# UNIVERSITI TEKNOLOGI MARA

# AN IMPROVED PARTICLE SWARM OPTIMIZATION TO SOLVE NON-SMOOTH ECONOMIC DISPATCH PROBLEMS IN POWER SYSTEM

**ZULFADLI BIN JALADUDIN**

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# ABSTRACT

This study presents the solution to non-smooth Economic Dispatch (ED) problem in power system considering the valve-point loading by using an improved technique of Particle Swarm Optimization (PSO). This method has been improvised by using Gaussian Mutation (GM) operator in order to improve the capability of basic PSO. The proposed technique was used on case study consisting of 3 and 13 generation units. The results obtained by the proposed method were compared with basic PSO.

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