

5th ANNUAL PROBABILITY AND STATISTICS DAY AT UMBC

FUNDED BY NATIONAL SECURITY AGENCY

SATURDAY, APRIL 23, 2011

INFORMATION TECHNOLOGY/ENGINEERING (ITE) BUILDING

FINAL PROGRAM

8:00AM - 9:00AM **REGISTRATION AND BREAKFAST**
LOBBY, GROUND FLOOR, OUTSIDE LECTURE HALLS 7 & 8

9:00AM - 9:30AM **WELCOME**
LECTURE HALL 7

- Philip Rous, Dean, College of Natural and Mathematical Sciences, UMBC
- Nagaraj Neerchal, Chair, Department of Mathematics and Statistics, UMBC
- Bimal Sinha, Conference Chair, UMBC

9:30AM - 10:15AM **KEYNOTE ADDRESS I**
LECTURE HALL 7

Introduction of Speaker: Thomas Mathew
Speaker: **Jun Shao, University of Wisconsin-Madison**
Title: **Analysis of Longitudinal Data with Nonignorable Nonresponse**

10:15AM - 11:00AM **KEYNOTE ADDRESS II**
LECTURE HALL 7

Introduction of Speaker: Thomas Mathew
Speaker: **Dennis D. Cox, Rice University**
Title: **Fundamental Issues in Bayesian Functional Data Analysis**

11:00AM - 11:30AM **COFFEE BREAK**

11:00AM - 4:00PM **POSTER SESSION**
LOBBY, GROUND FLOOR, NEAR BUILDING ENTRANCE

Student Presenters

- **Joshua Betz, UMBC**
Prognostic Ability of Diffusion Tensor Imaging in Severe Traumatic Brain Injury

- **Paula Borrego, UMBC**
Sex Roles in the Fish "Etheostoma flabellare"
- **Evelyn Frazier, UMBC/U.S. Census Bureau**
Dose-Response Modeling for Continuous Responses when Variance is not a Power of the Mean
- **Sophia Parker, University of the District of Columbia**
Predictive Variables in the Online Dating World
- **Andrew Raim, UMBC**
Parallel Computation of an Approximate Fisher Scoring Algorithm for Multinomial Mixture Models
- **James Travis, UMBC**
A Unified Description of the Statistics of Radar and Gauge Rainfall Data in terms of a Stochastic Dynamical Model
- **Abera Wouhib, UMBC/NCHS/CDC**
Application of Meta-Analysis in Public Health Surveys

Judges

- Pranab Mitra
- Sumona Mondal
- Karabi Nandy
- Lei Nie (coordinator)
- Gitanjali Paul

11:30AM - 1:30PM PARALLEL SESSIONS

SESSION A ♦ ROOM 227

ORAL PRESENTATIONS BY GRADUATE STUDENTS I

Chair: Rong Wei, NCHS

Student Presenters

- **Sungwoo Choi, UMBC**
Maximizing the Area under ROC Curve with Grouped Lasso
- **Mathangi Gopalakrishnan, UMBC**
Validation of Surrogate Endpoints by Bayesian Equivalence Testing
- **Nilabja Guha, UMBC**
Fitting a Group of Monotone Smooth Functions – A Bayesian Approach
- **Neung Ha, University of Maryland, College Park**
Methods and Results for Small Area Estimation using Smoking Data from the 2008 National Health Interview Survey
- **Dallas Joder, James Madison University**
Meta-Analysis of Salmonella enterica stpA and hns Microarray Experiments
- **Anna Sun, UMBC**
Comparing Statistical Methods for Missing Data Analysis in Schizophrenia Trials

Judges

- Kofi Adraghi (coordinator)
- Subhash Bagui
- Kevin Drummey
- Nusrat Jahan

SESSION B ♦ ROOM 229**ORAL PRESENTATIONS BY GRADUATE STUDENTS II****Chair: Chris Morrell, Loyola University****Student Presenters**

- **Xiaoyu "Cassie" Dong, UMBC/FDA**
Bayesian Approach of Assay Sensitivity Analysis of Thorough QT Trials
- **Jia-Ern Pai, UMBC**
Application of Granger-Geweke Causality Model on Urban Atmosphere Air Pollutants in New Delhi
- **Sanatan Saraf, UMBC**
Validation of Surrogate Endpoints
- **Jiraphan Suntornchost, University of Maryland, College Park**
Modeling U.S. Cause-Specific Mortality Rates Using an Age-Segmented Lee-Carter Model
- **Dihua Xu, UMBC**
Statistical Meta-Analysis for Correlation Matrices
- **Yihui Zhou, University of North Carolina at Chapel Hill**
A Powerful and Flexible Approach to the Analysis of RNA Sequence Count Data

Judges

- Marlow Lemons
- Yaakov Malinovsky (coordinator)
- Rajesh Nandy
- Nabendu Pal

SESSION C ♦ LECTURE HALL 7**SPECIAL INVITED SESSION: INTERNATIONAL PANEL****Chair: Arvind Shah, Merck****Speakers**

- **Abdulkadir Hussein, University of Windsor, Canada**
Incorporating Auxiliary Information into the Group Sequential Conduct of Clinical Trials at the Design Stage
- **Guido Knapp, TU Dortmund University, Germany**
An Exact Confidence Interval for a Common Effect Size
- **Roman Zmyslony, University of Zielona Góra, Poland**
Estimation of Parameters and Testing Hypothesis in Mixed Linear Models-free Coordinate Approach

- **Miguel Fonseca, New University of Lisbon, Portugal**
Building Linear Models
- **João Tiago Mexia, New University of Lisbon, Portugal**
Models and Inference: The Normal Case

1:30PM - 3:00PM LUNCH BREAK AND PHOTO SESSION

Photographer: Willy Weng

3:00PM - 3:45PM KEYNOTE ADDRESS III
LECTURE HALL 7

Introduction of Speaker: Nagaraj Neerchal

Speaker: **Marie Davidian, North Carolina State University**

Title: **Improved Doubly Robust Estimation when Data are Monotonely Coarsened, with Application to Longitudinal Studies with Dropout**

3:45PM - 5:30PM SPECIAL INVITED SESSION: UMBC ALUMNI
LECTURE HALL 7

Chair: Michael Messner, U.S. EPA

Speakers:

- **Inna Perevozskaya, Pfizer**
Using Innovative Designs for Clinical Trials: My Experiences with PhRMA Working Group on Adaptive Dose-Ranging Studies
- **Justin Newcomer, Sandia National Laboratories**
Estimating Margins and Uncertainty in Complex Systems
- **Martin Klein, U.S. Census Bureau**
Ranking Procedures for Several Normal Populations: An Empirical Investigation

5:30PM - 6:00PM STUDENT AWARD PRESENTATIONS
LECTURE HALL 7

Presentation of Awards: Megan Waterman, Regina Hambleton, Nagaraj Neerchal, Bimal Sinha

6:00PM - 7:00PM RECEPTION

7:00PM - 9:00PM CONFERENCE DINNER
SKYLIGHT ROOM, COMMONS BUILDING

Introduction of Banquet Speaker: Nagaraj Neerchal

Speaker: **Lawrence H. Cox, National Institute of Statistical Sciences**

Title: **Musings of a Mathematician Wandering through Statistics**