<sup>rd</sup> Conference Room

Chair: Chih-Yao Chang (Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. Split Variable Selection for Decision Trees with Ranking Data  
Yu-Shan Shih (National Chung Cheng University, Taiwan, R.O.C.)
- 4:48 p.m. Variable Selection in Principal Components Analysis of Qualitative Data Using the

- Accelerated ALS Algorithm  
Masahiro Kuroda (Okayama University of Science, Japan)
- 5:06 p.m. Calculation Methods and Graphical Expression of Two-step Cluster Analysis  
Takako Korikawa (Graduate School of Tokai University, Japan)
- 5:24 p.m. King-Werner Method for EM Algorithm  
Michio Sakakihara (Okayama University of Science, Japan)
- 5:42 p.m. Some Investigations on Rao-Blackwellization of Metropolis-Hastings Algorithm  
Chia-Wei Wang (National Chung Cheng University, Taiwan, R.O.C.)

◆ **16b7 - Mathematical Statistics (II)**

Location: AC 4<sup>th</sup> Conference Room

Chair: Tsui-Ling Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. On Compatibility of Discrete Conditional Distributions: A Graph-theoretic Approach  
Shih-Chieh Chen (National Chengchi University, Taipei, Taiwan, R.O.C.)
- 4:48 p.m. Does the Tail Asymmetry Really Matter? An Analysis Based on a Threshold Extreme Value Model  
Raymond K.S. Chan (Hong Kong University of Science and Technology, Hong Kong)
- 5:06 p.m. Variable Selection through Random Subsets  
Raymond W.M. Li (Hong Kong University of Science and Technology, Hong Kong)
- 5:24 p.m. Adjustment of Posterior Probability for Oversampling when Target is Rare  
Jong Hoo Choi (Korea University, Korea)
- 5:42 p.m. Moment Bounds and Multistep Prediction of Linear Processes  
Shih-Feng Huang (National University of Kaohsiung, Taiwan, R.O.C.)

**December 17 (Saturday):**

***Keynote Speech (II) [08:30 – 09:30]:***

Location: HSS International Conference Hall

Title: Statistical Issues in Personalized Genomics & Medicine

Speaker: Wing Hung Wong (Stanford University, U.S.A.)

Chair: Chuhsing Kate Hsiao (National Taiwan University, Taiwan, R.O.C.)

***The Statistica Sinica Special Invited Session (I) [09:30 – 10:10]:***

Location: HSS International Conference Hall

Title: Dictionary Models for Item Association with Applications to Chinese Text Analysis

Speaker: Jun Liu (Harvard University, U.S.A.)

Chair: Naisyin Wang (University of Michigan, U.S.A.)

***Parallel Sessions [10:30 – 12:00]:***

♠ **17a1 - Statistical Genetics**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Chao A. Hsiung (National Health Research Institutes, Taiwan, R.O.C.)

Chair: Chao A. Hsiung (National Health Research Institutes, Taiwan, R.O.C.)

- 10:30 a.m. On Selection of Endophenotypes in Genetic Mapping  
Yen-Feng Chiu (National Health Research Institutes, Taiwan, R.O.C.)
- 11:00 a.m. Mapping Complex Traits in Genetically Admixed Populations  
Hua Tang (Stanford University, U.S.A.)
- 11:30 a.m. Distribution of the Number of False Discovery Rates in Large-Scale Family-Based Association Testing with Application between PTPN1 and Hypertension and Obesity  
I-Shou Chang (National Health Research Institutes, Taiwan, R.O.C.)

♠ **17a2 - Statistical Methods for Large Scale Data: From Gene to Sun**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: I-Ping Tu (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Tzee-Ming Huang (National Chengchi University, Taiwan, R.O.C.)

- 10:30 a.m. Statistical Computing in Protein Folding  
Samuel Kou (Harvard University, U.S.A.)
- 11:00 a.m. Dynamic Tomographic Imaging of the Solar Corona  
Yuguo Chen (University of Illinois at Urbana-Champaign, U.S.A.)
- 11:30 a.m. Normalization and Testing for RT-PCR Experiments  
Marc Adlai Coram (Stanford University School of Medicine, U.S.A.)

♠ **17a3 - Medical Statistics**

Location: HSS Media Conference Room

Organizer: Yi-Ting Hwang (National Taipei University, Taiwan, R.O.C.)

Chair: Hung Hung (National Taiwan University, Taiwan, R.O.C.)

- 10:30 a.m. Modeling Left-truncated and Right Censored Survival Data with Longitudinal Covariates  
Jane-Ling Wang (University of California, Davis, U.S.A.)
- 11:00 a.m. Joint Modeling of Multivariate Survival and Longitudinal Data  
Yi-Kuan Tseng (National Central University, Taiwan, R.O.C.)
- 11:30 a.m. Statistical Methods for Evaluating ED Interventions  
Wendy Lou (University of Toronto, Canada)

♠ **17a4 - Analysis of Social Networks: Detecting Patterns and Rules of Interaction in Humans**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Hwai-Chung Ho (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Wei-Chung Liu (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Hwai-Chung Ho (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 10:30 a.m. Global and Local Assessment of Distributional Inequality in Networks  
Yen-Sheng Chiang (University of California, Irvine, U.S.A.)
- 11:00 a.m. Comparing Local Structure in Social Networks  
Katherine Faust (University of California, Irvine, U.S.A.)
- 11:30 a.m. Parametrizing Order-Stable Exponential Family Random Graph Models  
Cater Butts (University of California, Irvine, USA)

♣ **17a5 - CSA/JSS/KSS International Session**

Time Series Analysis and Stochastic Processes

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Ming-Yen Cheng (National Taiwan University, Taiwan, R.O.C.)



Sangyeol Lee (Seoul National University, Korea)

Jinfang Wang (Chiba University, Japan)

Chair: Byeongchan Seong (Chung Ang University, Korea)

10:30 a.m. Functional Limit Theorems of Ruin Behavior for Levy Insurance Risk Process

Hyun Suk Park (Hallym University, Korea)

11:00 a.m. Principal Volatility Components and Their Applications

Yu-Pin Hu (National Chi Nan University, Taiwan, R.O.C.)

11:30 a.m. Adaptive Estimation for Diffusion Processes

Yoichi Nishiyama (Institute of Statistical Mathematics, Japan)

#### ♣ **17a6 - Statistical Modeling and Analysis for Suicide Data**

Location: AC 3<sup>rd</sup> Conference Room

Organizer: Jeng-Tung Chiang (National Chengchi University, Taiwan, R.O.C.)

