



# Numerical Analysis in Data Science Program Virtual Opening Workshop August 26-27, 2020

## SCHEDULE

### Wednesday, August 26<sup>th</sup>

*Virtual - Eastern Daylight Time (NY)*

- 9:40 am Welcome and Opening Remarks  
**David Banks**, SAMSI Director; **Mansoor Haider**, SAMSI Associate Director
- 10:00 - 11:30 am Global Sensitivity Analysis  
(Chairs: **Pierre Gremaud** & **Mansoor Haider**, NCSU)  
**Thierry Klein** – Enac and IMT university of Toulouse  
*10 Years of Sensitivity Analysis in Toulouse*  
**Alen Alexanderian** - North Carolina State University  
*Sensitivity Analysis for Forward and Inverse Uncertainty Quantification*
- 11:30 - 12:30 pm Global Sensitivity Analysis Working Group Formation
- 12:30 - 1:00 pm Lunch Break
- 1:00 - 2:30 pm Inverse Problems and Uncertainty Quantification  
(Chairs: **Arvind Saibaba** NCSU; **Julianne Chung** VT)  
**John Bardsley** - University of Montana  
*Marginalization-Based MCMC Methods for Hierarchical Inverse Problems*  
**Julianne Chung** - Virginia Tech  
*Computational Advancements in Large-Scale Inverse Problems*
- 2:30 - 2:45 pm Break
- 2:45 - 3:45 pm Inverse Problems and Uncertainty Quantification Working Group Formation
- 3:45 - 4:30 pm Additional Discussion (as needed)
- 4:30 pm Adjourn

### Thursday, August 27<sup>th</sup>

*Virtual - Eastern Daylight Time (NY)*

- 8:45 - 9:45 am Additional Discussion (as needed)
- 9:45 am Updates and Brief Announcements

- 10:00 - 11:25 am      Reinforcement Learning  
(Chairs: **Rui Song & Emily Griffith**, NCSU)  
**Bo An**, Nanyang Technological University  
*Reinforcement Learning in Competitive Environment*
- Susan Murphy**, Harvard University  
*Intelligent Pooling: Practical Thompson Sampling for mHealth*
- 11:25 - 12:30 pm      Reinforcement Learning Working Group Formation
- 12:30-1:00 pm      Lunch Break
- 1:00 - 2:30 pm      Randomized Numerical Linear Algebra  
(Chairs: **Arvind Saibaba**, NCSU; **Bart van Bloemen Waanders**, Sandia National Laboratories)
- Petros Drineas** - Purdue University  
*Randomization in Numerical Linear Algebra (RandNLA)*
- Per-Gunnar Martinsson** – University of Texas, Austin  
*Randomized Algorithms for Computing Full and Partial Factorizations of Matrices*
- 2:30 - 2:45 pm      Break
- 2:45 - 3:45 pm      Randomized Numerical Linear Algebra Working group Formation
- 3:45 - 4:30 pm      Lightning Round of Working Group Summaries and Closing Remarks
- 4:30 pm      Adjourn