PIV Uncertainty: History, State of the Art, and Current Directions
Dr. Barton L. Smith
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Thursday, October 6, 2016
Time: 9:30 – 10:20 AM
Location: 358 Willard Blg.
Coffee and donuts will be provided

Abstract:
Particle Image Velocimetry (PIV) has moved from a flow visualization method to a powerful and accurate quantitative measurement technique of over the last 25 years due to rapid advances in cameras, lasers and PIV algorithms. In this talk, recent advances that provide local, instantaneous uncertainty of planar PIV measurements based on the acquired data will be outlined. This will be followed by new work on propagation of these local, instantaneous uncertainties into quantities of interest to the fluid dynamics community, including vorticity, Reynolds stress, and pressure, which highlight the need to move beyond traditional uncertainty propagation methodology.

Biography
Barton Smith joined Utah State University as an assistant professor in 2002. His research currently focuses on CFD Validation Benchmark experiments, which has led to an interest in measurement uncertainty. His earlier research focused primarily on actuators for flow control.

Prior to joining USU, Professor Smith was a post doctoral researcher at Los Alamos National Laboratory specializing in oscillatory flow measurements. He received his PhD from Georgia Tech in 1999 and a BSME from Michigan State University in 1990.