# *Abstract*

*Intelligent Water Drops (IWD)Algorithmis a type of swarm-based optimization algorithm that inspired by a batch of water drops that conjoined and formed a stream of water that big enough in a river. Thiswater flowthen pass over from edge to edge to form a travel route. This algorithm is one of nature-inspired algorithm that has an impressive performance on continous optimization problems, such as combinatorial problem Travelling Salesman Problem (TSP).*

*In IWD Algorithm,there are some important elements that affect the way water drops flow,namely Velocity and Soil.Both of these elements working together with water drops so that it can transform its surroundings, until this water drops arrived at it final destination. From these mechanism are the riversor waterdrops seek the optimum path depending on the condition of its surroundings to the it destination or the ocean. This mechanism isthe feature of IWD Algorithm to find the path with more rapid and effective compared with other algorithms.*

*This final projectused four dataset that each containing 51,70,75 and 100 cities.Test results show IWD can work well on the TSP and from the obtained solution shows thatsolution has been approached optimum value with an accuracy above 96%.*

***Keywords:*** *Travelling Salesman Problem, Intelligent Water drops, NP-Complete, optimum solution*