

## **Fuzzy logic model for flood warning expert system integrating multi-agent and ontology**

### **ABSTRACT**

An expert system is vital in flood warning to determine the decision making output in order for a proper control of the input consisting of river level and rainfall. The river level and rainfall input is naturally stochastic, uncertain and unpredictable. Therefore, a fuzzy logic model of the flood warning expert system has been designed for user to obtain information about flood. This fuzzy model integrates multi-agent and ontology and expected to handle both uncertainty and accuracy issues whereas previous researches focus on handling either uncertainty or accuracy issues only. Simulation of outcome based on river level and rainfall is presented in this study.

**Keyword:** Fuzzy logic model; Flood; Expert system; Multi agent; Ontology