Date	JST	CST	[RY103]	[RY102]	[RY101]	[RYB1]	[RY105]	[RY106]
2/21 Mon	14:00	13:00	[RYB2][Tutorial] Joe Suzuki (Osaka University, Japan) — Solve 100 Problems of Math and R/Python for Statistical Learning — Chair: Koji Yamamoto (Yokohama City University, Japan)					
	17:00	16:00	IASC-ARS Board Meeting					
2/22 Tue	10:15	9:15	Conference Registration					
			Get together					
	10:45	9:45	Opening Ceremony					
	11:15	10:15	[RYB2][Keynote Talk 1] Kengo Kamatani (Institute of Statistical Mathematics, Japan) — Scaling limit of Markov chain/process Monte Carlo methods — Chair: Hidetoshi Murakami (Tokyo University of Science, Japan)					
	12:00	11:00	Lunch					
	13:30	12:30	[RY103]Special IS — Recent Advances in Probability Models for Ranking Data	[RY102]IS17 — Innovation Methodology Development of Causal Mediation Analysis for Biomedical Data			[Gather.Town]PS1 — e-Poster Core Session (Part 1)	
	15:10	14:10	Coffee Break					
	15:40	14:40	[RY103]IS01 — FinTech	[RY102]IS12 — Advances in Biomedical Data Analysis	[RY101]IS11 — Efficient Computation on the Distribution Theory		[RY105]CS01 — Missing Values / EM Algorithm	[RY106]CS02 — Multivariate Analysis
	17:20	16:20	Welcome Reception					
2/23 Wed	9:30	8:30	Conference Registration					
	9:45	8:45	[RYB2][Keynote Talk 2] Ryan Tibshirani (Carnegie Mellon University, USA) — Divided Differences, Falling Factorials, and Discrete Splines: Another Look at Trend Filtering and Related Problems — Chair: Wataru Sakamoto (Okayama University, Japan)					
	10:30	9:30	Coffee Break					
	11:00	10:00	[RY103]IS14 — Advances in Bayesian Statistical Methods	[RY102]IS04 — Recent Advances in Big Data Learning with Network Structures	[RY101]IS08 — Statistical Analysis on the Web of Science		[RY105]CS03 — Distribution Theory	[RY106]CS04 — Lasso
	12:40	11:40	Lunch					
	14:00	13:00	[RY103]IS07 — Bayesian Methods for Modern Statistical Analysis	[RY102]IS15 — Recent Advances in Computational Statistics and Related Fields I			[Gather.Town]PS2 — e-Poster Core Session (Part 2)	
	15:40	14:40	Coffee Break					
	16:10	15:10	[RY103]IS13 — Advances in Complex Data Analysis	[RY102]IS02 — Big Data and Analytics in COVID-19	[RY101]IS10 — Recent Developments in Cognitive Diagnostic Models	[RYB1]IS03 — Digital Assets	[RY105]CS05 — Statistical Process Control / Monte Carlo Simulation	[RY106]CS06 — Regression
	17:50	16:50						
2/24 Thu	9:30	8:30	Conference Registration					
	9:45	8:45	[RYB2][Keynote Talk 3] Ray-Bing Chen (National Cheng Kung University, Taiwan) — Tree-based Gaussian Process for Computer Experiments with Many-Category Qualitative Factors — Chair: Yuichi Mori (Okayama University of Science, Japan)					
	10:30	9:30	Coffee Break					
	11:00	10:00	[RY103]IS09 — Methods and Applications in Deep Learning	[RY102]IS16 — Recent Advances in Computational Statistics and Related Fields II	[RY101]IS18 — Recent Advances in Mixture Modelling		[RY105]CS07 — Time Series / Stochastic Process	[RY106]CS08 — Statistical Software / Qualitative Data
	12:40	11:40	Lunch					
	14:00	13:00	[RY103]IS05 — Statistical Methods for Covariances and Other Dependence Structures	[RY102]IS06 — Design and Analysis of Modern Experiments and Computer Experiments			[RY105]CS09 — Accelerate Life Test	[RY106]CS10 — Application
	15:40	14:40						
	15:50	14:50	[RYB2]IASC-ARS General Assembly / Closing Ceremony					
	16:30	15:30						

IS: Invited Session
CS: Contributed Talk Session
PS: Contributed e-Poster Session

Session ID	Title	Authors
Special IS	**Recent Advances in Probability Models for Ranking Data**	**Organizer and Chair: Philip L.H. Yu (Education University of Hong Kong, Hong Kong)**
SIS-1	Effective signal reconstruction from multiple ranked lists via convex optimization	Michael G. Schimek (Medical University of Graz, Austria), Luca Vitale (Università degli Studi di Salerno, Italy), Bastian Pfeifer (Medical University of Graz, Austria), Michele La Rocca (Università degli Studi di Salerno, Italy)
SIS-2	Efficient estimation of finite mixtures of Mallows models with the Spearman distance	Marta Crispino (Bank of Italy, Italy), Cristina Mollica (Sapienza University of Rome, Italy), Valerio Astuti (Bank of Italy, Italy), Luca Tardella (Sapienza University of Rome, Italy)
