2016 International Biometric Conference | Victoria, Canada

28th IBC

FINAL PROGRAM

JULY 10-15, 2016 • VICTORIA, BC
VICTORIA CONFERENCE CENTRE

We are grateful for the continued support of the IBC!

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BARCELONA IBC 2018
XXIX INTERNATIONAL BIOMETRIC CONFERENCE
Barcelona, 8-13 July, 2018

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Message from the IBS President and the IBC 2016 Organizing President

Dear IBC attendees,

We are delighted to welcome you, your families and friends to Victoria for the XXVIIIth International Biometric Conference (IBC 2016) being hosted by the Western North American Region (WNAR) of the IBS.

Laura Cowen and her Local Organizing Committee (LOC) have done a wonderful job in providing a socially and scientifically inviting programme at an outstanding venue. The Victoria Convention Centre provides excellent spaces for formal meetings/scientific sessions and informal conversations/networking activities that are an essential part of every IBC. We are also grateful to Alan Lee and his colleagues at MCI for their work in organizing the meeting.

Fred van Eeuwijk (ANed) and his International Program Committee (IPC) have built the core of the scientific programme by selecting 17 invited sessions from across many different areas of biometry. We have also scheduled some special sessions, including Biometrics and JABES Showcases, an Invited Session from the ISI, and a Statistics in Practice session that has been organized by the German Region and is sponsored by Wiley. Also, please note the Young Statisticians Session on Monday afternoon, where the five awardees of the international competition for funding to attend the IBC will have the opportunity to present their work. In addition, WNAR have also prepared a programme of 12 Invited Sessions and three Young Investigator Award Sessions. Alongside these, we have an extensive Contributed Programme with 39 sessions of oral presentations and Poster Sessions. We would like to thank IPC for all of their work in reviewing abstracts and together with WNAR and the LOC in assembling this extensive programme for the week. Thanks also to all of those who submitted abstracts and who will present their work to make this meeting an interesting and successful scientific event. In addition, we thank Pascale Tubert-Bitter (FR) and her colleagues from the Education Committee who organized the Short Course Programme.

As ever, we are grateful to the continued support of our Executive Director Dee Ann Walker and her colleagues at the IBS International Business Office for helping us to manage the Society and for much of the IBC organization, including handling the submission of abstracts and registrations, and planning for the many IBS governance meetings that will take place over the coming week.

We are looking forward to renewing international friendships and professional contacts and making new ones during the next week. Hopefully, many of you will also join us in Barcelona, Spain for the XXIXth International Biometric Conference in 2018.

We wish you all an enjoyable and productive time.

Elizabeth Thompson

President

International Biometric Society

John Hinde

Organizing President

IBC 2016 Victoria

Message from the Local Organizing Committee

We are delighted to welcome international statistics and biostatistics researchers and practitioners from academia, industry and government to the first IBC to be held on the Pacific coast of Canada. Victoria, traditional territory of the Lekwungen First Nations, is home to the University of Victoria, one of the leading universities in Canada. It is also within 100 km of several world-class academic institutions located in Vancouver, BC and Seattle, Washington, USA. We hope this meeting will be a conduit for sharing research accomplishments and fostering new ideas, and will provide a venue to meet old friends and strike new relationships. Victoria is a popular tourist destination with the "ocean at its doorstep and wilderness in its backyard". It is also a good jumping off point for taking a cruise up the pacific coastline to Alaska or driving into the Canadian Rockies to visit the natural wonders of Banff or Jasper National Parks. We are grateful for support from the University of Victoria, Canadian Statistical Sciences Institute, American Statistical Association, Pacific Institute for the Mathematical Sciences, and Springer.

We look forward to meeting you!

Laura Cowen
Co-Chair, Local Organizing Committee
IBC 2016 Victoria

Youyi Fong
Co-Chair, Local Organizing Committee
IBC 2016 Victoria

Message from the Chair of the International Program Committee

Welcome to the XXVIII-th International Biometric Conference, the biennial meeting of the International Biometric Society. A large number of people have been working over the last year to produce a scientific program that looks varied, diverse and of high quality. The final program consists of 17 IBS invited sessions, 12 WNAR invited sessions, five special sessions, and 40 contributed oral sessions. In addition, four short courses will be offered and scientific posters will be on display throughout the conference.

Of the people that contributed to the realization of this program, I would like to thank in particular the members of the International Program Committee for reviewing a large number of abstracts, IBC President John Hinde for help on the coordination of the program scheduling tasks, the members of the Local Organizing Committee for the design and completion of the program schedule, and the International Business Office for help in many administrative and organizational matters.

I hope you will enjoy the conference and appreciate the quality of the presentations and posters.

Fred van Eeuwijk

Chair, IPC 2016

IBC 2016 Organizing Committee

Local Organizing Committee 2016

Laura Cowen, Co-Chair, Department of Mathematics and Statistics, University of Victoria

Youyi Fong, Co-Chair, Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center and Department of Biostatistics, University of Washington

Brad Biggerstaff, Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention

Elizabeth Brown, Vaccine and Infectious Disease and Public Health Sciences Divisions, Fred Hutchinson Cancer Research Center

Kate Crespi, Department of Biostatistics, Fielding School of Public Health, UCLA

Marco Carone, Department of Biostatistics, University of Washington

Megan Othus, Fred Hutchinson Cancer Research Centre, Public Health Sciences, Biostatistics and Biomathematics

Rhonda Rosychuk, Department of Pediatrics, University of Alberta

Fred van Eeuwijk, IPC Chair (ANed) (ex-officio)

Dee Ann Walker, Executive Director, IBS (ex-officio)

International Program Committee 2016

Fred van Eeuwijk (Chair) the Netherlands Region (ANed)

Mark Brewer British and Irish Region (BIR)

Stephane Robin French Region (RF)

Hanno Ulmer Austro-Swiss Region (ROeS)

Rachel Fewster Australasian Region (AR)

Pere Puig Spanish Region (REsp)

Charmaine Dean Western North American Region (WNAR)

Andrew Zhou (China)

Dimitris Rizopoulos the Netherlands Region (ANed)

Hans Peter Piepho German Region (DR)

Kristel van Steen (Belgian Region)

Gustavo de los Campos Argentinean Region (RArg)

Alison Smith Australasian Region (AR)

Afrânio Vieira Brazilian Region (RBras)

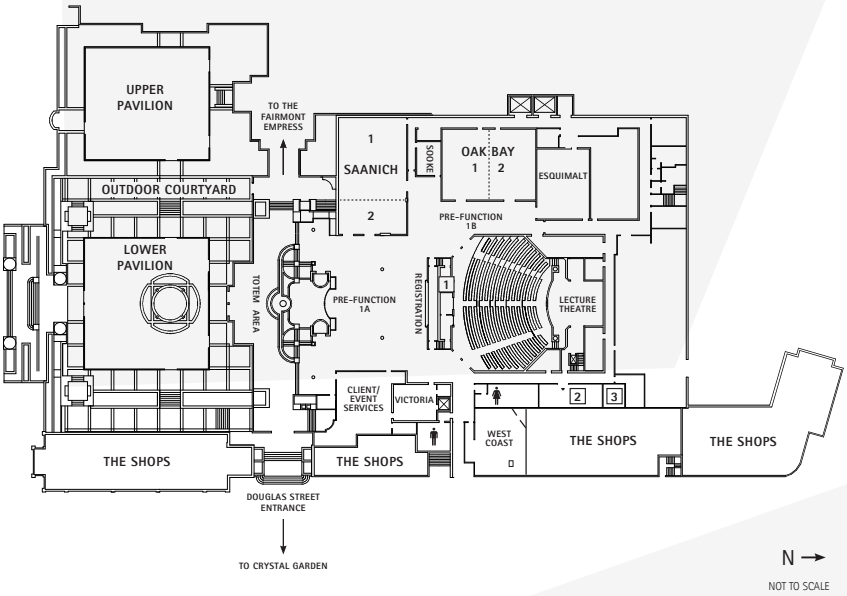
Laura Cowen LOC Co-Chair Western North American Region (WNAR)

Elizabeth Brown LOC Alternate Representative Western North American Region (WNAR)

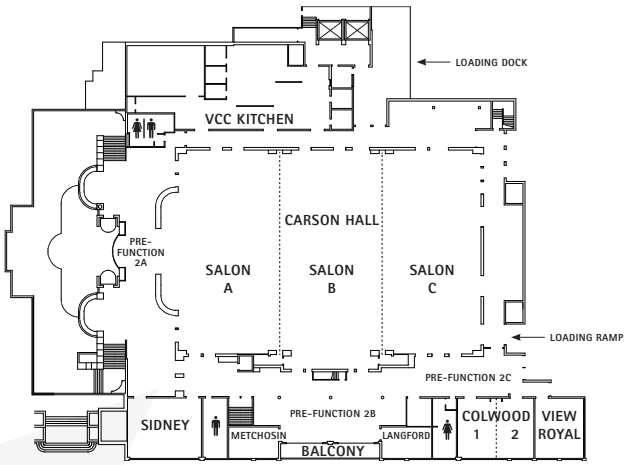
Event Venue

Victoria Conference Centre

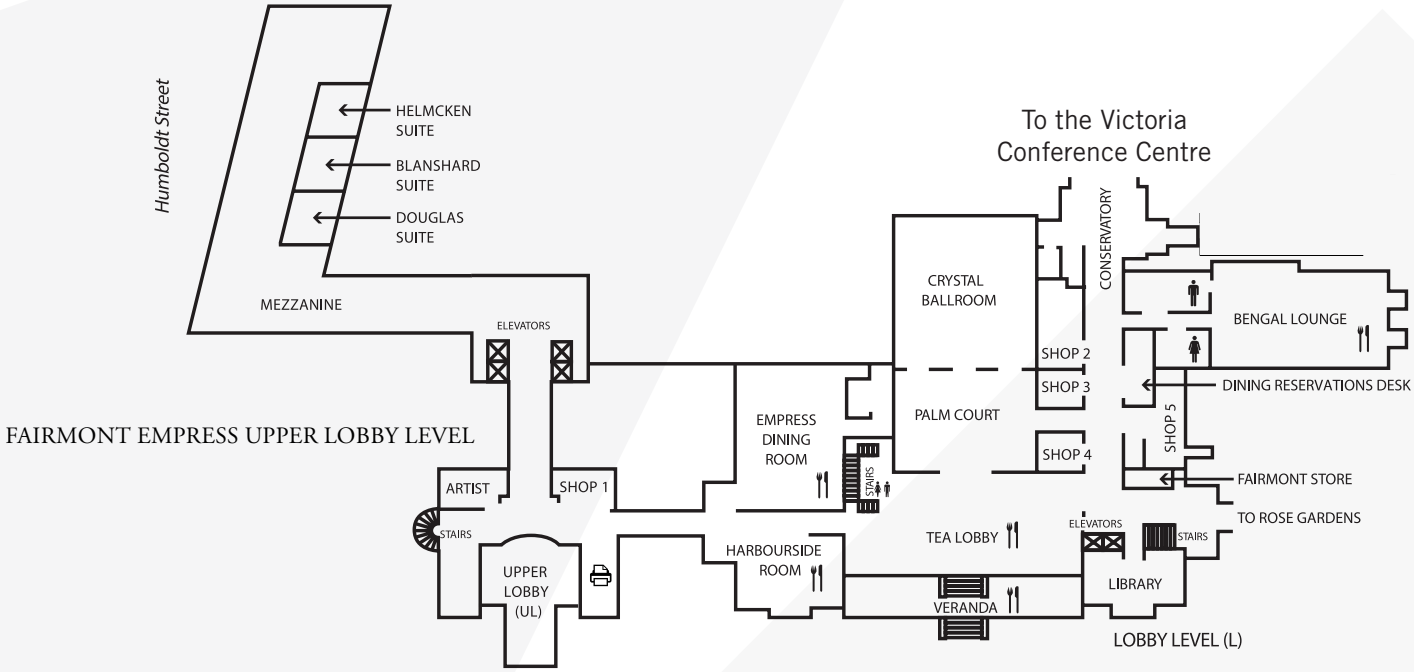
Level 1



Level 2



Fairmont Empress Hotel



Schedule at a Glance

Sunday, July 10

08:30 - 18:00	Registration Desk Open	Pre-Function 1A
09:00 - 16:00	Speaker Prep Room Open	Westcoast
09:00 - 15:00	Executive Board Meeting **private*	Colwood 1&2
09:00 - 17:00	Short Courses	
	SC.01 - Analysis of Life History Data with Multistate Models	Saanich 1&2
	SC.02 - An Introduction to the Joint Modelling of Longitudinal and Survival Data	Oak Bay 1&2
	SC.03 - A Statistical Approach to Machine Learning	Esquimalt
	SC.04 - Design of complex Experiments	Sidney
10:30 - 11:00	AM Refreshment Break	Pre-Function 1A
12:30 - 13:30	Lunch	Crystal Ballroom (Fairmont Empress Hotel)
15:00 - 15:30	PM Refreshment Break	Pre-Function 1A
15:30 - 17:00	WNAR Regional Committee Meeting **private*	Colwood 1&2
17:00 - 19:30	Welcome Reception	Crystal Ballroom (Fairmont Empress)

Monday, July 11

08:30 - 16:30	Registration Desk Open	Pre-Function 1A
08:00 - 16:00	Speaker Prep Room Open	Westcoast
08:45 - 10:30	Opening Session / President's Address	Lecture Theatre
10:30 - 17:30	Exhibits & Poster Area Open	Pre-Function 1&2
10:30 - 11:00	AM Refreshment Break	Pre-Function 1&2
11:00 - 12:30	Breakout Sessions	
	IS.01 - Some Recent Developments in Incomplete Data Analysis in Biometrical Studies	Lecture Theatre
	IS.02 - Modelling Count Data in the Era of Next Generation Sequencing Data	Carson Hall - Salon A
	CS.01 - Survival Analysis 1	Carson Hall - Salon B
	CS.02 - Ecological Research 1	Carson Hall - Salon C
	CS.03 - Microarrays and omics 1	Saanich 1&2
	WN.01 - Statistical methods for neuroimaging data	Oak Bay 1&2
12:30 - 14:00	Young Statisticians' Warm-Up	
12:30 - 14:00	Lunch Time Break	
12:45 - 13:45	WNAR Regional Advisory Board Meeting **private*	Colwood 1&2
14:00 - 15:30	Breakout Sessions	
	IS.03 - Combination, Enrichment and Added-value of Omics Data in Modern Clinical Prediction Problems	Lecture Theatre
	IS.04 - New Advances in Underdispersed Count Data Analysis	Carson Hall - Salon A
	CS.04 - Environmental Research 1	Carson Hall - Salon B
	CS.05 - Causal Inference 1	Carson Hall - Salon C
	CS.06 - Epidemiology 1	Saanich 1&2
	WN.02 - Statistical Inference in Complex Sampling Designs	Oak Bay 1&2
14:30 - 15:30	All Committee Chairs' & Officers' Meeting **private*	Metchosin
15:30 - 16:00	PM Refreshment Break	Pre-Function 1&2
16:00 - 17:30	Young Statisticians' Showcase	Lecture Theatre

Schedule at a Glance

16:00 - 17:30	Breakout Sessions	
	CS.07 - Agriculture	Carson Hall A
	CS.08 - Bioinformatics 1	Carson Hall B
	CS.09 - Clinical Trials 1	Carson Hall C
	CS.10 - Regression 1	Saanich 1&2
	WN.03 - Statistical Analysis of Wearable Sensor Data	Oak Bay 1&2
16:00 - 17:30	Committee on Communications Meeting **private*	Metchosin
16:00 - 17:30	Education Committee Meeting **private*	Langford
17:30 - 19:30	University of Washington Biostatistics-Statistics Alumni Reception **private*	Palm Court (Fairmont Empress Hotel)
18:00 - Late	Young Statisticians' Mixer **ticket required*	Bard & Banker Pub

