



Washington University in St. Louis

SCHOOL OF ENGINEERING & APPLIED SCIENCE

Preston M. Green Department of Electrical & Systems Engineering

Seminar Announcement

Sung-Min Sohn, Ph.D.
Assistant Professor
Department of Radiology
University of Minnesota



Thursday, March 9, 2017
Green Hall, Room 0120
11:00 A.M.

RF/Mixed-Signal Circuits and Systems toward Next-Generation MRI

Abstract: Dr. Sohn will present his research topics to overcome technical barriers to increase the accessibility of magnetic resonance imaging (MRI) and improve the quality of MR imaging for next-generation MRI that realizes miniaturization, lightweight, low cost, and safety. Most of his researches are related to the oscillating field (B_1) of RF coils (antennas in MRI) and interface circuits between RF coils and RF signal chains of transmit (Tx) and receive (Rx). Especially, he will focus on the development of RF/mixed-signal circuits for simultaneous transmit and receive (STAR) and automatic correction systems of frequency tuning, impedance matching, and RF coupling. His research results show the ultra-low RF peak power capability and replacement of manual adjustments to obtain human head MR images.

Bio: Sung-Min Sohn is an assistant professor (research track) in Department of Radiology at University of Minnesota Medical School. His current research interests lie in MRI hardware and applications, especially MRI-compatible RF/mixed-signal electronics, novel RF coils (antennas in MRI) and interface circuits. He was awarded a K99/R00 Pathway to Independence Award from NIH (NIBIB) in 2016.

Host: R. Martin Arthur