

**DEVELOPING AN AIR-CONDITIONER SWITCHING
CONTROL USING FUZZY LOGIC**

**Thesis is presented in partial fulfilment for the award of the
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MOHAMAD SUHAIME BIN MOHD SHARIF
Faculty of Electrical Engineering
Institute Technology Mara
40450 Shah Alam
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Abstract

This thesis introduces a fuzzy system in an expert system control. For a system control, a fuzzy logic is used to control the switching of an air-conditioner to cool the room temperature. The switching are design to a types of fixed value. This involved the *fuzzy tech tool* software and a process of simulation using the *Borland C++*.

An object-oriented programming techniques will be involves in the development of the fuzzy control. Object-oriented programming allows the simulation to be built in a modular fashion making it both expandable and easy maintainable. The simulation will responds to the given data input which is set in MS-DOS operating system. The crisp output data is shown on the monitor.

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CHAPTER 1

1.0 Introduction

Various phenomena around us needs a mathematical modeling to solve the problem. The phenomenon is so complex and mathematical modeling is not a good choice because there might be a missing information in the model represents.

To overcome the above problem , artificial intelligent(AI) can be used. It can understand complex or incomplex phenomena and can provide tools for reasoning. One of the AI tool is by using *fuzzy logic* . Fuzzy logic has met a tremendous interest approach in many potential application in sophisticated and complex process which are difficult to control. Fuzzy controllers are designed by what is termed the rule based approach.

Fuzzy logic was first proposed by an American , Lotfi A. Zadeh , in 1965. Zadeh showed that fuzzy logic is the foundation of any logic , regardless of how many truth values it may have.

Currently , one of the more active areas of fuzzy logic applications is control systems. Fuzzy controllers are expert control systems that smoothly interpolate between hard-boundary crisp rules. Rules fire simultaneously to continuous degrees or strengths and the multiple resultant actions are combined into an interpolated