
RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

REMACS 5.0



CS240 - BACHELOR OF INFORMATION TECHNOLOGY [HONS.]
CS248 - BACHELOR OF SCIENCES [HONS.]
MANAGEMENT IN MATHEMATICS
CS251 - BACHELOR OF COMPUTER SCIENCE [HONS]
NETCENTRIC COMPUTING
CS255 - BACHELOR OF COMPUTER SCIENCE [HONS]
DATA COMMUNICATION & NETWORKING

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Universiti Teknologi MARA Perlis Branch

**Research Exhibition in Mathematics and Computer Sciences
(REMACS 5.0)**

Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)

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Preface

It is with great pleasure that we present this extended abstract book, titled "The 5th Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)". This book is a collection of research work in the fields of Computer Science and Mathematics, contributed by the final year students from Universiti Teknologi MARA, Perlis Branch. The aim of this book is to showcase the diversity and depth of research in these two interrelated fields.

Mathematics and Computer Science are two fields that have seen tremendous growth and advancement in recent years. With the rise of new technologies and the increasing demand for data-driven solutions, researchers in these fields have been working hard to develop new theories, algorithms, and models that can help solve some of the most pressing problems of our time. This book is a testament to their hard work and dedication.

The abstracts in this book cover a wide range of topics, including algebra, analysis, logic, computer architecture, algorithms, artificial intelligence, machine learning, computer network, netcentric computing and many more. The work presented here is both theoretical and practical, and has the potential to impact many areas of society, from finance and healthcare to education and security.

We hope that this book will serve as a valuable resource for future students in the fields of Mathematics and Computer Science. We also hope that it will inspire more students to pursue innovative and groundbreaking research in these two fields. Finally, we would like to express our gratitude to all the contributors for their hard work and dedication, without which this book would not have been possible.



RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
REMACS 5.0

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EVENT SCHEDULE

8:00 – 8:30 am

- Registration

8:00 am – 12:00 pm

- FYP Project Presentation

12:00 - 2:00pm

- Lunch Break

2:15 – 2:35 pm

- National & Wawasan Setia Anthems
- Doa Recitation

2:35 – 2:45 pm

- Welcoming Address by Director of REMACS 5.0

2:45 – 2:55 pm

- Officiating & Closing Remarks from Rector of UiTM Perlis

2:55 – 3:00 pm

- REMACS 5.0 Montage

3:00 – 4:00 pm

- Awarding of Winners:
 - Best Poster
 - Best Project Award
- Photo Session
- End of Ceremony

Dress Code: Formal / Corporate

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EXTENDED ABSTRACTS

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
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ANALYSING ON INFLUENCING FACTORS OF STUDENTS' CAREER CHOICE USING FUZZY ANALYTIC HIERARCHY PROCESS (FAHP)

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Abstract

The number of professions available to students has grown over time, making it more difficult for them to choose a career after finishing their studies. The study examined the factors that have the greatest influence on students' career choices to assist them in making that decision. The aim is to identify the main factor and rank the main factor and subfactor that influence students' career choices using fuzzy Analytic Hierarchy Process (AHP). A questionnaire was distributed to collect data for the study using Classic Saaty's Scale. Based on the value collected, the study implemented a fuzzy analytic hierarchy process (AHP) to identify the main factor influencing students' career choices and rank the main factor and sub-factor that influence students' career choices. To identify the main factors, factors with a normalized weight that have the highest value are the factors that most influence students' career choices. To rank factors and sub-factors, the ranking went from the highest normalized weight to the lowest normalized weight. In the results, the main factor that most influences students' career choices are the personal interest factor, which has the highest normalized weight. In ranking the factors influencing students' career choices, experts agree that personal interest is the most influential factor. For sub-factors, the workplace is the most influential factor in students' career choices, while the sub-factor with the least influence is safety under the parental factor, which is also the least ranked of the factors influencing students' career choices.

Keywords: students' career choice, personal interest, workplace

1. Introduction

The number of professions available to students has grown over time, making it more difficult for them to choose a career after finishing their studies. The study examined the factors that have the greatest influence on students' career choices in order to assist them in making that decision. The study concentrates on the four main factors and three sub-factors. The aim is to identify the main factor and rank the main factor and subfactor that influence students' career choices using fuzzy Analytic Hierarchy Process (AHP).

2. Methodology

Two experts from the professional field distributed questionnaires to collect data for the study in order to evaluate the factors that influence students' career choices. An interview was held through a physical interview and an online interview by giving a questionnaire to experts to get their opinion on what factors are most influential in influencing a student's career choice based on their experience using Classic Saaty's Scale. Based on the value collected, the study implemented a fuzzy analytic hierarchy process (AHP) to identify the main factor influencing students' career choices and rank the main factor and sub-factor that influence students' career choices. To identify the main factors, factors with a normalized weight that have the highest value are the factors that most influence students' career choices. To rank factors and sub-factors, the ranking went from the highest normalized weight to the lowest normalized weight.

3. Results and Discussion

In the results, the main factor that most influences students' career choices are the personal interest factor, which has the highest normalized weight, followed by work environment, academic influence, and parental influence. In ranking the factors influencing students' career choices, experts agree that personal interest is the most influential factor, as students have freedom in deciding their future and what is best for them, alongside the advice of the people they are close to. The experts indicated that the workplace is the most influential factor in students' career choices, as their primary concern in life is their parents. They would not be concerned about their parents' health if they lived nearby or with them. Furthermore, when living with their parents, students can make proper financial plans by seeking advice from their parents, who are wise with money. The sub-factor with the least influence is safety under the parental factor, which is also the least ranked of the factors influencing students' career choices.

4. Novelty of Research / Product

There have been a variety of articles and research studies that used the fuzzy Analytic Hierarchy Process (AHP) method and proved that the method can be used to rank the variables of research accurately. According to the research on Application Monte Carlo and Fuzzy Analytic Hierarchy Processes for Ranking Floating Wind Farm Locations written by Díaz et al, (2022), the fuzzy set theory was first described by Zadeh (1965). It was demonstrated that fuzzy AHP models are accurate at locating the highest-caliber characteristics and practical when ranking equivalent or rival alternatives. The technique proved to be a practical method for dealing with real-world multi-criteria decision-making issues (Kabir & Ahsan Akhtar Hasin, 2011). The benefits of being able to capture the haziness of human thought and to support the solution of the study challenge in a straightforward and systematic manner The fuzzy AHP method collects data using a questionnaire, allowing for a pair-wise comparison of all boundaries and their categories to analyse and rank them (Das & Sengar, 2022). Pairwise comparisons are used by fuzzy AHP to handle the hierarchical process of interrelationships between factors (Zabihi et al., 2020). All in all, the research using fuzzy AHP is accurate, as it is strong at managing vagueness and inconsistency in human judgement.

5. Conclusion

According to the findings of this study, the most important factors are personal interest, followed by work environment, academic influence, and finally parental influence. For the sub-factor the most important sub-factors are workplace, followed by passion, salary, friends, CGPA level, difficulty, gender, scholarship, race, parents' expectations, family tradition, and safety.

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