Agenda: Workshop on Quantification of Uncertainties in Material Science

	Thursday 14-Jan-16	Friday 15-Jan-16
8:00-8:45am	**Registration, breakfast**	**Breakfast**
8:45-9:00am	**Opening remarks, introductions**	
9:00 - 9:15am	**Jim Warren (NIST)**	**Opening remarks**
	Session A (Chair: TBA)	**Session C (Chair: TBA)**
9:15-9:40am	**Antonio Possolo (NIST)** "Evaluating and Quantifying Uncertainty"	**Vince Hackley (NIST)** "Uncertainties in nanoparticle size measurements: Dealing with challenges of method dependent values"
9:50-10:15am	**Bill David (ISIS/Oxford)** "Statistical uncertainties, model selection and managing model incompleteness in the analysis of powder diffraction data"	**John Villarubia (NIST)** "Uncertainties in Nanometer-Scale Dimensional Metrology"
10:25-10:50am	**Nicholas Ritchie (NIST)** "Calculating the uncertainty due to matrix corrections in electron probe microanalysis"	**Max Gunzburger (FSU)** "Uncertainty quantification and multiscale nonlocal modeling for material mechanics"
11:00-11:25am	**Jean-Pierre Fleurial (NASA)** "The Challenge of Measuring Thermoelectric Materials and Devices Electrical and Thermal Performance"	**WK Liu (Northwestern)** "Linking Process, Structure, Property, and Performance for Metal-based Additive Manufacturing: Computational Approaches with Experimental Support"
11:35am - 1:00pm	**LUNCH**	**LUNCH**
	Session B (Chair: TBA)	**Session D (Chair: TBA)**
1:00-1:25pm	**Richard Lesar (Iowa)** "A Perspective on Uncertainty Quantification in the Multiscale Simulation of Materials"	**Ursula Kattner (NIST)** "The CALPHAD method and its uncertainty quantification challenge"
1:35-2:00pm	**Francesca Tavazza (NIST)** "A NIST effort towards the quantification and benchmarking of Density Functional Theory (DFT) uncertainty"	**Marius Stan (Argonne)** "Certainty and Uncertainty at Multiple Scales"
2:10-2:35pm	**Nicholas Zabaras (Warwick)** "A Data-Driven Approach to Predictive Multiscale Materials Modelling"	**Nathan Gibson (Oregon State)** "Electromagnetic wave propagation in complex dispersive media"
2:45-3:10pm	**Ralph Smith (NCSU)** "Bayesian Inference and Sensitivity Analysis for Multi-Scale Materials"	**Markos Katsoulakis (UMass Amherst)** "Path-space information metrics for uncertainty quantification and coarse-graining of molecular systems"

3:10 - 3:30pm	**Coffee break**	**Coffee break**
3:30 - 4:30pm	**Panel discussion: “ UQ Issues in Measurements vs Modeling: Commonalities and Differences“. Moderators: Levin (NIST), Lesar (Iowa)**	**Panel discussion: “Directions for UQ Research in Materials Science”. Moderators: Boettinger (NIST), Du (Columbia)**
5pm	**GROUP DINNER**	**CONCLUDING REMARKS**