

***Interactive comment on* “Towards Cyber Physical Era: Soft Computing framework based Multi-Sensor Array for Water Quality Monitoring” by Jyotirmoy Bhardwaj et al.**

Anonymous Referee #2

Received and published: 21 September 2017

The authors present an online water quality monitoring and contamination detection system for water distribution networks. Data processing and graphical user interface is implemented by use of Python libraries. For detection of contamination events Fuzzy set theory is applied. The topic is interesting. However, before publication the manuscript needs major revision.

The following issues should be addressed by the authors:

- The quality of language of the document has to be generally improved. Sometimes the meaning is not clear. Examples: Line 35 f. “User Interface was developed using Python as, Python framework is effective tool that can handle low level and networking

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functionalities.”

Many statements are not specific enough Example: Line 33f: “Traditional methodologies cannot classify and quantify the targeted quantities, therefore soft computing approaches comes into scenario.” Line 39f: “This framework enables interoperability & ease of integration and supports vision of Internet of Things (IoT).” Python is a script language. Refer to specific library

- The authors claim that the “Target of this proposed research is to provide simple, efficient, cost effective and socially acceptable means to detect the presence of contamination in water distribution network using applications of CPS.” However, social acceptance is not addressed in the paper.
- Similarly, it is not explained why the approach is cost effective. Cost for data transfer by wireless technology, maintenance of the system. For real time application: Frequency of data transfer has impact on battery life time, cost, storage capabilities, data treatment.
- Use of Fuzzy set technology is not well explained. Comparison with existing techniques (PCA: Principal component analysis, . . .) is missing. Why is Fuzzy theory superior?
- “User friendly Interface” -> more details required.
- Information about detection capabilities is missing: reliability of detection, rate of false positive detections

Interactive comment on Drink. Water Eng. Sci. Discuss., <https://doi.org/10.5194/dwes-2017-25>, 2017.

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