

Topic: Emerging manufacturing services enabled by sensors, HPC

Sensors are prevalent in modern society. They are present in our homes, in appliances such as ovens, washers and refrigerators. They are on the streets monitoring traffic flow and weather. More importantly, the connectivity makes the data from these sensors available at our fingertips. For example, it is commonplace to check the weather radar before heading out to determine if an umbrella is needed for an impending storm. Monitoring traffic and determining the quickest route home from work based on current traffic patterns is another way that we use these sensors in our daily life. A similar scenario is evolving in the manufacturing sector, where sensors are used throughout manufacturing operations and on virtually all manufacturing systems and equipment. This presentation discusses the potential services that are necessary to leverage such new data sets, as well as the new service sector business models that are evolving around the utilization of these data sets on high performance computing platforms. The talk will also provide some insight into the direction that sensor utilization is heading in the cyber physical manufacturing workspace, and the types of opportunities that they will enable in the very near future which will revolutionize manufacturing operations from the production floor to the global supply chain.