



**MUMS Program Opening Workshop**  
**August 20-24, 2018**

**SPEAKER TITLES/ABSTRACTS**

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“An Overview of Reduced-Order Models and Emulators”

Typically quantifying uncertainty requires many evaluations of a computational model or simulator. If a simulator is computationally expensive and/or high-dimensional, working directly with a simulator often proves intractable. Surrogates of expensive simulators are popular and powerful tools for overcoming these challenges. I will give an overview of surrogate approaches from an applied math perspective and from a statistics perspective with the goal of setting the stage for the "other" community.