
Electrical & Computer Engineering
S E M I N A R
Louisiana State University

Signal Processing for Spectral Efficient Communications

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Abstract—Signal processing techniques, such as detection, estimation, and coding, have been used with great success to improve the quality of communications. With the recent rapid growth of wireless communications, the application of signal processing to the enhancement of spectral utilization is becoming increasingly important. This talk will focus on novel signal processing schemes involving identification and dynamic use of spectrum opportunities changing over time, frequency, and space. In particular, the importance of statistical signal processing for interference reduction will be emphasized and real-time DSP implementation will be presented. In the end, further extension of the work to the coexistence of future wireless systems as well as DSP applications in embedded and cyber-physical systems will be discussed.

Bio—Xiangwei Zhou received his Ph.D. degree in Electrical and Computer Engineering from Georgia Institute of Technology, Atlanta, Georgia, in 2011. He received his M.S. degree in Information and Communication Engineering from Zhejiang University, Hangzhou, China and his B.S. degree in Communication Engineering from Nanjing University of Science and Technology, Nanjing, China, in 2007 and 2005, respectively. Since 2013, Dr. Zhou has been with the Department of Electrical and Computer Engineering at Southern Illinois University Carbondale as an Assistant Professor. Prior to that, he was a Senior Systems Engineer with Marvell Semiconductor, Santa Clara, California, from 2011 to 2013. Dr. Zhou's general research interests include digital signal processing, wireless communications, and cross-layer optimization. He is a recipient of the best paper award at the 2014 International Conference on Wireless Communications and Signal Processing. Dr. Zhou has served as a technical program committee member for a number of international conferences and is currently serving on the editorial board of IEEE Transactions on Wireless Communications.

When: Thursday, 26 March 2015, 9:30 - 10:30

Where: Room 117 EE Building

Info: <http://www.ece.lsu.edu/seminar>

