**Sunday, 15 June 2014**

**Poster Session**

**Room: Campus Center Ballroom**

**Poster (Presenter Last Name: A-I)**

7-8pm  
A Bayesian Population Based Approach to Modeling Pulsatile Hormones with Circadian Rhythms (Carlson)  
Nichole Carlson; University of Colorado Denver-Anschutz Medical Campus

7-8pm  
Accounting for Complex Survey Design in Modeling Temporal Trends of Phthalate Metabolites in the U.S. Population (Chen)  
Min Chen; ExxonMobil Biomedical Sciences, Inc.

7-8pm  
A simple meta-analysis approach for testing mRNA allelic imbalance when multiple sequence variants are available (Fingerlin)  
Tasha Fingerlin; Colorado School of Public Health

7-8pm  
A model for repeated clustered data with informative cluster sizes using Poisson distribution for cluster sizes (Iosif)  
Ana-Maria Iosif; University of California Davis

7-8pm  
Discussion

**Poster ( Presenter Last Name: J-K)**

7-8pm  
P-value approximations for spatial scan statistics using extreme value distributions (Jung)  
Inkyung Jung; Yonsei University College of Medicine, Korea

7-8pm  
On the Bayesian index of superiority and the Fisher exact test (Kawasaki)  
Yohei Kawasaki; Tokyo University of Science

7-8pm  
Three calculation methods for a Bayesian index of superiority test for two Poisson parameters (Kawasaki)  
Yohei Kawasaki; Tokyo University of Science

7-8pm  
A simple method of power analysis based on ‘Proportion Explained’ to assess mediated effects for a dichotomous outcome (Kim)  
Young Min Kim; Radiation Effects Research Foundation

7-8pm  
On Bayesian Index for Interim Analysis (Kurosawa)  
Takuma Kurosawa; Tokyo University of Science
Sunday, 15 June 2014
Poster Session continued Room: Campus Center Ballroom

Poster (Presenter Last Name: L-Man)

7-8pm  Recommendations for Interval Estimators of Relative Potency (Landes)
Reid Landes; Radiation Effects Research Foundation

7-8pm  Dose Finding Combining Three Agents in Early Phase Cancer Trials Using Escalation with Overdose Control (Li)
Quanlin Li; Cedars-Sinai Medical Center

7-8pm  Analyzing the Effect of Recycled Individuals in the Jolly Seber Model with Tag Loss (Malcolm)
Emily Malcolm; University of Victoria

7-8pm  Clinical utility of tumor measurement (TM)-based metrics in Phase II (P2) to predict Phase III (P3) overall survival (OS) outcomes (Mandrekar)
Sumithra Mandrekar; Mayo Clinic

Poster (Presenter Last Name: Mar-Mi)

7-8pm  Intra-cluster correlation estimates for design of cluster-randomized trials and multi-clinic studies that utilize electronic health record data (Marino)
Miguel Marino; Oregon Health and Science University

7-8pm  A Note on Covariate Adjustment using Propensity Scores (Matsui)
Yusaku Matsui; Tokyo University of Science

7-8pm  Power Analysis Methods to Predict Tamoxifen Treatment Response for Breast Cancer Using Diffuse Optical Spectroscopic Imaging (McLaren)
Christine McLaren; University of California, Irvine

7-8pm  Modeling multivariate binary responses for a public health survey: Application to the DiNEH project (Miller)
Curtis Miller; University of New Mexico

7-8pm  Risk Prediction with GxE Interactions via a Blockwise Kernel Machine Model (Minnier)
Jessica Minnier; Oregon Health & Science University
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>7-8pm</td>
<td>Comparison of splitting criteria of a survival tree based on the Cox model (Shimokawa)</td>
<td>Asanao Shimokawa; Tokyo University of Science</td>
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<tr>
<td>7-8pm</td>
<td>Confidence Intervals for Average Positive/ Negative Agreement (Tang)</td>
<td>Szu-Yu Tang;</td>
</tr>
<tr>
<td>7-8pm</td>
<td>An assessment of the disability adjusted life years for patients with atypical symptoms for peripheral arterial disease (Twumasi-Ankrah)</td>
<td>Philip Twumasi-Ankrah; University of Kansas School of Medicine - Wichita</td>
</tr>
<tr>
<td>7-8pm</td>
<td>Two-phase design in spatial analyses (Vieira)</td>
<td>Veronica Vieira; University of California, Irvine</td>
</tr>
</tbody>
</table>
### WNAR Invited 1

**Room:** Executive Dining Room

**Recent development of joint modeling techniques**

**Organizer:** Sheng Luo; The University of Texas at Houston  
**Chair:** Elizabeth Juarez-Colunga; Colorado School of Public Health

