

# Combined Program

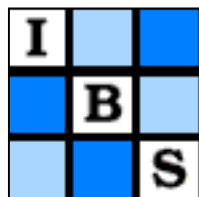
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## WNAR/IMS 2007

at

University of California, Irvine

June 24-27, 2007



UCIrvine  
University of California, Irvine

# WNAR/IMS 2007 – Combined Program

## University of California, Irvine

### Sunday June 24<sup>th</sup>

#### Session 8:30 – 5:00

##### **WNAR/IMS Short Course: *Causal Inference in Experimental and Observational Studies***

**Sunday June 24<sup>th</sup>, 8:30am - 5:00pm      Room: Bren Hall 6011**

**Instructor:** Don Rubin, Department of Statistics, Harvard University

##### **WNAR Regional Committee Meeting (By Invitation)**

**Sunday June 24<sup>th</sup>, 3:00pm – 5:00pm      Room: Bren Hall 2222**

##### **WNAR/IMS Welcoming Mixer and Registration (All Welcome)**

**Sunday June 24<sup>th</sup>, 6:30pm – 9:30pm      Room: 6<sup>th</sup> Floor Balcony, Bren Hall**

### Monday June 25<sup>th</sup>

#### Session 8:30 – 10:15

##### **WNAR Invited Paper Session 1: Analysis of Diagnostic Test Accuracy**

**Monday June 25<sup>th</sup>, 8:30am – 10:15am      Room: Bren Hall 6011**

**Organizer:** Todd Alonzo, University of Southern California

**Chair:** Todd Alonzo, University of Southern California

##### **Speakers:**

- Todd Alonzo, University of Southern California, “Insights into Latent Class Analysis of Diagnostic Test Performance”
- Andrew Xiao-Hua Zhou, Department of Biostatistics, University of Washington, “Semi-parametric regression models for time-dependent ROC curves”
- Kelly Zou, Harvard Medical School, “Accuracy and Reliability of Statistical Classification Methods with Applications in Image-Guided Therapy and Functional MR Imaging”

##### **IMS Invited Paper Session 1: Graphical Models**

**Monday June 25<sup>th</sup>, 8:30am – 10:15am      Room: Bren Hall 5011**

**Organizer:** Mathias Drton, University of Chicago

**Chair:** Marloes Maathuis, University of Washington

##### **Speakers:**

- Beatrix Jones, Massey University, Albany, New Zealand, “Using paths through graphical models to dissect pairwise relationships”
- Nicholas Eriksson, Stanford University, “Conjunctive Bayesian Networks”
- Jin Tian, Iowa State University, “Causal inference with graphical models”

### **Student Paper Competition Session 1**

**Monday June 25<sup>th</sup>, 8:30am – 10:15am**

**Room: Bren Hall 4011**

**Chair:** Raphael Gottardo, University of British Columbia

#### **Speakers:**

- Rebecca Hubbard, University of Washington, Department of Biostatistics, “Modeling delirium progression using a non-homogeneous Markov process”
- Zhong Liu, Department of Statistics, U. of British Columbia, “A Spatial-Temporal Model to Assess a Deterministic Model for the Prediction of Ozone”
- Hua Zhong, University of Washington, Department of Biostatistics, “Bias-Reduced Estimators and Confidence Intervals for Odds Ratios in Genome-wide Association Studies”
- Sonya Heltshel, University of Colorado DHSC, “Length-biased sampling in cancer screening with variable test sensitivity”

### **Contributed Paper Session 1: Applications in Cell Biology**

**Monday June 25<sup>th</sup>, 8:30am – 10:15am**

**Room: Bren Hall 3011**

**Chair:** Kathy Prewitt, Arizona State University

#### **Speakers:**

- Philip Dixon, Department of Statistics, Iowa State University, “Clustering metabolomic data using weighted distance measures”
- Byung Park, Oregon Health & Science University, “Statistical Analysis of Percent Data: Application to the Analysis of T Cell Subset Distribution”
- John Peterson, GlaxoSmithKline Pharmaceuticals, R&D, “Nonlinear Blending: An alternative to the classical pharmacological synergy measures for drugs in combination”
- Jihao Zhou, Allergan, Inc., “A Bayesian dose-response model for right-censored time-to-event data”