Tuesday, July 12

08:30 - 16:30	Registration Desk Open	Pre-Function 1A
08:30 - 16:00	Speaker Prep Room Open	Westcoast
09:00 - 17:30	Exhibits & Poster Area Open	Pre-Function 1&2
09:00 - 10:30	Breakout Sessions	
	IS.05 - Methodological Challenges in Observational Studies – Current Perspectives and Future Directions in Function Form, Measurement Error and Causal Inference	Lecture Theatre
	IS.06 - Statistical Assessment of the Replicability of Scientific Results	Carson Hall - Salon A
	CS.11 - Ecological Research 2	Carson Hall B
	CS.12 - Genetics 1	Carson Hall C
	CS.13 - Computer intensive methods, software development, and graphics	Saanich 1&2
	WN.04 - Missing Data in Regression: Beyond Existing Modelling Assumptions	Oak Bay 1&2
09:00 - 10:30	Club of Presidents **private*	Metchosin
10:30 - 11:00	AM Refreshment Break	
11:00 - 12:30	Breakout Sessions	
	IS.07 - Recent Developments in Pharmacokinetic and Pharmacodynamic Modeling and Data Analysis	Lecture Theatre
	CS.14 - Survival Analysis 2	Carson Hall - Salon B
	CS.15 - Infectious Diseases and Control	Carson Hall - Salon C
	CS.16 - Longitudinal data analysis / mixed effects model 1	Saanich 1&2
	WN.05 - Advances in Methodology for Causal Inference	Oak Bay 1&2
11:00 - 12:30	Statistics in Practice	Carson Hall - Salon A
11:00 - 12:30	Biometrics Associate Editors **private*	Metchosin
12:30 - 14:00	Lunch Time Break	
12:30 - 13:45	WNAR Regional Committee **private*	Colwood 1&2
13:00 - 14:00	Poster Session 1	Pre-Function 2
14:00 - 15:30	Breakout Sessions	
	IS.08 - Two-part Models for the Analysis of Correlated Count and Semi-continuous Data with Excess Zeros	Lecture Theatre
	CS.17 - Epidemiology 2	Carson Hall - Salon B
	CS.18 - Topics in Modeling	Carson Hall - Salon C
	WN.06 - Recent Methods Development for Cancer Screening	Oak Bay 1&2
14:00 - 15:30	Statistics in Practice	Carson Hall - Salon A

Schedule at a Glance

14:00 - 15:30	WNAR Young Investigators 1	Saanich 1&2
14:00 - 15:30	Editorial Advisory Meeting **private*	Metchosin
14:00 - 15:30	Biometric Bulletin Correspondents' Meeting **private*	Langford
14:00 - 17:30	Conference Advisory Committee **private*	Colwood 1&2
15:30 - 16:00	PM Refreshment Break	Pre-Function 1&2
16:00 - 17:30	Breakout Sessions	
	IS.09 - Recent Advances in Bayesian Methods for Causal Inference	Lecture Theatre
	CS.19 - Survival Analysis 3	Carson Hall - Salon B
	CS.20 - Clinical Trials 2	Carson Hall - Salon C
	WN.07 - A Continuous Approach to Interpreting Forensic DNA Profiles	Oak Bay 1&2
16:00 - 17:30	Biometrics Showcase	Carson Hall - Salon A
16:00 - 17:30	WNAR Young Investigators 2	Saanich 1&2
16:00 - 17:30	Awards Fund Committee **private*	Langford
17:45 - 19:00	Awards	Lecture Theatre
19:00 - 20:00	Regional Officers' / Awards Reception	Palm Court (Fairmont Empress Hotel)

Wednesday, July 13

CLOSED	Registration Desk	Pre-Function 1A
09:00 - 15:00	Speaker Prep Room Open	Westcoast
CLOSED	Exhibits & Poster Area	

Thursday, July 14

08:30 - 16:30	Registration Desk Open	Pre-Function 1A
08:30 - 16:30	Speaker Prep Room Open	Westcoast
09:00 - 18:00	Exhibits & Poster Area Open	Pre-Function 1&2
09:00 - 10:30	Breakout Sessions	
	IS.10 - Robust instrumental variable methods in Mendelian Randomization	Lecture Theatre
	IS.11 - Statistical Methods in Imaging Genomics and Brain Connectivity	Carson Hall - Salon A
	CS.21 - Survival Analysis 4	Carson Hall - Salon B
	CS.22 - Longitudinal data analysis / mixed effects model 2	Carson Hall - Salon C
	WN.08 - Statistical Methods to Improve Drug and Vaccine Safety Surveillance Using Big Healthcare Data	Oak Bay 1&2
09:00 - 10:30	WNAR Young Investigators 3	Esquimalt
09:00 - 12:30	Representative Council Meeting **private*	Colwood 1&2
09:00 - 12:30	JABES AE Meeting	Metchosin
10:30 - 11:00	AM Refreshment Break	Pre-Function 1&2
11:00 - 12:30	Breakout Sessions	
	IS.12 - Statistician and Scientist: A New Age in Collaboration	Lecture Theatre
	CS.23 - Causal Inference 2	Carson Hall - Salon A
	CS.24 - Microarrays and omics data 2	Carson Hall - Salon B
	CS.25 - Epidemiology 3	Carson Hall - Salon C
	CS.26 - Longitudinal /Mixed models	Esquimalt
	WN.09 - Advances in Nonparametric and Semiparametric Inference	Oak Bay 1&2
12:30 - 14:00	Lunch Time Break	

Schedule at a Glance

13:00 - 14:00	Poster Session 2	Pre-Function 2
14:00 - 14:30	IBS Members' General Meeting	Esquimalt
14:30 - 16:00	Breakout Sessions	
	IS.13 - Development and Evaluation of Biomarkers for Predicting Treatment Effects in Clinical Trials: Methodology and Application	Lecture Theatre
	CS.27 - Epidemiology 4	Carson Hall - Salon A
	CS.28 - Regression 3	Carson Hall - Salon B
	CS.29 - Medical Research	Carson Hall - Salon C
	WN.10 - Statistical Innovation for Network Analysis	Oak Bay 1&2
14:30 - 16:00	ISI Showcase	Saanich 1&2
14:30 - 16:00	Budget & Finance Meeting	Metchosin
14:30 - 18:00	Regional Officers' Meeting **private*	Colwood 1&2
16:00 - 16:30	PM Refreshment Break	Pre-Function 1&2
16:30 - 18:00	Breakout Sessions	
	IS.14 - Advances in Neuroimaging	Lecture Theatre
	IS.15 - Regularization & Model Selection Mixed Models	Carson Hall - Salon A
	CS.30 - Clinical Trials 3	Carson Hall - Salon B
	CS.31 - Missing and incomplete Data	Carson Hall - Salon C
	CS.32 - Spatial Epidemiology	Saanich 1&2
	CS.33 - Agriculture / biometrics	Oak Bay 1&2
16:30 - 18:00	LOC & IPC Chairs **private*	Langford
19:00 - 22:00	Gala Dinner **ticket required*	Royal BC Museum

Friday, July 15

08:30 - 13:00	Registration Desk Open	Pre-Function 1A
08:30 - 11:00	Speaker Prep Room Open	Westcoast
09:00 - 12:30	Exhibits & Poster Area Open	Pre-Function 1&2
09:00 - 10:30	Breakout Sessions	
	IS.16 - Novel Methods and Applications in Spatial and Spatiotemporal Statistics	Lecture Theatre
	CS.34 - Survival Analysis 5	Carson Hall - Salon A
	CS.35 - Bioinformatics 2	Carson Hall - Salon B
	CS.36 - Categorical data analysis	Saanich 1&2
	WN.11 - Novel Statistical Methods for Determination of Patient Classification in Personalized Medicine: Illustrations in Cystic Fibrosis	Oak Bay 1&2
09:00 - 10:30	JABES Showcase	Carson Hall - Salon C
10:30 - 11:00	AM Refreshment Break	Pre-Function 1&2
11:00 - 12:30	Breakout Sessions	
	IS.17 - Statistics and Fisheries	Lecture Theatre
	CS.37 - Regression 2	Carson Hall - Salon A
	CS.38 - Bayesian methods 1	Carson Hall - Salon B
	CS.39 - Genetics 2	Carson Hall - Salon C
	CS.40 - Topics in Application	Saanich 1&2
	WN.12 - Statistics and Human Rights	Oak Bay 1&2
12:30 - 13:30	Closing Ceremony & Awards Presentation	Lecture Theatre
13:30 - 14:00	WNAR Annual Business Meeting	Sidney

SC. Short Courses

Four Short Course proposals have been selected for presentation just before the International Biometric Conference begins. All Short Courses will take place on Sunday, 10 July 2016 from 9:00 am – 5:00 pm, and are taught by experienced professionals who are experts in their fields.

For detailed descriptions of each short course, including aims and topics, please visit https://biometricconference.org/scientific-programme/.

SC.01: Analysis of Life History Data with Multistate Models

Presenters: *Richard Cook and Jerry Lawless*
Sunday, 10 July 2016
09:00 – 17:00
Saanich 1&2

SC.02: An Introduction to the Joint Modelling of Longitudinal and Survival Data

Presenter: *Dimitris Rizopoulos*
Sunday, 10 July 2016
09:00 – 17:00
Oak Bay 1&2

SC.03: A Statistical Approach to Machine Learning

Presenters: *Andreas Ziegler and Marvin Wright*
Sunday, 10 July 2016
09:00 – 17:00
Esquimalt

SC.04: Design of Complex Experiments

Presenters: *Andrew Mead and Steven Gilmour*
Sunday, 10 July 2016
09:00 – 17:00
Sidney

IS. Invited Sessions

For detailed descriptions of each Invited Session, including aims and topics, please visit https://biometricconference.org/scientific-programme/.

Monday, 11 July 2016
11:00 – 12:30

IS.01: Some Recent Developments in Incomplete Data Analysis in Biometrical Studies

Lecture Theatre

Session Chair: *Peisong Han*

Adaptive sampling for efficient two-phase designs
Michael McIsaac (Department of Public Health Sciences at Queens University)

Modeling marginal hazard in the presence of unobserved histories: Does interrupting ART increase the risk of liver fibrosis?
James Hanley (McGill University)

Multiple robust fitting of a log-linear model
Andrea Rotnitzky (Di Tella University, Harvard School of Public Health)

Analyzing Recurrent Marker Data by Forward, Backward or Time-adjusted Models in the Presence of a Terminal Event
Mei-Cheng Wang (Johns Hopkins University)

IS.02: Modelling Count Data in the Era of Next Generation Sequencing Data

Carson Hall - Salon A

Session Chair: *Jeanine Houwing-Duistermaat*

Covariance Estimation for Compositional Data via Composition-Adjusted Thresholding
Hongzhe Li (University of Pennsylvania)

Modeling over-dispersion heterogeneity in differential expression analysis using mixtures
Stephane Robin (Institut National de la Recherche Agronomique, AgroParisTech)

Highly optimized statistical modeling of genome-scale count data
Mark Robinson (University of Zurich)

Methodological Challenges in the Analysis of Longitudinal RNASEQ Data
Roula Tsonaka (Leiden University Medical Center)

Monday, 11 July 2016
14:00 – 15:30

IS.03: Combination, Enrichment and Added-value of Omics Data in Modern Clinical Prediction Problems

Lecture Theatre

Session Chair: *Bart Mertens*

Combining clinical and omics data to construct a predictor and assess its predictive value – comparison of several strategies
Willi Sauerbrei (University Medical Center Freiburg)

Added predictive value of omic datasets
Mar Rodríguez Girondo (Leiden University Medical Center)

Integrating RNA-seq data from a mouse model and a clinical cohort
Harald Binder (University Medical Center Johannes Gutenberg University Mainz)

An efficient procedure to combine biomarkers with limits of detection for risk prediction
Ruth Pfeiffer (National Cancer Institute, NIH, HHS)

IS.04: New Advances in Underdispersed Count Data Analysis

Carson Hall - Salon A

Session Chair & Discussant: *Célestin Kokonendji*

Multivariate underdispersion extension
Célestin Kokonendji (University of Franche-Comté)

Competition and Underdispersion
Clarice Demétrio (ESALQ/USP)
John Hinde (National University of Ireland)

Some mechanisms leading to underdispersion
Pedro Puig (Universitat Autònoma de Barcelona)

Underdispersion models: models that “fly under the radar”
Kimberly Sellers (Georgetown University, U.S. Census Bureau)

Tuesday 12 July 2016
09:00 – 10:30

IS.05: Methodological Challenges in Observational Studies – Current Perspectives and Future Directions in Function Form, Measurement Error and Causal Inference

Lecture Theatre

Session Chair: *James Carpenter*

Reference based sensitivity analysis for clinical trials with missing data: some theory and examples
James Carpenter (London School of Hygiene & Tropical Medicine)

Unresolved issues in modeling of functional forms for continuous variables in multivariable analyses
Michal Abrahamowicz (McGill University)

Barriers and challenges to the use of statistical methods for addressing errors in the measurement and classification of outcome and explanatory variables in observational studies
Laurence Freedman (Gertner Institute for Epidemiology, Information Management Services, Inc)

Appearance versus reality: on reconciling the many faces of causal effects estimated in the medical literature
Els Goetghebeur (Ghent University)

IS.06: Statistical Assessment of the Replicability of Scientific Results

Carson Hall - Salon A

Session Chair: *Ruth Heller*

Assessing replicability of findings across two studies of multiple features
Marina Bogomolov (Technion)

A Regression Framework for Assessing Covariate Effects on the Reproducibility of High-Throughput Experiments
Qunhua Li (Penn State University)

Inferring replicability from the Cochrane Collaboration reviews
Daniel Yekutieli (Tel-Aviv University)

What can be learned from replication studies about ways to increase replicability?
Yoav Benjamini (Tel-Aviv University)

Tuesday, 12 July 2016
11:00 – 12:30

IS.07: Recent Developments in Pharmacokinetic and Pharmacodynamic Modeling and Data Analysis

Lecture Theatre

Session Chair: *Joel Dubin*

Discussant: *Sophie Donnet*

Multiscale Modeling for PK/PD Studies
Hulin Wu (University of Texas Health Science Center at Houston)

Bayesian Inference and Uncertainly Quantification for Stochastic PK/PD Models
Martin Lysy (University of Waterloo)

Model-based Bridging of Dose Regimens Supporting Drug Approval: A Case Study or Cross Functional Modeling Collaboration
Jose Pinheiro (Janssen Pharmaceuticals)

Tuesday, 12 July 2016
14:00 pm – 15:30

IS.08: Two-part Models for the Analysis of Correlated Count and Semi-continuous Data with Excess Zeros

Lecture Theatre

Session Chair: *Iris Reinhard*

Discussant: *Geert Molenberghs*

The LZIP: A Bayesian latent factor model for correlated zero-inflated counts
Brian Neelon (Medical University of South Carolina)

The changing landscape of zero-inflated models with random effects for count data
D. Leann Long (West Virginia University School of Public Health)

Two-part models for longitudinal semicontinuous data
Valerie Smith (Department of Veterans Affairs)

Discussion
Geert Molenberghs

Tuesday, 12 July 2016
16:00 – 17:30

IS.09: Recent Advances in Bayesian Methods for Causal Inference

Lecture Theatre

Session Chair: *Jason Roy*

A New Approach to Causal Inference Using Bayesian Nonparametric Methods
Jason Roy (University of Pennsylvania)

Surrogacy Assessment Using Principal Stratification and a Gaussian Copula Model
Michael Elliott (University of Michigan)