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:30-8:55</td>
<td>Joint models for longitudinal measurements and a binary event: An application to predicting poor pregnancy outcomes from longitudinal ultrasound measurements (Albert)</td>
<td>Paul Albert; Eunice Kennedy Shriver National Institute of Child Health and Human Development</td>
<td></td>
</tr>
<tr>
<td>8:55-9:20</td>
<td>Bayesian methods for non-ignorable dropout in joint models in smoking cessation studies (Gaskins)</td>
<td>Jeremy Gaskins; University of Louisville</td>
<td></td>
</tr>
<tr>
<td>9:20-9:45</td>
<td>A flexible modeling framework for overdispersed, hierarchical data of a joint nature (Molenberghs)</td>
<td>Geert Molenberghs; Universiteit Hasselt &amp; KU Leuven</td>
<td></td>
</tr>
<tr>
<td>9:45-10:10</td>
<td>Joint model of multivariate longitudinal data using multilevel item response model with applications to Parkinson’ Disease (Luo)</td>
<td>Sheng Luo; University of Texas at Houston</td>
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<tr>
<td>10:10-10:20</td>
<td>Discussion</td>
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### IMS Invited 1

**Room:** CC 307/308

**Statistical Methods for Applications in High-Dimensional and Complex Problems**

**Organizer:** Z. John Daye; University of Arizona  
**Chair:** Paul Hsu; University of Arizona

<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:30-8:55</td>
<td>Asymptotic Equivalence of Regularization Methods in Thresholded Parameter Space (Lv)</td>
<td>Jinchi Lv; University of Southern California</td>
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<tr>
<td>8:55-9:20</td>
<td>Optimal classification in sparse Gaussian graphic model (Fan)</td>
<td>Yingying Fan; University of Southern California</td>
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</tr>
<tr>
<td>9:20-9:45</td>
<td>Sparse Orthogonal Factor Regression in High Dimensions with an Application to eQTL Data Analysis (Chen)</td>
<td>Kun Chen; University of Connecticut</td>
<td></td>
</tr>
<tr>
<td>9:45-10:10</td>
<td>A Strategy for Testing Zero Variance Components with Application to QTL Association Mapping in Admixture Population (Zhou)</td>
<td>Jin Zhou; University of Arizona</td>
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<tr>
<td>10:10-10:20</td>
<td>Discussion</td>
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</table>
Monday, 16 June 2014

Student Paper 1
Room: CC309

Student paper competition
Organizer: Kathy Prewitt; Arizona State University
Chair: Kathy Prewitt; Arizona State University

8:30-8:55  A New Perspective on Fixed Effects Meta-analysis: Allowing and Quantifying Heterogeneity (Dominguez Islas)
Clara Dominguez Islas; University of Washington

8:55-9:20  A Model of Self-Reinforcing Social and Sexual Networks (Boren)
David Boren; UCLA

9:20-9:45  Robust Estimation of Benchmark Dose in the Presence or Absence of Hormesis Using Bayesian Model Averaging (Kim)
Steven Kim; University of California, Irvine

9:45-10:10 Single Index Methods for Estimation and Evaluation of Marker-Guided Treatment Rules Based on Multivariate Marker Panels (Skrivankova)
Veronika Skrivankova; University of Washington

10:10-10:20 Discussion

Contributed 1
Room: CC203

Bayesian Methods
Organizer: Program;
Chair: Benjamin French; University of Pennsylvania

8:30-8:50  Bayesian Variable Selection of Mixed Effects in Nonparametric Random Effects (Yang)
Mingan Yang; Central Michigan University

8:50-9:10  Relabel mixture models via modal clustering (Wu)
Qiang Wu; East Carolina University

9:10-9:30  A Bayesian non-parametric model to predict BCR-ABL1 for in patients with chronic myelogenous leukemia (Zhou)
Shouhao Zhou; UT-MD Anderson Cancer Center

9:30-9:50  Using Historical Experimental Information in the Bayesian Analysis of Reproduction Toxicological Experimental Results (Zhang)
Jing Zhang; Miami University

9:50-10:10 Bayesian Estimation Under Informative Sampling (Savitsky)
Terrance Savitsky; U.S. Bureau of Labor Statistics

10:10-10:20 Discussion
### WNAR Invited 2  
**Room: Executive Dining Room**

**Recent Advances in Survival Analysis**  
Organizer: Gang Li; University of California at Los Angeles  
Chair: Dongmei Li; University of Hawaii

<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:30-10:55</td>
<td>Cumulative Incidence Association Models for Bivariate Competing Risks Data <em>(Fine)</em></td>
<td>Jason Fine; University of North Carolina, Chapel Hill</td>
<td></td>
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<tr>
<td>10:55-11:20</td>
<td>Semiparametric Partly Linear Regression for Right-Censored Survival Data <em>(Li)</em></td>
<td>Gang Li; UCLA</td>
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<tr>
<td>11:20-11:45</td>
<td>A mixture cure model for competing risks data <em>(Othus)</em></td>
<td>Megan Othus; Fred Hutchinson Cancer Research Center</td>
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</tr>
<tr>
<td>11:45-12:10</td>
<td>Empirical likelihood for linear transformation models with interval-censored failure time data <em>(Zhao)</em></td>
<td>Yichuan Zhao; Georgia State University</td>
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<tr>
<td>12:10-12:20</td>
<td>Discussion</td>
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### WNAR Invited 3  
**Room: CC 307/308**