### **Session 10:30 – 12:15**

#### **WNAR Invited Paper Session 2: Analysis of Outcome Dependent Sampling Schemes**

**Monday June 25<sup>th</sup>, 10:30am – 12:15pm**    **Room: Bren Hall 6011**

**Organizers:** Sebastien Haneuse, Center for Health Studies &  
Jinbo Chen, University of Pennsylvania

**Chair:** Thomas Lumley, University of Washington

#### **Speakers:**

- Sebastien Haneuse, Center for Health Studies, “Analysis of two-phase studies in the presence of participation bias”
- John Neuhaus, University of California, San Francisco, “The analysis of retrospective family studies”
- Bhramar Mukherjee, University of Michigan, “Exploiting Gene-Environment Independence for Analysis of Case-Control Studies:”
- Nilanjan Chatterjee, Biostatistics Branch Division of Cancer Epidemiology and Genetics, NCI, NIH, DHHS, “Recent Developments in Semi-parametric Methods for Analysis of Case-control Studies in Genetic Epidemiology”
- *Discussant:* Thomas Lumley, University of Washington

**IMS Invited Paper Session 2: Empirical Processes**

**Monday June 25<sup>th</sup>, 10:30am – 12:15pm Room: Bren Hall 5011**

**Organizer:** Moulinath Banerjee, University of Michigan

**Chair:** David Van Dyk, University of California, Irvine

**Speakers:**

- Subhashis Ghoshal, North Carolina State University, “Strong Approximation for ROC Curve Estimate Based on the Bayesian Bootstrap”
- Marloes Maathuis, Department of Statistics, University of Washington, “Inconsistency of the MLE for the joint distribution of interval censored survival times and continuous marks”
- Peter Radchenko, USC, “Mixed-rates Asymptotics”

**Student Paper Competition Session 2**

**Monday June 25<sup>th</sup>, 10:30am – 12:15pm Room: Bren Hall 4011**

**Chair:** Raphael Gottardo, University of British Columbia

**Speakers:**

- Elizabeth Thomas, University of Washington, “Comparing methods of ROC curve analysis”
- Ann Lazar, University of Colorado at Denver and Health Sciences Center, “Comparing Population Average and Subject Specific Time Response Curves”
- Chengyong TANG, Iowa State University, “The Nonparametric Regression with Missing Responses and Its Applications to US Census”

**Contributed Paper Session 2: Clinical trials for Medical Devices/ROC Analysis**

**Monday June 25<sup>th</sup>, 10:30am – 12:15pm Room: Bren Hall 3011**

**Chair:** Holly Janes, Johns Hopkins University

**Speakers:**

- Huining Kang, Department of Internal Medicine, University of New Mexico, “Semiparametric Estimation for the ROC Curve of a Generalized Odds-Rate Model”
- Samir Lababidi, Food and Drug Administration, “Some Issues in developing gene expression microarray-based classifiers for clinical practice”
- Xuefeng Li, Food and Drug Administration, “A case study: Bayesian vs. Frequentist Adaptive Design”
- Hollington LU, DBS/CDRH/FDA, “Statistical issues in ophthalmic devices clinical trials  
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Statistical issues in ophthalmic devices clinical trials”

**Regional Advisory Board Luncheon (By Invitation)**

**Monday June 25<sup>th</sup>, 12:30pm – 1:45pm**

**Room: University Club, Room A**

## **Session 1:45 – 3:30**

### **WNAR Invited Paper Session 3: Nonparametric Bayesian Methods in Cancer**

**Monday June 25<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 6011**

**Organizer:** Sonia Jain, University of California, San Diego

**Chair:** Sonia Jain, University of California, San Diego

#### **Speakers:**

- Peter Mueller, M.D. Anderson Cancer Center, “Bayesian Clustering with Regression”
- Debajyoti Sinha, Medical University of South Carolina, “Longitudinal Studies with Outcome-Dependent Follow-Up: Models and Bayesian Regression”
- Timothy Hanson, University of Minnesota Division of Biostatistics, “Flexible Spatial Frailty Modeling via Mixtures of Polya Trees with Application to Breast Cancer Survival in Iowa”
- Sonia Jain, University of California San Diego, “Analysis of Gene Expression Leukemia Data using Split-Merge Markov Chain Monte Carlo”

### **IMS Invited Paper Session 3: Recent Advances in Causal Inference**

**Monday June 25<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 5011**

**Organizer:** James Robins, Harvard University

**Chair:** Tyler VanderWeele, University of Chicago

#### **Speakers:**

- Eric Tchetgen, Harvard School of Public Health, “Doubly and Multiply-robust inference in Marginal Structural Mean Models for Repeated Measures”
- Thomas Richardson, University of Washington, “On estimation of the relative risk and risk difference”
- Tyler VanderWeele, University of Chicago, “Sufficient cause interactions and statistical interactions”

