HAWAII CENTER FOR ADVANCED COMMUNICATIONS

**Presents: Special Seminar on**

# Cognitive Radios, Cognitive Networks and Dynamic Spectrum Access

By: Ms. Donya He
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Tuesday, April 8, 2008
9:00 a.m. – 10:00 a.m.
University of Hawaii at Manoa. Holmes Hall Room 287

There is limited spectrum for communications. Spectrum management, allocation and frequency reuse have been key concerns with increasing demands for higher data rate, video transmissions, wideband communications and communications that requires contiguous spectrum.

This presentation explores some key questions on Cognitive Radios, Cognitive Networks and Dynamic Spectrum Access.

Spectrum management and access requires the knowledge of RF environment. However, there is currently no software tool on the market that allows for complete end-to-end RF communications system analysis and simulation. While a myriad of tools exist to provide specific functional analysis within this scope, there is no tool using an integrated approach and looking at the network as a whole.

This presentation will explore some enabling technologies and path forward on spectrum management and DSA.

Ms. Donya He (B.S.E.E, M.S.E.E, M.B.A) is currently employed as RF Engineering Manager, Sr. Member of Technical Staff in Network Systems (NS) Division at BAE SYSTEMS. Ms. Donya He leads major Department of Defense (DoD) contract engineering work, supervises and conducts research on IRaDs and CRaDs projects and applies research results to new product development. She provides structure, orgnization, talents and technology to NS, leads engineering design efforts, support B&P pursuits, initiates and executes programs. She sets the vision for the RF department to carry on the vision from NS; Provided value added leadership, technology strategic vision, formulation and execution to the organization.

Ms. Donya He's Subject Matter Expertise experience spans from SATCOM On-The-Move network design, SATCOM modem and antenna design; ground terminal equipment design, wireless Communications Systems design including base station, user terminal, antenna and SSPA design; Cognitive radio design; Spectrum Management, frequency planning and network performance optimization; Interference analysis and mitigation, link budget analysis, network performance prediction, analysis and optimization; Phased array antenna design, Signal-in-Space waveform design and FPGA design.

Ms. Donya He has held Director of Engineering and Technical Director positions at previous employments. As Director of Engineering, she has built up large business units including RF department in supporting various multiple contracts and functions. She has also held Program Manager and Engineering Manager positions for various government and commercial contracts.

Ms. Donya He holds a Master of Science degree in Electrical Engineering (M.S.E.E) from The Johns Hopkins University; a Master of Business Administration (M.B.A) degree in International Business and Engineering Management from The Johns Hopkins University and a Bachelor of Science (B.S.E.E) degree in Electrical Engineering concentrating on Microwave Technology. Ms. Donya He is an active IEEE member in communications society and she has three pending patents.