

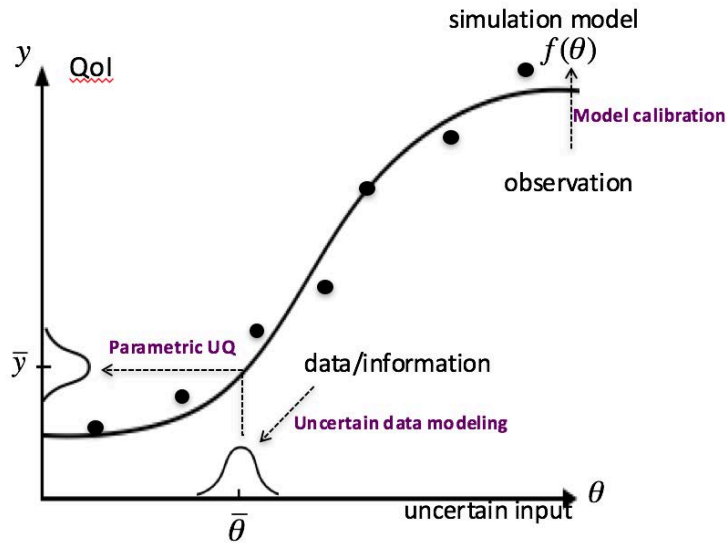


Assistant Professor Yanyan He

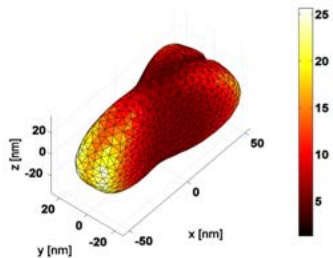
Department of mathematics, and of Computer Science and Engineering

Research: Uncertainty quantification (UQ), uncertain data modeling, uncertainty visualization, uncertain data fusion, fuzzy set and fuzzy measures
Funding: Army Research Laboratory

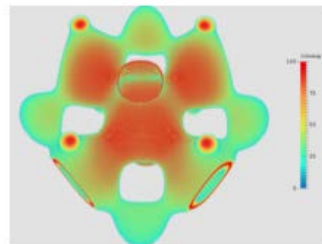
Algorithm development for UQ



Applications of UQ

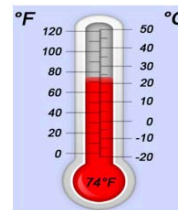


UQ-guided design for nanoparticles

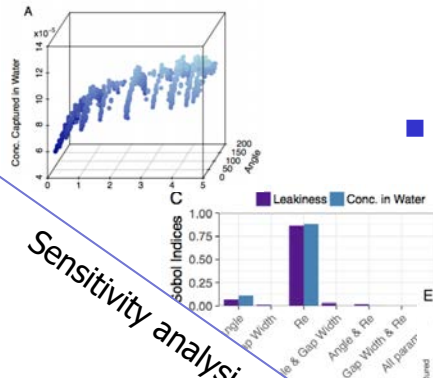
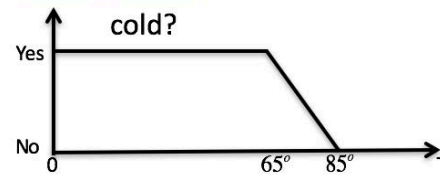


Uncertain isosurface extraction

Fuzzy set / measures



Fuzzy set can represent conceptual vagueness



Sensitivity analysis in biology

UQ algorithm development

- Uncertain data modeling
- Parametric (forward) UQ
- Model calibration

Applications of UQ

- Material design
- Sensitivity analysis for biological models
- Uncertainty visualization

Fuzzy set & measures

- incomplete data modeling
- Uncertain data fusion

