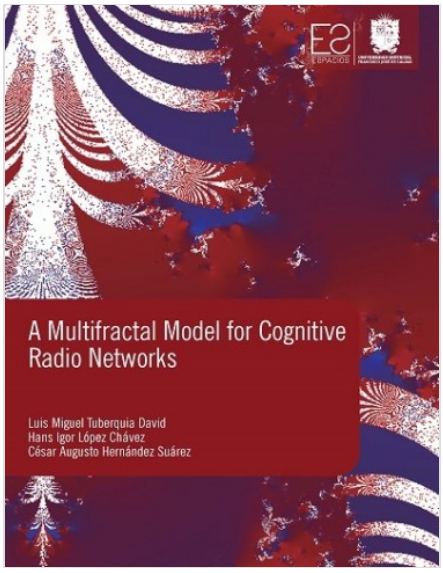
# A multifractal model for cognitive radio networks


## Autores

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## Sinopsis


The inefficient and sporadic use of the spectrum, along with the increase of such use, have downgraded the quality of service in various networks and wireless applications, such as cellphone network. This situation has motivated the development of recent researches that have found in the cognitive radio a possible solution to the problem. According to the current research projects the prediction of spectral occupancy is a key feature to enable the continuous data transmission from the secondary user, since it could reduce the number of channel changes during the transmission of a secondary user as well as its latency, minimizing the channels downgrade. The problem is then summarized in: how could the secondary users communication performance be improved without downgrading the quality of service of the primary users link? This work proposes develop a multi-fractal wavelet model that can predict the spectral occupancy with a high level of accuracy in order to maximize the transmission time without causing an interference to the PU, combined with a collaborative algorithm that finds the best combination of spectral opportunities that reduces the number of handoffs made to complete the SUs data transmission.


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