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ELECTRICAL & COMPUTER ENGINEERING
TEXAS A&M UNIVERSITY

S E M I N A R

Room M309 ANIN

February 8, 4:10 - 5:10 P.M.

A Phaser-Based Real-Time CMOS Spectrum Sensor for Cognitive Radios

by

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Abstract: Real time spectrum sensing can be useful for cognitive radio (CR) devices to detect primary signals without the need for a receiver, reducing complexity and false detection. An integrated CMOS real time CR spectrum sensor in 57-354 MHz frequency band with a new integrable phaser is presented, which is the first real time spectrum sensor applicable to radio frequency integrated circuit (RFIC) area. The integrated chip has been fabricated in a standard 0.18 μm CMOS IBM technology and draws 11 mA from a 1.8 V supply voltage

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Paria Sepidband (S'15) received the B.Sc. degree in electrical engineering from the University of Tehran, Tehran, Iran, in 2010 and the M.Sc. degree in electronics engineering from the Sharif University of Technology, Tehran, in 2012. She is currently working toward the Ph.D. degree in electrical and electronics engineering at Texas A&M University, College Station, TX, USA. Since January 2013, she has been working as a Research Assistant at the Analog and Mixed Signal Center, Texas A&M University. Her research interests include cognitive radio receivers and spectrum sensors, and ultra-wideband receivers.