

Sep. 12, 2019: ULI Distinguished Lecture by Sankaran Mahadevan, Syvertson Auditorium, N201

"Information Fusion and Uncertainty Quantification in System Performance and Safety Assessment" will be presented by Prof. Sankaran Mahadevan, Thursday, Sep. 12, 2019, 10:00 a.m. in the Syvertson Auditorium N201.

Commercial aviation is the safest mode of travel. With technology advances in data mining, machine learning, uncertainty aggregation, and other analytic methods, the aviation community is envisioning a future when safety will be achieved through recognition of safety risks as they develop in real time. Please join us as Professor Sankaran Mahadevan from Vanderbilt University describes the application of these methods to an ongoing NASA University Leadership Initiative project.

Abstract:

This lecture will discuss a Bayesian framework for machine learning and uncertainty aggregation from multiple information sources, towards performance assessment and decision-making in multi-physics, multi-scale systems. The information available is heterogeneous, from multiple sources and in multiple formats. A systematic methodology for information fusion and machine learning using Bayesian deep neural networks will be presented. The methods will be illustrated using several examples from civil, mechanical and aerospace systems.