Bayesian Inference for causal effects on bivariate outcomes with application to the evaluation of a job training program in Luxembourg
Andrea Mercatanti (LISER Luxembourg Institute of Socio-Economic Research)

A Bayesian Nonparametric Approach for Fitting Marginal Structural Models
Kirsten Lum (University of Pennsylvania)

Unmeasured confounding, large datasets, and the role of Bayesian inference
Lawrence McCandless (Simon Fraser University)

Thursday, 14 July 2016
09:00 – 10:30

IS.10: Robust instrumental variable methods in Mendelian Randomization

Lecture Theatre

Session Chair: *Simon Thompson*

Instrumental variable assumptions, and their practical interrogation in Mendelian Randomization studies
Maria Glymour (University of California)

Weighted median estimators for robust inference in Mendelian randomization
Stephen Burgess (University of Cambridge)

Robust Confidence Intervals for Causal Effects with Possibly Invalid Instruments
Hyunseung Kang (Stanford University)

Mendelian randomisation analysis of time-to-event endpoints
Stijn Vansteelandt (Ghent University)

IS.11: Statistical Methods in Imaging Genomics and Brain Connectivity

Carson Hall - Salon A

Session Chair: *Timothy Johnson*

Estimation for bivariate quantile varying coefficient model and its application in DTI data analysis
Linglong Kong (University of Alberta)

A Bayesian Group Sparse Multi-Task Regression Model for Imaging Genomics
Farouk Nathoo (University of Victoria)

A Bayesian Approach to Dynamic Functional Connectivity Networks
Marina Vannucci (Rice University)

Thursday, 14 July 2016
11:00 – 12:30

IS.12: Statistician and Scientist: A New Age in Collaboration

Lecture Theatre

Session Chair: *Brian Cullis*

Statistician and Scientist: A new age in collaboration
Beverly Gogel (Biometrics, The University of Adelaide)

Before there was data there was…
Katya Ruggiero (University of Auckland)

Developing effective collaborations with scientists: experiences of an applied environmental statistician
Adam Butler (Biomathematics and Statistics Scotland)

Regularization Methods In Modelling Genotype To Phenotype Relations, A Synthesis Of Statistical And Biological Principles
Fred Van Eeuwijk (Wageningen University)

Thursday, 14 July 2016
14:30 – 16:00

IS.13: Development and Evaluation of Biomarkers for Predicting Treatment Effects in Clinical Trials: Methodology and Application

Lecture Theatre

Session Chair & Discussant: *Holly Janes*

Adaptive Enrichment Trials for Biomarker-guided Treatments
Noah Simon (University of Washington)

Online, semi-parametric
Eric Laber

Estimation of optimal treatment allocations for the control of emerging
Parvin Tajik (Academic Medical Center - University of Amsterdam)

Thursday, 14 July 2016
16:30 – 18:00

IS.14: Advances in Neuroimaging

Lecture Theatre

Session Chair: *Elizabeth Juarez-Colunga*

Fast, fully Bayesian spatiotemporal inference for fMRI data
John Hughes (University of Minnesota)

Predicting Parkinson's Disease using individualized whole-brain functional connectivity networks
Benjamin Cassidy (Columbia University)

Estimating Neuron Fiber Orientation via Diffusion MRI
Galin Jones (University of Minnesota)

Statistical issues in pre-processing and group modeling of magnetic resonance image data for neurodegenerative diseases

Ani Eloyan (Brown University)

IS.15: Regularization & Model Selection Mixed Models

Carson Hall - Salon A

Session Chair: *Samuel Mueller*

Epidemics
Samuel Mueller

Joint selection in mixed models using regularized PQL
Francis Hui (The Australian National University)

Fully Efficient and Outlier-Robust Estimation in the Linear Model
Howard Bondell (Statistics, NC State University)

Weighted inverse covariance estimation for compositional count data with applications to microbiome data
Jiming Jiang (Statistics, Oregon State University)

Friday, 15 July 2016
09:00 – 10:30

IS.16: Novel Methods and Applications in Spatial and Spatiotemporal Statistics

Lecture Theatre

Session Chair: *Laura Cowen*

Effect of misspecification of correlation structure in spatial frailty model: an application in modelling large scale survival data and simulation study
Cindy Feng (University of Saskatchewan)

A High Dimensional Spatiotemporal State-Space Model for Combined Analysis of MEG and EEG data
Farouk Nathoo (University of Victoria)

Spatial Analysis of Environmental Bioassays
Debashis Mondal (Oregon State University)

Friday, 15 July 2016
11:00 – 12:30

IS.17: Statistics and Fisheries

Lecture Theatre

Session Chair: *Marie-Pierre Etienne*

Estimating dynamics, stability, and distribution shifts for fish communities using multispecies spatio-temporal models
James Thorson (Northwest Fisheries Science Center, NMFS, NOAA, University of Washington)

A spatio-temporal approach for abundance estimation with zero-inflated biomass data
Jean-Baptiste Lecomte (Fisheries and Oceans Canada)

Modelling movement using Stochastic Differential Equations in Fisheries Science
Pierre Gloaguen (AgroParisTech)

WN. WNAR Invited Sessions

For detailed descriptions of each WNAR Invited Session,
please visit https://biometricconference.org/scientific-programme/.

Monday, 11 July 2016
11:00 – 12:30

WN.01: Statistical Methods for Brain Imaging Data

Oak Bay 1&2

Session Chair: *Jeff Goldsmith*

Statistical methods for neuroimaging analyses of multi-center studies
Russell Shinohara (University of Pennsylvania)

Functional data modeling of dynamic PET data
Todd Ogden (Columbia University)

Scalar-on-Image Regression via Soft-Thresholded Gaussian Processes
Ana-Maria Staicu (North Carolina State University)

Modeling fMRI data for pre-surgical planning via a conditionally-weighted adaptive-smoothing model
Timothy Johnson (University of Michigan)

Monday, 11 July 2016
14:00 – 15:30

WN.02: Statistical Inference in Complex Sampling Designs

Oak Bay 1&2

Session Chair: *Alex Luedtke*

Efficient inference for an additive gene-treatment interaction from a nested two-phase study
Tracey Marsh (University of Washington)

Estimation of Stratified Mark-Specific Proportional Hazards Models for Competing Risks Outcomes under Two-Phase Sampling with Application to HIV Vaccine Efficacy Trials
Peter Gilbert (Fred Hutchinson Cancer Research Center, University of Washington)

Semiparametric causal inference in matched cohort studies
Edward Kennedy (University of Pennsylvania)

Multiple Imputation and/or calibration in twophase designs
Thomas Lumley (University of Auckland, New Zealand)

Monday, 11 July 2016
16:00 – 17:30

WN.03: Statistical Analysis of Wearable Sensor Data

Oak Bay 1&2

Session Chair: *Russell Shinohara*

Predicting human activity using smartphone GPS and accelerometer data
Julian Wolfson (University of Minnesota)

Multilevel Functional Methods for modeling actigraphy data and its application to predicting mortality in the US population
Vadim Zipunnikov (Johns Hopkins University)

24 hour accelerometry data collection, challenges and opportunities
Tiago Barreira (Syracuse University)

Discussion
Jeff Goldsmith (Columbia University)

Tuesday, 12 July 2016
09:00 – 10:30

WN.04: Missing Data in Regression: Beyond Existing Modelling Assumptions

Oak Bay 1&2

Session Chair: *Julian Wolfson*

Robustness against model misspecifications in missing data analysis
Peisong Han (University of Waterloo)

Imputation under informative sampling
Emily Berg (Iowa State University)

Semiparametric efficient inference for possibly misspecified regression models with missing covariates
Gary Chan (University of Washington)

Identifiability of Normal and Normal Mixture Models With Nonignorable Missing Data
Peng Ding (UC Berkeley)

Tuesday, 12 July 2016
11:00 – 12:30

WN.05: Advances in Methodology for Causal Inference

Oak Bay 1&2

Session Chair: *Andrea Cook*

Nonparametric doubly-robust inference
David Benkeser (University of California, Berkeley)

Adaptive Sampling for Subgroup Analyses
Alexander Luedtke (Fred Hutchinson Cancer Research Center)

Confidence intervals for means under constrained dependence
Forrest Crawford (Yale University)

Some Open Issues in Inference based on higher order influence function
James Robins (Harvard University)

Tuesday, 12 July 2016
14:00 – 15:30

WN.06: Recent Methods Development for Cancer Screening

Oak Bay 1&2

Session Chair: M*insun Song*

A Simulation Model for the Lifetime Exposure to Cigarette Smoking among Individuals Born in the US from 1890-2000
Theodore Holford (Yale University)

Simulating risk factors for lung cancer to optimize lung cancer screening guidelines
Summer Han (Stanford University)

The Impact of Time to Diagnostic Assessment on Screening Efficacy
Carolyn Rutter (RAND Corp.)

A tool for Individualized Coherent Absolute Risk Estimation (iCARE):
Nilanjan Chatterjee (Johns Hopkins University, National Cancer Institute)

Tuesday, 12 July 2016
16:00 – 17:30

WN.07: A Continuous Approach to Interpreting Forensic DNA Profiles

Oak Bay 1&2

Session Chair: *Bruce Weir*

Statistical interpretation of DNA evidence: a brief history of theory and practise
James Curran (University of Auckland)

Formulation of hypotheses in the evaluation of complex DNA evidence
David Balding (University of Melbourne, UCL Genetics Institute)

Effects of laboratory and analysis decisions on the LR and its distribution
Catherine Grgicak (Boston University)

Semi-Continuous vs Fully Continuous Models for the Interpretation of DNA Mixtures
Simone Gittelson (National Institute of Standards and Technology)

Thursday, 14 July 2016
09:00 – 10:30

WN.08: Statistical Methods to Improve Drug and Vaccine Safety Surveillance Using Big Healthcare Data

Oak Bay 1&2

Session Chair: *Jennifer Nelson*

Post-marketing surveillance: What are we hoping for when such is a condition of approval?
Scott Emerson (University of Washington)

Pooling to estimate treatment effects in distributed networks while respecting privacy concerns: experience from the Canadian Network for Observational Drug Effect Studies (CNODES) network
Robert Platt (McGill University)

Group sequential monitoring for drug and vaccine safety using inverse probability of treatment weighting in FDA's Sentinel project
Andrea Cook (Group Health Research Institute, University of Washington)

Comparing approaches for Confounding Adjustment in Secondary Database Analyses: High-Dimensional Propensity Score versus two machine learning algorithms: Random Forest and Elastic Net
Mohammad Karim (McGill University, Jewish General Hospital)

Thursday, 14 July 2016
11:00 – 12:30

WN.09: Advances in Nonparametric and Semiparametric Inference

Oak Bay 1&2

Session Chair: *Scott Emerson*

Automating the construction of asymptotically efficient estimators
Marco Carone (University of Washington)

Circumventing the curse of dimensionality in asymptotic efficient estimation
Mark van der Laan (UC Berkeley)

Minimax and Adaptive Estimation of Nonlinear Functionals
Rajarshi Mukherjee (Stanford University)

Thursday, 14 July 2016
14:30 – 16:00

WN.10: Statistical Innovation for Network Analysis

Oak Bay 1&2

Session Chair: *Sarah Emerson*

Flexible and Interpretable Regression Using Convex Penalties
Daniela Witten (University of Washington)

Graph-Guided Banding for Covariance Estimation
Jacob Bien (Cornell University)

Weighted inverse covariance estimation for compositional count data with applications to microbiome data
Duo Jiang (Oregon State University)

Estimating network structure from electrophysiological brain recordings
Uri Tzvi Eden (Boston University)

Friday, 15 July 2016
09:00 – 10:30

WN.11: Novel Statistical Methods for Determination of Patient Classification in Personalized Medicine: Illustrations in Cystic Fibrosis

Oak Bay 1&2

Session Chair: *David Benkeser*

Characterizing and Clustering an Adult Cystic Fibrosis Patient Population using Longitudinal Lung Function Measurements
Barbara Bailey (San Diego State University)

Distinguishing disease severity using high dimensional protein markers –a pragmatic approach
Sonya Heltshe (University of Washington, Seattle Children's Research Institute)

A Flexible Mixture Model to Characterize Clinical Personas of Parents of Children with CF
Rhonda Szczesniak (Cincinnati Children's Hospital, University of Cincinnati)

Identification of Pediatric Subjects with Cystic Fibrosis at High Risk of Early Chronic Pseudomonas aeruginosa Infection using a Hidden Markov Multi-state Model with a Frailty Term
Brandie Wagner (University of Colorado, Childrens Hospital Colorado)

Friday, 15 July 2016
11:00 – 12:30

WN.12: Statistics and Human Rights

Oak Bay 1&2

Session Chair: *Marco Carone*

Estimating the prevalence of human rights abuses: child abductions from El Salvador's civil war
Robin Mejia (Carnegie Mellon University)

Statistics and Human Rights Research: Current and Historical Examples
Megan Price (Human Rights Data Analysis Group)

Statistics and forensic evidence: The challenges that lie ahead
Alicia Carriquiry (Iowa State University)

Counting Civilian Casualties--Statistics and Human Rights Problems
Nicholas Jewell (University of California, Berkeley)

WNAR Young Investigators 1
Tuesday, 12 July 2016
14:00 – 15:30

Saanich 1&2

Session Chair: *Gary Chan*

An agent-based data augmentation algorithm for tractably fitting stochastic epidemic models to noisy time series data
Fintzi, Jonathan

Selecting Shrinkage Parameters for Effect Estimation
Keller, Joshua

Parsimonious B-Spline Regression Models via Control Polygon Reduction
DeWitt, Peter

Joint modelling of survival data and longitudinal data, with left-censoring, measurement error, and missing data, with application to HIV vaccine efficacy study
Yu, Tingting

WNAR Young Investigators 2
Tuesday, 12 July 2016
16:00 – 17:30

Saanich 1&2

Session Chair: *Nichole Carlson*

Statistical inference in partially observed stochastic compartmental models with application to cell lineage tracking of in vivo hematopoiesis
Xu, Jason

Association Testing for Rare Genetic Variants
Sondhi, Arjun

WNAR Young Investigators 3
Thursday 14 July 2016
09:00 – 10:30

Esquimalt

Session Chair: *Kai Li*

Evaluating New Matrix Pooled Testing Methods to Detect HIV Treatment Failure
Brand, Adam

Ancestry-Specific Allele Frequency Estimation
Zhang, Qian

CS. Contributed Sessions

For detailed descriptions of each Contributed Session please visit https://biometricconference.org/scientific-programme/

CS.01 – Survival Analysis 1
Monday, 11 July 2016
11:00 – 12:30
Carson Hall – Salon B

Session Chair: *Anna Barón*

Assessing Prediction Error in Survival Times: Application to Ovarian Cancer
Altman, Rachel

Polychotomization of continuous variables in Cox proportional hazards regression models: application to patients with stable COPD
Barrio, Irantzu

Metric Learning for Right Censored Survival Outcomes
Conn, Daniel

Projections of health indicators for chronic disease under Semi-Markov assumption
Joly, Pierre

Use of Sample-based methodology to obtain corrected estimates of retention in care of newly diagnosed HIV positive patients before the initiation of ART in Uganda.
Nyakato, Patience

Prostate-specific antigen testing for prostate cancer: Emptying a pool of susceptible individuals?
Valberg, Morten

CS.02 – Ecological Research 1
Monday, 11 July 2016
11:00 – 12:30
Carson Hall – Salon C

Session Chair: *Laura Cowen*

Simulation-Based Approaches for Designing Studies of Wildlife Populations Using Electronic Tags
Butler, Adam

A hurdle mixed model for linking Antarctic Krill presence/absence and density to phytoplankton and environmental factors
Harrison, Lisa-Marie

Predicting counts of fish based on zero inflated data in a stream network
Pereira, Julio

