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**Date:** Friday, March 23, 2018

**Time:** 1 - 1:50 pm

**Location:** D3 W122

## Manufacturing and Human-Subject Testing of Personalized Point of Care Wearable Sensors for Human Health

**Abstract:** Recent advances in wireless communications, machine learning and manufacturing technologies offer an unprecedented opportunity to create personalized wearable sensors and prognostics dashboards that can revolutionize the way we assure human health and wellness at the point-of-care. This talk overviews a portfolio of activities at Texas A&M University emerging from our recent manufacturing initiative focused on “advanced manufacturing for health,” and introduces an ongoing effort in personalized wearable sensors that can enhance quality of life among subjects with cardio-neuro-respiratory diseases, such as sleep apnea, myocardial ischemia and epilepsy.

**Biography:** Dr. Satish T. S. Bukkapatnam received his Ph.D. degree in industrial and manufacturing engineering from the Pennsylvania State University. He currently serves as Rockwell International Professor with Department of Industrial and Systems Engineering department at Texas A&M University, College Station, TX, USA. He is also the Director of Texas A&M Engineering Experimentation Station (TEES) Institute for Manufacturing Systems, and has joint appointments with Biomedical and Mechanical Engineering departments. His research addresses the harnessing of high-resolution nonlinear dynamic information, especially from wireless MEMS sensors, to improve the monitoring and prognostics, mainly of ultraprecision and nanomanufacturing processes and machines, and cardiorespiratory processes. His research has led to 141 peer-reviewed publications (82 published/ accepted in journals and 59 in conference proceedings); five pending patents; \$5 million in grants as PI/Co-PI from the National Science Foundation, the U.S. Department of Defense, and the private sector; and 14 best-paper/poster recognitions. He is a fellow of the Institute for Industrial and Systems Engineers (IISE), and he has been recognized with Oklahoma State University regents distinguished research, Halliburton outstanding college of engineering faculty, IISE Eldin outstanding young industrial engineer and the Society of Manufacturing Engineers Dougherty outstanding young manufacturing engineer awards.