IJDACR
ISSN: 2319-4863

IJDACR
International Journal Of Digital Application & Contemporary Research

International Journal of Digital Application & Contemporary research
Website: www.ijdacr.com (Volume 3, Issue 03, October 2014)

An Optimised SVD with SFLA & ABC for Spectrum Sensing in Cognitive Radio

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Abstract –**The aim of this study is to focus on spectrum sensing in cognitive radio which is a recently introduced technology in order to increase the spectrum efficiency. We studied the Singular value decomposition based signal detector and its advantages over the energy based signal detection. Soft thresholding technique for spectrum sensing is optimized using SFLA (Shuffled Frog Leaping) and Ant Bee Colony algorithm. Results shows that SFLA and ABC outperforms then SVD based signal detector to improve its performance, especially under low SNR simulation.**

Keywords – **Ant Bee Colony Algorithm, Cognitive Radio, SFLA, SNR, Spectrum Sensing, SVD.**