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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

Fuzzy set / measures

- 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

UQ-guided design for nanoparticles
Uncertain isosurface extraction

Fuzzy set can represent conceptual vagueness