MLE and Bayesian Approach to Partial Stratification in Two-Sample Capture-Recapture Experiments of a Closed Population with Heterogeneity
Premarathna, Lasantha

Rarefaction techniques and a bias in observed richness
Shimadzu, Hideyasu

New Zealand master sample using Balanced Acceptance Sampling
van Dam-Bates, Paul

CS.03 – Microarrays and omics 1
Monday, 11 July 2016
11:00 – 12:30
Saanich 1&2

Session Chair: *Tomi Mori*

An on-line CNV detection method for the next generation sequencing data
Chen, Jie

A new algorithm for GWAS panel optimization, applications in plant genetics
Mary-Huard, Tristan

Cancer Outlier Analysis Based on a Nested Two-Way Clustering
Oura, Tomonori

Detecting gene-gene interactions for survival phenotypes using a unified multifactor dimensionality reduction analysis
Park, Taesung

How to learn from a lot: Empirical Bayes in high-dimensional prediction settings
van de Wiel, Mark

Ridge estimation of the VAR(1) model and its time series chain graph from multivariate time-course omics data
van Wieringen, Wessel

CS.04 – Environmental Research 1
Monday, 11 July 2016
14:00 – 15:30
Carson Hall – Salon B

Session Chair: *David Affleck*

Utilizing prior information in environmental inventory design - experiences from forest inventories
Heikkinen, Juha

Statistical Downscaling of Climate Model Projections of Variables that have Temporal Dependence Structure
Linder, Ernst

Short-Term Forecasting of Atmospheric Data Using Singular Spectrum Analysis
Noguchi, Kimihiro

Modelling Seasonal Rainfall at Fine Time-Scales Using Doubly Stochastic Poisson Processes
Ramesh, Nadarajah

A Test for Tail-Up Spatial Dependence on a Stream Network
Zimmerman, Dale

Bayesian spatio temporal rate change model for incinerator policy evaluation: simulation study
Freni-Sterrantino, Anna

CS.05 – Causal Inference 1
Monday, 11 July 2016
14:00 – 15:30
Carson Hall – Salon C

Session Chair: *Mark Seligman*

Causal Inference in Randomized Experiments with Partial Compliance
Coggeshall, Scott

Estimating inverse probability weights using super learner when weight-model specification is unknown in a marginal structural Cox model context: An application to multiple sclerosis
Karim, Mohammad

A Class of Semiparametric Tests of Treatment Effect Robust to Measurement Error of a Confounder
Miles, Caleb

Investigating the underlying causal network on European football teams
Ramos Cerqueira, Pedro

Robust Estimation of Propensity Score Weights via Subclassification
Wang, Linbo

Pathway Lasso: Estimate and Select Sparse Mediation Pathways with High Dimensional Mediators
Zhao, Yi

CS.06 – Epidemiology 1
Monday, 11 July 2016
14:00 – 15:30
Saanich 1&2

Session Chair: *Yinshan Zhao*

A Joint Modeling assessing the impact of Body Mass Index variation on the Mortality of Incident Elderly Patients on Peritonial Dyalisis
Colugnati, Fernando

A new measure of between-studies heterogeneity in meta-analysis
Crippa, Alessio

Analysis of under-reported data by means of INAR-hidden Markov chains
Fernández-Fontelo, Amanda

Correction for batch effects in nested case-control and case-cohort studies
Samuelsen, Sven Ove

Hypothesis Testing for Treatment Arm Differences in Network Meta-Analyses
Uhlmann, Lorenz

Multinomial Additive Hazards Model to Assess the Disability Burden Using Cross-Sectional Data
Yokota, Renata

CS.07 - Agriculture
Monday, 11 July 2016
16:00 – 17:30
Carson Hall – Salon A

Session Chair: TBD

The incorrect application of experimental designs and the alternative application thereof
Calitz, Frikkie

An Exploration of Statistical Methods for Genomic Selection in Perennial Ryegrass: A New Zealand Study
Catherine Lloyd-West

The progressive meta-method and meta-analysis in application to crop production engineering
Gołaszewski, Janusz

One step at a time: Stage-wise analysis of agricultural experiments using mixed models
Piepho, Hans-Peter

The truth is out there if you look: a barley near-infrared calibration analysis
Russell, Kenneth

Bayesian Semiparametric Mixed Beta Regression for Severity in Plant Disease
Macchiavelli, Raul

CS.08 – Bioinformatics 1
Monday, 11 July 2016
16:00 – 17:30
Carson Hall – Salon B

Session Chair: *Brandie Wagner*

Sample size determination for the prediction of traits in metabolomics
Hageman, Jos

A Generalized Estimating Equations Framework for the Modeling of Intracellular Cytokine Staining Count Data
Meir, Amit

Excess False Positives in Negative-Binomial Based Analysis of Data from RNA-Seq Experiment
Rocke, David

Batch correction methods for metabolomics data in the presence of non-detects
Wehrens, Ron

An overdispersed and zero-inflated statistical model for identification of differentially abundant genes in metagenomic data
Jonsson, Viktor

CS.09 – Clinical Trials 1
Monday, 11 July 2016
16:00 – 17:30
Carson Hall – Salon C

Session Chair: *Ji-Hyun Lee*

To randomize or not to randomize – the challenge of individualized oncology trials
Benner, Axel

Inference on treatment efficacy in subgroups and the mixture population, with an application to time-to-event outcomes
Lin, Hui-Min

Modeling the win ratio in clinical trials with multiple types of event
Oakes, David

Assessing Survival Benefit When Treatment Delays Disease Progression
Schoenfeld, David

New Developments in Optimal Adaptive Two-Stage Designs for Single-Arm Trials with Binary Outcome
Kunzmann, Kevin

CS.10 – Regression 1
Monday, 11 July 2016
16:00 – 17:30
Saanich 1&2

Session Chair: *Rebeca Aguirre-Hernández*

Maximum Likelihood Estimation Of Multivariate Tree Biomass Models From Incomplete Records
Affleck, David

Model Selection and the Cult of AIC
Brewer, Mark

Resampling-based model-building procedures and influential points in multivariable regression
De Bin, Riccardo

Estimating a Population Attribute When Sample Size is Informative
Louis, Thomas

Breakpoint Model for Logistic Regression and Application to the detection of G x E Interactions
Nuel, Grégory

High-Dimensional Hypothesis Testing With the Lasso
Zhao, Sen

CS.11 – Ecological Research 2
Tuesday, 12 July 2016
09:00 – 10:30
Carson Hall – Salon B

Session Chair: *Laura Cowen*

An Empirical Study of the Effects of Sub-sampling In Marine Surveys for Biodiversity Estimation
Darnell, Ross

Using Statistical Modelling to Improve the Resource Efficiency for Measurements on Large Crop Trials for Plant Scientists
Mortlock, Miranda

Exploring ecological relevance in a priori selection of variables for species distribution models (SDMs)
Pirathiban, Ramethaa

Efficient estimation of closed population mark-recapture models in continuous-time
Schofield, Matthew

Statistical Analysis of Trait Variability in Ontogenesis of Epiphytic Lichens
Sofronov, Georgy

New Hidden Markov Models for Removal Data
Zhou, Ming

CS.12 – Genetics 1
Tuesday, 12 July 2016
09:00 – 10:30
Carson Hall – Salon C

Session Chair: *Jinko Graham*

Detection of Set-based Gene-Environment Interaction in Families
Basu, Saonli

In search for genetic predictors of longevity and premature mortality: methodological challenges and new findings.
Fischer, Krista

Allelic Versus Genotypic Level Tests For Multivariate Phenotypes
Grosh, Saurabh

SNP genotype calling of tetraploid species: inclusion of parental information and combination with other sources of information
Gort, Gerrit

The Epistasis Boundary: Linear vs. Nonlinear Genotype-Phenotype Relationships
Sverdlov, Serge

Preferential sampling through time when estimating changes in effective population size
Minin, Vladimir

CS.13 - Computer intensive methods, software development, and graphics
Tuesday, 12 July 2016
09:00 – 10:30
Saanich 1&2

Session Chair: *Ji-Hyun Lee*

Randomizing and checking standard and multiphase designs using the R package dae
Brien, Chris

Dynamic Nomograms as a Translational Tool.
Newell, John

Model selection stability with mplot
Tarr, Garth

Bootstrapped Model-Averaged Confidence Intervals
Zeng, Jimmy

BGData: A Suite of R Packages for Linked Memory Mapped Arrays and Computational Methods for Big Biomedical Data
de los Campos, Gustavo

Multiple Factor Analysis and Principal Component Analysis With R and Factominer in Exploratory Data Analysis of White Wines
Ntushelo, Nombasa

CS.14 – Survival Analysis 2
Tuesday, 12 July 2016
11:00 – 12:30
Carson Hall – Salon B

Session Chair: *Julie McIntyre*

The single-index / Cox proportional hazard mixture cure model: a new modelling approach for the mixture cure model.
Amico, Mailis

A Bayesian joint model for time to malaria and mosquito abundance data from Ethiopia
Belay, Denekew

Competing risk modelling of time-varying drug exposures
Danieli, Coraline

Dynamic prediction of survival using landmarking in large longitudinal observational patient databases: challenges and solutions
Keogh, Ruth

The destructive Poisson-OLLGHN model for survival data with cure rate
Pescim, Rodrigo

Assessing and Modelling informative missing data in survival analysis
Hutton, Jane

CS.15 – Infectious Diseases and Control
Tuesday, 12 July 2016
11:00 – 12:30
Carson Hall – Salon C

Session Chair: *Nicholas P. Jewell*

Estimation of the effectiveness of influenza vaccination from household studies
Ainslie, Kylie

Estimating HIV incidence from HIV diagnoses surveillance data: a penalized likelihood approach
Alioum, Ahmadou

Age-Specific Back-calculation to Estimate HIV Incidence
Brizzi, Francesco

Determining the end of an epidemic with human-to-human transmission
Nishiura, Hiroshi

A non-homogeneous proportional-odds model for outbreak data
Van den Broel, Jan

CS.16 - Longitudinal data analysis / mixed effects model 1
Tuesday, 12 July 2016
11:00 – 12:30
Saanich 1&2

Session Chair: *Rhonda Rosychuk*

Robust joint modeling of longitudinal data and clustered competing risks data by downweighting of outlying longitudinal measurements
Gumedze, Freedom

Population-averaged versus subject-specific approaches for longitudinal data with follow-up truncated by death
Jacqmin-Gadda, Hélène

Joint models for nonlinear longitudinal profiles in the presence of informative censoring.
Little, Francesca

Selecting Outcome Measures and Statistical Models in Neurological Clinical Trials That Measure Functional Outcomes
Uggen, Tea

Two-part models with stochastic processes for modelling longitudinal semi continuous data: exact likelihood inference and modelling the overall marginal mean
Yiu, Sean

Multivariate Joint Models for Longitudinal and Survival Data: Predictive Abilities of Tumor Burden in Advanced Colorectal Cancer
Rondeau, Virginie

CS.17 – Epidemiology 2
Tuesday, 12 July 2016
14:00 – 15:30
Carson Hall – Salon B

Session Chair: *Rhonda Rosychuk*

Information Weighted Independence Graphs for Assessing Associations Between Cardio-Vascular Risk Factors from A Longitudinal Study of Young Adults
Baker, Peter

Fractional polynomials and model selection in Generalized Estimating Equations, with an application to a longitudinal study
Cui, Jisheng

Model-Based Estimation of the Attributable Fraction for Cross-sectional, Case-Control and Cohort Studies Using the R Package AF
Dahlqwist, Elisabeth

An overview of statistical methods for analysis of balanced binary repeated measures on subjects nested within clusters
Masaoud, Elmabrok

A latent process model for forecasting multiple time series in environmental public health surveillance
Morrison, Kathryn

CS.18 – Topics in Modeling
Tuesday, 12 July 2016
14:00 – 15:30
Carson Hall – Salon C

Session Chair: *Yan Yan Wu*

An alternative pruning based approach to unbiased recursive partitioning algorithms
Alvarez-Iglesias, Alberto

State-space models' dirty little secrets: even simple linear Gaussian models can have estimation problems
Auger-Methe, Marie

Spatio-Temporal Modelling and Competition Dynamics in Tillage Forestry Experiments on Early Growth Eucalyptus Grandis
González Barrios, Pablo

Understanding intra-day variation in LIBS spectra
Gupta, Anjali

Spatio-temporal analysis of yield trends for recommended maize varities in Kenya
Lagat, Abraham

Effects of Additive Covariate Error on Parameters and Covariates of a Linear Regression Model
Nakashima, Eiji

CS.19 – Survival Analysis 3
Tuesday, 12 July 2016
16:00 – 17:30
Carson Hall – Salon B

Session Chair: *Yan Yan Wu*

Causal inference in survival analysis using pseudo-observations
Andersen, Per

Robustness of Estimation Methods in a Survival Cure Model with Mismeasured Covariates
Bertrand, Aurélie

Study of Joint Progressive Type-II Censoring in Heterogeneous Populations
Fallah, Lida

Distance from a hydroelectric dam and time to malaria, with distance confounded with the clustering structure
Kifle, Yehenew Getachew

A joint frailty-copula model between tumour progression and death for meta-analysis
Rondeau, Virginie

Instrumental Variable with Competing Risk Model
Zheng, Cheng

CS.20 – Clinical Trials 2
Tuesday, 12 July 2016
16:00 – 17:30
Carson Hall – Salon C

Session Chair: *William Barlow*

Inference with Informative Designs
Flournoy, Nancy

Comparison of Dynamic Treatment Regimes Embedded in A Sequential Multiple-Assignment Randomized Trial (SMART) with An Ordinal Outcome
Ghosh, Palash

A permutation-based approach for three-arm trials with active and placebo controls
Mütze, Tobias

The Use of Routine Hospital Records in the Design of Trials of Complex Surgical Interventions: Identifying the Contributions of Multiple Providers
Papachristofi, Olympia

Bayesian optimal interval design for dose finding based on both efficacy and toxicity outcome
Takeda, Kentaro

Use of Propensity Scores to Adjust for Non-compliance in Randomized Clinical Trials
Zhao, Huaqing

CS.21 – Survival Analysis 4
Thursday, 14 July 2016
09:00 – 10:30
Carson Hall – Salon B

Session Chair: *Cheng Zheng*

Bayesian Joint Models of Longitudinal and Survival Outcomes with Time-Varying Effects using P-splines
Andrinopoulou, Eleni-Rosalina

Cohort effect in survival analysis: a change-point perspective
Bouaziz, Olivier

Modeling dependence in bivariate multi-state processes: a frailty approach Giussani, A. and Bonetti, M. Bocconi University, Milan, Italy
Giussani, Andrea

Optimal Subgroup Selection Rules in Adaptive Enrichment Designs with Time-to-event Outcome
Krisam, Johannes

Regularized Regression Methods for Competing Risks Data
Saadati, Maral

The ABRIDGE Method for Cox Regression Models: Variable Selection for Cox's Proportional Hazards Model via the Adaptive Broken Ridge (ABRIDGE) method
Kawagunchi, Eric

CS.22 - Longitudinal data analysis / mixed effects model 2
Thursday, 14 July 2016
09:00 – 10:30
Carson Hall – Salon C

Session Chair: *Chuan Zhou*

Marginal Zero-inflated Regression Models for Cross-sectional and Clustered Count Data
Hall, Daniel

Multilevel Modelling of Counts with Gamma-Poisson Model
Lee, Yan Liang (Jarod)

Joint Mixture Modelling of Longitudinal Data: Application to Human-Gut Microbiome Composition and the Immune System
Martin, Ivonne

Bivariate Mixture Models for the Joint Distribution of Repeated Serum Ferritin and Transferrin Saturation Values in an Australian Population
McLaren, Christine

Bias reduction from using regularly scheduled as opposed to outcome-driven visits in longitudinal studies
Neuhaus, John