**Instrumental Variables for Causal Inference**  
Organizer: Lan Liu; Harvard School of Public Health  
Chair: James Y. Dai; Fred Hutchinson Cancer Research Center

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:30-10:50</td>
<td>Bounds and IV Inequalities <em>(Robins)</em></td>
<td>James Robins; Harvard School of Public Health</td>
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<tr>
<td>10:50-11:10</td>
<td>Aporetic Conclusions When Testing the Validity of an Instrumental Variable <em>(Small)</em></td>
<td>Dylan Small; University of Pennsylvania</td>
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</tr>
<tr>
<td>11:10-11:30</td>
<td>Weighted log-rank tests for the analysis of late stage cancer trials with substantial treatment switching. <em>(Bowden)</em></td>
<td>Jack Bowden; MRC Biostatistics Unit</td>
<td></td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Causal Inference with Instrumental Variable <em>(Liu)</em></td>
<td>Lan Liu; Harvard University</td>
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<tr>
<td>11:50-12:10</td>
<td>Discussion</td>
<td>Tchetgen, Eric</td>
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<td>12:10-12:20</td>
<td>Discussion</td>
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</table>
Monday, 16 June 2014

Student Paper 2
Room: CC309

Student paper competition
Organizer: Kathy Prewitt; Arizona State University
Chair: Kathy Prewitt; Arizona State University

10:30-10:55  Parameter Redundancy in the Jolly Seber Tag Loss Model (Yurchak)
Stephanie Yurchak;

Andrew McDavid; University of Washington

11:20-11:45  Estimating bias for dependent test statistics (Tan)
Kean Ming Tan; University of Washington

11:45-12:10  Discussion
Floor Discussion

12:10-12:20  Discussion

IMS Invited 2
Room: CC203

Hypothesis testing and estimation for kernel-based regression models and other models under non-regular conditions
Organizer: Youyi Fong and Chongzhi Di; Fred Hutchinson Cancer Research Center
Chair: Youyi Fong; Fred Hutchinson Cancer Research Center

10:30-10:55  Biologically structured kernels and penalized regression (Randolph)
Timothy Randolph; Fred Hutchinson Cancer Research Center

10:55-11:20  On the pseudolikelihood inference for semiparametric models with boundary problems (Chen)
Yong Chen; University of Texas School of Public Health

11:20-11:45  Kernel Continuum Regression (Lee)
Myung Hee Lee; Colorado State University

11:45-12:10  A Mutual Information Kernel-based Logistic Regression Model For Protein Sequences (Fong)
Youyi Fong; Fred Hutchinson Cancer Research Center

12:10-12:20  Discussion
# Statistical Challenges in HIV Prevention

**Organizer:** Rebecca Yates Coley; University of Washington  
**Chair:** Tanya Garcia; Texas A&M Health Science Center

<table>
<thead>
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<th>Time</th>
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<tbody>
<tr>
<td>1:45-2:10</td>
<td><strong>Incorporating Founder Virus Information in Vaccine Trials</strong> (Follmann)</td>
<td>Dean Follmann</td>
<td>NIAID</td>
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<tr>
<td>2:10-2:35</td>
<td><strong>Latent Class Approach to Modeling Frailty in HIV Prevention Trials</strong> (Coley)</td>
<td>Rebecca Yates Coley</td>
<td>University of Washington</td>
</tr>
<tr>
<td>2:35-3:00</td>
<td><strong>Assessing the mediating effect of a biomarker: a nonparametric, matching-based approach</strong> (Wolfson)</td>
<td>Julian Wolfson</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>3:00-3:25</td>
<td><strong>Design and Analysis Issues Associated with Community-Based HIV Test and Treat: The SEARCH Study</strong> (Jewell)</td>
<td>Nicholas Jewell</td>
<td>University of California, Berkeley</td>
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</tbody>
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### IMS Invited 3

**Room: CC 307/308**

**Bayesian Approaches for Inference with Instrumental Variables**  
**Organizer:** Prakash Laud; Medical University of Wisconsin  
**Chair:** Wesley Johnson; UC, Irvine

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<tbody>
<tr>
<td>1:45-2:15</td>
<td><strong>Semi-parametric models for binary and time-to-event data with instrumental variables</strong> (Laud)</td>
<td>Purushottam Laud</td>
<td>Medical College of Wisconsin</td>
</tr>
<tr>
<td>2:15-2:45</td>
<td><strong>Non Parametric Instrumental Variable Estimation Using Bayesian Learning</strong> (McCulloch)</td>
<td>Robert McCulloch</td>
<td>University of Chicago</td>
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<tr>
<td>2:45-3:15</td>
<td><strong>Nonparametric Bayesian Analysis of Sharp and Fuzzy Regression Discontinuity Designs</strong> (Chib)</td>
<td>Siddhartha Chib</td>
<td>Washington University in St. Louis</td>
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<tr>
<td>3:15-3:35</td>
<td><strong>Discussion</strong></td>
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</table>
### Student Paper 3
Room: CC309

