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Joint MUMS Program Transition - SPUQ Workshop
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SPEAKER/ABSTRACT

Emily Kang, University of Cincinnati
"Simulation Experiments and Uncertainty Quantification in Remote Sensing"

Abstract:
Remote sensing data sets produced by NASA and other space agencies are the result of complex algorithms that infer geophysical state from observed radiances using retrieval algorithms. Simulation experiments are important tools to design new observing systems, to evaluate new data assimilation algorithms, to calibrate parameters, and to study uncertainty propagation. This talk will discuss opportunities and challenges involved in such experiments and to advance statistical methodology. Examples will be given of modeling and simulating carbon dioxide and development of a stochastic simulator of the physical forward model in the retrieval algorithm for NASA's Orbiting Carbon Observatory-2.