SIS-3	Ranking completion problem	Zhuang Yipeng (Education University of Hong Kong, Hong Kong)
SIS-4	Modeling ranking data and social network	Jiaqi Gu (University of Hong Kong, Hong Kong), Philip Yu (Education University of Hong Kong, Hong Kong)
IS17	**Innovation Methodology Development of Causal Mediation Analysis for Biomedical Data**	**Organizer and Chair: Sheng-Hsuan Lin (National Yang-Ming Chiao-Tung University, Taiwan)**
IS17-1	Nonparametric path-specific effects on a survival outcome through time-to-event mediators	Yen-Tsung Huang, Ju-Sheng Hung (Academia Sinica, Taiwan)
IS17-2	Unified semicompeting risks analysis of hepatitis natural history through mediation modeling	Jih-Chang Yu, Yen-Tsung Huang (Academia Sinica, Taiwan)
IS17-3	Causal mediation analysis for panel data - mechanism investigation for COVID-19 pandemic induced depression	Pei-Hsuan Hsia, Sheng-Hsuan Lin (National Yang Ming Chiao Tung University, Taiwan)
IS17-4	Robust inference on effects attributable to mediators: A controlled-direct-effect-based approach for causal effect decomposition with multiple mediators	An-Shun Tai (National Yang Ming Chiao Tung University, Taiwan)
PS1	**e-Poster Core Session (Part 1)**	**Chair: Yoshikazu Terada (Osaka University, Japan), Michio Yamamoto (Okayama University, Japan),**
PS1-01	Quantum computation, quantum algorithms and implications on data science	Jeremy Garcia, Nathan Kim, David Han (University of Texas at San Antonio, USA)
PS1-02	Statistical perspectives in teaching application-oriented deep learning	Nathan Kim, David Han (University of Texas at San Antonio, USA)
PS1-03	The optimal condition-based maintenance policy under the gamma degradation process	David Han (University of Texas at San Antonio, USA)
PS1-04	A covariate selection method for propensity score model based on interquantile estimation of outcome	Takehiro Shoji, Jun Tsuchida, Hiroshi Yadohisa (Doshisha University, Japan)
PS1-05	Bayesian tail risk forecasting of the realized volatility CAViaR models	Tiffany H. Y. Hsu, Cathy W. S. Chen (Feng Chia University, Taiwan)
PS1-06	Quantile three-factor model with heteroskedasticity and skew Student t errors	Kai Y.K. Wang, Cathy W. S. Chen (Feng Chia University, Taiwan)
PS1-07	Evaluation of statistical methods for recurrent time-to-event data	Naoki Uemura (Yokohama City University, Japan), Hideto Yasuda (Jichi Medical University, Japan), Takayuki Abe (Yokohama City University, Japan)
PS1-08	Estimation of treatment effects for multivariate longitudinal data	Shintaro Yuki, Hiroshi Yadohisa (Doshisha University, Japan)
PS1-09	A cluster Kriging method considering additional information	Toshiki Sakai, Jun Tsuchida, Hiroshi Yadihisa (Doshisha University, Japan)
PS1-10	Rapid design of metamaterials via multi-target Bayesian optimization	Yang Yang (Tsinghua University, China), Chunlin Ji (Kuang-Chi Institute of Advanced Technology, China), Ke Deng (Tsinghua University, China)
PS1-11	Online quantile linear discriminant analysis	Soshi Kawarai, Hiroshi Yadohisa (Doshisha University, Japan)

Session ID	Title	Authors
IS01	**FinTech**	**Organizer and Chair: Ying Chen (National University of Singapore, Singapore)**
IS01-1	Bayesian inference of temporal trends in daily financial news	Mike So (Hong Kong University of Science and Technology, Hong Kong)
IS01-2	Optimal execution with hidden orders under self-exciting dynamics	Ying Chen (National University of Singapore, Singapore), Zexin Wang (Imperial College London, United Kingdom), Ge Zhang, Chao Zhou (National University of Singapore, Singapore)
IS01-3	Shapley-Lorenz trustworthy AI	Paolo Giudici, Emanuela Raffinetti (University of Pavia, Italy)
IS01-4	Non fungible tokens and VizTech	Wolfgang Karl Härdle (Humboldt-Universität zu Berlin, Germany)
IS12	**Advances in Biomedical Data Analysis**	**Organizers: Michio Yamamoto (Okayama University, Japan), Yoshikazu Terada (Osaka University, Japan)** **Chair: Yoshikazu Terada (Osaka University, Japan)**
IS12-1	One-step approximation of covariate balancing propensity score using generalized linear models	Tomohiro Shinozaki (Tokyo University of Science, Japan)
IS12-2	Direct and indirect effect with multiple longitudinal mediators	Masataka Taguri (Yokohama City University, Japan), Yasuyuki Okuda (Daiichi Sankyo Co., Ltd., Japan)