Chair: Anne Chao (National TsingHua University, Taiwan, R.O.C.)

10:30 a.m. An Illness and Death Model for Evaluating Cost Effectiveness of Suicide Prevention Programs

Paul Siu Fai Yip (University of Hong Kong, Hong Kong)

10:52 a.m. Spatial Autocorrelation Statistics and Spatial Clustering in The Areas in Japan with Low Suicide Rates

Takafumi Kubota (The Institute of Statistical Mathematics, Japan)

11:15 a.m. Age-Period-Cohort Analysis of Suicide Mortality in Taiwan – Gender-Specific Differences

Jeng-Tung Chiang (National Chengchi University, Taiwan, R.O.C.)

11:37 a.m. Analysis of the Repeated Suicide Attempt: A follow-up Study of the National Suicide Surveillance System in Taiwan

Wei-Hwa Chang (Taiwan Suicide Prevention Center, Taiwan, R.O.C.)

#### ♣ **17a7 - Computer Experiments**

Location: AC 4th Conference Room

Organizer: Chien-Yu Peng (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Ray-Bing Chen (Cheng Kung University, Taiwan, R.O.C.)

Chair: Chien-Yu Peng (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

10:30 a.m. Efficient Particle Swarm Methods for Optimal Space-Filling Designs on GPU

Weichung Wang (National Taiwan University, Taiwan, R.O.C.)

11:00 a.m. Iterative Kernel Fitting with Massive Data: Simultaneously Achieving Numeric and Nominal Accuracy

Peter Z. G. Qian (University of Wisconsin-Madison, U.S.A.)

11:30 a.m. Analysis of Computer Experiments with Functional Response

Ying Hung (Rutgers University, U.S.A.)

#### ***Poster Session [12:00 – 13:00]:***

Location: HSS 4th Floor

01. Optimum Settings of Process Mean, Economic Order Quantity, and Commission Fee

Chung-Ho Chen (Southern Taiwan University, Taiwan, R.O.C.)

02. Optimizing Latin Hypercube Designs by Particle Swarm with GPU Acceleration

Dai-Ni Hsieh (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

03. Some Properties of Naive Bayes  
HyunJi Kim (Sungkyunkwan University, Korea)
04. An Improvement of CFS Feature Subset Selection  
Jaeun Lee (Sungkyunkwan University, Korea)
05. Application of Coefficient of Intrinsic Dependence in Measuring Multivariate Association  
Li-yu Liu (National Taiwan University, Taiwan, R.O.C.)
06. Asymptotic Expansions of the Distributions of the Polyserial Correlation Coefficients  
Haruhiko Ogasawara (Otaru University of Commerce, Japan)
07. On the Calculation of Win Probability for a Baseball Game  
Norio Torigoe (Tokai University, Japan)
08. Matrix Variate Logistic Regression Model with Application to EEG Data  
Chen-Chien Wang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)
09. On Multilinear Principal Component Analysis of Order-two Tensors  
Peishien Wu (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)
10. An Iterative Algorithm for Robust Kernel Principal Component Analysis  
Yi-RenYeh (Research Center for Information Technology Innovation Academia Sinica, Taipei, Taiwan, R.O.C.)
11. Cancer Mortality Analysis by the Cox Proportional Hazard Model in Nagasaki Atomic Bomb Survivors  
Kenichi Yokota (Nagasaki University, Japan)
12. Predictor Selection for First-order Autoregressive Processes with Positive Disturbances  
Chiao-Yi Yang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

### ***Parallel Session [13:00 – 14:30]:***

#### **♣ 17b1 - Industrial Statistics**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Hsiuying Wang (National Chiao Tung University, Taiwan, R.O.C.)

Chair: Lyinn Chung (National Taipei University, Taiwan, R.O.C.)

- |           |   |
|-----------|---|
| 1:00 p.m. | Reliability in Nano-Technology and Logistics Industry<br>Jye-Chyi Lu (Georgia Institute of Technology, U.S.A.)                                      |
| 1:30 p.m. | Misspecification Analyses of Gamma with Inverse Gaussian Degradation Processes<br>Sheng-Tsaing Tseng (National TsingHua University, Taiwan, R.O.C.) |
| 2:00 p.m. | On The Monitoring of Mixture Linear Profiles<br>Yi-Hua Tina Wang (Tamkang University, Taiwan, R.O.C.)   |

#### **♣ 17b2 - Statistical Genetics**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Chen-Hung Kao (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Chen-Hung Kao (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- |           |   |
|-----------|---|
| 1:00 p.m. | Study Genetic Basis and Pathways of Complex Traits<br>Zhao-Bang Zeng (North Carolina State University, U.S.A.)  |
| 1:30 p.m. | Optimal Significance Analysis of Microarray Data in a Class of Tests whose Null Statistic can be Constructed<br>Hironori Fujisawa (Institute of Statistical Mathematics, Japan) |

♠ **17b3 - Advances in Functional Data Analysis**

Location: HSS Media Conference Room

Organizer: Jeng-Min Chiou (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: John Aston (University of Warwick, United Kingdom)

- 1:00 p.m. Nonlinear Representations for Functional Data  
Hans-Georg Müller (University of California Davis, U.S.A.)
- 1:30 p.m. Forecasting EDF Electricity Demand: a Curve Time Series Approach  
Qiwei Yao (London School of Economics, United Kingdom)
- 2:00 p.m. Parameter Estimation for Ordinary Differential Equations: an Alternative View on  
Penalty and Beyond  
Naisiyin Wang (University of Michigan, U.S.A.)

♥ **17b4 - IASC Committee on CS & DM in KD Special Invited Session**

**Massive Data Analysis Focused on Symbolic Data Analysis**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Hiroyuki Minami (Hokkaido University, Japan)

Chair: Ci-Ren Jiang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 1:00 p.m. A Feature Extraction Method for Mixed Feature-Type Symbolic Data  
Ikufumi Takagi (Doshisha University, Japan)
- 1:30 p.m. Analysis for Distribution Valued Dissimilarity Data  
Masahiro Mizuta (Hokkaido University, Japan)
- 2:00 p.m. Toward Complementary Application with Symbolic Data Analysis and Rough Set  
Theory  
Hiroyuki Minami (Hokkaido University, Japan)

♣ **17b5 - CSA/JSS/KSS International Session**

**Modeling and Inference for Biomedical/High Dimensional Data**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Ming-Yen Cheng (National Taiwan University, Taiwan, R.O.C.)