### **Student Paper Competition Session 3**

**Monday June 25<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 4011**

**Chair:** Raphael Gottardo, University of British Columbia

#### **Speakers:**

- Ying Huang, University of Washington, Department of Biostatistics, “Biomarker Evaluation using the Controls as a Reference Population”
- Brandie Wagner, University of Colorado DHS, “Generalizing the Sum Statistic Approach for Multiple Comparisons with Covariance Adjustment and Application to Longitudinal Data”
- Jeri Harwood, Dept of Pediatrics, University of Colorado at Denver and Health Sciences Center, “Varying-Coefficient Methods for Longitudinal Data with Nonignorable Dropout”
- Sarah Emerson, Stanford University, “Adaptive modification of patient accrual in survival analysis”

### **Contributed Paper Session 3: Survival Analysis**

**Monday June 25<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 3011**

**Chair:** Xuefeng Li, Food and Drug Administration

#### **Speakers:**

- David Kraus, Institute of Information Theory and Automation, Prague, Czechia, “Adaptive Neyman's smooth tests of homogeneity of two samples of survival data”

- David Shera, University of Pennsylvania / The Children's Hospital of Philadelphia, "Survival analysis in a clinical trial to treat pre-natal twins"
- Yi-Kuan Tseng, Graduate Institute of Statistics, National Central University, Taiwan, "Joint modeling of survival and longitudinal data - graphic improvement with a case study in AIDS data"

### **Session 3:45 – 5:00**

#### **WNAR Presidential Invited Address**

**Monday June 25<sup>th</sup>, 3:45pm – 5:00pm**      **Room: Crystal Cove Auditorium,  
Located in UCI Student Center**

**Organizer & Chair:** Ken Burnham, Colorado State University

**Speaker:** Terry Speed, Department of Statistics, UC Berkeley

**Title:** "Statistics and Computational Biology"

## **Tuesday June 26<sup>th</sup>**

### **Session 8:30 – 10:15**

#### **WNAR Invited Paper Session 4: Recent Advances in Mixture Models/Clustering**

**Tuesday June 26<sup>th</sup>, 8:30am – 10:15am**      **Room: Bren Hall 5011**

**Organizer:** Surijat Ray, Boston University

**Chair:** Debashis Paul, University of California, Davis

#### **Speakers:**

- Tony Cai, University of Pennsylvania, "Oracle and Adaptive Rules for False Discovery Rate Control"
- Surajit Ray, Boston University, "Modal Inference: Building the bridge between nonparametric clustering and mixture analyses"
- Galen Papkov, Rice University, "Modified Polynomial Histograms"

#### **IMS Invited Paper Session 4: Two-Phase Designs and Semi-Parametric Inference**

**Tuesday June 26<sup>th</sup>, 8:30am – 10:15am**      **Room: Bren Hall 6011**

**Organizer:** Thomas Lumley, University of Washington

**Chair:** Thomas Braun, University of Michigan

#### **Speakers:**

- Thomas Lumley, University of Washington, "Survey calibration and two-phase designs"
- Bryan Langholz, USC Keck School of Medicine, "Some multiphase case-control study designs"
- Daniel Rubin, University of California, Berkeley, "Targeted Maximum Likelihood in Two-Phase Studies"

**Student Paper Competition Session 4****Tuesday June 26<sup>th</sup>, 8:30am – 10:15am****Room: Bren Hall 4011****Chair:** Raphael Gottardo, University of British Columbia**Speakers:**

- Kyle Rudser, University of Washington Biostatistics, “Nonparametric Inference for Arbitrary Functionals of Survival”
- Rachel Chu, University of British Columbia, “Bayesian adjustment for exposure misclassification in case-control studies”
- Siobhan Everson-Stewart, University of Washington, “Biocreep in Non-inferiority Clinical Trials”

**Contributed Paper Session 4: Bayesian Methods****Tuesday June 26<sup>th</sup>, 8:30am – 10:15am****Room: Bren Hall 3011****Chair:** Sonia Jain, University of California, San Diego**Speakers:**

- Simon Bonner, Statistics and Actuarial Science, Simon Fraser University, “Bayesian Smoothing of the Stratified-Petersen Model”
- Dennis Cox, Rice University, “Functional Data Classification-- A Bayesian Probit Model with Factor Effects and Curve Selection”
- Daniela Golinelli, RAND Statistics Group, “Estimating the effect of Business Improvement Districts on crime in Los Angeles: a Bayesian analysis”
- Susan Paddock, RAND Corporation, “Bayesian variable selection for analyzing longitudinal substance abuse treatment data subject to informative censoring”
- Song Zhang, UT MD Anderson Cancer Center, “Constructing Dependent Polya Trees with Copulas”

