

COOPERATIVE SPECTRUM SENSING FOR COGNITIVE RADIO-WIRELESS SENSORS NETWORK BASED ON OR-RULE DECISION TO ENHANCE ENERGY CONSUMPTION IN GREENHOUSES

The Oakland University and School of Engineering and Computer Science communities are invited to attend Haythem Alhumud's defense of his Ph.D. dissertation. Seating is limited. RSVP with Katie Loodeen at loodeen@oakland.edu.

Cooperative Spectrum Sensing for Cognitive Radio-Wireless Sensors Network Based on OR-Rule Decision to Enhance Energy Consumption in Greenhouses

Committee: Mohamed Zohdy, Ph.D. (Chair), Debatosh Debnath, Ph.D., Richard Olawoyin, Ph.D., Sayed Ali Areififar, Ph.D.

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Location: 347 EC

Energy management is the biggest challenge in WSNs. This research addressed this problem from an innovative point of view. The traditional topology of WSNs was modified to include radio cognition that offers advantages of communication reliability and reduces network delay. CR based WSNs technology enables sensors to occupy the channels that are free, whether they are licensed or non-licensed; they sense whether primary users are busy in occupying channels. WSNs nodes use empty spaces in channels to send their own signals. CR-WSNs methodology is explained in detail that utilizes the spectrum sensing paradigm We are discussing research efforts related to energy conservation and management for WSNs. We have presenting the efficiency of Implicit- OR technique in multiple greenhouses. The use of the Implicit-OR energy protocol enabled the investors to have dense, fully observed greenhouses while maintaining the minimum energy consumption and extending the sensor network lifetime. This proposed strategy overcomes the challenges of the past of time delay, probability of channel not getting sensed, unlimited packets per channel. Overall, our proposed method enhances the lifetime of the network by managing and organizing the communication schedules of sensor nodes and provides one of the best solution for energy management techniques.