Sangyeol Lee (Seoul National University, Korea)

Jinfang Wang (Chiba University, Japan)

Chair: Ming-Yen Cheng (National Taiwan University, Taiwan, R.O.C.)

- 1:00 p.m. A Two-Step Procedure for Development of Powerful Robust Genetic Association  
Tests using Case-Parents Triad Data  
Jiun-Yi Wang (Asia University, Taiwan, R.O.C.)
- 1:30 p.m. Identification of Dissimilarities in High-Dimensional Gene Regulatory Systems by  
Predicted Discrepancies from State Space Model  
Rui Yamaguchi (University of Tokyo, Japan)
- 2:00 p.m. Nonparametric Analysis of Recurrent Events with Incomplete Observation Gaps  
Jinheum Kim (University of Suwon, Korea)

♠ **17b6 - Time Series and Spatial Data Analysis**

Location: AC 3<sup>rd</sup> Conference Room

Organizer: Hsin-Cheng Huang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Uwe Hassler (The Goethe University Frankfurt, Germany)

- 1:00 p.m. Threshold Modeling of Martingale Differences  
Kung-Sik Chan (University of Iowa, U.S.A.)



- 1:30 p.m. On Estimating the Parameters in Conditional Heteroskedasticity Models by Empirical Likelihood Estimation  
Tsung-Lin Cheng (National Changhua University of Education, Taiwan, R.O.C.)
- 2:00 p.m. Quasi-Likelihood Scan Statistics for Detection of Spatial Clusters with Covariates  
Pei-Sheng Lin (National Health Research Institutes, Taiwan, R.O.C.)

♥ **17b7 - Statistical Computing in Multisensory Network Systems**

Location: AC 4<sup>th</sup> Conference Room

Organizer: Yunmin Zhu (Sichuan University, China)

Chair: Yunmin Zhu (Sichuan University, China)

- 1:00p.m. Optimal Dimensionality Reduction of Sensor Data in Multisensor Estimation Fusion  
Enbin Song (Sichuan University, China)
- 1:22p.m. A Finite Iterative Algorithm for Best Linear Unbiased Estimation Fusion in Distributed Systems  
Jie Zhou (Sichuan University, China)
- 1:45p.m. Diffusion Based EM Algorithm for Distributed Estimation of Gaussian Mixtures in Wireless Sensor Networks  
Yang Weng (Sichuan University, China)
- 2:07p.m. Distributed Kalman Filtering Fusion with Packet Loss or Intermittent Communications  
Yingting Luo (Sichuan University, China)

***Parallel Session [14:40 – 16:10]:***

♥ **17c1 - ISBIS (The International Society for Business and Industrial Statistics) Special Invited Session**

**Reliability Evaluation**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Guoying Li (Chinese Academy of Sciences, China)

Chair: May-Ru Chen (National Sun Yat-sen University, Taiwan, R.O.C.)

- 2:40 p.m. System Reliability Evaluation in Absence of Partial Components Test Data  
Dan Yu (Chinese Academy of Sciences, China)
- 3:10 p.m. An Adaptive Design to Assess the Reliability of the Protechnic Control Subsystem in Opening the Solar Array  
Yubin Tian (Beijing Institute of Technology, China)
- 3:40 p.m. Software Reliability Modeling and Analysis with Non-homogeneous Poisson Processes  
Qingpei Hu (Chinese Academy of Sciences, China)

♥ **17c2 - Statistical Bioinformatics**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Jae Won Lee (Korea University, Korea)

Chair: YihHuei Steven Huang (Tamkang University, Taiwan, R.O.C.)

- 2:40 p.m. Clustering, Classification and Ordering via a Graph Theory  
Choongrank Kim (Pusan National University, Korea)
- 3:10 p.m. Minimax Estimation for Mixtures of Wishart Distributions  
Ja-Yong Koo (Korea University, Korea)

- 3:40 p.m. Exploration of Gene-Gene Interactions in Case-Control Study Using Information Gain  
Mira Park (Eulji University, Korea)

♠ **17c3 - Machine Learning and Its Applications**

Location: HSS Media Conference Room

Organizer: Su-Yun Huang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Chen-Hsiang Yeang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 2:40 p.m. Projective Power Entropy Based Learning for Unsupervised Data  
Shinto Eguchi (Institute of Statistical Mathematics, Japan)
- 3:10 p.m. Multiple Kernel Learning for Dimensionality Reduction  
Yen-Yu Lin (Research Center for Information Technology Innovation, Academia Sinica, Taiwan, R.O.C.)
- 3:40 p.m. Global Quantification of Mammalian Gene Expression Control  
Wei Chen (Max-Delbrueck Centre for Molecular Medicine, Germany)

♥ **17c4 - Statistics in Systems Biology**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Seiya Imoto (University of Tokyo, Japan)

Rui Yamaguchi (University of Tokyo, Japan)

Chair: Seiya Imoto (University of Tokyo, Japan)

Rui Yamaguchi (University of Tokyo, Japan)

- 2:40 p.m. Prediction for Severe Adverse Drug Events by Systems Biology and Statistical Learning  
Henry Horng-Shing Lu (National Chiao Tung University, Taiwan, R.O.C.)
- 3:10 p.m. Bayesian Supercomputing Tackles Cancers  
Ryo Yoshida (Research Organization of Information and Systems, Japan)
- 3:40 p.m. Gene Network Analysis in Cancer Biology  
Hiromitsu Araki (University of Auckland, New Zealand)

♣ **17c5 - CSA/JSS/KSS International Session**

**Multivariate Analysis**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Ming-Yen Cheng (National Taiwan University, Taiwan, R.O.C.)

Sangyeol Lee (Seoul National University, Korea)

Jinfang Wang (Chiba University, Japan)

Chair: Jinfang Wang (Chiba University, Japan)

- 2:40 p.m. Effective Methodologies for High-Dimensional Statistical Inference  
Makoto Aoshima (University of Tsukuba, Japan)
- 3:10 p.m. Flexible Generalized Varying Coefficient Regression Models  
Byeong U. Park (Seoul National University, South Korea)
- 3:40 p.m. A Monotonic Constrained Regression Framework for Image Contrast Enhancement  
Lu-Hung Chen (National Chung Hsing University, Taiwan, R.O.C.)

