IEEE Portugal Communications Chapter

PALESTRA

Quinta-feira, 27 de Setembro de 2007, 11h00
Anfiteatro, Complexo Interdisciplinar, IST, Lisboa

Techniques for Cognitive Radio

Prof. Homayoun Nikookar
(Delft University of Technology, Delft, The Netherlands)

Abstract

Recently there has been a growth of research on Cognitive Radio (CR). While the spectrum is becoming a scarce commodity and the demand of ubiquitous wireless service is increasing, CR offers a solution to utilize the spectrum efficiently. In this talk, paper spectrum sensing as an important element of CR awareness is described. OFDM as a spectrally efficient modulation scheme is discussed and the rationale for its use in the CR system is explained. Spectrum pooling for efficient use of spectrum is studied and the role of adaptive OFDM techniques in this method is highlighted. Waveshaping and beamforming as alternative techniques in CR are reviewed.

Bio

H. Nikookar received his Ph.D. in Electrical Engineering from Delft University of Technology (TUDelft), The Netherlands, in 1995. He is an associate Professor at the International research Centre for Telecommunications and Radar (IRCTR) of the Department of Electrical Engineering, Mathematics and Computer Science of TUDelft. He is also the coordinator of the Radio Advanced Technologies and Systems (RATS) program of IRCTR. Dr. Nikookar has a rich experience in conducting research in many aspects of wireless communications, including wireless channel modelling, UWB, MIMO, multicarrier transmission, Wavelet-based OFDM and Cognitive Radio. He is a senior member of the IEEE.

Entrada Livre (não requer inscrição)