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## Certificate

*It is here by certified that the paper ID : IJRASET62340, entitled  
Optimal Deployment of Wireless Sensor Nodes using Particle Swarm Optimization  
(PSO), Ant Colony Optimization (ACO)*

*by  
Kiruthikeswaran Rajaram*

*after review is found suitable and has been published in  
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*Good luck for your future endeavors*

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