IS12-3	Odds-based predictive improvement index for binary regression models	Kenichi Hayashi (Keio University, Japan), Shinto Eguchi (Institution of Statistical Mathematics, Japan)
IS12-4	Estimation of the causal effects of stochastic interventions based on sufficient dimension reduction	Michio Yamamoto (Okayama University / RIKEN AIP, Japan)
IS11	**Efficient Computation on the Distribution Theory**	**Organizers: Hiroki Hashiguchi, Hidetoshi Murakami (Tokyo University of Science, Japan)** **Chair: Hiroki Hashiguchi (Tokyo University of Science, Japan)**
IS11-1	Approximation to probability density functions in sampling distributions based on Fourier cosine series	Shigekazu Nakagawa (Okayama University of Science, Japan), Hiroki Hashiguchi (Tokyo University of Science, Japan), Yoko Ono (Yokohama City University, Japan)
IS11-2	On the distribution of the sum of gamma mixture random variables	Masato Kitani (Tokyo University of Science, Japan), Hidetoshi Murakami, Hiroki Hashiguchi (Tokyo University of Science, Japan)
IS11-3	Algorithm for product of zonal polynomials and its application in statistics	Koki Shimizu, Hiroki Hashiguchi (Tokyo University of Science, Japan)
IS11-4	The moment generating function of two-sample linear rank tests in the presence of ties	Hikaru Yamaguchi (Tokyo University of Science, Japan), Hidetoshi Murakami (Tokyo University of Science, Japan)
IS11-5	Acceleration of bootstrap computation for incomplete data	Masahiro Kuroda (Okayama University of Science, Japan)
CS01	**Missing Values / EM Algorithm**	**Chair: Takashi Seo (Tokyo University of Science, Japan)**
CS01-1	Multiple imputation with verifiable identification condition for nonignorable missing data	Kenji Beppu, Kosuke Morikawa (Osaka University, Japan), Jongho Im (Yonsei University, South Korea)
CS01-2	Tempered expectation-maximization algorithm for discrete latent variable models	Luca Brusa (University of Milano-Bicocca, Italy), Francesco Bartolucci (University of Perugia, Italy), Fulvia Pennoni (University of Milano-Bicocca, Italy)
CS01-3	Estimating finite mixtures of disc distribution and its applications to image recognition	Shunsuke Maki (Nanzan Univeristy, Japan), Takayuki Shiohama (Nanzan University, Japan)
CS01-4	Maximum likelihood estimation of hidden Markov models for continuous longitudinal data with missing responses and dropout	Fulvia Pennoni (University of Milano-Bicocca, Italy), Francesco Bartolucci, Silvia Pandofi (University of Perugia, Italy)
CS02	**Multivariate Analysis**	**Chair: Masahiro Mizuta (Hokkaido University, Japan)**
CS02-1	A technical note on model ontology via multidimensional scaling	Keishi Nomura, Kensuke Okada (University of Tokyo, Japan)
CS02-2	Spherical random projection	Seungwoo Kang, Hee-Seok Oh (Seoul National University, South Korea)
CS02-3	Soft clustering of multidimensional time series	Ángel López-Oriona, José. A. Vilar, Pierpaolo D'Urso (Universidade da Coruña, Spain)
CS02-4	Application of cross-data matrix methodology to embedded vector of deep-learning models with estimation of spiked model parameter	Yuuki Tachioka (Denso IT Laboratory, Japan)
CS02-5	A method for extracting nonlinear structure based on nonlinear measures of dependence	Shouma Ishimoto, Hiroyuki Minami, Masahiro Mizuta (Hokkaido University, Japan)

Session ID	Title	Authors
IS14	**Advances in Bayesian Statistical Methods**	**Organizer and Chair: Mike K.P. So (Hong University of Science and Technology, Hong Kong)**
IS14-1	Linkage vector autoregressive model	Manabu Asai (Soka University, Japan), Mike K.P. So (Hong Long University of Science and Technology, Hong Kong)
IS14-2	Dynamic ordering learning in multivariate forecasting	Bruno P. C. Levy (INSPER Institute of Education and Research, Brazil), Hedibert F. Lopes (Arizona State University, USA)
IS14-3	Dynamic factor, leverage and realized covariances in multivariate stochastic volatility	Yuta Yamauchi (Nagoya University, Japan), Yasuhiro Omori (University of Tokyo, Japan)
IS04	**Recent Advances in Big Data Learning with Network Structures**	**Organizer and Chair: Zhao Ren (University of Pittsburgh, USA)**
IS04-1	Functional causal modeling via Karhunen-Loève expansions	Kuang-Yao Lee (Temple University, USA), Lexin Li (University of California at Berkeley, USA), Bing Li (Pennsylvania State University, USA)
