

Personal Details

Name: Ts. Dr. Ahmad Hakimi bin Ahmad Sa'ahiry

Position: **Postdoctoral**/Research Fellow

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School of Computing, Engineering, and the Built Environment,
Edinburgh Napier University, Scotland, United Kingdom

Field of Research Expertise and Interest

Cloud Computing, Artificial Intelligent, Wireless Sensors Network, Wireless Positioning system, Indoor Positioning System, Deep Neural Network, Signal Processing, Internet of Things (IoT), Robotic.

Work Experience

Company	Field of work	Position	Duration
Edinburgh Napier University, United Kingdom	Research (Industry 5.0, Healthcare, Robotic), Project Development, Grant Development, Collaboration, Academic Service	Postdoctoral/ Research Fellow	March 2026 – March 2027 (1 year)
Universiti Tunku Abdul Rahman (UTAR), Malaysia	Teaching, Research, Supervision, Consultation, University works	Assistant Professor	June 2023 – May 2026 (3 years)
University of Yamanashi, Japan	Solving the issue of device diversity in Organic	Research Assistant (RA)	1 Year (2022)

	Fingerprinting method for indoor positioning system in application of mobile robot.		
University of Yamanashi, Japan	Assist Japanese student in Yamanashi's University verbalize in English.	Student Assistant (SA)	2 Semester (6 Months)
Universiti Malaysia Perlis	- Research on Indoor Positioning System - Design and develop deep learning model. - Make an Analysis of WiFi signal for indoor positioning purposes	Research Assistant (RA)	2 Years (2020)
Dominant Opto Technologies	- Maintenance Department - Develop a predictive maintenance to reduce cost. - Control ISO level dust in Clean Room - Improve the ISO level of the clean room dust level	Engineer, Trainee	2 and half months (2018)

Academic and Personal Qualifications

Year	Degree	Discipline	University	Grade
2021	PhD of Mechatronic Engineering (Dual Degree Program)	System Integration Engineering/ Computer Science	University of Yamanashi, Japan	CGPA = 3.5/4.00
2020	PhD of Mechatronic Engineering	Mechatronic Engineering	Universiti Malaysia Perlis, Malaysia	Passed with minor correction
2016	Bachelor of Mechatronic Engineering	Mechatronic Engineering	Universiti Malaysia Perlis, Malaysia	CGPA = 3.65/4.00

Grant

1. Principal Investigator

- **Project Title:** *Advancing Sustainable WiFi Energy Harvesting and Localization: Integrating Advanced Antennas, Intelligent Algorithms, and Deep Learning for Smart 5G and 6G Systems*
- **Funding Amount:** MYR 24,000 – MYR 48,000
- **Duration:** 1 November 2024 – 31 October 2025

2. Co-Investigator

- **Project Title:** *Deep Learning-Based Prediction of Breathing and Heart Rates from Non-Contact Signal Processing Patterns*
(Internal Grant – UTARRF)
- **Funding Amount:** MYR 24,000
- **Duration:** June 2025 – June 2026

3. Co-Investigator

- **Project Title:** *Bilingual Voice-Assisted Chatbot for Traditional Chinese Medicine at UTAR Hospital Using Transformer-Based Models* (Internal Grant – UTARRF)
- **Funding Amount:** MYR 24,865
- **Duration:** June 2025 – June 2026

4. Co-Investigator

- **Project Title:** *Forest Fire Risk Prediction Based on Historical Data Using Enhanced Feedforward Neural Networks for Early Warning and Disaster Management* (Internal Grant – UTARRF)
- **Funding Amount:** MYR 24,000
- **Duration:** November 2025 – November 2026

Postgraduate Student

- 1) Assadullah Dahri, Master of Computer Science, On Going.

Certification

- 1) AWS Certified Cloud Practitioner (Fundamental cloud-AWS)
- 2) Rocheston Cybersecurity

Technical Skills

Cloud Computing (AWS), Cybersecurity (Kali Linux), Networking (Cisco), Mobile App Development (Flutter/Dart, Native Android), Python (TensorFlow, Keras, NLP, Web Scraping), Web Development (Vanilla JS, Laravel, WordPress), C, C++, Node-RED (IoT), Robotic Operating System (ROS), PLC Systems, Micro Soldering (Phone Motherboard Repair), N8N (Automation).