♥ **17c6 - The Bernoulli Society Special Invited Session**

**Mathematical Finance, Applied and Theoretical Developments**

Location: AC 3<sup>rd</sup> Conference Room

Organizer: Arturo Kohatsu-Higa (Ritsumeikan University, Japan)

Chair: Te-Hsin Liang (Fu Jen Catholic University, Taiwan, R.O.C.)

- 2:40 p.m.      Dynamic Cointegrated Pairs Trading: Time-Consistent Mean-Variance Strategies  
Hoi Ying Wong (The Chinese University of Hong Kong, Hong Kong)
- 3:10 p.m.      Option Prices in terms of Probability Functions  
Ju-Yi Yen (Vanderbilt University, U.S.A.)
- 3:40 p.m.      A First-Passage Model of Default with Markovian Credit Migration  
Cheng-Der Fuh (National Central University, Taiwan, R.O.C.)

♥ **17c7 - Statistical Graphics and Visualization**

Location: AC 4<sup>th</sup> Conference Room

Organizer: Dae-Heung Jang (Pukyong National University, Korea)

Chair: Han-Ming Wu (Tamkang University, Taiwan, R.O.C.)

- 2:40 p.m.      Visualizing Trade-offs Between Multiple Objectives: Tools to help Decision-Makers  
Christine M. Anderson-Cook (Los Alamos National Laboratory, U.S.A.)
- 3:10 p.m.      Exploring Symbolic Data Structure Using Matrix Visualization  
Yin-Jing Tien (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)
- 3:40 p.m.      Correlation-Based r-Plot for Evaluating Supersaturated Designs  
Youngil Kim (Chungang University, Korea)

***Parallel Session [16:30 – 17:30]:***

♥ **17d1 - Algorithmic Trading: Methods and Models**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Philip Leung-ho Yu (The University of Hong Kong, Hong Kong)

Chair: Philip Leung-ho Yu (The University of Hong Kong, Hong Kong)

- 4:30 p.m.      Complex Trading Strategy Based on Particle Swarm Optimization  
Philip Leung-ho Yu (The University of Hong Kong, Hong Kong)
- 5:00 p.m.      Improving the Power of Stepwise Procedures in Multiple Inequalities Testing -  
Evidence from Global CTA Funds  
Stephane M.F. Yen (National Cheng Kung University, Taiwan, R.O.C.)

♦ **17d2 - Finance**

Location: HSS 2<sup>nd</sup> Conference Room

Chair: Yen-Hung Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m.      On The Pricing of Investment Corporation Bonds  
Masakazu Ando (Chiba Institute of Technology, Japan)
- 4:50 p.m.      Verification of the Effectiveness of Dollar-cost Averaging Investment Method  
Kaoru Fueda (Okayama University, Japan)



- 5:10 p.m. Relationship Between Capital Structure and Financial Performance: An Application by Data Mining  
Nermin Ozgulbas (Baskent University Faculty of Health Sciences Department of Healthcare Management, Turkey)

◆ **17d3 - Mathematical Statistics (III)**

Location: HSS Media Conference Room

Chair: Wei-Ying Wu (Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. A Broad Class Estimators for Two Ordered Normal Means with Ordered Variances under Pitman's Comparison  
Chang Yuan-Tsung (Mejiro University, Japan)
- 4:45 p.m. Empirical Likelihood Inference about the Mean with Ranked Set Samples  
Ayman Baklizi (Qatar University, Qatar)
- 5:00 p.m. Multidimensional Scaling as Regression Analysis  
Takashi Shindo (Okayama University Graduate School, Japan)
- 5:15 p.m. Distributions of Resampling Moments  
Yoko Ono (Yokohama City University, Japan)

◆ **17d4 - Clinical Trials(II)**

Location: AC 1<sup>st</sup> Conference Room

Chair: Chia-Hui Huang (Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. Statistical Investigation of Bioequivalence based on Comprehensive Nested Hypotheses  
Yasunobu Furukawa (Kyowa Hakko Kirin Co., Ltd., Japan)
- 4:50 p.m. A Discussion on Environmental Risks for Breast and Liver Cancer by Analyzing (Age, Period)-Tabulated Data  
Nobutane Hanayama (Shobi University, Japan)
- 5:10 p.m. A Spatial Surveillance Approach for Breast Cancer Mortality by Races and Ages in the U.S.  
Lung-Chang Chien (Washington University, U.S.A.)

◆ **17d5 - Applications (I)**

Location: AC 2<sup>nd</sup> Conference Room

Chair: Yung-Fu Cheng (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. Optimal Allocation for the Second Elementary Symmetric Function with Different Coefficients  
Chien-Yu Peng (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)
- 4:45 p.m. A Study on Determinants of the Demand for Insurance Products  
Soo-Kyeong Lee (Korea University, Chungnam, Korea)
- 5:00 p.m. A Simultaneous Test of Differential Item Functioning and Validating Item Construct of Measurements  
Yih-Shan Shih (National Taichung University of Education, Taiwan, R.O.C.)
- 5:15 p.m. Computing Asymptotic Relative Efficiency Using Logistic Regression  
Tai-Ming Lee (Fu Jen Catholic University, Taiwan, R.O.C.)

◆ **17d6 - Applications (II)**

Location: AC 3<sup>rd</sup> Conference Room

Chair: Hsiu-Wen Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. SPARSIMAX: Principal Component Analysis with Direct Sparsity Constraint on Loadings  
Kohei Adachi (Osaka University, Japan)
- 4:45 p.m. A Visualization of Aggregated Symbolic Data  
Yoshikazu Yamamoto (Tokushima Bunri University, Japan)
- 5:00 p.m. Identification of Extreme Climate Cycles and Trends from Weather Time Series for Renewable Energy Applications  
Shin-Guang Chen (Tungnan University, Taiwan, R.O.C.)
- 5:15 p.m. Data Driven Modelling of Vertical Atmospheric Radiation  
Jaromír Antoch (Charles University, Czech Republic)

◆ **17d7 - Clinical Trials (III)**

Location: AC 4<sup>th</sup> Conference Room

Chair: Mey Wang (Center for Drug Evaluation, Taiwan, R.O.C.)