**Student paper competition**  
Organizer: Kathy Prewitt; Arizona State University  
Chair: Kathy Prewitt; Arizona State University

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<tbody>
<tr>
<td>1:45-2:10</td>
<td>A Flexible Joint Longitudinal-Survival Model For Quantifying The Association Between Within-Subject Volatility In Serum Biomarkers And Mortality <em>(Akhavan Masouleh)</em></td>
<td>Sepehr Akhavan Masouleh; UC Irvine</td>
</tr>
<tr>
<td>2:10-2:35</td>
<td>Fused Lasso Additive Model <em>(Petersen)</em></td>
<td>Ashley Petersen; University of Washington</td>
</tr>
<tr>
<td>2:35-3:00</td>
<td>Confidence Intervals for a Secondary Parameter in Group Sequential Trials with Unknown Correlation <em>(Skalland)</em></td>
<td>Timothy Skalland; Oregon State University</td>
</tr>
<tr>
<td>3:00-3:25</td>
<td>Multiple Imputation Methods for Causal Analysis with Truncation by Death <em>(Wang)</em></td>
<td>Linbo Wang; University of Washington</td>
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<td>3:25-3:35</td>
<td>Discussion</td>
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### Contributed 2
Room: CC203

**Methods in Genetics**  
Organizer: Program;  
Chair: Tasha Fingerlin; Colorado School of Public Health

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<tbody>
<tr>
<td>1:45-2:05</td>
<td>A Power Set Based Statistical Selection Procedure to Locate Susceptible Rare Variants Associated with Complex Traits with Sequencing Data <em>(Sun)</em></td>
<td>Hokeun Sun; Pusan National University</td>
</tr>
<tr>
<td>2:05-2:25</td>
<td>A novel functional data analysis approach to detecting gene by longitudinal environmental exposure interaction <em>(Wei)</em></td>
<td>Peng Wei; University of Texas School of Public Health</td>
</tr>
<tr>
<td>2:25-2:45</td>
<td>Parent-specific copy number profiling by next-generation DNA sequencing <em>(Chen)</em></td>
<td>Hao Chen; University of California, Davis</td>
</tr>
<tr>
<td>2:45-3:05</td>
<td>Impact of departure from Hardy-Weinberg equilibrium on Expectation-Maximization algorithm based haplotype frequency estimation <em>(Ahn)</em></td>
<td>Hyeong Jun Ahn; Biostatistics and Data Management Core, John A. Burns School of Medicine at UH manoa</td>
</tr>
<tr>
<td>3:05-3:25</td>
<td>Effect-size distributions of human complex traits and diseases from genome-wide association studies <em>(Park)</em></td>
<td>Ju-Hyun Park; Dongguk University, Seoul, Korea</td>
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<tr>
<td>3:25-3:35</td>
<td>Discussion</td>
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Tuesday, 17 June 2014

WNAR Invited 5  Room: Executive Dining Room

**Longitudinal and Survival Data Analysis**
Organizer: Yuedong Wang; University of California at Santa Barbara
Chair: Angelo Elmi; The George Washington University

8:30-8:55  Joint models for longitudinal data and informative visits (**McCulloch**)
Charles McCulloch; UCSF

Angelo Elmi; The George Washington University

9:20-9:45  Bayesian Joint Modeling of Panel Count and Severity Outcomes (**Juarez-Colunga**)
Elizabeth Juarez-Colunga; University of Colorado Denver

9:45-10:10  Comparison of methods of statistical inference for correlation of random effects in joint models (**Wagner**)
Brandie Wagner; University of Colorado

10:10-10:20  Discussion

WNAR Invited 6  Room: CC 307/308

**Recent Advances in Testing Gene-Environment Interactions**
Organizer: Qianying Liu; University of Chicago
Chair: Hao Chen; UC, Davis

8:30-8:55  An exposure-weighted score test for genetic associations integrating environmental risk factors (**Chatterjee**)
Nilanjan Chatterjee; National Cancer Institute

8:55-9:20  Design and analysis of pharmacogenetic studies (**Dai**)
James Dai; Fred Hutchinson Cancer Research Center

9:20-9:45  Powerful set-based gene-environment interaction testing framework for complex diseases (**Jiao**)
Shuo Jiao; Fred Hutchinson Cancer Research Center

9:45-10:10  Region-based Test for Gene-Environment Interactions in Longitudinal Studies (**He**)
Zihuai He; University of Michigan

10:10-10:20  Discussion
Student Paper 4
Room: CC309

Student paper competition
Organizer: Kathy Prewitt; Arizona State University
Chair: Kathy Prewitt; Arizona State University