**Session 10:30 – 12:15****WNAR Invited Paper Session 5: Recent Advances in Adaptive Designs for Phase I and II Clinical Trials****Tuesday June 26<sup>th</sup>, 10:30am – 12:15pm****Room: Bren Hall 5011****Organizer:** Thomas Braun, University of Michigan**Chair:** Thomas Braun, University of Michigan**Speakers:**

- Wei Zhang, Boehringer Ingelheim Pharmaceuticals, Inc., “Adaptive dose-finding designs incorporating both toxicity and efficacy”
- Guosheng Yin, Department of Biostatistics, M. D. Anderson Cancer Center, “Bayesian Dose-finding by Jointly Modeling Toxicity and Efficacy as Time- to-Event Outcomes with Cure Rate Models”
- Thomas Braun, University of Michigan, Department of Biostatistics, “Simultaneously Optimizing Dose and Schedule of a New Cytotoxic Agent”

**IMS Invited Paper Session 5: Nonparametric Bayesian Methods**

**Tuesday June 26<sup>th</sup>, 10:30am – 12:15pm**                      **Room: Bren Hall 6011**

**Organizer:** Padraic Smyth, University of California, Irvine

**Chair:** Jessica Utts, University of California, Davis

**Speakers:**

- Wesley Johnson, Department of Statistics, UC Irvine, “Joint Modeling of Longitudinal and Survival Data Using Mixtures of Polya Trees”
- Athanasios Kottas, University of California, Santa Cruz, “Bayesian nonparametric modeling of stochastic order in the analysis of ROC data”
- Ian Porteous, University of California Irvine, “Bayesian Multi-HDP for Matrix Factorization”

**Contributed Paper Session 5: Spatial Modeling**

**Tuesday June 26<sup>th</sup>, 10:30am – 12:15pm**                      **Room: Bren Hall 4011**

**Chair:** Bryan Langholz, University of Southern California

**Speakers:**

- Ronald Barry, Univ. of Alaska Fairbanks Dept. of Mathematics and Statistics, “Bayesian and frequentist cokriging: a variety of applied analyses”
- Dale Tessin, Iowa State University, “From points to surfaces: Spatial patterns and predation risk analysis”
- Irene Helenowski, Northwestern University & University of Illinois-Chicago, “Issues in Convergence for Various Spatial Models”
- Alejandro Veen, IBM TJ Watson Research Center, “The Mean K-function and its Use for Model Assessment of Space-time Point Process Models in Seismology”

**Contributed Paper Session 6: Genomics**

**Tuesday June 26<sup>th</sup>, 10:30am – 12:15pm**                      **Room: Bren Hall 3011**

**Chair:** Nilanjan Chatterjee, National Cancer Institute

**Speakers:**

- Saonli Basu, University of Minnesota, “A likelihood-based trait-model-free approach for linkage detection of continuous trait in pedigrees”
- Jing Cao, Southern Methodist University, “A Bayesian Mixture Model for High Throughput Screening”
- Qunhua Li, Univ of Washington, “Statistical methods for Peptide Identification Using Tandem Mass Spectrometry Through Sequence Database Searching”
- David Rossell, MD Anderson Cancer Center, “Sample size for microarrays.”
- Yun Ju Sung, Washington University in St Louis, “Accounting for Imprinting in Linkage Analysis of General Pedigrees”

**New Investigators Luncheon (Ticketed Event)**

**Tuesday June 26<sup>th</sup>, 12:30pm – 1:45pm**

**Room: University Club, Library**

**WNAR Regional Committee Luncheon (Invitation Only)**

**Tuesday June 26<sup>th</sup>, 12:30pm – 1:45pm**

**Room: University Club, Room C**

## **Session 1:45 – 3:30**

### **WNAR Invited Paper Session 6: Group Sequential Clinical Trials and Non-Ignorable Incomplete Data**

**Tuesday June 26<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 6011**

**Organizer:** John Kittelson, University of Colorado

**Chair:** Diane Fairclough, University of Colorado

**Speakers:**

- John Kittelson, University of Colorado Health Sciences Center, “The problem: How sequential monitoring may introduce non-ignorable incomplete data”
- Sam MaWhinney, University of Colorado Health Sciences Center, “Mixed-effects, flexible B-spline models to analyze longitudinal relationships with incomplete support”
- Patrick Blatchford, University of Colorado Health Sciences Center, “Incorporating auxiliary information using group sequential designs for bivariate outcomes”
- Adam Boyd, University of Colorado Health Sciences Center, “Inference for time-to-event endpoints in the presence of non-proportional hazards”
- *Discussant:* Diane Fairclough, University of Colorado Health Sciences

