BME Seminar
Friday, October 28, 2016
UTEB 150 at Storrs & Videoconferenced to UCHC CG-079B
12:00-12:50 pm

“Data-Driven Model-Based Approach to Health Monitoring and Control of Physiological Systems”

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Abstract: Despite its success to date, dynamical systems and control theory has yet to make significant contributions in health monitoring, diagnostics, decision support and control of physiological systems. Especially, model-based system identification integrated with multiple measurement information fusion may potentially offer unique opportunities to address a wide range of outstanding challenges in biosystems and healthcare. This talk describes how dynamical systems and control engineering can be used to address several challenges in the domain of personalized healthcare, including unobtrusive blood pressure and cardiovascular health monitoring as well as decision support and closed-loop control for automated critical care. For these problems, significance and state-of-the-art, data-driven model-based approaches and future prospect will be discussed.

Biography:

Dr. Jin-Oh Hahn received BS and MS degrees in mechanical engineering from Seoul National University in 1997 and 1999, and PhD degree in mechanical engineering from Massachusetts Institute of Technology (MIT) in 2008. He is currently with the University of Maryland, where he is an Assistant Professor in the Department of Mechanical Engineering and a faculty affiliate in the Applied Mathematics, Statistics, and Scientific Computation (AMSC) Program. Dr. Hahn is a recipient of the Young Investigator Program Award from the Office of Naval Research in 2014, and the Young Investigator Grant Award from the Korean-American Scientists and Engineers Association in 2013. His current research interests include applications of dynamical systems and control theory to health monitoring, fault diagnostics, maintenance and treatment of dynamic systems.