- 4:30 p.m. Sample Size Determination for Clinical Trials with Two Correlated Time-to-Event Co-primary Endpoints  
Toshimitsu Hamasaki (Osaka University Graduate School of Medicine, Japan)
- 4:45 p.m. Properties and Effects of Inferences on Hierarchical Generalized Linear Models in Clinical Trial Designs  
Kentaro Kuroishi (Astellas Pharm Inc, Japan)
- 5:00 p.m. Design and Data Monitoring of Clinical Trials with Co-primary Benefit: Risk Endpoints Using Prediction  
Scott R. Evans (Harvard University School of Public Health, U.S.A.)
- 5:15 p.m. Graphical Approaches for Seamless Phase II/III Designs with Multiple Doses Involving Multiple Families of Endpoints  
Toshifumi Sugitani (Tokyo University of Science, Japan)

**December 18 (Sunday):**

***The Future Research and Education in Statistics [08:00 – 10:10]:***

Location: HSS International Conference Hall

Organizer: Jing-Shiang Hwang (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: George Tiao (University of Chicago, U.S.A.)

- 8:30 a.m. Statisticians at Work: Inspiration, Aspiration, Ambition  
Jeff Wu (Georgia Institute of Technology, U.S.A.)
- 9:03 a.m. Statistical Education and Educating Statisticians: Producing Wine Connoisseurs and Master Winemakers  
Xiao-Li Meng (Harvard University, U.S.A.)
- 9:36 a.m. Graduation Education in Biostatistics: My Personal Viewpoint  
Kung-Yee Liang (National Yang-Ming University, Taiwan, R.O.C.)

**Parallel Session [10:30 – 12:00]:**

♥ **18a1 - Bayesian Modeling and Computation**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Dedi Rosadi (Gajahmada University, Indonesia)

Chair: Dedi Rosadi (Gajahmada University, Indonesia)

Tsair-Chuan Lin (National Taipei University, Taiwan, R.O.C.)

10:30 a.m. On the Modeling of District Policy Effects to Household Expenditure: A Hierarchical Bayesian Approach

Nur Iriawan (Institut Teknologi Sepuluh Nopember, Indonesia)

11:00 a.m. Calibration of Artificial Ensemble Forecast Using Bayesian Model Averaging  
Heri Kuswanto (Sepuluh Nopember Institute of Technology, Indonesia)

♠ **18a2 - Financial Time Series Analysis**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Henghsiu Tsai (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Mike Ka Pui So (Hong Kong University of Science and Technology, Hong Kong)

10:30 a.m. Clustering of Multiple Time Series with Applications

Ruey S. Tsay (University of Chicago, U.S.A.)

11:00 a.m. Minimum Variance Unbiased Estimator of Integrated Volatility in Stochastic Volatility Models

Mei-Hui Guo (National Sun Yat-sen University, Taiwan, R.O.C.)

11:30 a.m. Bayesian Inference of Asymmetric Smooth Time-varying Structure in Financial Time Series

Cathy W. S. Chen (Feng Chia University, Taiwan, R.O.C.)

♠ **18a3 - Robustness and Diagnostics Toward Data Analysis**

Location: HSS Media Conference Room

Organizer: Tsung-Chi Cheng (National Chengchi University, Taiwan, R.O.C.)

Chair: Hsun-chih Kuo (National Chengchi University, Taiwan, R.O.C.)

10:30 a.m. Very Robust Regression

A. C. Atkinson (London School of Economics, United Kingdom)

11:00 a.m. Diagnostics for the Proportional Odds Regression Model Using Stochastic Processes

Ivy (I-Ming) Liu (Victoria University of Wellington, New Zealand)

11:30 a.m. Deterministic Algorithms for MCD and LTS

Tim Verdonck (Katholieke Universiteit Leuven, Belgium)

♥ **18a4 - Statistics in Systems Biology**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Satoshi Kuriki (Institute of Statistical Mathematics, Japan)

Chair: Vivian Yi-Ju Chen (Tamkang University, Taiwan, R.O.C.)

10:30 a.m. Likelihood Ratio Test for Exploratory Factor Analysis Model

Yoshiyuki Ninomiya (Kyushu University, Japan)



- 11:00 a.m. Likelihood Ratio Tests for Positivity in Polynomial Regressions  
Naohiro Kato (Louisiana State University, U.S.A)
- 11:30 a.m. Ordinal Data Analysis Based on Kullback-Leibler Distance  
Wei Gao (Northeast Normal University, China)

♠ **18a5 - Distribution Theory**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Gwo Dong Lin (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: J. S. Huang (University of Guelph, Canada)

- 10:30 a.m. Cantor Order Statistics: Without Applications  
Barry C. Arnold (University of California, Riverside, U.S.A.)
- 10:52 a.m. Issues Concerning Constructions of Discrete Life Distributions  
Chin-Diew Lai (Massey University, New Zealand)
- 11:15 a.m. Multivariate Inverse Gaussian Distributions and Skew - Normal Laws  
Vanamamalai Seshadri (McGill University, Canada)
- 11:37 a.m. Some Properties of a Bivariate Distribution Based on Order Statistics  
J. S. Huang (University of Guelph, Canada)

♠ **18a6 - Cure Models in Event History Analysis**

Location: AC 3<sup>rd</sup> Conference Room

Organizer: Yi-Hau Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Wei-Yann Tsai (Columbia University, U.S.A.)

- 10:30 a.m. Estimation and Inference for Accelerated Failure Time Model with a Cure Fraction  
Wenbin Lu (North Carolina State University, U.S.A.)
- 11:00 a.m. Nonparametric Method of Mixture Model with Prevalence Sampling  
Yu-Jen Cheng (National TsingHua University, Taiwan, R.O.C.)
- 11:30 a.m. The Association Estimation for Multivariate Survival Data with a Cure Fraction  
Chyong-Mei Chen (Providence University, Taiwan, R.O.C.)

♠ **18a7 - Model/Variable Selection**

Location: AC 4<sup>th</sup> Conference Room

Chair: Pai-ling Li (Tamkang University, Taiwan, R.O.C.)

- 10:30 a.m. Selecting Variance Structure in Mixed Effect Models by Information Criteria Based on Monte Carlo Approximations  
Wataru Sakamoto (Okayama University, Japan)
- 10:48 a.m. Variable Selection in Quantile Regression with Autoregressive Errors  
Yaeji Lim (Seoul National University, Korea)
- 11:06 a.m. Robust Lasso-type Estimation and Efficient Bootstrap Information Criteria in Regression Modeling  
Heewon Park (Chuo University, Japan)
- 11:24 a.m. Statistical Diagnosis of Longitudinal Models for Binary Data  
Takao Takase (Clinical Science, Japan)
- 11:42 a.m. Model Selection in Multilevel Latent Class Models  
Hsiu-Ting Yu (McGill University, Canada)

**Parallel Session [13:00 – 14:30]:**

♥ **18b1 - IASC-ERS Special Invited Session**

**Feature Selection and Extraction in Predictive Modeling**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Vincenzo Esposito Vinzi (Essec Business School, France)

Chair: Hsing-Kuo Pao (National Taiwan University of Science and Technology, Taiwan, R.O.C.)