A Novel Sampling Approach for the Rapid Model Exploration of Large Clustered Binary Data
Wright, Stephen

CS.23 – Causal Inference 2
Thursday, 14 July 2016
11:00 – 12:30
Carson Hall – Salon A

Session Chair: *Kate Crespi*

Instrumental Variable Approaches for Estimating Complier Average Causal Effects on Bivariate Outcomes in Randomized Trials with Non-Compliance
DiazOrdaz, Karla

A Model Averaging Approach for Estimating Propensity Scores by Optimizing Balance
Xie, Yuying

Improving Covariate Balancing Propensity Score for Continuous Treatment Regimes
Noreen, Samantha

Model Assessment and Dynamic Treatment Regimens
Wallace, Michael

Reappraisal of odds ratios for validating observational comparative studies
Yanagawa, Takashi

Epidemiological paradoxes explored by causal frailty models - The qualitative DAG needs quantitative support
Stensrud, Mats

CS.24 – Microarrays and omics data 2
Thursday, 14 July 2016
11:00 – 12:30
Carson Hall – Salon B

Session Chair: *Julie Zhou*

Powerful and omnibus consistent distribution-free K-sample and independence tests
Heller, Ruth

Identification of marginal causal relationships in gene networks from observational and interventional expression data.
Monneret, Gilles

General linear models for investigating the dependence between gene module co-expression dynamics and a continuous trait
Padayachee, Trishanta

Testing for Differential Connectivity in High-Dimensional Networks
Zhao, Sen

Latent variable Meta-analysis with Probabilistic Partial Least Squares (PPLS)
el Bouhaddani, Said

CS.25 – Epidemiology 3
Thursday, 14 July 2016
11:00 – 12:30
Carson Hall – Salon C

Session Chair: *Nicholas P. Jewell*

On methods of extracting and reporting leading joint causes of death
Forcheh, Ntonghanwah

Estimating the mortality reduction produced by each round of cancer screening
Hanley, James

Design of Primary and Sensitivity Analyses for Handling Non-future Dependence Missing Data in Clinical Trials With an Emphasis on the Type-I Error Rate Using Multiple Imputation and Pattern Mixture Model Approach
Peng, Lixian

Point-wise averaging approach in dose-response meta-analysis of aggregated data
Crippa, Alessio

A Marginal Structural Model with Dose-Delay Joint-Exposure for Assessing Reductions to Chemotherapy Intensity
Lancia, Carlo

Quantifying the effect of spectrum bias in diagnostic accuracy studies
Davidow, Amy

CS.26 – Longitudinal / Mixed models
Thursday, 14 July 2016
11:00 – 12:30
Esquimalt

Session Chair: *Rachel Altman*

Reconstructing individual disease progression curves with an application to Alzheimer's Disease
Budgeon, Charley

Analysis of KCSE Performance in Nakuru County: A Generalized Estimating Equations Approach
Muchene, Elvis

Estimating HIV Seroconversion Time Using Biomarkers of Recent Infection
Koulai, Loumpiana

The impact of family structure on the association between determinants and health outcomes and modelling family structure using fractional relatedness of founders and non-founders in LifeLines cohort study
Demetrashvili, Nino

New Repeated Measures Design and Sample Size for Randomized Controlled Trials
Tango, Toshiro

Joint modelling of remission and longitudinal quality-of-life measures in psoriatic arthritis; a multi-state modelling approach
Boer, Martin

CS.27 – Epidemiology 4
Thursday, 14 July 2016
14:30 – 16:00
Carson Hall – Salon A

Session Chair: *Kate Crespi*

Modelling semicontinuous exposures: Simulation study and practical application to survival data
Becher, Heiko

Study of the Occurrence of Seasonal Diseases: A Circular Statistical Approach
Das, Kishore

Extending Average Attributable Fractions
Ferguson, John

Estimating parameters of epidemiological model via Simulated Tempering Without Normalizing Constants
Jonoska Stojkova, Biljana

Is There a Puberty-related Sex-switch Of Allergic Rhinitis Prevalence? Pooled Analyses Of Longitudinal Birth Cohorts.
Keller, Theresa

Associations between early body mass index trajectories and later metabolic risk in European children: The IDEFICS study
Pigeot, Iris

CS.28 – Regression 3
Thursday, 14 July 2016
14:30 – 16:00
Carson Hall – Salon B

Session Chair: *Minsun Song*

Sparse functional classification method with composite basis function for early detection of Alzheimer's disease based on brain MRI
Araki, Yuko

Modification of integrated discrimination improvement by beta divergence
Hayashi, Kenichi

Personalized screening intervals for biomarkers using joint models for longitudinal and survival data
Rizopoulos, Dimitris

A statistical framework for using external information in updating prediction models with new biomarkers
Taylor, Jeremy

Multivariate regression models to determine risk factors associated with incidence, severity and duration of chronic pain after surgery
Ulin, Fidel

CS.29 – Medical Research
Thursday, 14 July 2016
14:30 – 16:00
Carson Hall – Salon C

Session Chair: *Eren Demirhan*

Clinical trial by television
Bland, Martin

Markov-Renewal Multistate Model for Colorectal Cancer Screening Evaluation in Lynch Syndrome families
Briollais, Laurent

Assessing Inter-rater Agreement of Immunohistochemistry Scores
Craig, Bruce

Estimating the Probability of Clonal Relatedness in Cases with Two Tumors
Mauguen, Audrey

Affinity Analysis for chronic disease screening and prevention
Zhao, Xu

CS.30 – Clinical Trials 3
Thursday, 14 July 2016
16:30 – 18:00
Carson Hall – Salon B

Session Chair: *Chuan Zhou*

Challenges in the Design and Analysis of Stepped-Wedge Cluster Randomized Controlled Trials to Evaluate the Effectiveness and Safety of Electronic Medical Record Systems
Li, Ling

Resampling based methods to assess the clinical Utility of Phase II endpoints based on tumor measurements to predict overall survival outcomes in Phase III Trials
Mandrekar, Sumithra

Cluster-level adaptive interventions and sequential, multiple assignment, randomized trials: Estimation and sample size considerations
NeCamp, Timothy

Simultaneous inference from separate mixed model fits - an alternative to joint modelling
Ritz, Christian

Outcome-adaptive interim monitoring in Phase II trials: Criteria for early stopping
Kopp-Schneider, Annette

Choice of futility boundaries for group sequential designs with two endpoints
Schueler, Svenja

CS.31 – Missing and incomplete Data
Thursday, 14 July 2016
16:30 – 18:00
Carson Hall – Salon C

Session Chair: *Chris Drake*

Extension of the pseudo likelihood method to analyze two-phase studies with selective phase 2 samples
Enders, Dirk

Evaluating and Comparing Biomarkers in Two-Phase Case-Control Studies
Huang, Ying

The competing risks model with missing cause of failure and auxiliary case covariates
Nevo, Daniel

Methods for Handling Missing Data Due to Death and Drop-out in Mortal Cohorts
Wen, Lan

Variable Selection for Multiply-Imputed Data with Penalized Generalized Estimating Questions
Geronimi, Julia

Bayesian imputation of (non-)linear endo- vs. exogenous time-varying covariates in linear mixed models
Erler, Nicole

CS.32 – Spatial Epidemiology
Thursday, 14 July 2016
16:30 – 18:00
Saanich 1&2

Session Chair: *Barbara Bailey*

Using the Local-EM Algorithm for Spatio-Temporal Analysis of Spatially Aggregated Cancer Data
Brown, Patrick

Identifiability issues in spatio-temporal disease mapping models
Goicoa, Tomas

Assessing Joint Spatial Autocorrelations in Multiple Mortality Risks in South Africa, 1997-2014
Manda, Samuel

Gaussian process emulators for parameterizing spatial infectious disease transmission models incorporating infection time uncertainty
Pokharel, Gyanendra

Spatial Analysis of County-Level Diabetes Prevalence – Project CHANGE: Creating a Healthier Mississippi One Community at a Time
Tabb, Loni

A multiple cluster detection test based on scan statistics and generalized linear models for disease clustering
Takahashi, Kunihiko

CS.33 – Agriculture / biometrics
Thursday, 14 July 2016
16:30 – 18:00
Oak Bay 1&2

Session Chair: TBD

A Generic Randomization Device for Estimation of Mean of Quantitative Sensitive Response Variable
Batool, Fatima

Grain Demand and Consumption in Selected Districts of Uganda the Case of Maize, Beans, Groundnuts and Rice
Abdallah, Kiriko

In silico selection for resistant genes of diseases and endophytic fungi in Theobroma cacao: a K-Tables Analysis approach
Demey, Jhonny

Rough Set Based Feature Selection Method for High Dimensional Biological Data
Venkatesan, Perumal

Comparison of positive predictive value of a number of diagnostic procedures – An extension to three diagnostic results
Kim, Seonwoo

CS.34 – Survival Analysis 5
Friday, 15 July 2016
09:00 – 10:30
Carson Hall – Salon A

Session Chair: *Susanne May*

Dynamic frailty models for recurrent events data
Balan, Theodor Adrian

Frailty Model for the Joint Modeling of Screening Visit and Disease Processes in Lynch Syndrome Families
Choi, Yun-Hee

A joint model for an interval censored multi-state outcome and a longitudinal outcome with clusters
Grand, Mia

Estimating Piecewise Constant Hazard Rates in Survival Analysis through Adaptive Ridge
Nuel, Gregory

Joint Frailty Mixed Models: Accounting for Heterogeneity in Sieve Analysis of Vaccine Efficacy
Shao, Jason

Evaluation of failure time surrogate endpoints in individual patient data meta-analyses of randomized clinical trials. A Poisson approach
Rotolo, Federico

CS.35 – Bioinformatics 2
Friday, 15 July 2016
09:00 – 10:30
Carson Hall – Salon B

Session Chair: *Xiaoming Sheng*

Bayesian hierarchical modeling for subject-level response classification in peptide microarray immunoassays
Imholte, Gregory

Multiple testing for networks and graphical models
Meskaldji, Djalel-Eddine

Penalized Exponential Tilt Model for Analysis of High-dimensional DNA Methylation Data
Sun, Hokeun

Fast Parametric Time Warping of Peak Lists
Wehrens, Ron

Bayesian integrative analysis of omics data: Prediction models with informative selection priors
Wiesenfarth, Manuel

Selecting Biomarkers for building optimal treatment selection rules using Kernel Machines.
Dasgupta, Sayan

CS.36 – Categorical data analysis
Friday, 15 July 2016
09:00 – 10:30
Saanich 1&2

Session Chair: *Youyi Fong*

Objective functions for group testing
Bilder, Christopher

Nonlinear Models for Immunological Assay Outcome from Two Dilutions
Fong, Youyi

Estimation of proportions by group testing: retesting revisited
Hepworth, Graham

A Commentary on Statistical Assessment of Violence Recidivism Risk
Imrey, Peter

On the analysis of two phase designs in cluster-correlated data settings
Rivera, Claudia

Intrasubject parallelism in the paralle-line bioassay
Uehara, Hideaki

CS.37 – Regression 2
Friday, 15 July 2016
11:00 – 12:30
Carson Hall – Salon A

Session Chair: *Brad McNeney*

A model for interpretable high dimensional interactions
Bhatnagar, Sahir

Multiple-linear-combination (MLC) regression tests for gene-based association analysis of common variants adapted to linkage disequilibrium structure
Bull, Shelley

Firth Logistic Regression for Rare Events and Extensions
Geroldinger, Angelika

Statistical challenges in the use of meta-regression models for deriving Dietary Reference Values: how to move from population of studies to population of individuals
Martino, Laura

The weighted bootstrap for penalty parameter selection in sparse regression: Modeling Alzheimer's disease with clinical and microRNA data
Patrick, Ellis

Analyzing low frequency variants in the presence of quantitative covariates using prospective and retrospective logistic regression models
Shin, Ji-Hyung

CS.38 – Bayesian methods 1
Friday, 15 July 2016
11:00 – 12:30
Carson Hall – Salon B

Session Chair: *Chris Drake*

An empirical Bayes approach to network recovery using external knowledge
Kpogbezan, Gino

A bivariate mixture model for natural antibody levels to human papillomavirus types 16 and 18: baseline estimates for monitoring the effects of immunization
Bogaards, Johannes

Adaptive nonparametric smoothing for capture-recapture models
Faulkner, James

Accounting for exposure uncertainty and effect modification using a Bayesian structural approach: Radon exposure and lung cancer mortality in a prospective cohort of uranium miners
Hoffmann, Sabine

A Bayesian Hierarchical Model for the Analysis of PAR-CLIP Data
Huessler, Eva-Maria

CS.39 – Genetics 2
Friday, 15 July 2016
11:00 – 12:30
Carson Hall – Salon C

Session Chair: *Serge Sverdlov*

Sparse latent graphical models in high dimensional setting with application to genetics
Behrouzi, Pariya

Optimal block designs for experiments with responses drawn from a Poisson distribution
Bush, Stephen

Modelling and inference for stochastic transcriptional regulation of circadian genes
Calderazzo, Silvia

Statistical method to analyze allelic imbalance of RNA sequence data : an application in Osteoarthritis disease data
Fuady, Angga

Testing for genetic associations in arbitrarily structured populations
Song, Minsun

Threshold setting in duplex digital PCR experiments
Vynck, Matthijs

CS.40 – Topics in Application
Friday, 15 July 2016
11:00 – 12:30
Saanich 1&2

Session Chair: *Brandie Wagner*

Clinical Decision Support System for HCC Surveillance Clinical Exam
Lee, Taerim

An alternative improvement to the Chao estimator of species richness
Kumphakarm, Ratchaneewan

Unbiased estimation in seamless phase II/III trials with unequal treatment effect variances and adjustment for multiplicity
Robertson, David

Using Electric Resistances to Find A-Optimal Block Designs When the Concurrence Graphs are Sparse
Saajjad, Alia

Evidence synthesis for a single randomized controlled trial and observational data in small populations
Unkel, Steffen

A proposal to select active effects in 2k-p experiments with beta response.
Grajales, Luis

Showcases

Young Statisticians' Showcase

Monday, 11 July 2016
16:00 – 17:30
Lecture Theatre

Chair: *Inmaculada Arostegui*, Department of Applied Mathematics and Statistics and OR, University of the Basque Country, Spain

16:00 *Fernando Aguate*, Facultad de Ciencias Agropecuarias, Universidad Nacional de Córdoba, Argentina
Use of high-resolution image data outperforms vegetation indices in prediction of maize yield

16:18 *Bekir Çetintav*, Graduate School of Natural and Applied Sciences, Dokuz Eylul University, Turkey
Fuzzy ranked set sampling: An advanced sampling method for data collection

16:36 *Linda Chaba*, Institute of Mathematical Sciences, Strathmore University, Kenya
Comparison of the SAM and a Bayesian method for differential gene expression analysis

16:54 *Edward Kennedy*, Department of Biostatistics & Epidemiology, Perelman School of Medicine, University of Pennsylvania, USA
Semiparametric estimation of the local instrumental variable curve

17:12 *Faye Williamson*, Lancaster University, UK
Clinical trial design for rare diseases using Bayesian bandit models

Statistics in Practice

Sponsored by WILEY

Tuesday, 12 July 2016

Session 1 (Part 1 & 2)
11:00 – 12:30
Carson Hall – Salon A

Session 2 (Part 3 & 4)
14:00 – 15:30
Carson Hall – Salon A

Meta-analysis of Individual Participant Data

Presenters:
Simon G. Thompson, Professor of Biostatistics Department of Public Health and Primary Care, University of Cambridge, UK

Mark Simmonds, Research Fellow
Centre for Reviews and Dissemination, University of York, UK

