Response to Reviewer 1 Comments

Dear reviewer,

thank you very much for your time and efforts reviewing our manuscript. We believe your comment have indeed improved our work and we hope to have answered all open questions and corrected all errors. In the next paragraphs, we answer all comments individually, where the original comment is in black, while our answers are in red for better readability.

Regards,
Damien WOHWE SAMBO,
Blaise Omer YENKE,
Anna FÖ RSTER,
Paul DAYANG.

**Point 1**: Comparison among existing algorithms in terms of the network scale is of great interest and should be discuss in more detail since the title is "Optimized Clustering Algorithms for Large Wireless Sensor Networks: A Review."

**Response 1**: Thank you for your relevant remark, more details have been added. See section 4.

**Point 2**: Compared with centralized clustering approaches, more discussions on decentralized clustering are expected by referring existing work like: Decentralized sensor selection for cooperative spectrum sensing based on unsupervised learning.

**Response 2**: Thank you very much for pointing out this issue. Indeed, there is a big difference between centralized and decentralized clustering approaches, resulting in significant differences in the performance of the network. Generally speaking, it depends on the chosen technique, e.g. Genetic Algorithms are very processing intensive and thus are usually implemented as centralized solutions. Table 7 includes this information in column "Nature”. The mentioned paper has been added also to our survey in Introduction (highlight reference 6).

**Point 3**: Spectrum-awareness or spectrum-efficient clustering studies should be discussed since in practical large wireless sensor networks, the use of spectrum is a vital issue: Spectrum Sensing in Opportunity-Heterogeneous Cognitive Sensor Networks: How to Cooperate?
Response 3: This is of course an interesting topic, but we consider it out of scope for our paper, which is already quite long and broad. We suggest this as a possible extension of our work.