

**DEVELOPMENT OF AN EDUCATION SIMULATOR FOR
PARTICLE SWARM OPTIMIZATION IN SOLVING ECONOMIC
DISPATCH PROBLEMS**

Thesis is presented in partial fulfillment for the award of the

Bachelor of Electrical Engineering (Hons)

UNIVERSITI TEKNOLOGI MARA



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ACKNOWLEDGEMENTS

Assalamualaikum warahmatullah hiwabarrakatuh...

Firstly, I would like to express my gratitude to my project supervisor, Associate Professor Bibi Norasiqin Sheikh Rahimullah for her guidance, critical comment, advice, supporting and willing to give ideas to complete my project. Every single knowledge that had been given by her during this undergoing period doing the project will always is my precious treasure.

My project would not been complete without the help and comments from my friends. For that, I would like to thank all my friends for their support in completing this project.

My gratitude also to my lecturers for their support and encouragement throughout my course in Universiti Teknologi MARA (UiTM), especially during the completion of this project.

Lastly, I would like to dedicate my love and gratitude to my mother, father, brothers and sister for their support throughout the completion of this project.

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ABSTRACT

Development of an Educational Simulator presents a windows-based educational simulator using graphical user interface (GUI) for solving Economic Dispatch (ED) problems. The developed simulator incorporated particle swarm optimizations (PSO) to solve the ED problems. The objective of ED is to obtain the minimum generation cost with optimal power generator output while satisfying several constraints. In the developed simulator, users are able to set the parameters that have influences on particle swarm optimization performance. The Graphical User Interface (GUI) program design and PSO algorithm used in this study was implemented by using MATLAB 7.6.0 (R2008a).

Keywords- - Economic Dispatch (ED), Particle Swarm Optimization (PSO), windows-based educational simulator, Graphical User Interface (GUI)

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