Meta-analyses of multiple studies, for which individual participant data (IPD) are available, are becoming common. The aim of these sessions is to update participants on statistical methods that can be used for such analyses, and the pitfalls to be avoided. Application to both trials and observational studies will be addressed, together with examples and reference to available software. Familiarity with the concept of meta-analysis is assumed. The two sessions are organised as four 30-minute presentations, each then allowing 10 minutes for discussion and questions. Specifically, the presentations will cover the following topics:

1. **IPD meta-analysis of clinical trials**
   We first introduce IPD meta-analysis, and analysis methods in the context of two-arm randomized trials:
   - Definition of IPD
   - Advantages and practicalities of IPD meta-analysis
   - Analysis methods: naïve lumping, two-stage, one-stage
   - Two-stage meta-analysis: binary and continuous outcomes
   - Fixed and random treatment effects

2. **IPD meta-analysis of observational studies**
   We here discuss the use of covariates, in the context of survival data in observational epidemiological studies:
   - Summarising data in each study in a consistent way
   - Adjusting for covariates
   - Analysing interactions
   - Separating within- and between-study information
   - Handling confounders that are completely missing in some studies

3. **Advanced IPD meta-analysis methods for clinical trials**
   Here we explore some more challenging topics in the context of IPD meta-analysis of randomized trials:
   - One-stage analysis: a general hierarchical model structure
   - Covariates and interactions: one-stage vs. two-stage
   - Survival data in trials
   - Combining IPD with aggregate data from non-IPD studies
   - Addressing missing outcome data

4. **Advanced IPD meta-analysis methods for observational studies**
   The usual measures of association derived from epidemiological studies, such as hazard ratios, do not have a direct interpretation in terms of the implications for public health. Here we discuss how such measures can be derived from IPD meta-analysis:
   - Adjusting for measurement error and within-person variability
   - Assessing the usefulness of novel markers for medical screening
   - Deriving measures of public health impact
   - Estimating life expectancy
   - Estimating causal relationships using Mendelian randomization

Biometrics Showcase

Tuesday, 12 July 2016
16:00 – 17:30
Carson Hall – Salon A

Best Papers by an IBS Member in Biometrics, 2014 and 2015

2014: Published in the December 2014 issue, volume 70, pages 993-1002

"**Bayesian nowcasting during the STEC O104:H4 outbreak in Germany**," by *Michael Hohle* and *Matthias an der Heiden*

2015: Published in the December 2015 issue, volume 71, pages 1150-1159

"**Handling missing data in matched case-control studies using multiple imputation**," by *Shaun R. Seaman* and *Ruth H.Keogh*

ISI Showcase

Thursday, 14 July 2016
14:30 – 16:00
Saanich 1&2

Global Food Security: the role of statisticians and statistical science

Chair: *Kaye Basford* (Australia)

Speakers:
Linda Young (US)*: Statistics, statisticians and climate challenges*

Ross Darnell (Australia)*: Biometricians in Research for Development (R4D)*

Abraham Lagat (Kenya)*: Addressing food security challenges in developing countries*

Discussant: *Raul Macchiavelli* (Puerto Rico)

By 2050, the world will have to produce 50 to 80% more food (Keating & Carberry, 2010) and this will need to be achieved in the face of increasingly constrained and contested land, water, nutrient and energy resources. The threat of dangerous climate change also means the food security challenge has to be met whilst reducing the greenhouse gas load on the atmosphere. This implies an "eco-efficiency" imperative for global agriculture – producing more food and fibre with more efficient use of natural resources with less impact on the environment.

Agriculture and forestry are entering an era where rapidly changing global markets for commodities, changes to water allocations, rising input costs, skills deficiencies and environmental pressures are paramount. Meeting needs and consumer expectations across the diversity of economic and social contexts involves basics of supply and delivery, along with sustainable land management as well as healthy, ethical food production. Land use goals and consumer driven demands cannot be simply traded off against each other.

To address climate change, global agricultural systems need to achieve productivity growth and realise improved greenhouse gas abatement opportunities. Managed and native forests play an increasingly important role in the land use mix on account of their role as a carbon sink (or source in the case of land clearing or forest disturbance) and the interactions with agriculture, water and biodiversity.

Various speakers will consider the role of statistical sciences and statisticians in tackling these challenges now and in the future.

JABES Showcase

Friday, 15 July 2016
09:00 – 10:30
Carson Hall – Salon C

The following papers will be discussed during the JABES Showcase.

Chair: *Linda Young*

2015 Best Paper
Incorporating Genetic Heterogeneity in Whole-Genome Regressions Using Interactions
by *Gustavo de los Campos , Yogasudha Veturi, Ana I. Vazquez, Christina Lehermeier, Paulino Pérez-Rodríguez*

2014 Best Paper
Two Stage Bayesian Study Design for Species Occupancy Estimation
by *Gurutzeta Guillera-Arroita; Martin S. Ridout, Byron J.T. Morgan*

Business Meetings

Executive Board
Sunday, 10 July 2016
09:00 – 15:00
Colwood Room 1 & 2

WNAR Regional Committee
Sunday, 10 July 2016
15:30 – 17:00
Colwood Room 1 & 2

WNAR Regional Advisory Board
Monday, 11 July 2016
12:30 – 13:45
Colwood Room 1 & 2

All Committee Chairs & Officers
Monday, 11 July 2016
14:30 – 15:30
Metchosin Room

Committee on Communications
Monday, 11 July 2016
16:00 – 17:30
Metchosin Room

Education Committee
Monday, 11 July 2016
16:00 – 17:30
Langford Room

Club of Presidents
Tuesday, 12 July 2016
09:00 – 10:30
Metchosin Room

Biometrics Associate Editors
Tuesday, 12 July 2016
11:00 – 12:30
Metchosin Room

WNAR Regional Committee
Tuesday, 12 July 2016
12:30 – 13:45
Colwood Room 1 & 2

Conference Advisory Committee
Tuesday, 12 July 2016
14:00 – 17:30
Colwood Room 1 & 2

Editorial Advisory Committee
Tuesday, 12 July 2016
14:00 – 15:30
Metchosin Room

Biometric Bulletin Correspondents
Tuesday, 12 July 2016
14:00 – 15:30
Langford Room

Awards Fund Committee
Tuesday, 12 July 2016
16:00 – 17:30
Langford Room

Representative Council
Thursday, 14 July 2016
09:00 – 12:30
Colwood Room 1 & 2

JABES AE Meeting
Thursday, 14 July 2016
09:00 – 12:30
Metchosin Room

IBS Members' General Meeting
Thursday, 14 July 2016
14:00 – 14:30
Esquimalt Room

Regional Officers
Thursday, 14 July 2016
14:30 – 18:00
Colwood Room 1 & 2

Budget & Finance
Thursday, 14 July 2016
14:30 – 16:00
Metchosin Room

LOC & IPC Chairs
Thursday, 14 July 2016
16:30 – 18:00
Langford Room

WNAR Annual Business Meeting
Friday, 15 July 2016
13:30 - 14:00
Sidney Room

Poster Sessions

Poster presenters have been asked to standby during the following times to either present or answer any questions regarding their poster. Outside of these times, posters will be up for individual viewing.

Group 1

Tuesday, 12 July 2016
13:00 – 14:00
Pre-Function 2

Group 2

Thursday, 14 July 2016
13:00 – 14:00
Pre-Function 2

Group 1 Posters

Poster Board #	Presenter Name	Poster Title
2	Song, Xinyuan	Analysis of multivariate longitudinal data with latent variables
5	van der Pas, Stephanie	Competing risks with dependent observations
6	Yerex, Robert	Implementing Temporal Graphs of Sequential Patient History Data as Engineered Features for Predicting Patient Readmission
7	Zheng, Han	A review of the Diagnostic Functionality of Negative Binomial Models Fitted in Four Statistical Packages
8	Perduca, Vittorio	A New Versatile Statistic for Genome-Wide Association Studies
9	Gondara, Lovedeep	Accounting for loss to follow-up bias
10	Jensen, Signe	Simultaneous inference for multiple outcomes using separate and joint models
12	Causerur, David	Signal detection in ERP data using decorrelation methods
13	Lee, WhanHee	Relative Risk Estimation Considering an Uncertainty of Centering Value in a Non-linear Regression Model
14	Biedermann, Stefanie	Intelligent modelling for survival data with informative censoring
15	Kals, Mart	Comparison of population-specific and 1000G imputation reference panels using 2,244 deeply sequenced genomes from the Estonian Biobank
16	Novianti, Putri	Improving ridge regression in omics study by group regularization
17	Boehringer, Stefan	A Hardy-Weinberg Goodness-of-fit test in the Presence of Covariates
18	Willems, Sanne	Optimal Scaling in Survival Analysis with Ordinal Data
19	Bennett, Maxine	Using historical control data from a single study in an adaptive clinical trial design with a binary outcome

20	Ren, Mingchen	Joint modeling of mixed discrete and continuous outcomes with incomplete observations: a copula approach
21	tanaka, sachiko	Competing Risk Models for evaluating the percistency of the prescribed drugs
22	Mukherjee, Ayon	Covariate-Adjusted Response-Adaptive Designs for Weibull Distributed Survival Responses
23	Tajik, Parvin	Treatment selection for patients with ovarian cancer
24	Ternès, Nils	Building a high-dimensional Cox regression model for predicting treatment outcome in a randomized controlled trial
25	Kasela, Silva	Tree-based methods in Prediction of Incident Prostate Cancer Cases Based on DNA Methylation Patterns
26	Jalali, Amirhossein	Variability Bands and Permutation Envelops for the Mean Residual Life function
27	Gustavsson, Sara	Mediator analysis: perceived stress as a mediator between psychosocial job conditions and symptoms of burnout
28	Veturi, Yogasudha	Whole Genome Regression using Data from Heterogeneous Populations by Modeling Interactions Veturi Y1 and de los Campos G2, 3 1Department of Biostatistics, University of Alabama at Birmingham 2Department of Epidemiology and Biostatistics, Michigan State Un
29	Staicu, Ana-Maria	Scalar-on-Image Regression via Soft-Thresholded Gaussian Processes
30	Turner, Alexandra	Joint modelling of remission and longitudinal quality-of-life measures in psoriatic arthritis; a multi-state modelling approach
32	Belin, Thomas	Trust and Understanding as Key Concepts Underlying Both Incomplete Data Analysis and Ethics in Statistics More Broadly
33	Carpenter, James	Reference based sensitivity analysis for clinical trials with missing data: some theory and examples
34	Grimonprez, Quentin	Correlated variable selection by hierarchical clustering and group-lasso
35	Tiensuwan, Montip	Bayesian D–Optimal Designs for Finney Models Montip Tiensuwan1,2,* and Pattaraporn Tusto1,2 1Department of Mathematics, Mahidol University, Bangkok 10400, Thailand 2Center of Excellence in Mathematics, CHE, Si Ayutthaya Road, Bangkok 10400, Thailand *Corr
36	Nwakuya, Maureen	Investigation of the Mean Square Error and Total Variance of Multiple Imputation Estimates
37	Ekwaru, John Paul	Addition of arbitrary constants in log transformation of variables with zero values may result in poor fitting statistical models. An approach to determine a value that optimizes the model fit is proposed
38	van Koten, Chikako	A generalised additive mixed model (GAMM) analysis of longitudinal agricultural data
39	Correia, Marcelo	Developing Graphical user interface for Bayesian statistics applied to Mixed Treatment Comparison on R Commander
40	Mesa, Ines	An application of weighted kappa in nursing research
41	Wu, Yanyan	BMI trajectory and association of BMI and telomere length in older adults
42	Shimokawa, Asanao	On the stratified test of cross tables based on finite mixture models

43	Iijima, Hiroaki	Bayesian hierarchical modeling for adjusting measurement error in Area Under the ROC Curve (AUC) estimation for longitudinal study using Instrumental Variables
44	Nemoto, Asuka	Population pharmacokinetics and pharmacogenetics of alcohol in Japanese: Use of parameter estimates from other studies as a prior information
45	Gangnon, Ronald	Loss Functions and Optimal Rankings for County Health Indices
46	Sofer, Tamar	Generalization of genome-wide association results from European to Hispanic/Latino populations using directional r-values
47	Inoue, Eisuke	Multiple imputation and inverse probability weighting for regression models using restricted mean survival time under covariate missing
49	Kipnis, Victor	A New Longitudinal Time-Varying Measurement Error Model with Application to Physical Activity Assessment Instruments in a Large Biomarker Validation Study
50	Espin-Garcia, Osvaldo	Two-Phase Designs for Joint Quantitative-Trait-Dependent and GWAS-SNP-Dependent Sampling in post-GWAS regional sequencing
51	Gray, Christen	Comparison of methods for measurement error correction: Regression calibration, multiple imputation and Bayesian methods
52	Walter, Stephen	Bias in the estimated treatment effect in randomised trials having interim analyses and potential early stopping for futility
53	Tuson, Matthew	Reduction of Bruzzi's formula to a multivariable method removes instability in the estimation of population attributable fraction for health outcomes
54	Hermans, Lisa	Weighted Estimation for Clusters of Unequal Size
55	Casanoves, Fernando	Non-linear mixed model implementation in InfoStat and Interface to nlme library
56	Hall, Charles	The Effect of World Trade Center Exposure on the Timing of Aerodigestive Diagnoses in New York City Firefighters: 2001-2011
58	Fabio, Lizandra	Diagnostics tools in the multivariate negative binomial regression model
59	Kawaguchi, Atsushi	Gene Expression Signature-based Prognostic Risk Score with Network Structure
60	Chang, Ya-Mei	Spatial distribution of Taiwan air pollution-an application of spatial quantile regression
61	O'Keeffe, Aidan	Correlated Reversible Multi-state Models with Random Effects
62	Vestal, Brian	Characterization of Radiologically Based Emphysema Using a Spatial Point Process Framework
63	Yokota, Isao	Comparison of sequential clinical trial designs with time-to-event outcomes in small populations
64	Alonso Malaver, Carlos	Number of Seeds Dispersed by the Gorse: A Case Study
65	Meir, Amit	Maximum Likelihood Estimation After Model Selection in the Multivariate Normal Distribution
66	Simpkin, Andrew	Estimating features of repeated measures trajectories
67	Córdoba, Mariano	FastMapping: a tool to automate spatial variability mapping
68	Balzarini, Monica	Using the local Moran index to remove errors from crop yield maps
69	Midthune, Douglas	Estimating within-person effects in longitudinal data measured with error, with application to physical activity and sleep
70	Bretz, Frank	Generalized error rates for subgroup analyses

71	de Andrade, Mariza	Multivariate Analysis in the Genomic time: Back to the Future
72	Balzarini, Monica	Comparison of algorithms to detect clusters of multivariate genetic data
73	Park, Mira	Finding population structures by iterative independent component analysis in genome-wide association studies
74	Jonoska Stojkova, Biljana	Estimating parameters of epidemiological model via Simulated Tempering Without Normalizing Constants
75	Noma, Hisashi	A generalized Akaike's information criterion for multiple imputation
76	Li, Yang	Semiparametric Varying-Coefficient Regression for Analysis of Recurrent Event Data
77	Soler, Júlia	A Comparative Study of Algorithms for Discovering Causal Genotype-Phenotype Networks by Using Genetic Variant Information
78	Quintana, Jose	Predictors of readmission at 30 days after a hospital admission by heart failure
79	Rakhmawati, Trias	Local Influence Diagnostics for Incomplete Overdispersed Longitudinal Counts
80	Quintana, Jose	Clinical prediction rule for 30 days death in heart failure
81	Brown, Marshall	Dynamic Prediction of Risk of Liver-Related Outcomes in Chronic Hepatitis C using Routinely Collected Data
82	Yada, Shinjo	The study of phase I/II oncology trials for longitudinal data
83	Sediadie, Thapelo	Factors Affecting Children Ever Born (CEB) in Botswana: Application of Poisson Regression Model
84	Yuen, Ho Ming	Effect of smoking cessation early in pregnancy on adverse perinatal outcomes: a retrospective cohort study of 57220 births in UK
85	Kuntoro, Kuntoro	Logistic Regression Model for Representing the Relationship Between Maternal Child Health Status and Socio Cultural Indicators
86	Hattori, Satoshi	Sensitivity analysis for publication bias in meta-analysis of diagnostic studies
87	Meskaldji, Djalel-Eddine	Estimating Brain Functional Connectivity Based on Extremes
88	Rostami, Mehdi	Modeling spatially correlated survival data in hip fracture among residents from the long term care facilities in BC, Canada
90	Ortiz, Nelida	Evaluation of Measurement Error on Predict Variable of Sugar Cane Stems Population
92	Van den Berge, Koen	A stage-wise procedure for assessing multifactorial RNA-Seq experiments
94	Masselot, Pierre	The timescales of the relationship between a response and exposures by EMD regression

