**PhD Project Proposal**

School of Electronics, Electrical Engineering and Computer Science

& ECIT Global Research Institute

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| **Proposed Project Title: Spectrum Access in M2M Communications** |
| **Principal Supervisor: Dr. E. Garcia-Palacios Second Supervisor: Dr Y. Ko** |
| **Project Description:**  With ever increasing number of sensor nodes in the near future and the saturation of spectrum, a rethink of spectrum access techniques and algorithms is needed. Legacy technologies (both cellular and wireless) have proven to be inefficient. New technologies such as IEEE 802.11ah, LoRaWAN or NB-IoT are better designed but still face challenges in terms of spectrum allocation efficiency and spectrum access delays, especially if the number of terminals is as high as envisaged in next generation high dense networks. This research focus on layer 2 spectrum allocation optimization and intelligent algorithms as a solution to the problem. |
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