1:00 p.m. A Comparative Study of Feature Selection Methods

Agostino Di Ciaccio (University of Rome “La Sapienza”, Italy)

1:30 p.m. Grouped Variable Selection via Nested Spike and Slab Priors

Tso-Jung Yen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

2:00 p.m. Variable Selection for Generalized Canonical Correlation Analysis

Arthur Tenenhaus (Supelec Engineering School of Paris, France)

♠ **18b2 - Large Volatility Matrix Estimation Based on High-Frequency Financial Data**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Cheng-Der Fuh (National Central University, Taiwan, R.O.C.)

Chair: Cheng-Der Fuh (National Central University, Taiwan, R.O.C.)

1:00 p.m. Efficient Simulation of Markov Models with Applications to Risk Management

Inchi Hu (Hong Kong University of Science and Technology, Hong Kong)

1:30 p.m. Large Volatility Matrix Estimation Based on High-Frequency Financial Data

Yazhen Wang (University of Wisconsin-Madison, U.S.A.)

2:00 p.m. Price Densities in Incomplete Markets: An Application to Weather Derivatives

Huei-Wen Teng (National Central University, Taiwan, R.O.C.)

♥ **18b3 - Knowledge Creation from a Statistical Viewpoint**

Location: HSS Media Conference Room

Organizer: Hideyuki Imai (Hokkaido University, Japan)

Chair: Lo-Bin Chang (National Chiao Tung University, Taiwan, R.O.C.)

1:00 p.m. Sitting Posturography for Fatigue Measurements

M. Kudo (Hokkaido University, Japan)

1:30 p.m. A Kind of Overall Weights Representation for Absolute Measurement AHP

S. Ohnishi (Hokkai-Gakuen University, Japan)

2:00 p.m. Agents' Kansei Design Based on Variable Neighborhood Models

Seiki Ubukata (Hokkaido University, Japan)

♥ **18b4 - IASC Committee on CS & DM in KD Special Invited Session**

**Model Based Approach to Knowledge Discovery**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Natale Carlo Lauro (University Federico II, Italy)

Chair: Shun-Yi Chen (Tamkang University, Taiwan, R.O.C.)

1:00 p.m. Topological Learning and Learnability

Djamel Abdelkader Zighed (Univerite Lumiere Lyon 2, France)

1:30 p.m. Ordinal Rating Models for Financial Evaluation

Paolo Giudici (Universita di Pavia, Italy)

♣ **18b5 - Design of Experiments**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Frederick K. H. Phoa (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Frederick K. H. Phoa (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 1:00 p.m. On Minimal-Point Designs  
Dennis K. J. Lin (Pennsylvania State University, U.S.A.)
- 1:30 p.m. Design for Tuning Parameter Selection in the Lasso  
Chunfang Devon Lin (Queen's University, Canada)
- 2:00 p.m. The Stepwise Response Refinement Screener (SRRS)  
Frederick K. H. Phoa (Academia Sinica, Taiwan R.O.C.)

♦ **18b6 - Applications (II)**

Location: AC 3<sup>rd</sup> Conference Room

Chair: Osamu Komori (The Institute of Statistical Mathematics, Japan)

- 1:00 p.m. Canonical Correlation Analysis as Maximizing Generalized Coefficients of  
Determination with Oblique Rotation of Canonical Variables  
Hironori Satomura (Osaka University, Japan)
- 1:18 p.m. Ordered Statistics for Robust Genomic Meta-analysis  
George Tseng (The University of Pittsburgh, U.S.A.)
- 1:36 p.m. Cluster Analysis of Mouse Ultrasonic Vocalization Data  
Xiaoling Dou (Institute of Statistical Mathematics, Japan)
- 1:54 p.m. Predictive Model Development Based on Customer Segmentation  
Nayeon Yi (Korea University, Korea)
- 2:12 p.m. The Early Detection of Alzheimer's Diseases Based on MRI Data via Sparse  
Functional Logistic Classification  
Yuko Araki (Kurume University, Japan)

♥ **18b7 - Financial Statistics & Other**

Location: AC 4<sup>th</sup> Conference Room

Organizer: Zhuyu Li (Sichuan University, China)

Chair: Ben-Chang Shia (Fu Jen Catholic University, Taiwan, R.O.C.)

- 1:00 p.m. Efficient Simulation of Markov Models with Applications to Risk Management  
Zhuyu Li (Sichuan University, China)
- 1:30 p.m. Linear B-Spline Copulas with Applications to Nonparametric Estimation of Copulas  
Xiaojing Shen (Sichuan University, China)
- 2:00 p.m. Some Construction Methods for Uniform Designs with Large Size  
Yongdao Zhou (Sichuan University, China)

***Parallel Session [14:40 – 16:10]:***

♣ **18c1 - Bioinformatics and Translational Medicine**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Hsuan-Yu Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Hsuan-Yu Chen (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)



- 2:40 p.m. Molecular Gene-signatures and Cancer Clinical Trials  
Mei-Ling Ting Lee (University of Maryland, U.S.A.)
- 3:10 p.m. Discovering Influential Variables and Applications: A Review  
Shaw-Hwa Lo (Columbia University, U.S.A.)

♥ **18c2 - Simulation Techniques in Quantitative Finance**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Wolfgang Härdle (Humboldt-Universität, Germany)

Chair: Ray-Bing Chen (National Cheng Kung University, Taiwan, R.O.C.)

- 2:40 p.m. Copula Dynamics in CDOs  
Barbara Choros-Tomczyk (Humboldt-Universität, Germany)
- 3:10 p.m. Measuring the Collective Correlation of Stock Market  
Wei-Fang Niu (National University of Singapore, Singapore)
- 3:40 p.m. Regularized Pairwise Estimator of Realized Covariance  
Ying Chen (National University of Singapore, Singapore)

♥ **18c3 - Statistics Education**

Location: HSS Media Conference Room

Organizer: Taerim Lee (Korea National Open University, Korea)

Chair: Sheau-Hue Shieh (National Taipei University, Taiwan, R.O.C.)

