

# Nonparametric Statistics, Refined, Redefined, and Renewed

Program and Schedule – last updated April 3, 2009

## Thursday, April 16, 2009

### **Welcome**

8:45-9:15

*Madan Puri, Provost Donald Bobbitt, Associate Dean Krishnan Rajeshwar, and Department Chair Jianping Zhu, University of Texas at Arlington, and Department Head Larry Ammann, University of Texas at Dallas*

### ***Depth Functions and Quantiles in Nonparametric Multivariate Methods***

9:15-9:20

Introduction: *Robert Serfling*, University of Texas at Dallas

9:20-9:45

*Marc Hallin, Davy Paindaveine, and Miroslav Šiman* Université Libre de Bruxelles,

“Multivariate Quantiles: from  $L_1$  Optimization to Halfspace Depth”

9:45-10:10

*Jun Li*, University of California, Riverside, and *Regina Liu*, Rutgers University,

“Multivariate Spacings Based on Data Depth and Construction of Nonparametric Multivariate Tolerance Regions”

10:10-10:35

*Robert Serfling*, University of Texas at Dallas,

“On Equivariance/Invariance Properties of Multivariate Depth and Related Functions”

10:35-10:55

Open Discussion

10:55-11:15

**Coffee Break**

### ***Ranked Set Sampling***

11:15-11:20

Introduction: *Doug Wolfe*, Ohio State University

11:20-11:48

*Omer Ozturk*, Ohio State University,

“Nonparametric Maximum Likelihood Estimation of CDF and Within-set Ranking Error Probabilities in Ranked-set Sampling”

11:48-12:16

*Christopher Sroka*, Battelle Memorial Institute, Columbus

“Approaches for Allocating Observations in a Stratified Ranked Set Sample”

12:16-12:44

*Nader Gemayel*, Ohio State University,

“Nonparametric Estimation in Ranked Set Sampling with Imperfect Ranking Induced by a Concomitant Variable in a Finite Population Setting”

12:44-12:55

Open Discussion

12:55-14:30            **Lunch**

**Multivariate and Repeated Measurements Designs**

14:30-14:40            Introduction: *Edgar Brunner*, University of Göttingen

14:40-15:10            *Solomon Harrar*, University of Montana,  
"Modified Rank-Based MANOVA: Asymptotics and Small Sample  
Approximations"

15:10-15:40            *Xin Gao*, York University,  
"Nonparametric Multiple Comparison Procedures for Unbalanced  
Experimental Designs"

15:40-16:10            *Arne C. Bathke*, University of Kentucky, and *Edgar Brunner*,  
University of Göttingen,  
"Improvement and Generalization of the Box-Greenhouse-Geisser  
Adjustment"

16:10-16:30            **Coffee Break**

**Student Talks**

16:30-16:55            *Frank Konietschke*, University of Göttingen,  
"Simultaneous Confidence Intervals for Nonparametric Relative  
Contrast Effects"

16:55-17:20            *Kimihiko Noguchi*, University of Waterloo,  
"Combination of Levene-Type and Finite-Intersection Tests for  
Homogeneity of Variances Against Ordered Alternatives"

17:20-17:45            *Satyaki Mazumder*, University of Texas at Dallas,  
"Asymptotic Results for Scaled-Deviation Type Outlyingness  
Functions, with Applications"

17:45-18:10            *Zibonele Valdez-Jasso*, University of Texas at Dallas,  
"Statistical analysis of UfMRI"

18:10-18:35            *Wei Dou*, Yale University,  
"Functional Generalized Linear Models: Methodology,  
Convergence Rates, and Applications"

18:35-19:00            *Soutir Bandopadhyay*, Texas A&M University,  
"Nonparametric Covariogram Estimation Based on Irregularly  
Spaced Spatial Data"

19:30                    **Banquet in the beautiful Carlise Suite, University Center**

**Speaker: Madan Puri, introduced by Edgar Brunner**

## **Friday, April 17, 2009**

### ***Testing and Estimation***

- 9:00-9:10 Introduction: *Suojin Wang*, Texas A&M University
- 9:10-9:40 *Haiyan Wang*, Kansas State University, *Siti Tolos*, Kansas State University, and *Suojin Wang*, Texas A&M University,  
"A Nonparametric Test of Independence in the Presence of Heteroscedastic Treatment Effects"
- 9:40-10:10 *Javier Rojo*, Rice University, and *Richard C Ott*, Mesa State College,  
"Testing for Long Tails"
- 10:10-10:40 *Suojin Wang*, Texas A&M University,  
"Generalized Empirical Likelihood Methods for Analyzing Longitudinal Data"

10:40-11:00 ***Coffee Break***

### ***Nonparametric Regression and Related Models***

- 11:00-11:10 Introduction: *Shan Sun*, University of Texas at Arlington
- 11:10-11:40 *Ming-Yen Cheng*, University College, London, and *Jyh-Shyang*, Tamkang University,  
"Adapting to Design Sparsity in Univariate and Bivariate Local Linear Regression"
- 11:40-12:10 *Yangqing Sun*, University of North Carolina at Charlotte, *Rajeshwari Sundaram*, National Institute of Child Health and Human Development, and *Yichuan Zhao*, Georgia State University,  
"Empirical Likelihood Inference for the Cox Model with Time-Dependent Coefficients via Local Partial Likelihood"
- 12:10-12:40 *Soyeon Lee*, Occidental College, *Wentao Gu*, Zhejiang Gongshang University, and *Lanh Tran*, Indiana University,  
"Fixed Design Regression for General Linear Time Series"

12:40-14:30 ***Lunch***

### **Missing Data Analysis**

- 14:30-14:40 Introduction: *Sam Efromovich*, University of Texas at Dallas  
14:40-15:10 *Ursula Müller*, Texas A&M University,  
“Efficient Estimators for Nonlinear Regression Models with  
Responses Missing at Random”  
15:10-15:40 *Sam Efromovich*, University of Texas at Dallas,  
“Nonparametric Regression with Missing Data”  
15:40-16:10 *Jiexiang Li*, College of Charleston,  
“Asymptotic Normality for Deconvolution Kernel Density Estimators  
from Random Fields”

16:10 - 16:30 **Coffee Break**

### **Spatial Sign and Rank Techniques**

- 16:30-16:40 Introduction: *Davy Paindaveine*, Université Libre de Bruxelles  
16:40-17:10 *Denis Larocque*, HEC Montreal,  
“Multivariate Nonparametric Methods for Clustered Data:  
A Review and Some Recent Developments”  
17:10-17:40 *Weihua Zhou*, University of North Carolina at Charlotte,  
“A Multivariate Wilcoxon Regression Estimate”  
17:40-18:10 *Davy Paindaveine*, Université Libre de Bruxelles,  
“On Multivariate Runs Tests for Randomness”

### **Closing Remarks Opening the Future**

- 18:15 Introduction: *Robert Serfling*  
*Edgar Brunner*  
*Marc Hallin*