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**OPTIMAL LOAD SHEDDING IN LOSS MINIMIZATION USING  
MULTISTAGE ARTIFICIAL IMMUNE SYSTEM**

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**JULY 2013**

## **ACKNOWLEDGEMENT**

Firstly, the author wishes to express highest appreciation to those who have been contributed in completing this project. Deepest gratitude conveyed to Miss Norlee Husnafeeza binti Ahmad for her guidance, critics and valuable thoughts.

Secondly, special thanks to both honorable panels, Dr. Hasmaini ninti Mohamad and Mr. Muahammad Nazree bin Che Othman for their comments, priceless suggestions and outstanding deliberations to improve the project during the project presentation

Most importantly I want to extend my gratitude to my family for their support, patience and assurance during my pursuit for higher studies. They have encouraged me throughout my education, and I will always be grateful for their sacrifice, kindness and love.

Finally not to forget, thank you to everybody who is directly or indirectly contributed because their perspective and guidance helped greatly to point me in the right direction upon completing this project.

## **ABSTRACT**

Voltage collapse is one of the problems in power system. It can even cause blackout and bring serious negative feedback to consumers especially for industrial sector. Everything is counted when it comes or involves money. Therefore it is important to ensure the stability of the system. Optimization in load shedding is proposed to enhance voltage stability. Increases in load demand, disturbance or changes in power system operational will ascend the instability of the voltage [1].

This paper presents the optimal load shedding by using Multistage Artificial Immune System (MAIS). Besides that, it will also give reflection to the cost where the cost will be minimized and at the same time it will improve the voltage profile. The objective of this paper is to minimize the system losses as well as studying MAIS. The numerical simulation on the IEEE 30-bus power system is going to be used in this paper.

### **Keywords:**

Load Shedding, Loss Minimization, Artificial Immune System, Multistage Artificial Immune System

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