Selected Publication

Google scholar:

https://scholar.google.com/citations?user=2c_O6kYAAAAJ&hl=en

Journal (ISI)

- 1) “Effect of Sample Sizes in Fingerprinting Database for Wi-Fi System”, **International Journal of Computers, Communications and Control, (ISI – Q3)**.
- 2) Deep Reinforcement Learning-Driven Hybrid Precoding for Efficient Mm-Wave Multi-User MIMO Systems, **Journal of Sensor and Actuator Networks, (ISI – Q2)**
- 3) “Device Diversity in Crowdsourced WiFi Fingerprinting Database for Autonomous Mobile Robot”. **International Journal of Advanced Robotic Systems (ISI – Q3)**

Conference Proceeding (Scopus)

- 1) “Different Devices Behavior in Fingerprinting Indoor Positioning for Mobile Robot in Healthcare Industries”, **2022 IEEE 4th Global Conference on Life Sciences and Technologies (LifeTech) Japan**
- 2) “An Experimental Study of Deep Learning Approach for Indoor Positioning System Using Wi-Fi System”, **Intelligent Manufacturing and Mechatronics Books** (pp 113 – 124)
- 3) “Review on recent Asset Tracking Technologies”, AIP conference Proceeding.

Academic Services

Reviewer

- *Asia-Pacific Management Review (USM)*
- *Engineering Research Express (IOP Publishing)*
- *Measurement and Science Technology (IOPscience)*

Teaching Experience

- 1) Programming Concept and Practices
- 2) Computer System and Network Security
- 3) Data Communication and Networking
- 4) Introduction to Computer Organization (ICOA)
- 5) Emerging Industrial Technology
- 6) Mini Project
- 7) Cloud Computing
- 8) Distributed Computer System

Industry Collaboration (Consultation)

- 1) Indoor Positioning system with IoT in Healthcare Industry with **Ideria Sdn Bhd** (Hospital) (On Going)
Link: <https://ideria.co/>
- 2) IoT-Based Energy Waste Identification in Properties with **Int life** (formerly known as HSA Technologies)
Description: Develop solutions that can help reduce energy consumption and carbon emissions by up to 35%. By integrating IoT devices with advanced analytics, we aim to pinpoint areas of energy inefficiency and provide actionable insights to property developers and managers.
Link: <https://intlfe.com.my/>
- 3) Trainer, Specialist Trainer for Program Pembangunan Pengajar Kemahiran (PPK) in IoT Middleware, Polytechnic Ungku Omar, 5 days training.
- 4) Malayan Flour Mill Berhad (MFM), Enhancements in Loading/Unloading Bay Operations.

Administrative Posts

- 1) Faculty Quality Assurance and Audit Committee
- 2) Department Credit Transfer Committee
- 3) Programme Promotion Committee
- 4) Event Organising Committee

Honours and Awards

- 1) Silver award, “WOIPS: Wireless Positioning Framework Utilizing Organic Fingerprinting Method”, Expo EREKA 2021
- 2) Bronze award, “ICSiBOT: Towards Malaysian, First Generic Service Robot Platform” Expo EREKA 2021

Awarded Scholarship

- 1) Yayasan Bank Rakyat (YBR), Master of Research, Malaysia.
- 2) Japan Student Services Organization (JASSO), Doctor of Philosophy (Dual Degree), Japan.

Professional Body

- 1) **Profesional Technologist** under Malaysia Board of Technologist (MBOT)
- 2) Graduate Engineer under Board of Engineer Malaysia (BEM)
(Applying for Professional Engineer)

References

- 1) Name: Assoc. Ts. Dr. Abdul Halim bin Ismail
Position: Associate Professor
Organization: Universiti Malaysia Perlis
Email: ihalim@unimap.edu.my

- 2) Name: Prof. Dr. Masahiro Toyoura
Position: Professor
Organization: University of Yamanashi
Email: mtoyoura@yamanashi.ac.jp

- 3) Name: Dr. Muhammad Husaini bin Nadri
Position: Assistant Professor
Organization: Universiti Tunku Abdul Rahman
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- 4) Name: Prof. Chan Hwang See
Position: Professor
Organization: Edinburgh Napier University
Email: c.see@napier.ac.uk