8:30-8:55 Estimating Measures of Genetic Relatedness in the Presence of Population Structure (Conomos)
Matthew Conomos; University of Washington

8:55-9:20 Selection and Estimation for Mixed Graphical Models (Chen)
Shizhe Chen; University of Washington

9:20-9:45 Sample size methods for cross-sectional HIV incidence and trend estimation (Konikoff)
Jacob Konikoff; University of California Los Angeles

9:45-10:10 Discussion

10:10-10:20 Discussion

Contributed 3
Room: CC203

Methods in Clinical Trials
Organizer: Program;
Chair: John Kittelson; Colorado School of Public Health

8:30-8:50 Sample size considerations for historical control studies with survival outcomes (Zhu)
Hong Zhu; University of Texas Southwestern Medical Center

8:50-9:10 Designs for Randomized Phase II Clinical Trials (Chang)
Myron Chang; University of Florida

9:10-9:30 Maximizing the Number of Patients Receiving Optimal Doses in Cancer Dose Finding Trials with Escalation With Overdose Control (EWOC) (Rogatko)
Andre Rogatko; Cedars-Sinai Medical Center

9:30-9:50 Statistical methods for selection of HIV vaccine regimens based on immune response biomarkers (Huang)
Ying Huang; Fred Hutchinson Cancer Research Center

9:50-10:10 The Role of Adaptive RCT Designs in the Efficient and Accurate Identification of Effective Therapies (Emerson)
Scott Emerson; University of Washington

10:10-10:20 Discussion
Tuesday, 17 June 2014

WNAR Invited 7 Room: Executive Dining Room

Recent Advances in Missing Data Methods
Organizer: Yisheng Li; University of Texas MD Anderson Cancer Center
Chair: Sheng Luo; University of Texas at Houston

10:30-10:50 Doubly robust nonparametric multiple imputation for ignorable missing data (Li)
Yisheng Li; The University of Texas MD Anderson Cancer Center

10:50-11:10 Survival Analysis with Missing Covariates via Nonparametric Multiple Imputation (Hsu)
Chiu-Hsieh Hsu; University of Arizona

11:10-11:30 A Flexible Bayesian Approach to Monotone Missing Data in Longitudinal Studies with Informative Missingness (Daniels)
Michael Daniels; University of Texas at Austin

11:30-11:50 Resampling methods for variable selection in the presence of missing data for small and large-scale problems (Long)
Qi Long; Emory University

11:50-12:10 Discussion
Raghunathan, Trivellore

12:10-12:20 Discussion

IMS Invited 4 Room: CC 307/308

Statistics in Medical Imaging
Organizer: Thomas Lee; UC, Davis
Chair: Dan Gillen; UC, Irvine

10:30-10:55 Statistical analysis of imaging data for disease exploration (Eloyan)
Ani Eloyan; Johns Hopkins University

10:55-11:20 Fiber Tracking on Diffusion Weighted Magnetic Resonance Imaging (Paul)
Debashis Paul; University of California, Davis

11:20-11:45 Statistical techniques for the normalization and segmentation of structural MRI (Shinohara)
Russell Shinohara; University of Pennsylvania

11:45-12:10 Tensor regression with applications in neuroimaging data analysis (Zhou)
Hua Zhou; North Carolina State University

12:10-12:20 Discussion
Tuesday, 17 June 2014

Contributed 4  Room: CC309

Methods for High-Dimensional Data
  Organizer: Program;
  Chair: Ana-Maria Iosif; UC, Davis

10:30-10:50 Penalized likelihood methods for high-dimensional data with consideration of group structure: an application to microarray data in Yellow Fever vaccine recipients (Yu)
  Xuesong Yu; Fred Hutchinson cancer Research center

10:50-11:10 On spacings between adjacent eigenvalues after random projection (Chen)
  Hung Chen; Department of Mathematics, National Taiwan University

11:10-11:30 Simultaneous Gene Identification and Network Construction with Multilevel Regularized Poisson Graphical Model for Integrated Genomic Data (Zhenqiu)
  Liu Zhenqiu; Cedars-Sinai Medical Center

11:30-11:50 Statistical design of experiments in quantitative proteomics (Zhang)
  Guangxiang Zhang; University of Hawaii at Manoa

11:50-12:10 High-Dimensional Pathway and Set-Based Analysis (Chi)
  Yueh-Yun Chi; University of Florida

12:10-12:20 Discussion

Contributed 5  Room: CC203

Methods Utilizing Smoothing Approaches
  Organizer: Program;
  Chair: Jayawant Mandrekar; Mayo Clinic

10:30-10:50 Joint estimation of multiple bivariate densities of protein backbone angles using an adaptive exponential spline family (Maadooliat)
  Mehdi Maadooliat; Marquette University

