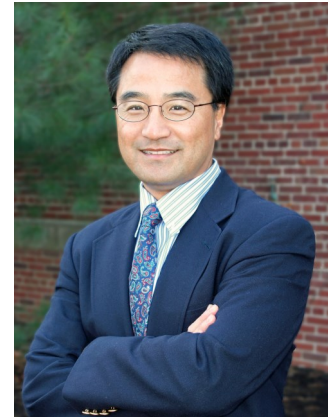

“Development of a low-cost wearable device for intermittent and continuous monitoring of paroxysmal atrial fibrillation”

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Friday, February 10th, 2017
Lecture: 9:00 AM-10:00 AM
ENGINEERING CENTER
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Abstract: The efforts of my research group at University of Connecticut have been focused on wearable devices, biosignal processing, and development of novel algorithms for detection of atrial fibrillation (AF). My laboratory has been working on developing low-cost wearable devices for continuous monitoring of atrial fibrillation for the past eight years. To this end, we have been developing novel and low-cost approaches to intermittently and continuously monitor paroxysmal AF. For intermittent monitoring of paroxysmal AF, we will discuss the development of using a smartphone’s video camera to detect AF. For continuous monitoring of paroxysmal AF, we will discuss the development of a low-cost, leadless and wireless wearable device. Finally, since motion artifacts are a significant problem in wearable devices in general, recently developed algorithms for removing motion artifacts will also be discussed.

Biography: Ki H. Chon received the B.S. degree in electrical engineering from the University of Connecticut, Storrs; the M.S. degree in biomedical engineering from the University of Iowa, Iowa City; and the M.S. degree in electrical engineering and the Ph.D. degree in biomedical engineering from the University of Southern California, Los Angeles. He spent three years as an NIH Post-Doctoral fellow at the Harvard-MIT Division of Health Science and Technology, one year as a Research Assistant Professor in the Department of Molecular Pharmacology, Physiology, and Biotechnology at Brown University, Providence, Rhode Island, and four years as an Assistant and Associate Professor in the Department of Electrical Engineering at the City College of the City University of New York. He then moved to the Department of Biomedical Engineering at SUNY Stony Brook as an Associate Professor and was promoted to a full professor. Most recently, he was a Professor and Chair of Biomedical Engineering at Worcester Polytechnic Institute, Worcester, MA. He is currently the John and Donna Krenicki Professor and Head of Biomedical Engineering at University of Connecticut, Storrs, CT. His current research interests include medical instrumentation, biomedical signal processing, wearable sensors and devices including use of smart phones for vital signs and monitoring cardiac arrhythmias, development of hydrophobic vital sign sensors and identification and modeling of physiological systems. He has published more than 128 peer-reviewed journal articles, 83 conference proceedings and abstracts to date and has 8 U.S. patents granted. His patent on real-time detection of atrial fibrillation algorithm has been licensed to a Holter company and the Holter is currently on the market.