IS04-2	Integrative inference for biological networks	Yuping Zhang (University of Connecticut, USA)
IS04-3	Clustering with latent semiparametric mixture models	Wen Zhou (Colorado State University, USA)
IS04-4	Simultaneous inference in multiple matrix-variate graphs for high-dimensional neural recordings	Zhao Ren (University of Pittsburgh, USA)
IS08	**Statistical Analysis on the Web of Science**	**Organizer: Frederick Kin Hing Phoa (Academia Sinica, Taiwan)** **Chair: Junji Nakano (Chuo University, Japan)**
IS08-1	A preferential attachment model of growing hypergraphs	Hohyun Jung (Sungshin Women's University, South Korea), Sung-Ho Kim (KAIST, South Korea), Frederick Kin Hing Phoa (Academia Sinica, Taiwan)
IS08-2	How to estimate potential research subjects by LASSO	Hiroka Hamada, Keisuke Honda (Institute of Statistical Mathematics, Japan)
IS08-3	International comparison of innovation strategies in artificial intelligence research: an analysis of intrapersonal diversity using bibliographic databases	Yuji Mizukami (Nihon University, Japan), Junji Nakano (Chuo University, Japan)
IS08-4	A mixture model of truncated zeta distributions with applications to scientific collaboration networks	Hohyun Jung (Sungshin Women's University, South Korea), Frederick Kin Hing Phoa (Academia Sinica, Taiwan)
CS03	**Distribution Theory**	**Chair: Shigekazu Nakagawa (Okayama University of Science, Japan)**
CS03-1	Choice of the Dirichlet parameter for estimation of measures in two-way contingency tables	Tomotaka Momozaki, Koji Cho, Tomoyuki Nakagawa, Sadao Tomizawa (Tokyo University of Science, Japan)
CS03-2	Modified Anderson-Darling statistic and its power comparison	Yuyan Ma, Masato Kitani, Hidetoshi Murakami (Tokyo University of Science, Japan)
CS03-3	A test statistic based on normalized transformation for multivariate sample kurtosis	Eri Kurita, Seo Takashi (Tokyo University of Science, Japan), Zofia Hanusz (University of Life Sciences in Lublin, Poland)
CS03-4	Modified profile likelihood estimation in the Lomax distribution with censored data	Maisoun Sewailem, Ayman Baklizi (Qatar University, Qatar)
CS04	**Lasso**	**Chair: Hidetoshi Matsui (Shiga University, Japan)**
CS04-1	Multivariate adaptive regression splines for estimating heterogeneous treatment effect	Guanwenqing He, Ke Wan, Toshio Shimokawa (Wakayama Medical University, Japan)
CS04-2	Rule ensemble method with group lasso for heterogeneous treatment effect estimation	Ke Wan, Guanwenqing He, Toshio Shimokawa (Wakayama Medical University, Japan)
CS04-3	Spacing test for fused lasso	Rieko Tasaka, Joe Suzuki (Osaka University, Japan)
CS04-4	Spatially varying coefficient modeling of numerical and categorical predictor variables in the generalized lasso	Septian Rahardiantoro, Wataru Sakamoto (Okayama University, Japan)

Session ID	Title	Authors
IS07	**Bayesian Methods for Modern Statistical Analysis**	**Organizer and Chair: Cathy W.S. Chen (Feng Chia University, Taiwan)**
IS07-1	Bayesian skill-rating models for doubles players	J.-R. Chang, J.-C. Lin, H.-F. Hua, R. C. Weng (National Chengchi University, Taiwan)
IS07-2	High-frequency realized stochastic volatility model	Toshiaki Watanabe (Hitotsubashi University, Japan), Jouchi Nakajima (Bank of Japan, Japan)
IS07-3	Variational inference for cutting feedback with misspecified models	Xuejun Yu, David Nott (National University of Singapore, Singapore), Michael Stanley Smith (University of Melbourne, Australia)
IS07-4	Bayesian cumulative probit linear mixed models for longitudinal ordinary data	Kuo-Jung Lee, Ray-Bing Chen (National Cheng Kung University, Taiwan), Keunbaik Lee (Sungkyunkwan University, South Korea)
IS15	**Recent Advances in Computational Statistics and Related Fields I**	**Organizers: Tso-Jung Yen (Academia Sinica, Taiwan) and Hiroshi Yadohisa (Doshisha University, Japan)** **Chair: Yen-Tsung Huang (Academia Sinica, Taiwan)**
IS15-1	Robust inference of conditional average treatment effects using dimension reduction	Ming-Yueh Huang (Academia Sinica, Taiwan), Shu Yang (North Carolina State University, USA)
IS15-2	Bayesian multinomial model based on quantile regression	Koki Matsuoka (NTT DATA Corporation, Japan), Masaaki Okabe, Jun Tsuchida (Doshisha University, Japan)
