Program in Brief

- **Short Course:**

  Bayesian Inference
  Prof. Robert Gramacy (University of Chicago) will present a short course "Bayesian Inference " on October 19 & 20 preceding the conference beginning on October 21.

- **Invited Speakers:**
  - **Catherine Warner, Institute for Defense Analyses**
    Rigorous, Defensible, Efficient Testing
  - **Sallie Keller, Virginia Tech**
    Data, Models, and Analytics
  - **Edward Wegman, George Mason University**
    Malware Static Analysis Techniques Using a Multidisciplinary Approach
  - **Bradley Jones, SAS/JMP**
    Design Oriented Modeling: A Powerful Approach for Model Selection for Definitive Screening Designs

- **Special Sessions:**
  - **Design of Experiments**
    Organizer: Tom Donnelly, SAS/JMP

    Design and Analysis for Constraining Dynamic Network Simulation Models with Observational Data
    David Higdon, Jiangzhuo Chen, Virginia BioInformatics Institute, Virginia Tech

    Incorporating Confidence Intervals On the Decision Threshold in Logistic Regression
    Michael J. Kist and Rachel T. Silvestrini, Industrial and Systems Engineering Department, Rochester Institute of Technology, Rochester, N

    Covering Arrays: A Tool to Construct Efficient Test Suites for Validating Software Systems
    Joseph Morgan and Ryan Lekivetz, SAS/JMP

  - **Text Mining**
    Organizer: Ed Wegman, George Mason University

    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

○ **Cooperative Studies at the VA**
Organizers: Barry Bodt, Army Research Laboratory, and David Webb, Army Test and Evaluation Command

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

● **Contributed Papers:**

Tractable Analysis of Experiments on High-dimensional Simulation Codes
Matthew Plumlee, University of Michigan

Computational Geometry for Multivariate Statistics
John Nolan, American University

Statistical Design and Validation of Modeling and Simulation (M&S) Tools Used in Operational Testing
Kelly McGinnity and Laura Freeman, Institute for Defense Analyses

Learning Bayesian Network Structure using Data from Designed Simulation Experiments
Jarom Ballantyne, Terril Hurst, Allan Mense, Raytheon Missile Systems

Modeling Adversarial Sensor Networks Using Generalized Stochastic Petri Nets
Terril Hurst, Kris Kukla, Daniel Rosser, James Kimmet, Raytheon Missile Systems

Derivation of the Distribution Function for the Tampered Brownian Motion Process Model
Arthur Fries, Institute for Defense Analysis

Summary of Findings and Recommendations from the National Research Council Report on "Reliability Growth: Enhancing Defense System Reliability"
Arthur Fries, (Chair) Institute for Defense Analyses, W. Peter Cherry, Science Applications International Corporation, Robert Easterling, Statistical Consultant, Elsayed A. Elsayed, Rutgers University, Aparnav Huzurbazar, Los Alamos National Laboratory, Patricia A. Jacobs, Naval Postgraduate School, William Q. Meeker, Jr., Iowa State University, Nachi Nagappan, Microsoft Research, Michael Pecht, University of Maryland, Ananda Sen, University of Michigan, Scott Vander Wiel, Los Alamos National Laboratory, Constance F. Citro, Director, Committee on National Statistics, Michael L. Cohen, Study Director, Michael J. Siri, Program Associate

Modeling an Augmented Lagrangian for Blackbox Constrained Optimization
Robert Gramacy, University of Chicago

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

Vidhyashree Nagaraju[1], Thierry Wandji[2], and Lance Fiondella[1*]
University of Massachusetts[1], Naval Air Systems Command[2]

Bayesian Hierarchical Models for Common Components Across Multiple System Configurations

Kassie Fronczyk[1], Rebecca Dickinson[1], Alyson Wilson[2], Caleb Browning[2], and Laura Freeman[1]
Operational Evaluation Division, Institute for Defense Analyses[1] and Department of Statistics,
North Carolina State University[2]

Estimating System Reliability from Heterogeneous Data

Caleb Browning[1], Laura Freeman[2], Alyson Wilson[1], Kassie Fronczyk[2], and Rebecca Dickinson[2]
Department of Statistics, North Carolina State University[1], Operational Evaluation Division, Institute for Defense Analyses[2]

Ammunition Projectile Chemical Coating Experiment with Design Oriented Modeling

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

A Design of Experiments approach to evaluating Parameterization Schemes for Numerical Weather Prediction (Clinical Paper)

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

- **Events:**
  Mixer, Wednesday, 21 October
Wilks Luncheon, Thursday, 22 October