### **Contributed Paper Session 7: Hypothesis Testing**

**Tuesday June 26<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 5011**

**Chair:** Gang Liang, University of California, Irvine

**Speakers:**

- Thomas Ferguson, Statistics Department, UCLA, “Testing Equality of Players in a Round-Robin Tournament”
- Alexander Gordon, University of North Carolina at Charlotte, “Multiple testing procedures and their generalized family-wise error rates”
- Michele Guindani, UT MD Anderson Cancer Center, “From ODP to BDP, a bayesian nonparametric perspective”
- David Mauger, Penn State University, “Practical sample size considerations for studies with overdispersed count data”

### **Contributed Paper Session 8: High Dimensional Data**

**Tuesday June 26<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 4011**

**Chair:** Dennis Cox, Rice University

**Speakers:**

- Mark Gamalo, University of Missouri-Kansas City, “Robust Estimate of the Spectral Envelope”
- Danielle Harvey, Division of Biostatistics, UC Davis, “Biologically driven data reduction of high dimensional spatially correlated data”
- Jong Soo Lee, Carnegie Mellon University, “Identifying and assessing sources variability in a clinical study”
- Debashis Paul, Department of Statistics, University of California, Davis, “Principal components analysis for sparsely observed, correlated functional data”
- Qian Weng, UC Davis, “Modeling progression of cerebrovascular disease in the presence of error”

**Contributed Paper Session 9: General Statistical Methods**

**Tuesday June 26<sup>th</sup>, 1:45pm – 3:30pm**

**Room: Bren Hall 3011**

**Chair:** Sonya Heltsh, University of Colorado DHSC

**Speakers:**

- Ken Gerow, U. Wyoming, “Let the Dog Wag the Tail: Reframing basic statistics to answer interesting questions”
- Zonghui Hu, National Institute of Health, “Semiparametric two-sample change-point model”
- Jong Kim, Portland State University, “A Note on the Barnett-Cohen Censored Histogram”
- Kathy Prewitt, University of Texas Health Science Center at San Antonio, “Nonparametric curve comparison using local linear smoothing with small samples”

**Session 3:45 – 5:00**

**WNAR General Business Meeting (All Members Welcome)**

**Tuesday June 26<sup>th</sup>, 3:45pm – 5:00pm**

**Room: Bren Hall 6011**

**Annual Banquet (Ticketed Event)**

**Tuesday June 26<sup>th</sup>, 6:00 – 9:00pm**

**Location:**

Villa Nova Restaurant  
3131 W. Coast Hwy  
Newport Beach, Ca 92663

**Wednesday June 27<sup>th</sup>**

**Session 8:30 – 10:15**

**RAB Young Investigators Invited Paper Session: Design and Analysis of Biomarker and Diagnostic Test Studies**

**Wednesday June 27<sup>th</sup>, 8:30am – 10:15am Room: Bren Hall 5011**

**Organizer:** Todd Alonzo, University of Southern California

**Chair:** Todd Alonzo, University of Southern California

**Speakers:**

- Ying Huang, University of Washington, Department of Biostatistics, “Evaluating the predictiveness of a continuous biomarker in case-control studies”
- Holly Janes, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, “Matching in Studies of Classification Accuracy: Implications for Analysis, Efficiency, and Assessment of Incremental Value”
- Hua He, Dept. of Biostatistics, Univ. of Rochester, “Correcting Verification Bias in the Assessment of the Accuracy of Diagnostic Tests”
- *Discussant:* Todd Alonzo, University of Southern California

**WNAR Invited Paper Session 7: Statistical Applications to Wildlife/Ecology**

**Wednesday June 27<sup>th</sup>, 8:30am – 10:15am Room: Bren Hall 6011**

**Organizer:** Kenneth Burnham, Colorado State University

**Chair:** Kenneth Burnham, Colorado State University

**Speakers:**

- Ken Gerow, U. Wyoming, “Power and Sample Size Estimation Techniques for comparing Two Means: Assessment and a New Computational Tool”
- Jennifer Hoeting, Colorado State University, “Spatial models for ordered categorical data”
- William Kendall, USGS Patuxent Wildlife Research Center, “Adjusting for unobservable or misclassified states in capture-recapture studies: design and modeling approaches”