IS15-3	Eigen-adjusted functional principal component analysis	Ci-Ren Jiang (Academia Sinica, Taiwan), Eardi Lila (University of Washington, Seattle, US), John AD Aston (Cambridge University, United Kingdom), Jane-Ling Wang (University of California, Davis, US)
IS15-4	Compressed sensing in scanning tunneling spectroscopy	Yoshinori Nakanishi-Ohno (Doshisha University, Japan)
PS2	**e-Poster Core Session (Part 2)**	**Chair: Michio Yamamoto (Okayama University, Japan), Yoshikazu Terada (Osaka University, Japan)**
PS2-01	Causal mediation analysis for difference-in-difference design and panel data	Pei-Hsuan Hsia, An-Shun Tai, Chu-Lan Micheal Kao (National Yang Ming Chiao Tung University, Taiwan), Yu-Hsuan Lin (National Health Research Institutes, Taiwan), Sheng-Hsuan Lin (National Yang Ming Chiao Tung University, Taiwan)
PS2-02	CUSUMIN: a cumulative sum interval design for cancer phase I dose finding	Tomoyoshi Hatayama (Janssen Pharmaceutical KK, Japan), Seiichi Yasui (Tokyo University of Science, Japan)
PS2-03	On identification and estimation for sufficient cause interaction through quasi-instrumental variable	Pei-Hsuan Hsia, An-Shun Tai, Sheng-Hsuan Lin (National Yang Ming Chiao Tung University, Taiwan)
PS2-04	Confidence interval for F1-scores for binary and multi-class classification	Kanae Takahashi (Hyogo College of Medicine, Japan), Kouji Yamamoto (Yokohama City University, Japan), Aya Kuchiba (Kanagawa University of Human Services, Japan), Tatsuki Koyama (Vanderbilt University Medical Center, USA)
PS2-05	A study on estimation of the human interest for place based on the human movement data	Shinnosuke Suzuki, Kosuke Okusa (Yokohama City University, Japan)
PS2-06	Comparison of software packages for network meta-analysis with time-to-event endpoint.	Shintaro Hirano (Yokohama City University, A2 Healthcare Corp., Japan), Yosuke Muroi (Yokohama City University, Japan), Michinori Arimitsu (JMDC inc., Japan), Takayuki Abe (Yokohama City University, Japan)
PS2-07	Robust principal component analysis applicable to partially observed functional data	Hyunsung Kim (Chung-Ang University, South Korea), Yeonjoo Park (University of Texas at San Antonio, U.S.A.), Yaeji Lim (Chung-Ang University, South Korea)
PS2-08	Embedding method for multiple multivariate data by using class label information	Kenta Sakamoto, Hiroshi Yadohisa (Doshisha University, Japan)
PS2-09	Partial least squares for qualitative data	Chitose Nishiyama, Hiroko Katayama, Yuichi Mori (Okayama University of Science, Japan)
PS2-10	Sample size calculation in Bayesian clinical trials considering simultaneous efficacy and inefficacy for normally distributed outcome with unknown variance	Yosuke Inaba (Chiba University Hospital, Japan), Tomoyuki Kakizume (Takeda Pharmaceutical Company Limited, Japan), Masaaki Doi (Kyoto University, Japan), Yohei Kawasaki (Japanese Red Cross College of Nursing, Japan)
PS2-11	Wasserstein discriminant analysis for limited labeled data	Mitsuhiro Hashiguchi, Hiroshi Yadohisa (Doshisha University, Japan)

Session ID	Title	Authors
IS13	**Advances in Complex Data Analysis**	**Organizers: Yoshikazu Terada (Osaka University, Japan), Michio Yamamoto (Okayama University, Japan)** **Chair: Michio Yamamoto (Okayama University, Japan)**
IS13-1	Ordinal probit models for heterogeneous thresholds using anchoring vignette	Mariko Takagishi (Osaka University, Japan), Tomoyuki Sugimoto (Shiga University, Japan), Yoshikazu Terada (Osaka University, Japan)
IS13-2	Sparse multivariate regression with missing values and its application to material properties prediction	Kei Hirose (Kyushu University, Japan), Keisuke Teramoto (Hiroshima University, Japan)
IS13-3	Truncated estimation for varying-coefficient functional linear models and its application to agricultural data	Hidetoshi Matsui (Shiga University, Japan)
IS13-4	Fast Approximation for large-scale clustering	Yoshikazu Terada (Osaka University / RIKEN, Japan), Michio Yamamoto (Okayama University / RIKEN, Japan)
IS02	**Big Data and Analytics in COVID-19**	**Organizer and Chair: Ying Chen (National University of Singapore, Singapore)**
IS02-1	Interpretable kernels	Patrick J.F. Groenen (Erasmus University Rotterdam, Netherlands), Michael Greenacre (Universitat Pompeu Fabra, Spain)