Group 2 Posters

Poster Board #	Presenter Name	Poster Title
1	Galimberti, Stefania	The Validation of a Surrogate Endpoint in a Complex Treatment Setting
2	Hasegawa, Takahiro	Group Sequential Monitoring Based on the Weighted Log-Rank Test Statistic with the G?,? Class of Weights in Cancer Vaccine Studies
3	Kakourou, Alexia	Adapting shrinkage-based censored regression methods to calibrate diagnostic rules on high-resolution mass spectrometry data subject to limit of detection
4	Odhiambo, Collins	A Smooth Test of Goodness-of-fit for the Weibull Distribution: An application to an HIV retention data
5	Bruyndonckx, Robin	Evaluation of the linear mixed model in the presence of an increasing proportion of singletons
6	Dickhaus, Thorsten	Simultaneous Bayesian analysis of contingency tables in genetic association studies
7	Jin, Yuying	Statistical issues and study design considerations for biomarker development and validation for precision medicine
8	Lee, Ji-Hyun	Sample size calculations for group randomized trials with unequal group sizes through Monte Carlo simulations
9	Fu, Luella	Stable Adaptive Model Selection
10	Amorim, Gustavo	Improved Estimation in the Probabilistic Index Model
11	Mandrekar, Jay	Application of Factor Analysis in the Development of an Abbreviated Questionnaire: Case Study from Neurology
12	Nishikawa, Masako	New concept of non-inferiority test from the point of effectiveness when longitudinal data may be missing
13	Soler, Júlia	Multivariate Heritability Test in Extended–Pedigree Data
14	Buchanan, Ashley	Individual and Disseminated Package Effects in a HIV Prevention Network-Randomized Trial
15	McIntyre, Julie	Nonparametric Regression with Heteroscedastic Normal Measurement Error
17	Chen, Li-Ching	A Moment-Type Goodness-of-Fit Test of Multinomial Logistic Regression Model in Case-Control Studies
18	Rathnayake, Kasun	Penalized likelihood parameter estimation for additive hazard models with interval censored data
19	Fernandes, Francisco	Analyzing Human Genome Dependence Structure in Stratified Population
20	Ssenyonga, Ronald	Incidence and predictors of Tuberculosis among adults starting Antiretroviral Therapy based on 2013 WHO guidelines at Joint Clinical Research Centre
21	Sanchez-Pla, Alex	Integrative Analysis to Select Genes Regulated by Methylation in a Cancer Colon Stud
22	Price, Brenda	Estimation of the Optimal Surrogate Using SuperLearner and TMLE with Application to Two Randomized Dengue Vaccine Efficacy Trials

23	Roshan Sangachin, Davood	Bayesian Adaptive Ranges for Clinical Biomarkers
24	Perthame, Emeline	Student Locally-Linear Mapping (SLLiM) for robust non linear regression in high dimension
25	Sediadie, Thapelo	Superiority of Jackknife method over the Standard method in the estimation of the standard error for complex survey sample design: A case study of Botswana Household Income and Expenditure Survey
26	Wang, Cuiling	Power analysis for longitudinal studies with time dependent predictors
27	Murotani, Kenta	A comparison of two binary diagnostic tests with consideration to the background of mixed patients who with or without definitive diagnosis
28	Debeko, Dereje	Nutritional Status of Under- five Children in Hawassa Zuria District, Southern Ethiopia
29	Uneh, Edith	Grouping Case Fatality of Accident Victims Using Multivariate Statistical Approach
30	Yamaoka, Kazue	A cluster randomized controlled trial to examine the effects of a lifestyle education program for adolescents
31	Wang, Anxin	Risk scores for predicting the incidence of type 2 diabetes in China: the Kailuan prospective study
32	Mancera, Paulo	A system of fractional ordinary differential equations to model tumor growth
33	Ogoke, Uchenna	A Chi-Squared Approach To Obtaining Missing Values On Egg Production
35	Karunarathna, Charith	Using Gene Genealogies to Understand the Patterns of Case-Control Association
36	Shah, Syed Jawad Ali	Modeling of Imbalanced Survival Data Using Different Survival Ensemble Techniques
39	Nevo, Daniel	Inference for mediation proportion in generalized linear models
40	Oladugba, Abimibola	Estimation of Optimum Sample Size and Number of Replications in a Split-Plot Design
41	Jung, Yoonsung	Effects on the covariance selection in the Goat research
42	Mbachu, Hope	Levels of and Differentials in current use of Contraceptives among Women of Reproductive Age in Nigeria
43	Otani, Takahiro	A comparison of multiple testing methods for effective strategies in genome-wide association studies
44	Khan, Mohammad Kaviul	Comparison of Methodologies to Estimate Covariate Effect on Survival Time Data: A Simulation Based Approach
45	Matsuba, Junji	High Risk of Cerebrovascular Disease Mortality among Hiroshima Female Atomic Bomb Survivors Exposed at Young AGE: A Cohort Study, 1970-2010 Junji MATSUBA1,2), Keiko OTANI3), Kenichi SATOH3), Hideshi KAWAKAMI3) and Megu Ohtaki3) 1) Graduate School of Biome
46	Murad, Havi	Imputation of measures of blood sugar level (HbA1c and glucose) used as time-dependent covariates in a Cox model for time to event
47	Arostegui, Inmaculada	Different Approaches of the Beta-Binomial Regression Model to Analyze Health Related Quality of Life Data: A Comparison Study

48	Neuhaeuser, Markus	The number of strata in propensity score stratification for a binary outcome
49	Uozumi, Ryuji	Adaptive seamless design for development of biosimilars
50	Trevenen, Michelle	Creation and validation of an algorithm to temporally align polysomnography and actigraphy sleep data
51	Morettin, Pedro	Wavelet-based Classification Applied to fMRI Pedro A. Morettin University of São Paulo, Brazil
52	Carrasco, Jalmar	A beta regression model with multiplicative measurement errors
54	Urbano, Mariana	Confidence interval for the effective dose of bioassay models with random effects
55	Ito, Yoichi	Sample size estimation using negative binomial distribution for determining the risk of adverse drug reaction in the post-marketing study
59	Coombs, Ngaire	Comparison of approaches for analysing associations between skewed variables in a small sample
61	Izumi, Shizue	Estimating the effects of exposure in a case-cohort design of Hokkaido Cohort Study when some binary outcomes of interests are known to be missing
62	Takahashi, Kanae	A comparison of methods for testing equality of predictive values in small-size clinical trials
63	Melo, Oscar	Generalized linear mixed vector autoregressions incorporating spatial as well as temporal dynamics for the bovine brucellosis in Colombia
64	Bharat, Chrianna	Childhood Growth Modelling for Medical Research: A Simulation Study
65	Golaszewski, Janusz	An analytical approach to decomposition of aggregate energy intensity in agriculture
66	Demey-Zambrano, Johanna	Selection of candidate genes using CUR Matrix decomposition approach
67	Sato, Keiko	Developing a program to foster professionalism for biostatisticians
68	Idalino, Rita de Cássia	Robust factorial designs by using compound criteria
69	Nduka, Ethelbert	The trend of Mood disorder by gender
70	Aguirre-Hernandez, Rebeca	Validation of the short form Mexican-Spanish version of the Support Person Unmet Needs Survey
71	Balzarini, Monica	Multivariate classification of accumulation curves. Application in sugarcane
72	Balzarini, Monica	A New Method to Adjust P-Values in Multiple Association Testing with Correlated Data
73	Veloso, Romulo	Verification of efficiency of likelihood ratio test with chi-square statistical approach in nonlinear models
74	Kashiwabara, Kosuke	An efficient adaptive sample size determination via working sequential designs for confirmatory clinical trials

75	Yin, Yue	Optimal designs for regression models using the second-order least squares estimator
76	Chang, Hsing-Yi	Applying multistate model to examine the co-existence of frailty and depression and the consequent mortality in Elderly
77	Odani, Motoi	A Bayesian Meta-Analytic Approach for Safety Signal Detection in Randomized Clinical Trials
78	Muller, Warren	Identifying management and environmental variables that influence recruitment success of Eucalyptus species
79	Hassall, Kirsty	Integrating factorial treatment structures within multivariate analyses: An application in lipidomics
80	Nishimoto, Naoki	Tuning window length in Singular spectrum analysis for emergency telephone consultation of cold and ice region of Japan
81	Cesana, Bruno	Statistical Relationships between the Bivariate Gaussian Model and its Corresponding Models with Variable Replicates and Variable Means in Linear Regression Analysis
82	Ranola, John Michael	Fast Spatial Ancestry of Human Populations of Africa: An Update to OriGen
83	de Lima, Renato	Neural network committee and linear regression to predict the nitrogen-corrected metabolizable energy of poultry feedstuffs
84	Miller, Curtis	Poissson-Bernoulli regression for count variables
85	Anton, Cristina	Parameter Estimation and Prediction for Time-Dependent Concentration Response Curves for Cytotoxicity Assessment
86	Farewell, Daniel	Ignorability and unbalanced longitudinal data
87	Masaoud, Elmabrok	An assessment of the impact of missing values on the performance of different statistical methods for analysis of binary repeated measures on subjects nested within clusters
88	Moore, Camille	A Dirichlet Process Mixture Model for Non-Ignorable Dropout
90	Crespi, Catherine	Cluster dropout in cluster randomized trials: Bayesian methods for sensitivity analyses
91	Bahamyirou, Asma	Comparison of causal inference approaches for estimating the effect of exposure to inhaled corticosteroids on mean birth weight and gestational age
92	Hunt, Lynette	Mixture Model selection for Three-mode Three-way data

Awards at IBC

Norm Breslow Memorial and Awards Presentation

Tuesday, 12 July 2016
17:45 - 19:00
Lecture Theatre

Regional Officers' Reception

Tuesday, 12 July 2016
19:00 - 20:00
Fairmont Empress Hotel – Palm Court

Social Programme

Welcome Reception

Sunday, 10 July 2016

17:00 - 19:30

Fairmont Empress Hotel – Crystal Ballroom

Young Statisticians' Mixer

**ticket required for entry*

Monday, 11 July 2016

18:00 – Late

Bard & Banker – Top Floor

If you are under 35 years of age and are currently enrolled in a Masters or Doctoral degree program (or just received your degree) and want to meet colleagues who know what you're going through, then the Young Statisticians' Mixer is for you!

IBS will furnish:

- One drink ticket per person
- Light appetizers
- Exclusive use of the top floor

Victoria's newest landmark pub, the Bard & Banker, is located on the corner of Fort Street and Government Street in downtown Victoria, BC. Opened in 1862 as the Bank of British Columbia, the building remained a bank until 1988 under an array of different banking establishments' control. Of all the bank employees to work at this location in the 126 years it was a bank, the most notable was the bard of the Yukon, Robert Service.

With 30 different beers on tap, one of the most impressive selections of spirits under one roof and live music every night on sky stage, the Bard & Banker defines the ultimate pub experience.

Reception for Regional Officers & Award Winners

Tuesday, 12 July 2016

19:00 - 20:00

Fairmont Empress Hotel – Palm Court

Banquet / Cultural Gala

**ticket required for entry*

Thursday, 14 July 2016

19:00 - 22:00

Royal BC Museum - 3rd Floor

Cost: $75.00 USD per person
(includes entrance to the Museum)

You are invited and don't want to miss the IBC 2016 Gala Event to be held at The Royal BC Museum, one of Canada's greatest cultural treasures. The Museum, founded in 1886, houses a collection of artifacts and specimens of British Columbia's incredible natural and human history.

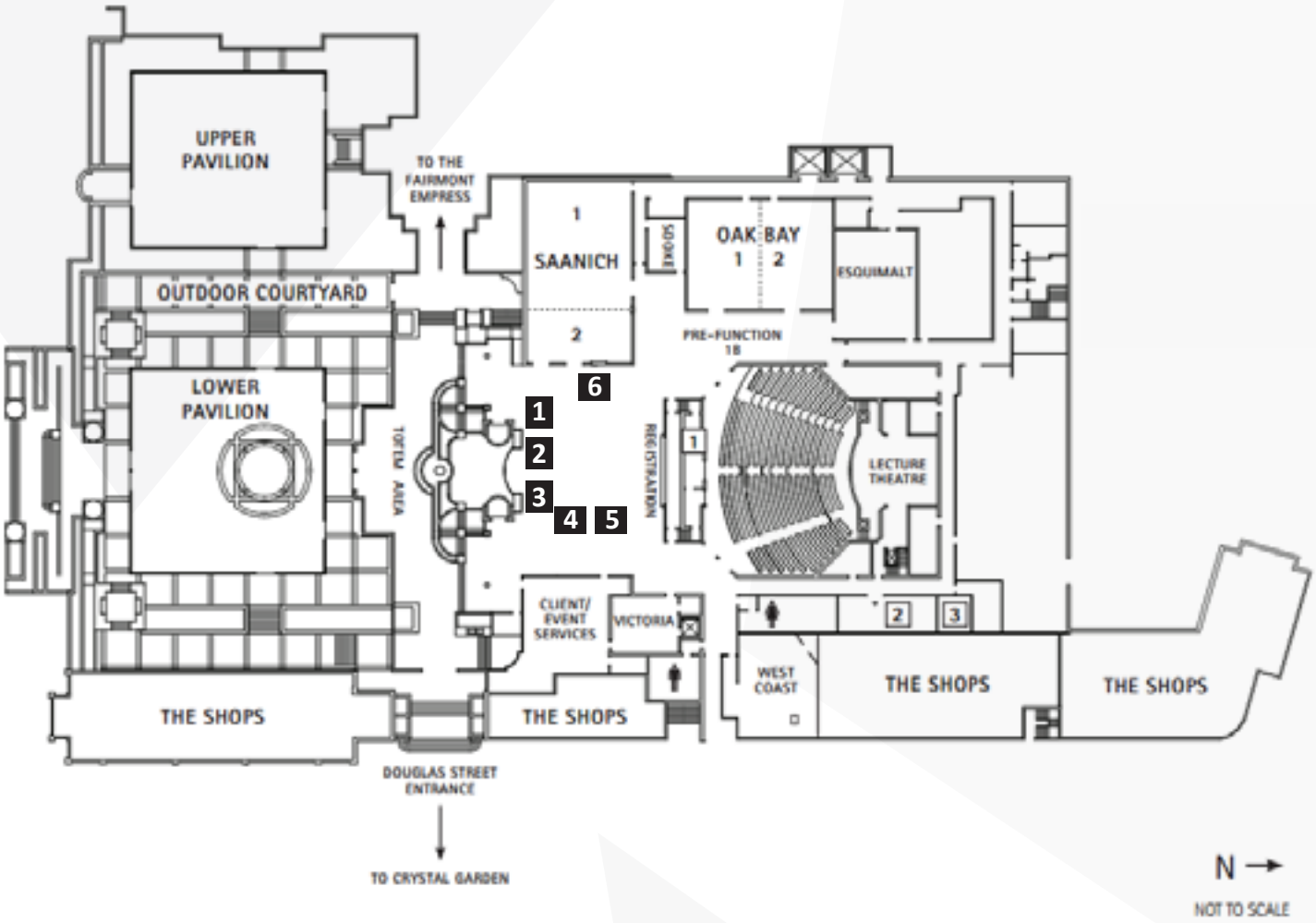
Located across the street from the Victoria Conference Centre and Empress Hotel, Gala attendees will have access to the entire third floor of the Museum. Here you may visit the 'First Peoples Gallery' as well as the 'Modern History Gallery.' You'll view totem poles, a pit house, a cannery and old town (among other treasures), while enjoying an array of locally inspired food and drinks.