10:50-11:10 A Generalized Partial Linear Marginal Model with Semiparametric Covariance Structure for Correlated Medical Cost Data (Lei)
  Liu Lei; Northwestern University

11:10-11:30 Liu estimator in partly linear regression models with correlated errors (Tabakan)
  Gulin Tabakan; Aksaray University, Turkey

11:30-11:50 A lattice-based smoother for estimating response surfaces on regions with irregular boundaries or holes (McIntyre)
  Julie McIntyre; University of Alaska Fairbanks

11:50-12:10 Discussion
  Floor Discussion

12:10-12:20 Discussion
### Methodological frontiers in analysis of data from Electronic Health Records

**Organizer:** Rebecca Hubbard; Group Health Research Institute, Seattle WA  
**Chair:** Rebecca Hubbard; Group Health Research Institute, Seattle WA

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 1:45-2:10| Outcome-adaptive variable selection for causal inference *(Shortreed)*  
Susan Shortreed; Group Health Research Institute |
| 2:10-2:35| The impact of outcome misclassification on estimation of prediction accuracy *(French)*  
Benjamin French; University of Pennsylvania |
| 2:35-3:00| Comparing treatments when effects vary across individuals and multiple outcomes matter *(Hatfield)*  
Laura Hatfield; Harvard Medical School |
| 3:00-3:25| A joint model for multistate disease processes and random informative observation times, with applications to electronic medical records data *(Lange)*  
Jane Lange; University of Washington & Group Health Research Institute |
| 3:25-3:35| Discussion                                                                                   |

### Advances in Modeling Count Data

**Organizer:** Damla Senturk; University of California at Los Angeles  
**Chair:** Catherine Crespi; University of California at Los Angeles

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<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 1:45-2:10| Functional Linear Models for Zero-Inflated Count Data with Application to Modeling Hospitalizations in Patients on Dialysis *(Senturk)*  
Damla Senturk; University of California, Los Angeles |
| 2:10-2:35| Weighted Hurdle Regression Method for Joint Modeling of Cardiovascular Events Likelihood and Rate in the U.S. Dialysis Population *(Nguyen)*  
Danh Nguyen; University of California, Irvine |
| 2:35-3:00| Estimation Under Misspecification of the Risk Period in the Self-Controlled Case Series Method with Application to Vaccine Safety Studies *(Campos)*  
Luis F. Campos; University of California, Irvine |
| 3:00-3:25| Discussion                                                                                   |
| 3:25-3:35| Discussion                                                                                   |
### Tuesday, 17 June 2014

#### IMS Invited 5

**Room: CC309**

**Advances in Functional Data Analysis**

Organizer: Kathryn Prewitt; Arizona State University  
Chair: Kathryn Prewitt; Arizona State University

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:45-2:15</td>
<td>Restricted Likelihood Ratio Tests for Regression with Functional Data (McLean)</td>
<td>Mathew McLean; Texas A&amp;M University</td>
<td></td>
</tr>
<tr>
<td>2:15-2:45</td>
<td>Inverse Regression for Functional and Longitudinal Data (Jiang)</td>
<td>Ci-Ren Jiang; Academia Sinica</td>
<td></td>
</tr>
<tr>
<td>2:45-3:15</td>
<td>SVMs and Other Regularized Kernel Methods for General Regression and Classification Problems: Functional Data, Stochastic Processes and Structured Models (Hable)</td>
<td>Robert Hable; University of Bayreuth</td>
<td></td>
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<tr>
<td>3:15-3:35</td>
<td>Discussion</td>
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</table>

#### Contributed 6

**Room: CC203**

**Methods in Epidemiology**

Organizer: Program;  
Chair: Jake Olivier; University of New South Wales

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>1:45-2:05</td>
<td>Parameter estimation in unbalanced case-crossover designs: Assessment of air pollution effects on the risk of asthma-related hospital encounters (Gillen)</td>
<td>Daniel Gillen; University of California, Irvine</td>
<td></td>
</tr>
<tr>
<td>2:05-2:25</td>
<td>A Bayesian approach to causal mediation analysis for natural direct an indirect effects (McCandless)</td>
<td>Lawrence McCandless; Faculty of Health Sciences, Simon Fraser University, Burnaby BC, Canada</td>
<td></td>
</tr>
<tr>
<td>2:25-2:45</td>
<td>Measuring cell-type specific differential methylation in human brain tissue (Taub)</td>
<td>Margaret Taub; Johns Hopkins University</td>
<td></td>
</tr>
<tr>
<td>2:45-3:05</td>
<td>Using the whole cohort in analysis of countermatched designs (Lumley)</td>
<td>Thomas Lumley; University of Auckland</td>
<td></td>
</tr>
<tr>
<td>3:05-3:25</td>
<td>Exposure as a latent variable, using pharmacokinetic combination of biomarkers, behavioral data, and/or environmental measurements (Bartell)</td>
<td>Scott Bartell; University of California, Irvine</td>
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<tr>
<td>3:25-3:35</td>
<td>Discussion</td>
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</tbody>
</table>
**Tuesday, 17 June 2014**