IS02-2	What factors drive the satisfaction of citizens on governments' responses to COVID-19?	Cathy W.S. Chen (Feng Chia University, Taiwan), Sangyeol Lee (Seoul National University, South Korea), Manh Cuong Dong (Feng Chia University, Taiwan), Masanobu Taniguchi (Waseda University, Japan)
IS02-3	Measuring spillover and diffusion in mixed frequency large dimensional spatial data: method and application to global pandemic and unemployment interactions during COVID-19	Xiaoyi Han (Xiamen University, China), Yanli Zhu (Hohai University, China), Yijiong Zhang (National University of Singapore, Singapore), Ying Chen (National University of Singapore, Singapore)
IS02-4	Deep switching state space model for nonlinear time series forecasting with regime switching	Xiuqin Xu, Chen Ying (National University of Singapore, Singapore)
IS10	**Recent Developments in Cognitive Diagnostic Models**	**Organizers: Koken Ozaki (University of Tsukuba, Japan), Kensuke Okada (University of Tokyo, Japan)** **Chair: Kensuke Okada (University of Tokyo, Japan)**
IS10-1	Cognitive diagnosis models for multiple-choice items and their applications	Koken Ozaki (University of Tsukuba, Japan)
IS10-2	A variational Bayesian posterior approximation method for hidden Markov diagnosis classification models	Yamaguchi Kazuhiro (University of Tsukuba, Japan), Alfonso J. Martinez (University of Iowa, USA)
IS10-3	The practical application of cognitive diagnostic models to encourage students' deep understanding and use of effective learning strategies	Shun Saso, Motonori Oka, Satomi Shiba, Yuri Uesaka (University of Tokyo, Japan)
IS10-4	Explanatory cognitive diagnostic model for process data	Yoshito Tan, Kensuke Okada (University of Tokyo, Japan)
IS10-5	A generalized class of cognitive diagnostic models for multiple-choice items derived from the log-linear model	Kentaro Fukushima, Kensuke Okada (University of Tokyo, Japan)
IS03	**Digital Assets**	**Organizer and Chair: Wolfgang K. Härdle(Humboldt University of Berlin, Germany)**
IS03-1	Analysis of cedar plantation management and mega-solar replacement	Itaka, Shizu (Tokyo University of Science, Japan)
IS03-2	Hedging cryptos with bitcoin futures	Francis Liu (Berlin School of Economics and Law, Germany), Natalie Packham (Berlin School of Economics and Law, Germany), Meng-Jou LU (Asia University, Taiwan), Wolfgang Karl Härdle (Humboldt-Universität zu Berlin, Germany)
IS03-3	Understanding smart contracts: hype or hope?	Elizaveta Zinovyeva, Raphael C. G. Reule, Wolfgang Karl Härdle (Humboldt University of Berlin, Germany)
CS05	**Statistical Process Control / Monte Carlo Simulation**	**Chair: Masahiro Kuroda (Okayama University of Science, Japan)**
CS05-1	A distribution-free phase-I scheme for quad-aspects monitoring and control	Akira Suzuki (Tokyo University of Science, Japan), Amitava Mukherjee (XLRI- Xavier School of Management, India), Hidetoshi Murakami (Tokyo University of Science, Japan)
CS05-2	Stratification and optimal resampling in sequential Monte Carlo	Yichao Li (Tsinghua University, China), Wenshuo Wang (Harvard University, USA), Ke Deng (Tsinghua University, China), Jun S. Liu (Harvard University, USA)
CS05-3	A distribution-free phase-II scheme for tri-aspect surveillance using combinations of three orthogonal statistics	Naoshi Nomoto (Tokyo University of Science, Japan), Amitava Mukherjee (XLRI- Xavier School of Management, India), Hidetoshi Murakami (Tokyo University of Science, Japan)
CS05-4	Nonparametric monitoring of unknown structural dependence in high-dimensional data streams using pseudo copula and eigenvectors	Amitava Mukherjee (XLRI - Xavier School of Management, India)
CS06	**Regression**	**Chair: Toshio Honda (Hitotsubashi University, Japan)**
CS06-1	The naïve estimators of a Poisson regression model with measurement errors	Kentarou Wada, Takeshi Kurosawa (Tokyo University of Science, Japan)
CS06-2	Varying coefficient models for extreme value index regression	Koki Momoki, Takuma Yoshida (Kagoshima University, Japan)
CS06-3	A goodness-of-fit measure for logistic regressions under separation	Naoki Kotani, Takeshi Kurosawa (Tokyo University of Science, Japan)