The Royal BC Museum is the only natural and human history museum in the province of British Columbia, with a collection of 7 million artifacts and 750,000 specimens. You'll want to schedule your own visit to view the other galleries that won't be accessible during the Gala. For tickets to the Museum or for more information go to http://royalbcmuseum.bc.ca

Join colleagues and friends while enjoying the sights and sounds of the Pacific Northwest.

This is an evening not to be missed!

Exhibitor Information



Booth Number	Company
1	Wiley www.wiley.com
2	IBC 2018 - Barcelona www.biometricconference.org
3	Taylor & Francis Group www.tandfonline.com
4	University of Victoria www.uvic.ca
5	Springer www.springer.com
6	Cambridge University Press www.cambridge.org

General Information

ABOUT VICTORIA

Voted one of the most popular destinations in the world by Travel and Leisure Magazine, a top city in the Americas and the best temperate island by Condé Nast Traveler Magazine, Victoria offers the perfect destination for the 28th International Biometric Conference (IBC 2016).

Victoria boasts some of the country's most exhilarating scenery: there's an ocean and mountain vista around every corner. Heritage architecture, colourful gardens and traditions such as afternoon tea mix with soft adventure such as fishing, hiking, cycling and golf. There are culinary experiences such as gourmet farm and wine tours, microbreweries, world class dining and arts and culture. As an island destination, Victoria offers visitors an escape from the hurried world and beams with ambience.

Victoria has received many accolades including:

- #1 Destination to Visit in Canada
- Best Island in North America
- 2nd only to San Francisco for number of restaurants per capita
- 2nd Best Destination for Culture and Sightseeing in Canada
- One of the Most Walkable Cities in Canada
- Canada's Smartest City

Very close to the Victoria Conference Centre (VCC), where the IBC2016 is being held, you'll find an abundance of eco-adventures such as whale watching and guided sea-kayak trips, harbor cruises and seaplane tours. Victoria is known as "The City of Gardens" with its annual flower counts of over 2 billion. The gardens are word famous including Butchart Gardens with its breathtaking 55-acres of spectacular floral displays.

Victoria was voted one of the most walkable cities with museums and unique shops just steps away from the VCC. Most attractions are located within walking distance, including the world renowned Royal British Columbia Museum, which preserves and shares the stories of British Columbia through its remarkable collections and exhibitions.

ACCOMMODATIONS

The IBC 2016 has selected the world-famous Fairmont Empress as its official host hotel.

The Fairmont Empress hotel sits majestically at the cornerstone of Victoria's sparkling Inner Harbour and city centre of arts, entertainment and cultural attractions. Built in 1908 for the Canadian Pacific Railway, the Empress Hotel is one of a series of hotels built by Canadian railway companies in the early 20th century to encourage tourists to travel their transcontinental routes.

A local favourite for dining options, The Fairmont Empress Hotel has versatile restaurants, including The Bengal Lounge featuring South Asian cuisine. No visit to Victoria is complete without experiencing Afternoon Tea, a true feature of the hotel. The hotel also features the highly acclaimed Willow Stream Spa, regarded as one of the best spas in Canada.

ACCESS/SECURITY

Name badges will be provided to all delegates and participants when they check in at the Registration Desk. The badge is your admission pass to all conference sessions, the exhibit hall and social events. Delegates are required to wear their name badge at all times and will not be granted access to the Conference without it. This is to ensure that access to the Conference is properly managed.

BANKS & CURRENCY

All costs in Canada are set in Canadian funds (CAD). Foreign currencies are readily exchanged at airports and banks. Bank debit or credit cards are the most convenient means of getting cash at the many 24-hour-access automated banking machines available in Victoria. As in the USA and Europe, these machines accept cards with Plus, Interac and Cirrus symbols. Most Canadian businesses accept major credit cards (Visa, MasterCard, American Express), as well as US currency and travelers'-cheques. Banks are open Monday to Friday (09:00 –17:00 PDT).

BUSINESS CENTRE SERVICES

The Official Conference Hotels offer business centre services for hotel guests.

CAR PARKING

The Official Conference Hotels offer car parking to hotel guests at a daily fee.

CLIMATE

Warmed by Pacific Ocean currents and protected by a range of mountains, Victoria enjoys mild temperatures year-round. From high 70s Fahrenheit (low 20s Celsius) in summer to a mild mid 40s Fahrenheit (0° to 5° Celsius) in winter, the climate is always hospitable. Average daily temperatures in July are 17 Celsius (64 Fahrenheit).

CONFERENCE DATES AND VENUE

July 10 - 15, 2016

Victoria Conference Centre

720 Douglas Street

Victoria, BC V8W 3M7

CANADA

Toll Free: +1.866.572.1151

Phone: +1.250.361.1000

Fax: +1.250.361.1099

Web: http://victoriaconference.com/

CONFERENCE MOBILE APP

The official IBC 2016 Mobile App can be downloaded on Apple itunes and Google Play Stores.

Keyword search: IBC 2016

CONFERENCE LANGUAGE

The official language of the IBC 2016 is English. All sessions will be conducted in English.

CONFERENCE SECRETARIAT

MCI Group Canada Inc.

200 – 1444 Alberni Street

Vancouver, BC V6G 2Z4

CANADA

Tel.: +1.604.688.9655

Fax: +1.604.685.3521

Email: ibs@biometricsociety.org

Web: https://biometricconference.org/

CONFERENCE TIMETABLE

All IBC 2016 Conference sessions will be held at the Victoria Conference Centre. Please consult the Schedule at a Glance in this Final Program for detailed timing and refreshment breaks. Social Program events are held at various locations. Please consult the Social Program section of this Final Program for details. All time references within this Final Program are noted in Pacific Daylight Time (PDT).

CONFERENCE WI-FI

Complimentary WiFi has been organized by the IBC 2016 and will be available to all registered delegates throughout the Victoria Conference Centre.

Network: VictoriaConference

Access Code: ibc2016

ELECTRICITY

The electrical current in Canada is 110 volts AC at 60Hz. Adapters may be required for appliances from other countries.

EMERGENCIES

If you or any other delegate is unwell, or an accident or any other emergency occurs while at the Victoria Conference Centre, a First Aid Service will be able to assist. The Emergency telephone number in Victoria for police, fire or ambulance is 911.

EXHIBIT AREA HOURS

The exhibits are located in Pre-Function 1A of the Victoria Conference Centre in front of the IBC 2016 Registration Desk and will be open during the following times:

Monday, July 11	10:30 – 17:30
Tuesday, July 12	09:00 – 17:30
Wednesday, July 13	Closed
Thursday, July 14	09:00 – 18:00
Friday, July 15	09:00 – 12:30

INSURANCE

It is strongly recommended that participants purchase adequate coverage for health, travel and private liability insurance before departing their home countries. The organizers will not accept responsibility for personal injury, loss or damage to private, personal property of conference participants and/or accompanying persons.

LOST PROPERTY

Please report any lost or unattended items immediately to the Conference staff. Should you lose anything while at the Victoria Conference Centre, please inquire at the Conference Registration Desk where any lost property will be held.

PHOTOGRAPHER

An official photographer is present during the Conference. By registering for the IBC 2016, you agree to have your picture taken.

REFRESHMENT BREAKS & LUNCH

Coffee, tea and snacks are served during morning and afternoon refreshment breaks in the Pre-Function areas of the Victoria Conference Centre each day. A break will be given each day for lunch where delegates are encouraged to visit the many local eateries throughout Victoria's Inner Harbour.

REGISTRATION DESK

The registration desk is located in the Victoria Conference Centre and will be open at the following times:

Sunday, July 10	08:30 – 18:00
Monday, July 11	08:30 – 16:30
Tuesday, July 12	08:30 – 16:30
Wednesday, July 13	CLOSED
Thursday, July 14	08:30 – 16:30
Friday, July 15	08:30 – 13:00

RESTAURANTS & GRATUITIES

An extensive variety of cuisine is available representing the multicultural flavor of Victoria. Fine dining, casual or family friendly restaurants are easily accessible throughout Victoria. Minors are not admitted into bars or lounges. In British Columbia, a minor is defined as anyone under 19 years of age.

In Canada, tips and gratuities are not typically included in a bill. In general, a gratuity of 15% of the total amount before taxes is considered to be a suitable gratuity. This applies to waiters, waitresses and taxi drivers. At hotels and airports, doorman and porters are generally offered $2.00 CAD per item of luggage.

SMOKING POLICY

The Conference will be a smoke-free event. Smoking is prohibited in any indoor public place within the city boundaries of Victoria. Smoking is also prohibited within customer service areas of food and/or liquor establishments (indoor or open patios), and within six metres of any entryway, open windows or customer service area.

SPEAKER PREP ROOM

The Speaker Prep Room is located in the Victoria Conference Centre – Westcoast Room. PC laptops will be provided for speakers to edit or review their presentations. The Speaker Prep Room will be open at the following times:

Sunday, July 10	09:00 – 16:00
Monday, July 11	08:00 – 16:00
Tuesday, July 12	08:30 – 16:00
Wednesday, July 13	09:00 – 15:00
Thursday, July 14	08:30 – 16:30
Friday, July 15	08:30 – 11:00

TAXES

In Victoria, purchases of goods and/or services are subject to 5% Goods and Services Tax (GST) and 7% Provincial Sales Tax (PST). When purchasing alcoholic beverages, the PST is charged at 10%. Hotel room rates are subject to 10% Hotel Tax, 5% GST and 1% Victoria Destination Marketing Fee, per night and per room.

TAXIS

Taxis are readily available at the Conference venue and all Official Conference Hotels. Taxis may also be hailed in the street by signaling the driver. Taxis available for hire will have the light illuminated on the roof of their vehicles. To order a taxi by phone, please call the following numbers:

Victoria Taxi	+1.250.383.7111
Yellow Cab	+1.250.381.2222
Bluebird Cabs	+1.250.382.2222

TELEPHONE SERVICE

Victoria employs three separate area codes: 250, 778 and 236. Calls within the greater Victoria area are local regardless of whether they use a 250, 778 or 236 area code; however, you will need to dial all ten digits of the phone number in order to be connected (e.g. +1.250.555.1234).

TIME

Victoria is in the Pacific Time Zone (-0800 GMT). Daylight Savings Time (-0900 GMT) is in effect in late summer. Daylight Savings Time is in effect from 02:00 on the second Sunday in March until 02:00 on the first Sunday in November.

TRANSPORTATION (PUBLIC)

Buses are available mainly within downtown and uptown Victoria. A single fare is $2.50 and only exact change is accepted. Transit tickets are available at grocery and convenience stores. Information on route maps is available at the Victoria Information Desk or Concierge at Hotels.

DISCLAIMER

All reasonable endeavors will be made to hold the 28th International Biometric Conference and to present the printed program as scheduled under circumstances which assure the comfort and safety of the Conference Participants. However, the International Biometric Society and its branches, International Biometric Conference Local Organizing Committee, and their respective directors, officers, employees, representatives or agents, shall not be liable in any manner whatever to any person as a result of the cancellation of the Conference or any of the arrangements, programs or events connected therewith; nor shall any of the foregoing entities or persons be liable in any manner whatever for any loss, injury, damage or inconvenience which may be suffered by any person while traveling to or from, or during such person's presence in, Canada in connection with the Conference. Participants are advised to consider procuring their own insurance against any such occurrences.

INTERNATIONAL BIOMETRIC SOCIETY

SUMMARY OF 2015 ACCOUNTS

President: *Elizabeth Thompson (West North American Region)*

Past President: *John Hinde (British and Irish Region)*; President Elect: *Louise Ryan (Australasian Region)*

Secretary/Treasurer 2014-2016: *James Carpenter (British and Irish Region);* Executive Director: *Dee Ann Walker*

Registered office: 1444 I Street, Suite 700, Washington, DC 20005, USA

Executive Board

Name	Term	Name	Term
Karen Bandeen-Roche (East North American Region)	2015-18	*Freedom Gumedze (South African Region)*	2015-18
José Pinheiro (East North American Region)	2013-16	*Krista Fischer (Nordic-Baltic Region)*	2015-18
Joel Greenhouse (East North American Region)	2015-18	*Paulo J. Ribeiro (Brazilian Region)*	2013-16
Tae Rim Lee (Korean Region)	2015-18	*Ernst Wit (Netherlands Region)*	2015-16
Frank Bretz (Austro-Swiss Region)	2015-18	*Alan Welsh (Australasian Region)*	2013-16
Sharon-Lise Normand (Eastern North American Region)	2013-16	*Andreas Ziegler (German Region)*	2013-16

Summary Accounts for 1 Jan 2015 to 31 Dec 2015

Net assets 1 Jan 2015: $2,268,611.76 (excluding restricted funds)

Income category	Amount	% Of Total
Dues	$224,100.20	39.7%
Investment	($36,776.83)	–6.5%
Publications	$374,431.64	66.3%
IBC & SC	$2,600.00	0.5%
TOTAL	**$564,355.01**	**100%**

Expense category	Amount	% Of Total
Governance	$158,969.59	27.9%
Administration	$86,760.07	15.2%
Programs	$18,117.88	3.2%
IBC & SC	$53,267.09	9.3%
Services	$63,603.72	11.1%
Membership	$97,317.39	17.1%
Publications	$92,627.21	16.2%
TOTAL	**$570,662.95**	**100%**

Income 2015	Expenditure 2015	2015 Deficit	Net Assets 1 Jan 2016 (excluding restricted funds)
$564,355.01	**$570,662.95**	**($6,307.94)**	**$2,262,303.82**

For more information, please come to the Members' General Meeting:

Thursday 14th July, 14.00-14.30, Esquimalt

The full financial report is available on request from James.Carpenter@lshtm.ac.uk

BARCELONA
IBC 2018

XXIX INTERNATIONAL BIOMETRIC CONFERENCE

Barcelona, 8-13 July, **2018**

Co-Chairs

Lupe Gómez (Past President SEB, Universitat Politècnica de Catalunya)

Pere Puig (Universitat Autònoma de Barcelona)

Local Organising Committee

Imma Aróstegui (President SEB, Universidad País Vasco)

Malu Calle (Past President SEB, Universitat de Vic)

Ramón Clèries (Vocal Societat Catalana d'Estadistica, ICO)

María Durbán (IP BIOSTATNET, Universidad Carlos III)

Klaus Langohr (Universitat Politècnica de Catalunya, IMIM)

Montse Rué (Universitat de Lleida)

Marc Sáez (Universitat de Girona)

Alex Sánchez (Past President SEB, Universitat de Barcelona)

Isabel Serra (Centre de Recerca Matemàtica)

International Program Committee

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Simon Bonner (ENAR)

Paolo Canas Rodrigues (Brazil)

Daniel Commenges (France)

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Shirley Pledger (New Zealand)

Pere Puig (Spain)

Lola Ugarte (Spain)

Xiao-Hua A. Zhou (China)

Fred van Eeuwijk (The Netherlands)


2016 International Biometric Conference
28th IBC
Victoria, Canada
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