6TH ANNUAL PROBABILITY AND STATISTICS DAY AT UMBC

FUNDED BY NATIONAL SECURITY AGENCY

SATURDAY, APRIL 21, 2012
INFORMATION TECHNOLOGY/ENGINEERING (ITE) BUILDING

FINAL PROGRAM

8:00AM – 9:00AM **REGISTRATION & BREAKFAST**
LOBBY, OUTSIDE LECTURE HALLS 7 & 8 (ROOMS 104 & 102)

9:00AM – 9:30AM **WELCOME**
LECTURE HALL 7 (ROOM 104)

- William LaCourse, Interim Dean, College of Natural & Mathematical Sciences, UMBC
- Nagaraj Neerchal, Chair, Department of Mathematics & Statistics, UMBC
- Bimal Sinha, Conference Chair, UMBC

9:30AM – 10:15AM **KEYNOTE ADDRESS I**
LECTURE HALL 7 (ROOM 104)

Introduction of Speaker: Thomas Mathew, UMBC
Speaker: **Robert Gibbons, University of Chicago**
Title: **Statistical Issues in Drug Safety – the Curious Case of Antidepressants, Anticonvulsants, … and Suicide**

10:15AM – 11:00AM **KEYNOTE ADDRESS II**
LECTURE HALL 7 (ROOM 104)

Introduction of Speaker: DoHwan Park, UMBC
Speaker: **Nancy Flournoy, University of Missouri – Columbia**
Title: **Sequential Dose-Finding Designs for Binary Responses in Clinical Trials**

11:00AM – 11:30AM **COFFEE BREAK**

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

Student Presenters
- **Elande Baro, UMBC**
  Bayesian Kappa Regression
- **Paula Borrego, UMBC**
  Some Aspects of Multivariate Quality Control Charts for Dispersion
- **Xumeng Cao, Johns Hopkins University**
  Demonstration of Enhanced Monte Carlo Computation of the Fisher Information for Complex Problems

- **Merve Gurlu**
  Univariate Classification of Degraded Cartilage Samples
- **Moumita Karmakar, UMBC**
  Effect of Promotions on Sales and Classifying Stores Based on Consumer Response
- **Sandya Lakkur, UMBC**
  Applications of Multivariate Mann–Whitney U–Statistics to Describe Differences in Cognitive Profile in People with Schizophrenia vs. Controls
- **Wenxin Lu, Georgetown University**
  Applications of Propensity Score Matching and Stratification to the Americans' Changing Lives Study
- **Kirsten Polins, UMBC**
  Anhedonia is Associated with Memory Impairment for Positive Emotion in Schizophrenia
- **Anna Sun, UMBC**
  Application of Multivariate Normal and Multivariate t-Distribution to the Clinical Trial Sample Size Calculation with Multiple Comparisons
- **Qi Wang, Johns Hopkins University**
  Rate of Convergence Analysis of Model-Free Algorithm
- **Keith Zirkle, James Madison University**
  Meta-analysis of Microarray Studies Using Quality-adjusted Random Effect Size Model

Coordinator (Non-Judge)
- Yi Huang, UMBC

Judges
- Prasanta Basak, Penn State Altoona
- Nusrat Jahan, James Madison University
- Rupa Mitra, Community College of Baltimore County
- Karabi Nandy, University of California, Los Angeles
- Gitanjali Paul, GlaxoSmithKline
- Rajib Paul, Western Michigan University

11:30AM – 1:30PM **PARALLEL SESSIONS**

SESSION A ◈ LECTURE HALL 7 (ROOM 104)
ORAL PRESENTATIONS BY GRADUATE STUDENTS I
Chair: Rong Wei, National Center for Health Statistics

Student Presenters
- **Deepak Ayyala, UMBC**
  Testing Equality of Autocorrelation Matrices at Lag Zero: Application to Resting State Networks
- **Xumeng Cao, Johns Hopkins University**
  Preliminary Results on Non-Bernoulli Distribution of Perturbations for Simultaneous Perturbation Stochastic Approximation
- **Carolina Franco, University of Maryland, College Park**
  Semiparametric Estimation for Kernel Families