WNAR Invited 10  
Room: CC310

**Multiplicity Issues Big and Small, More or Less, in Personalized Medicine**  
Organizer: Jason C. Hsu and Dongmei Li; The Ohio State University and University of Hawaii  
Chair: Vincent Vu; Ohio State University

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
<tbody>
<tr>
<td>1:45-2:10</td>
<td>Mixture Representable Efficacy Measures and Subgroup Mixable Estimates in Personalized Medicine (Hsu)</td>
<td>Jason Hsu; Eli Lilly &amp; Co. and the Ohio State University</td>
</tr>
<tr>
<td>2:10-2:35</td>
<td>Confident Thresholding of a Companion Diagnostic Test (Tang)</td>
<td>Szu-Yu Tang; Ventana Medical Systems, Inc.</td>
</tr>
<tr>
<td>2:35-3:00</td>
<td>Assumptions required for resampling-based multiple tests to be valid (Kil)</td>
<td>Siyoen Kil; The Ohio State University</td>
</tr>
<tr>
<td>3:00-3:25</td>
<td>Assessing Differential Expression in Two-Color Microarrays: A Resampling-Based Empirical Bayes Approach (Li)</td>
<td>Dongmei Li; University of Hawaii at Manoa</td>
</tr>
<tr>
<td>3:25-3:35</td>
<td>Discussion</td>
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</tbody>
</table>
### WNAR Invited 11

**Room: Executive Dining Room**

**Statistical challenges in the integration of high dimensional genomic data**
- Organizer: Raphael Gottardo; Fred Hutchinson Cancer Research Center,
- Chair: Laura Cowen; University of Victoria

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
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<tbody>
<tr>
<td>8:30-9:00</td>
<td>CNV-guided Multi-read Allocation for ChIP-seq <em>(Zhang)</em></td>
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<td>Qi Zhang; Department of Biostatistics and Medical Informatics, University</td>
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<td></td>
<td>of Wisconsin Madison</td>
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<tr>
<td>9:00-9:30</td>
<td>Functional normalization of the 450k array <em>(Hansen)</em></td>
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<td>Kasper D Hansen; Johns Hopkins University</td>
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<tr>
<td>9:30-10:00</td>
<td>Characterizing cell heterogeneity using single-cell genomics <em>(Gottardo)</em></td>
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<tr>
<td></td>
<td>Raphael Gottardo; Fred Hutchinson Cancer Research Center</td>
</tr>
<tr>
<td>10:00-10:20</td>
<td>Discussion</td>
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</tbody>
</table>

### WNAR Invited 12

**Room: CC 307/308**

**Innovative Methods for Incomplete Data Analysis**
- Organizer: Catherine Crespi; University of California at Los Angeles
- Chair: Sarah Emerson; Oregon State University

<table>
<thead>
<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>8:30-8:55</td>
<td>Model selection in incomplete data <em>(Harel)</em></td>
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<tr>
<td></td>
<td>Ofer Harel; University of Connecticut</td>
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<tr>
<td>8:55-9:20</td>
<td>Non-central $F$ power approximations for balanced linear mixed models with</td>
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<td></td>
<td>missing data <em>(Ringham)</em></td>
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<td></td>
<td>Brandy Ringham; University of California, Los Angeles</td>
</tr>
<tr>
<td>9:20-9:45</td>
<td>Handling nonignorably missing data in cluster randomized trials with</td>
</tr>
<tr>
<td></td>
<td>binary outcomes using Bayesian methods <em>(Crespi)</em></td>
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<tr>
<td></td>
<td>Catherine M. Crespi; University of California Los Angeles</td>
</tr>
<tr>
<td>9:45-10:10</td>
<td>A Bayesian Semi-Parametric Varying Coefficient Method for Non-</td>
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<td></td>
<td>Ignorable Dropout <em>(MaWhinney)</em></td>
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<tr>
<td></td>
<td>Samantha MaWhinney; Colorado School of Public Health</td>
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<tr>
<td>10:10-10:20</td>
<td>Discussion</td>
</tr>
</tbody>
</table>
Wednesday, 18 June 2014

Contributed 7 Room: CC309

Methods for Non-Normal Outcomes
Organizer: Program; Chair: Hongwei Zhao; Texas A & M University

8:30-8:50 The Use of Poisson Mixtures for Testing the Effect of Genetically Modified Maize on Non-Target Field Arthropod Abundance (Jiang)
Changjian Jiang; Monsanto

8:50-9:10 Moment Reconstruction and Moment-Adjusted Imputation in Nonlinear Berkson Measurement Error Modeling (Potgieter)
Cornelis Potgieter; Southern Methodist University

9:10-9:30 Statistical Methods for Differential Expression in RNA-Seq (Rocke)
Davis Rocke; University of California, Davis