- 2:40 p.m. Elementary Statistics Education in Smart Phone  
Dae-Heung Jang (Pukyong National University, Korea)
- 3:10 p.m. Certification of Statistical Literacy by Japan Statistical Society  
Yasuto Yoshizoe (Aoyama Gakuin University, Japan)
- 3:40 p.m. Transforming Statistics Education through ICT Application  
Taerim Lee (Korea National Open University, Korea)

♥ **18c4 - Statistics and Visualization**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Kwan-Liu Ma (University of California, Davis, U.S.A.)

Chair: Chuan-kai Yang (National Taiwan University of Science and Technology, Taiwan, R.O.C.)

- 2:40 p.m. Efficient Exploration of 3D Scalar Field based on Statistical Space Analysis  
Wei Chen (Zhejiang University, China)
- 3:10 p.m. Visual Analysis of Vehicle Trajectory Data  
Huamin Qu (Hong Kong University of Science and Technology, Hong Kong)
- 3:40 p.m. The Role of Statistics in Medical Visualization  
Ivan Viola (University of Bergen, Norway)

♥ **18c5 - Recent Advances in Transformation Methods**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Byeong Uk Park (Seoul National University, South Korea)

Chair: Byeong Uk Park (Seoul National University, South Korea)

- 2:40 p.m. Thick-pen Transform and Its Extension  
Hee-Seok Oh (Seoul National University, South Korea)
- 3:10 p.m. Smoothing Empirical Mode Decomposition  
Donghoh Kim (Sejong University, Korea)
- 3:40 p.m. Robust Estimation of Principal Functions Using M-Estimation  
Hyejin Shin (Seoul National University, South Korea)

◆ **18c6 - Time Series**

Location: AC 3<sup>rd</sup> Conference Room

Chair: Tsung-I Lin (National Chung Hsing University, Taiwan, R.O.C.)

- 2:40 p.m. Test of Mean Difference for Paired Longitudinal Data Using Stationary Bootstrap  
Hirohito Sakurai (National Center for University Entrance Examinations, Japan)
- 3:02 p.m. Vine-copula GARCH Model with Dynamic Conditional Dependence  
Yuk Ting Yeung (Hong Kong University of Science and Technology, Hong Kong)
- 3:25 p.m. Modeling Dynamic Seasonality in Time Series  
Ray S.W. Chung (Hong Kong University of Science and Technology, Hong Kong)
- 3:47 p.m. Asymptotic Behavior of Temporal Aggregates in the Frequency Domain  
Uwe Hassler (Goethe University Frankfurt, Germany)

♥ **18c7 - Statistical Meta Analysis**

Location: AC 4<sup>th</sup> Conference Room

Organizer: Philip Leung-ho Yu (The University of Hong Kong, Hong Kong)

Chair: Philip Leung-ho Yu (The University of Hong Kong, Hong Kong)

- 2:40 p.m. On Some Aspects of Statistical Meta-analysis with an Application  
Bimal K. Sinha (University of Maryland, U.S.A.)
- 3:10 p.m. On Statistical Inference for Direct and Indirect Multiple Treatment Comparisons  
Guido Knapp (University of Dortmund, Germany)
- 3:40 p.m. A Comparison of Meta-Analysis using Literature and using Individual Patient Data  
Thomas Mathew (University of Maryland, U.S.A.)

***Parallel Session [16:30 – 18:00]:***

♥ **18d1 - Environmental Statistics**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Hizir Sofyan (Syiah Kuala University, Aceh - Indonesia)

Chair: Hung-wen Cheng (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

- 4:30 p.m. Applied of Response Surface Method on Reverse Osmosis Process Using Polyurethane Membrane  
Marlina (Syiah Kuala University, Indonesia)
- 5:00 p.m. Seasonal ARIMA Recurrent Neural Networks for Forecasting Short-term Maximum and Minimum Temperature  
Suhartono (SepuluhNopember Institute of Technology, Indonesia)
- 5:30 p.m. Geometric Approach to Empirical Analysis of Landslide Disaster Prediction  
Anton Abdulbasah Kamil (UniversitiSains Malaysia, Malaysia)

♥ **18d2 - Analysis of Financial Time Series**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Cathy W. S. Chen (Feng Chia University, Taiwan, R.O.C.)

Chair: Yasuhiro Omori (University of Tokyo, Japan)

4:30 p.m. Time-Simultaneous Prediction Bands: A New Look at the Uncertainty Involved in Forecasting Mortality

Wai-Sum Chan (The Chinese University of Hong Kong, Hong Kong)

5:00 p.m. Predictive Approach for Model Selection on Econometric Models with Factor Augmented Predictors

Tomohiro Ando (Keio University, Japan)

5:30 p.m. Conditional Quantile Estimation in Heteroskedastic Time Series Models

Mike Ka Pui So (Hong Kong University of Science and Technology, Hong Kong)

♠ **18d3 - Environmental and Biological Statistics**

Location: HSS Media Conference Room

Organizer: Yu-Shan Shih (National Chung Cheng University, Taiwan, R.O.C.)

Chair: Yu-Shan Shih (National Chung Cheng University, Taiwan, R.O.C.)

4:30 p.m. Pseudomartingale Estimating Equations for Modulated Renewal Process Models  
Feng-Chang Lin (University of North Carolina, USA)

5:00 p.m. Nonparametric Estimation and Test of Conditional Kendall's Tau between Failure and Truncation Times

Jin-Jian Hsieh (National Chung Cheng University, Taiwan, R.O.C.)

5:30 p.m. Multiple Point Genetic Association Studies with An Uncertainty-coding Matrix  
Chuhsing Kate Hsiao (National Taiwan University, Taiwan, R.O.C.)

♥ **18d4 - Applications of Clustering Techniques**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Donguk Kim (Sungkyunkwan University, Korea)

Chair: Hsiao-Yun Huang (Fu Jen Catholic University, Taiwan, R.O.C.)

4:30 p.m. Clustering of Climate Functional Data Using Mixture Models  
Yongsung Joo (Dongguk University, Korea)

5:00 p.m. Estimation of the Central Subspace Using Clustering  
Jae Keun Yoo (Ewha Womans University, Korea)

5:30 p.m. A New Selection Model via Clustering Missingness Indicators  
Byungtae Seo (Sungkyunkwan University, Korea)

♥ **18d5 - Statistical Methods for Social Studies**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Ting Hsiang Lin (National Taipei University, Taiwan, R.O.C.)