**Contributed Paper Session 10: Machine Learning**

**Wednesday June 27<sup>th</sup>, 8:30am – 10:15am Room: Bren Hall 4011**

**Chair:** Sebastien Haneuse, Center for Health Studies

**Speakers:**

- Hung Chen, Dept. Math. National Taiwan University, “Operating characteristics of Cp-LASSO on variable selection in linear regression with orthonormal regressors”
- Rebecka Jornsten, Rutgers University, “MIXT - Incorporating multiple distance metric in clustering via a multi-level mixture mode”
- Sinjini Mitra, University of Southern California, “Probabilistic Tracking of Plans and Intentions in Intelligence Analysis”

**Contributed Paper Session 11: Health Services Research**

**Wednesday June 27<sup>th</sup>, 8:30am – 10:15am Room: Bren Hall 3011**

**Chair:** Loki Natarajan, University of California, San Diego

**Speakers:**

- John Kornak, University of California, San Francisco, “A Bayesian Decision Procedure for Choosing between Diagnostic Methods with an Application in Osteoporosis Fracture Risk Assessment”
- Ying Lu, University of California, San Francisco, “Lower Boundary of Treatment Efficacy for Patients Diagnosed by a New Technique and Its Implications on Cost-Effective Analysis”
- Maskim Pashkevich, Stanford University, “Natural History Model of Lung Cancer Based on the Mayo Lung Project”
- Bronislava Sigal, Stanford University, “On Relating Growth Rate, Stage Transitions and Size at Symptomatic Detection for Different Models of Breast Cancer”

**Session 10:30 – 12:15**

**IMS Invited Paper Session 6: Sparsity in High-Dimensional Problems**

**Wednesday June 27<sup>th</sup>, 10:30am – 12:15pm Room: Bren Hall 6011**

**Organizer:** Larry Wasserman, Carnegie Mellon University

**Chair:** Jiashun jin, Purdue University

**Speakers:**

- Jiashun Jin, Department of Statistics, Purdue University, “Estimating the proportion of non-null effects in large-scale multiple testing”

- John Lafferty, Carnegie Mellon University, “Nonparametric Sparsity using the Rodeo”
- Ping Li, Stanford University, “Conditional Random Sampling: A Sampling Technique for Sparse Data”

**Contributed Paper Session 12: Applications in Wildlife/Ecology**

**Wednesday June 27<sup>th</sup>, 10:30am – 12:15pm**

**Room: Bren Hall 5011**

**Chair:** Kenneth Burnham, Colorado State University

**Speakers:**

- Barbara Bailey, San Diego State University, “Developing Nonlinear Forecasts of the Gulf of Maine Zooplankton Ecosystem”
- John Fieberg, Minnesota Department of Natural Resources, “Analysis of survival data from telemetry studies using semi-parametric proportional hazards models”
- Charles Geyer, University of Minnesota, “Aster Models for Life History Analysis”
- Benjamin Sandford, National Marine Fisheries Service, “Salmon Migration Seawater Holding Study: An Application of Survival Curve Estimation”

**Contributed Paper Session 13: Epidemiology**

**Wednesday June 27<sup>th</sup>, 10:30am – 12:15pm**

**Room: Bren Hall 4011**

**Chair:** Ying Lu, University of California, San Francisco

**Speakers:**

- Rafael Diaz, Department of Mathematics and Statistics, California State University Sacramento, “Comparison of Adaptive Gaussian Quadrature, PQL and Laplace 6 Estimates of Hierarchical”
- Mulugeta Gebregziabher, Medical University of South Carolina, “Measuring Association in Prevalence Studies: Odds Ratio Versus Prevalence Ratio”
- Loki Natarajan, University of California San Diego, “Measurement Error Models”

**Contributed Paper Session 14: General Linear Models**

**Wednesday June 27<sup>th</sup>, 10:30am – 12:15pm**

**Room: Bren Hall 3011**

**Chair:** Kyle Rudser, University of Washington

**Speakers:**

- Arunava Chakravarty, Department of Statistics, UC Riverside, “Some Observations in Likelihood Based Fitting of Discrete Longitudinal Models”
- Samuel Wong, Department of Statistics, The Chinese University of Hong Kong, “Flexible Modeling of Generalized Mixed Models via Hybrid Estimation: Some Case Studies”