- **Nilabja Guha, UMBC**
  Estimation of Order Statistics Under Measurement Error
- **Andrew Raim, UMBC**
  An Approximate Fisher Scoring Algorithm for Finite Mixtures of Multinomials
- **James Travis, UMBC**
  A Bayesian Approach to Understanding the Probability of Zero Rainfall

Coordinator (Non-Judge)
- Kofi Adragni, UMBC

Judges
- Subhash Bagui, University of West Florida
- Michael Baron, University of Texas at Dallas
- Indrani Basak, Penn State Altoona
- Gauri Datta, University of Georgia
- Marlow Lemons, Virginia Tech
- Nabendu Pal, University of Louisiana at Lafayette

SESSION B ◈ LECTURE HALL 8 (ROOM 102)
ORAL PRESENTATIONS BY GRADUATE STUDENTS II
Chair: Jenny Zhang, U.S. Food & Drug Administration

Student Presenters
- **Rowena Bastero, UMBC**
  Robust Estimation of a Spatiotemporal Model with Structural Change
- **Li Cheung, George Washington University**
  Cervical Cancer Risk for Women Undergoing Concurrent Testing for Human Papillomavirus and Cervical Cytology: A Population-based Study in Routine Clinical Practice
- **Mathangi Gopalakrishnan, UMBC**
  Bayesian Equivalence Testing for Normally Distributed Surrogate Endpoints
- **Sanatan Saraf, UMBC**
  Validation of Surrogate Endpoints
- **Qi Wang, Johns Hopkins University**
  Discrete Simultaneous Perturbation Stochastic Approximation On Loss Function with Noisy Measurements
- **Xiao-Song Zhong, UMBC**
  An Evaluation of Data Mining Methods and Software for Adverse Events Occurring in Clinical Trials

Coordinator (Non-Judge)
- Yaakov Malinovsky, UMBC

Judges
- Dulal Bhaumik, University of Illinois at Chicago
- Martin Klein, U.S. Census Bureau
- Sumona Mondal, Clarkson University
- Rajesh Nandy, University of California, Los Angeles

- Justin Newcomer, Sandia National Laboratories
- Lei Nie, U.S. Food & Drug Administration

1:30PM – 3:00PM **LUNCH BREAK & PHOTO SESSION**

Photographer: Karen Kaur, UMBC

3:00PM – 3:45PM **KEYNOTE ADDRESS III**
LECTURE HALL 7 (ROOM 104)

Introduction of Speaker: Nagaraj Neerchal, UMBC
Speaker: **John Bailer, Miami University**
Title: **Using Statistics to Improve Ecotoxicology Testing**

3:45PM – 5:15PM **SPECIAL INVITED SESSION: INTERNATIONAL PANEL**
LECTURE HALL 7 (ROOM 104)
Chair: Jorge Morel, Procter & Gamble

Speakers
- **Guido Knapp, TU Dortmund University, Germany**
  Adaptive Group Sequential Three-Arm Trials Including Placebo for Showing Noninferiority of a New Drug
- **Sévérien Nkurunziza, University of Windsor, Canada**
  Extension of Some Useful Identities in Shrinkage Strategies and their Applications
- **François Perron, Université de Montréal, Canada**
  On Some Numerical and Theoretical Aspects of Bayesian Inference with a Large Number of Parameters

5:15PM – 6:00PM **ALUMNI RECOGNITION & STUDENT AWARD PRESENTATIONS**
LECTURE HALL 7 (ROOM 104)
Coordinator: Nagaraj Neerchal, UMBC

Alumni Recognition:
- Philip Rous, Provost, UMBC
- Kofi Adragni, UMBC

Presentation of Awards:
- Kevin Drummey, National Security Agency, MD Chapter of ASA
- Bill Szewczyk, National Security Agency
- Megan Waterman, National Security Agency, MD Chapter of ASA

6:00PM – 7:00PM **RECEPTION**

7:00PM – 10:00PM **CONFERENCE DINNER**
SKYLIGHT ROOM, COMMONS BUILDING

Introduction of Banquet Speaker: Tommy Wright, U.S. Census Bureau
Speaker: **Robert Rodriguez, President, American Statistical Association**
Title: **Statistical Leadership – Is It in Your Future?**