

Program

Conference on Applied Statistics in Defense

October 21-22, 2015

George Mason University, Fairfax, VA

Sponsored by Interface Foundation of North America, Inc.

Monday, October 19

0900 - 1200 TUTORIAL

Bayesian Methods with R

Robert Gramacy, University of Chicago

1200 - 1300 Lunch

1300 - 1630 TUTORIAL

Tuesday, October 20

0900 - 1200 TUTORIAL

1200 - 1300 Lunch

1300 - 1630 TUTORIAL

Wednesday, October 21

0900 - 1000 GENERAL SESSION I: Laura Freeman (Chair)

Rigorous, Defensible, Efficient Testing (Keynote)

Catherine Warner, Institute for Defense Analyses

1000 - 1015 WELCOME

Peggy Agouris, Dean, College of Science, George Mason University

1015 - 1030 Break

1030 – 1200

SPECIAL SESSION I: Text Analysis, Edward Wegman (Organizer and Chair)

Mining Text Networks

David Banks, Duke University

Modeling the Evolution and Influence of Blogger's Topic Sentiment and Opinion Profile

Michael James Garrity

Preserving Semantic Content in Text Mining Using Multigrams

Yasmin H. Said

CONTRIBUTED SESSION I: Reliability Growth, Alyson Wilson (Chair)

Bayesian Hierarchical Models for Common Components Across Multiple System Configurations

Kassie Fronczyk, Rebecca Dickinson, and Laura Freeman, Institute for Defense Analyses, and Alyson Wilson and Caleb Browning, North Carolina State University

Derivation of the Distribution Function for the Tampered Brownian Motion Process Model

Arthur Fries, Institute for Defense Analysis

Maximum Likelihood Estimation of a Non-homogeneous Poisson Process Software Reliability Model with the Expectation Conditional Maximization Algorithm

Vidhyashree Nagaraju and Lance Fiondella, University of Massachusetts, and Thierry Wandji, Naval Air Systems Command

1200 - 1300 Lunch

1300 - 1430

SPECIAL SESSION II: Design of Experiments, Barry Bodt (Chair),

Organizer: Tom Donnelly, SAS/JMP

Design and Analysis for Constraining Dynamic Network Simulation Models with Observational Data

David Higdon and Jiangzhuo Chen, Virginia BioInformatics Institute, Virginia Tech

Incorporating Confidence Intervals On the Decision Threshold in Logistic Regression

Michael J. Kist and Rachel T. Silvestrini, Rochester Institute of Technology

Covering Arrays: A Tool to Construct Efficient Test Suites for Validating Software Systems

Joseph Morgan and Ryan Lekivetz, SAS/JMP

CONTRIBUTED SESSION II: Advances in Statistics, Arthur Fries (Chair)

Modeling an Augmented Lagrangian for Blackbox Constrained Optimization

Robert Gramacy, University of Chicago

Computational Geometry for Multivariate Statistics

John Nolan, American University

Estimating System Reliability from Heterogeneous Data

Caleb Browning and Alyson Wilson, North Carolina State University, and Laura Freeman, Kassie Fronczyk, and Rebecca Dickinson, Institute for Defense Analyses

1430 - 1500 Break

1500 - 1600 GENERAL SESSION II: Alyson Wilson (Chair)

Data, Models, and Analytics

Sallie Keller, Virginia Tech

1600 - 1700 GENERAL SESSION III: Tom Donnelly (Chair)

Design Oriented Modeling: A Powerful Approach for Model Selection for Definitive Screening Designs

Bradley Jones, SAS/JMP

1600 - 1700 CLINICAL SESSION: DOE for Weather Prediction, Tom Donnelly (Chair)

A Design of Experiments Approach to Evaluating Parameterization Schemes for Numerical Weather Prediction

Jeffrey A. Smith, US Army Research Laboratory and Richard Penc, US Army Research Laboratory through the Oak Ridge Associated Universities

Thursday, October 22

0900 - 1000 GENERAL SESSION IV: David Jakubek (Chair)

Malware Static Analysis Techniques Using a Multidisciplinary Approach

Edward Wegman, George Mason University

1000 - 1030 Break

1030 - 1200

CONTRIBUTED SESSION III: Daniel Yang (Chair)

Tractable Analysis of Experiments on High-dimensional Simulation Codes

Matthew Plumlee, University of Michigan

Modeling Adversarial Sensor Networks Using Generalized Stochastic Petri Nets

Terril Hurst, Kris Kukla, Daniel Rosser, and James Kimmet, Raytheon Missile Systems

Learning Bayesian Network Structure using Data from Designed Simulation Experiments

Jarom Ballantyne, Terril Hurst, and Allan Mense, Raytheon Missile Systems

CONTRIBUTED SESSION IV: Chuck White (Chair)

Statistical Design and Validation of Modeling and Simulation Tools Used in Operational Testing

Kelly McGinnity and Laura Freeman, Institute for Defense Analyses

Summary of Findings and Recommendations from the National Research Council Report on "Reliability Growth: Enhancing Defense System Reliability"

Arthur Fries, Institute for Defense Analyses, et al.

Ammunition Projectile Chemical Coating Experiment with Design Oriented Modeling

Doug Ray, U.S. Army Armament Research, Development and Engineering Center, and Tom Donnelly, SAS Institute Inc., JMP Division

1200 - 1400 Lunch and WILKS AWARD PRESENTATION

1400 - 1500 SPECIAL SESSION III: Studies from the Veteran's Administration,

Barry Bodt (Chair), Organizers: Barry Bodt and David Webb

CSP #579: The Health of Vietnam Era Women's Study (HealthViEWS)

Tracey Serpi, Perry Point Cooperative Studies Program Coordinating Center, VA

CSP #504: Risperidone Treatment for Military Service Related Post-Traumatic Stress Disorder (PTSD)

Karen Jones, Perry Point Cooperative Studies Program Coordinating Center, VA

1500 - 1530 CLOSING REMARKS / DISCUSSION