



MUMS Program Opening Workshop
August 20-24, 2018

SPEAKER TITLES/ABSTRACTS

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“Extrapolation: The Art of Connecting Model-Based Predictions to Reality”

In the presence of relevant physical observations, one can usually calibrate a computer model, and even estimate systematic discrepancies of the model from reality. Estimating and quantifying the uncertainty in this model discrepancy can lead to reliable predictions - so long as the prediction "is similar to" the available physical observations. Exactly how to define "similar" has proven difficult in many applications. Clearly it depends on how well the computational model captures the relevant

physics in the system, as well as how portable the model discrepancy is in going from the available physical data to the prediction. This talk will discuss these concepts using computational models ranging from simple to very complex.