CS06-4	Forward variable selection for ultra-high dimensional quantile regression models	Toshio Honda (Hitotsubashi University, Japan), Chien-Tong Lin (National Tsing Hua University, Taiwan)

Session ID	Title	Authors
IS09	**Methods and Applications in Deep Learning**	**Organizer and Chair: Hsin-Chou Yang (Academia Sinica, Taiwan)**
IS09-1	Robust aggregation for federated learning by minimum gamma-divergence estimation	Cen-Jhih Li (Academia Sinica, Taiwan), Pin-Han Huang (National Taiwan University, Taiwan), Yi-Ting Ma (Academia Sinica, Taiwan), Hung Hung (National Taiwan University, Taiwan), Su-Yun Huang (Academia Sinica, Taiwan)
IS09-2	A novel approach for predicting atrial fibrillation recurrence after ablating using deep convolutional neural networks by assessing left atrial curved M-mode	Yi-Ting Hwang (National Taipei University, Taiwan), Hui-Ling Lee (Chang Gung Memorial Hospital, Taiwan), Chung-Chuan Chou (Chang Gung University College of Medicine, Taiwan)
IS09-3	Deep learning-based segmentation for pneumothorax identification in chest radiograph: application of tensor dimensionality reduction method	Yi-Ju Lee (Academia Sinica, Taiwan), Toshinari Morimoto (National Taiwan University, Taiwan), Su-Yun Huang (Academia Sinica, Taiwan)
IS16	**Recent Advances in Computational Statistics and Related Fields II**	**Organizers: Hiroshi Yadohisa (Doshisha University, Japan) and Tso-Jung Yen (Academia Sinica, Taiwan)** **Chair: Yuejun Zheng (Doshisha University, Japan)**
IS16-1	Training structured neural networks through manifold identification and variance reduction	Ching-pei Lee, Zih-Syuan Huang (Academia Sinica, Taiwan)
IS16-2	Feature estimation and testing for linear regression with time series regressors	Junho Yang (Academia Sinica, Taiwan), Suhasini Subba Rao (Texas A&M University, USA)
IS16-3	Comparative analysis of Japanese folk songs using rhythmic indices	Akihiro KAWASE (Doshisha University, Japan)
IS16-4	An empirical study on effects of gaming on motivation for learning of college student -focusing on mediation of generalized self-efficacy-	Hanlin Yeh, Ryozo Yoshino, Yuejun Zheng (Doshisha University, Japan)
IS18	**Recent Advances in Mixture Modelling**	**Organizer and Chair: Thomas Yee (University of Auckland, New Zealand)**
IS18-1	Cluster analysis for ordered categorical data	Ivy Liu (Victoria University of Wellington, New Zealand), Daniel Fernandez (Polytechnic University of Catalonia-BarcelonaTech, Spain), Richard Arnold (Victoria University of Wellington, New Zealand), Roy Costilla (Agresearch, New Zealand), Louise McMillan, Shirley Pledger (Victoria University of Wellington, New Zealand)
IS18-2	Merging modal clusters via significance assessment	Yong Wang, Shengwei Hu (University of Auckland, New Zealand)
IS18-3	A nonparametric mixture approach to density and null proportion estimation in large-scale multiple comparison problems	Xiangjie Xue, Yong Wang (University of Auckland, New Zealand)
IS18-4	Generally-altered, -inflated, -truncated and deflated negative binomial regression	Thomas Yee (University of Auckland, New Zealand), Chenchen Ma (Peking University, China)
CS07	**Time Series / Stochastic Process**	**Chair: Masayuki Uchida (Osaka University, Japan)**
CS07-1	Statistical modeling of market capitalization with financial data and esg rating data	Masayuki Jimichi, Chika Saka (Kwansei Gakuin University, Japan), Daisuke Miyamoto (University of Tokyo, Japan), Syuichi Nagata (Kwansei Gakuin University, Japan)
CS07-2	l_{1} common trend filtering: an extension	Ruoyi Bao, Hiroshi Yamada, Kazuhiko Hayakawa (Hiroshima University, Japan)
CS07-3	Bayesian modelling integer-valued transfer function models	Aljo Clair P. Pingal, Cathy W.S. Chen (Feng Chia University, Taiwan)
CS07-4	Adaptive change detection for ergodic diffusion processes based on high frequency data	Yozo Tonaki (Osaka University, Japan), Yusuke Kaino (Kobe University, Japan), Masayuki Uchida (Osaka University, Japan)
CS08	**Statistical Software / Qualitative Data**	**Chair: Kohei Adachi (Osaka University, Japan)**
CS08-1	Item selection for qualitative data	Hiroko Katayama, Chitose Nishiyama, Yuichi Mori (Okayama University of Science, Japan)
CS08-2	A taxonomy of factor analysis models: two- versus three-parts and random- versus fixed-scores	Kohei Adachi (Osaka University, Japan)