9:30-9:50 Power-Robustness Analysis of Statistical Models for RNA Sequencing Data (Di)
Yanning Di; Oregon State University

9:50-10:10 Covariate decomposition methods for consistent estimation with generalized linear mixed models in settings with data missing-at-random and omitted covariates (Neuhaus)
John Neuhaus; University of California, San Francisco

10:10-10:20 Discussion

Contributed 8 Room: CC203

Semi-Parametric or Spline Based Approaches
Organizer: Program; Chair: Charles McCulloch; UC, San Francisco

8:30-8:50 Improved understanding of Huntington’s disease onset via a genetic mixture model with distribution-free random effects (Garcia)
Tanya Garcia; Texas A&M Health Science Center

8:50-9:10 Joint Clustering in Semi-parametric multivariate regressions via Dirichlet Process (Zhang)
Hongmei Zhang; University of Memphis

9:10-9:30 Semiparametric Instrumental Variable Estimation in an Endogenous Treatment Model (Shen)
Chan Shen; University of Texas MD Anderson Cancer Center

9:30-9:50 EM Algorithm for Generalized Odds-Rate Hazard Models with Interval Censored Data (Zhang)
Bin Zhang; Cincinnati Children’s Hospital Medical Center

9:50-10:10 Discussion
Floor Discussion

10:10-10:20 Discussion
### Wednesday, 18 June 2014

#### Contributed 9  
Room: Executive Dining Room

**Statistical Applications for Ecology**  
Organizer: Program;  
Chair: Tanya Garcia; Texas AM University

<table>
<thead>
<tr>
<th>Time</th>
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</tr>
</thead>
<tbody>
<tr>
<td>10:30-10:50</td>
<td>Stable isotope sourcing with Bayesian covariate model selection</td>
<td>Erik Erhardt</td>
<td>University of New Mexico</td>
</tr>
<tr>
<td>10:50-11:10</td>
<td>Partial Stratification in Two-Sample Capture-Recapture Experiments</td>
<td>Carl Schwarz</td>
<td>Simon Fraser University</td>
</tr>
<tr>
<td>11:10-11:30</td>
<td>Investigating Movement of the California Sea Cucumber</td>
<td>Paul van Dam-Bates</td>
<td>University of Victoria</td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Phase transition on the convergence rate of parameter estimation</td>
<td>Lam Ho</td>
<td>University of Wisconsin-Madison</td>
</tr>
<tr>
<td>11:50-12:10</td>
<td>Nonlinear Models and Prediction Intervals for Plankton Ecosystem</td>
<td>Barbara Bailey</td>
<td>San Diego State University</td>
</tr>
<tr>
<td>12:10-12:20</td>
<td>Discussion</td>
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</table>

#### Contributed 10  
Room: CC 307/308

**Case Studies**  
Organizer: Program;  
Chair: Samuel Mueller; University of Sydney

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>10:30-10:50</td>
<td>Statistical approach for the development, prediction, and validation</td>
<td>Jay Mandrekar</td>
<td>Mayo Clinic</td>
</tr>
<tr>
<td>10:50-11:10</td>
<td>Multi-stage group testing with heterogeneous probabilities of disease</td>
<td>Christopher Bilder</td>
<td>University of Nebraska-Lincoln</td>
</tr>
<tr>
<td>11:10-11:30</td>
<td>Cancer and Biostatistics Education in High Schools: A free Online</td>
<td>Rafael Diaz</td>
<td>California State University Sacramento/UC Davis</td>
</tr>
<tr>
<td>11:30-11:50</td>
<td>Discussion</td>
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<tr>
<td>11:50-12:10</td>
<td>Discussion</td>
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<td>12:10-12:20</td>
<td>Discussion</td>
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</table>
Wednesday, 18 June 2014

Contributed 11 Room: CC309

Study Design and Applications
Organizer: Program;
Chair: Miguel Marino; Oregon Health and Science University

10:30-10:50 Measures of expected influence of large patient strata helpful in providing constraints to enrollment in randomized multi-center clinical trials. (Srinivasan)
Shankar Srinivasan; Celgene

10:50-11:10 The effect of software and formula on computed sample size for the difference in two proportions (Olivier)
Jake Olivier; University of New South Wales

11:10-11:30 Discussion
Floor Discussion

Contributed 12 Room: CC203

Non-Parametric Methods
Organizer: Program;
Chair: Gulin Tabakan; Aksaray University

10:30-10:50 On Phase II Monitoring of the Probability Distributions of Univariate Continuous Processes (Mukherjee)
Partha Sarathi Mukherjee; Boise State University

10:50-11:10 An improved survival estimator for medical costs using Kernel methods (Zhao)
Hongwei Zhao; Texas A&M University

11:10-11:30 Variance Estimation of the NPMLE of the Mean with Current Status Data (Kim)
Jong Kim; Portland State University

11:30-11:50 Discussion
Floor Discussion

11:50-12:10 Discussion
Floor Discussion

12:10-12:20 Discussion