Chair: Esher Hsu (National Taipei University, Taiwan, R.O.C.)

4:30 p.m. A Study of Smoothing Methods on Small Area Population Projection  
Ching-Syang Jack Yue (National Chengchi University, Taiwan, R.O.C.)

5:00 p.m. Issues Related to Analyzing International Large-Scale Assessment Data  
Hak-Ping Tam (National Taiwan Normal University, Taiwan, R.O.C.)

5:30 p.m. A Missing Treatment Adjustment for Nested Regression Analysis of Deviant



Behavior – A TEPS Case Study

Hong-Long Wang (National Taipei University, Taiwan, R.O.C.)

♥ **18d6 - Bayesian Statistics and Computing**

Location: AC 3<sup>rd</sup> Conference Room

Organizer: ChulEung Kim (Yonsei University, Korea)

Chair: Jia-hong Wu (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

4:30 p.m. Asymmetric Classification with Normal Populations Perturbed by Common Interval Screening

Hea-Jung Kim (Dongguk University, Korea)

5:00 p.m. A Bayesian Semiparametric Approach to Estimation of Median Incomes of Small Areas

Dal Ho Kim (Kyungpook National University, Korea)

5:30 p.m. Species Sampling Model and Posterior Consistency

Jaeyong Lee (Seoul National University, Korea)

**December 19 (Monday):**

***Parallel Session [09:00 – 10:30]:***

♠ **19a1 - Recent Advances in Analysis of Dependent Data**

Location: HSS 1<sup>st</sup> Conference Room

Organizer: Shu-Hui Yu (National University of Kaohsiung, Taiwan, R.O.C.)

Chair: Shu-Hui Yu (National Taipei University, Taiwan, R.O.C.)

9:00 a.m. Parametric and Nonparametric Analysis of Temporal Trend in Extreme Values with Applications to Wind Storm Losses and Temperature Data

Nader Tajvidi (Lund Institute of Technology, Sweden)

9:30 a.m. Tuning Parameter Selection in High Dimensional Penalized Likelihood

Yingying Fan (University of Southern California, U.S.A.)

10:00 a.m. A Note on Mean Squared Prediction Error under the Unit Root Model with Deterministic Trend

Shu-Hui Yu (National University of Kaohsiung, Taiwan, R.O.C.)

♠ **19a2 - Recent Advances in Statistical Model Selection**

Location: HSS 2<sup>nd</sup> Conference Room

Organizer: Ching-Kang Ing (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Ching-Kang Ing (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

9:00 a.m. On Choosing the Size of Data Perturbation in Adaptive Model Selection

Hung Chen (National Taiwan University, Taiwan, R.O.C.)

9:30 a.m. Adaptive Minimax Estimation with Sparse  $l_q$  Constraints

Yuhong Yang (University of Minnesota, U.S.A.)

10:00 a.m. Model Selection Principles in Misspecified Models

Jinchi Lv (University of Southern California, U.S.A.)

♥ **19a3 - Interface Special Invited Session**

**Visualization**

Location: HSS Media Conference Room

Organizer: Juergen Symanzik (Utah State University, U.S.A.)

Chair: Thomas Mathew (University of Maryland, U.S.A.)

9:00 a.m. Data Visualization and Its Interface to Statistical Models

Adalbert F.X. Wilhelm (Jacobs University, Germany)

9:30 a.m. Statistical Inference on Graphics

Heike Hofmann (Iowa State University, U.S.A.)

10:00 a.m. Visualizing High Dimensional Data: Applying Graph Theory to Data Visualization

Wayne Oldford (University of Waterloo, Canada)

♠ **19a4 - Time Series**

Location: AC 1<sup>st</sup> Conference Room

Organizer: Mei-Hui Guo (National Sun Yat-sen University, Taiwan, R.O.C.)

Chair: Mei-Hui Guo (National Sun Yat-sen University, Taiwan, R.O.C.)

9:00 a.m. On Recent Developments of Nonstationary and Long-Memory Time Series

NgaiHang Chan (The Chinese University of Hong Kong, Hong Kong)

9:30 a.m. Doubly Constrained Factor Models: Estimation and Applications

Henghsiu Tsai (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

10:00 a.m. Model Selection for Integrated Autoregressive Processes of Infinite Order

Chor-Yiu Sin (National TsingHua University, Taiwan, R.O.C.)

♠ **19a5 - Advances in Computational Biology**

Location: AC 2<sup>nd</sup> Conference Room

Organizer: Shwu-Rong Grace Shieh (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

Chair: Shwu-Rong Grace Shieh (Institute of Statistical Science, Academia Sinica, Taiwan, R.O.C.)

9:00 a.m. On Automated Flow Cytometric Data Analysis

Geoff McLachlan (University of Queensland, Australia)

9:30 a.m. Statistical Learning Based on Distributions of Oligonucleotides in DNA Sequences

Probal Chaudhuri (Indian Statistical Institute, India)

10:00 a.m. Sequential Lasso for Feature Selection with Ultra-High Dimensional Feature Space

Zehua Chen (National University of Singapore, Republic of Singapore)

♥ **19a6 - Statistics in Finance**

Location: AC 3<sup>rd</sup> Conference Room

Organizer: Mike Ka Pui So (Hong Kong University of Science and Technology, Hong Kong)

Chair: Wai-Sum Chan (The Chinese University of Hong Kong, Hong Kong)

9:00 a.m. Stable Mixture GARCH Models

Marc Paoletta (University of Zurich, Switzerland)

9:30 a.m. Bayesian Analysis of Time-Varying Parameter Vector Autoregressive Model with the Ordering of Variables

Toshiaki Watanabe (Hitotsubashi University, Japan)

Joint Meeting of The 2011 Taipei International Statistical Symposium  
and 7th Conference of the Asian Regional Section of the IASC

10:00 a.m.      Realized Stochastic Volatility with Leverage and Long Memory  
Yasuhiro Omori (University of Tokyo, Japan)

***The Statistica Sinica Special Invited Session (II) [10:50 – 11:40]:***

Location: HSS International Conference Hall

Title: Dynamic Empirical Bayes Models and Their Applications to Finance and Insurance

Speaker: Tze Leung Lai (Stanford University, U.S.A.)

Chair: Ngai Hang Chan (The Chinese University of Hong Kong, Hong Kong)



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