CS08-3	Integrated online statistics education system with web-based eStat software	Jung Jin Lee (ADA University, Azerbaijan)
CS08-4	compak: an R package for Conway-Maxwell-Poisson associated kernel	Alan Huang, Lucas Sippel (University of Queensland, Australia), Thomas Fung (Macquarie University, Australia)

Session ID	Title	Authors
IS05	**Statistical methods for covariances and other dependence structures**	**Organizer and Chair: Jaeyong Lee (Seoul National University)**
IS05-1	Semi-parametric contextual bandits with graph-Laplacian regularization	Young-Geun Choi (Sookmyung Women's University, South Korea), Gi-Soo Kim (UNIST, South Korea), Seunghoon Paik (UC Berkeley, USA), Myunghee Cho Paik (Seoul National University, South Korea)
IS05-2	Scalable and optimal Bayesian inference for sparse covariance matrices via screened beta-mixture prior	Kyoungjae Lee (Sungkyunkwan University, South Korea), Seongil Jo (Inha University, South Korea), Jaeyong Lee (Seoul National University, South Korea)
IS05-3	An efficient parallel block coordinate descent algorithm for large-scale precision matrix estimation using graphics processing units	Young-Geun Choi (Sookmyung Women's University, South Korea), Seunghwan Lee, Donghyeon Yu (Inha University, South Korea)
IS05-4	Bayesian optimal two-sample tests in high-dimension	Kyoungjae Lee (Sungkyunkwan University, South Korea), Kisung You (Yale School of Medicine, USA), Lizhen Lin (University of Notre Dame, USA)
IS06	**Design and Analysis of Modern Experiments and Computer Experiments**	**Organizer and Chair: Frederick Kin Hing Phoa (Academia Sinica, Taiwan)**
IS06-1	Predictive subdata selection for computer models	Ming-Chung Chang (Academia Sinica, Taiwan)
IS06-2	Bagging-enhanced sampling schedule for functional quadratic regression	Ming-Hung Kao (Arizona State University, USA), Hyungmin Rha (Eli Lilly, USA), Rong Pan (Arizona State University, USA)
IS06-3	A factor screening approach for supersaturated experiments with an exponential family response via Dantzig selector 2.0	Jing-Wen Huang (National Tsing Hua University, Taiwan), Frederick Kin Hing Phoa (Academia Sinica, Taiwan), Yu-Wei Chen (National Tsing Hua University, Taiwan)
IS06-4	Uniform projection designs and strong orthogonal arrays	Cheng-Yu Sun, Boxin Tang (Simon Fraser University, Canada)
CS09	**Accelerate Life Test**	**Chair: David Han (University of Texas at San Antonio, USA)**
CS09-1	Bayesian designs for progressively type-I censored simple step-stress accelerated life tests under cost constraint and order-restriction	Crystal Wiedner, David Han (University of Texas at San Antonio, USA)
CS09-2	Inference for the progressively type-I censored k-level step-stress accelerated life tests under interval monitoring with the lifetimes from a log-location-scale family	Aruni Jayathilaka, David Han (University of Texas at San Antonio, USA)
CS09-3	Adaptive design and inference for a step-stress accelerated life test	Haifa Ismail-Aldayeh, David Han (University of Texas at San Antonio, USA)
CS09-4	Design optimization for the step-stress accelerated degradation tests based on exponential dispersion process	David Han (University of Texas at San Antonio, USA)
CS10	**Application**	**Chair: Shuen-Lin Jeng (National Cheng Kung University, Taiwan)**
CS10-1	Analysis of social media usage among customers in the cosmetics industry	Reina Mishima, Yumi Asahi (Tokyo University of Science, Japan)
CS10-2	Discriminant analysis of finger plethysmogram wave data in depressed patients using sample entropy	Tokihiko Niwa (Kwansei Gakuin Senior High School, Japan), Sou Mirai (Tokyo Dental College Ichikawa General Hospital, Japan), Shingo Shirahata (Osaka University, Japan), Testurou Kamae (Osaka City University, Japan), Makio Syuukawa (Syuukawa Cardiology Clinic, Japan), Makoto Komazawa, Kenichi Itao (WINFrontier Co., Ltd., Japan)
CS10-3	A study of impacts of of historical contexts on labor force participation rates for South Korean and Japanese women based on age-by-period data	Nobutane Hanayama (Shobi University, Japan), Myung J. Hwang (Korean University, South Korea)
CS10-4	Multiple testing of differential gene expression in combined rna-seq experiments based on a data-driven simulation procedure	Shuen-Lin Jeng (National Cheng Kung University, Taiwan)