Games and Decisions in Reliability and Risk (GDRR6)[*]
Duques Hall, 2201 G Street, NW
Washington, DC 20052

Wednesday, May 29, 2019 **Duques 651**

8:00-8:45 am **Registration and Morning Snack, Duques 650 Lobby Area**

8:45-9:00 am **Opening Remarks**
Vanessa G. Perry, Associate Dean for Faculty, GWSB

9:00-10:30 am **Session 1: Risk Assessment and Multicriteria Decisions**
Chair: Fabrizio Ruggeri, CNR-IMATI, Italy

- Vicki Bier, University of Wisconsin, "The Role of Expert Judgment in Counter-terrorism Risk Assessment."
- Canan Ulu, Georgetown University, "A Bayesian Model for Multicriteria Sorting Problems."

10:30-11:00 am **Coffee Break, Duques 650 Lobby Area**

11:00-12:30 pm **Section 2: Stochastic Optimization**
Chair: Emre Barut, George Washington University

- Vadim Sokolov, George Mason University, "Bridging Simulation-based and Gradient-based Techniques for Optimal Decision-making under Uncertainty."
- Miguel Lejeune, George Washington University, "Distributionally Robust Optimization of Fractional Reward-Risk Functions. "

12:30-2:00 pm **Lunch, Duques 650 Lobby Area**

2:00-3:30 pm **Session 3: Collective Behavior and Game Theory**
Chair: Miguel Lejeune, George Washington University

- Melike Baykal-Gursoy, Rutgers University, "Two-Stage Invest-Defend Game: Balancing Strategic and Operational Decisions."
- Seth Guikema, University of Michigan, "Collective Behavior, Repeated Hazards, and the Evolution of Community Vulnerability."

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[*] Sponsored and hosted by the Institute for Integrating Statistics in Decision Sciences (I²SDS) of George Washington University, and endorsed by the International Society for Bayesian Analysis (ISBA).

3:30-4:00 pm   **Coffee Break, Duques 650 Lobby Area**

4:00-5:15 pm   **Session 4: Expert Opinion and Reliability Experiments**
Chair: Babak Zafari, Babson College

- Richard Arnold, Victoria University of Wellington, New Zealand, "Biclustering in Capture-Recapture Experiments."
- Simon Wilson, Trinity College, Ireland, "Pairwise Comparison Elicitation for Probabilistic Fault Tree Analysis, with Application to Spacecraft Re-entry Risk."
- Deniz Marti, George Washington University, "Are Expert Performance Differences Random ?"

6:30-8:30 pm   **Reception, Duques 650 Lobby Area**

Thursday, May 30, 2019   Duques 651

8:00-9:00 am   **Morning Snack, Duques 650 Lobby Area**

9:00-10:30 am   **Session 5: Machine Learning**
Chair: Thomas Mazzuchi, George Washington University

- Emre Barut, George Washington University, "Statistically Consistent Schemes for Deep Learning Interpretation."
- Joel Vaughan, Wells Fargo, "Model Risk Management in Banking and Role of Machine Learning Techniques."

10:30-11:00 am   **Coffee Break, Duques 650 Lobby Area**

11:00-12:15 pm   **Section 6: Reliability Methods**
Chair: Tevfik Aktekin, University of New Hampshire

- Ayca Altay, Rutgers University, "Data-driven Predictive Maintenance Scheduling Policies for Railways."
- J. Rene van Dorp, George Washington University, "Three-Point Lifetime Distribution Elicitation for Maintenance Optimization."
- Didem Egemen, George Washington University, "Bayesian Analysis of Virtual Age in Repairable Systems."

12:30-2:00 pm   **Lunch, Duques 650 Lobby Area**

2:00-3:30 pm　　　　　**Session 7: Bayesian Methods and Risk Management**
　　　　　　　　　　　　Chair: Refik Soyer, George Washington University

- David Rios Insua, ICMAT-CSIC, Spain, "An Adversarial Risk Analysis based Framework and Decision Support System for Cybersecurity Risk Management."
- Hedibert Lopes, INSPER, Brazil, "Learning a Latent Pattern of Heterogeneity in the Innovation Rates of a Time Series of Counts."

3:30-4:00 pm　　　　　**Coffee Break, Duques 650 Lobby Area**

4:00-5:15 pm　　　　　**Session 8: Healthcare Models and Multivariate Time Series**
　　　　　　　　　　　　Chair: Simon Wilson, Trinity College, Ireland

- Babak Zafari, Babson College, "Using Natural Language Processing Models for Analyzing Healthcare Data."
- Janiele Custodio, George Washington University, "Conic Reformulations of Chance-constrained Stochastic Location-allocation Problems under Exogenous Uncertainty: Application to Drone-aided Healthcare Delivery."
- Tevfik Aktekin, University of New Hampshire, "A Family of Multivariate Non-Gaussian Time Series Models."

6:30-9:00 pm　　　　　**Symposium Dinner, City View Room, 7th Floor**
　　　　　　　　　　　　1957 E Street, Elliot School of International Affairs

After Dinner Speaker: Nozer Singpurwalla, City University of Hong Kong, "The Inequity Spectrum of Life Distributions."

Friday, May 31, 2019　　　　Duques 651

8:00-9:00 am　　　　　**Morning Snack, Duques 650 Lobby Area**

9:00-10:30 am　　　　　**Session 9: Reinforcement Learning**
　　　　　　　　　　　　Chair: Vadim Sokolov, George Mason University

- Jesus M. Rios Aliaga, IBM Research, "Applying Reinforcement Learning to Sequential Decision Models."
- Nicholas G. Polson, University of Chicago, "Bayesian Decisions via Deep Reinforcement Learning."

10:30-11:00 am   **Coffee Break, Duques 650 Lobby Area**

11:00-12:15 pm   **Section 10: Adversarial Risk and Network Security**
                            Chair: J. Rene van Dorp, George Washington University

- Chaitanya Joshi, University of Waikato, New Zealand, "Insider Threat Modeling: An Adversarial Risk Analysis Approach."
- Omur Ozel, George Washington University, "Uniform Redundancy Allocation Maximizes the Robustness of Flow Networks under Random and Targeted Attacks."
- Abdolmajid Yolmeh, Rutgers University, "Patrolling Games on General Graphs with Time-Dependent Node Values."

12:20 pm   **Closing Remarks**
                      Refik Soyer, George Washington University