

Name: Assoc. Prof. Ir. Ts. Dr. Muzammil Bin Jusoh
Research Fellow Advanced Computing (AdvComp), Centre of Excellence,
Faculty of Electronic Engineering Technology, Universiti Malaysia Perlis.
Graduate BEM, IEM, SMIEEE, SMIET, ACPE
E-mail: muzammil@unimap.edu.my; muzammiljusoh11@gmail.com
Mobile: +60134282801, Webpage: drmuzammil.com
Expertise: Reconfigurable Antenna using RF switches for frequency, polarization and beam control, RADAR system & Wireless Comm System.

1. ACADEMIC QUALIFICATIONS

- PhD in Communication Engineering, UniMAP (Jan 2011- July 2013)
  *Queen Mary University of London, QMUL (Feb 2013- May 2013)
- MEng in Electrical-Electronics & Telecommunications Eng., UTM (July 2009- Dec 2010)
- B.Eng in Electrical-Telecommunications Engineering, UTM (July 2002- Jun 2006)

2. PROFESSIONAL MEMBERSHIP

- **ASEAN Chartered Professional Engineer** (ACPE) on 7th Oct 2021 **(ACPE-05194/MY) Electronic**
- **Professional Engineer** from **Board of Engineers Malaysia** on 28th Aug 2020 **(P121203) Electronic**
- **Professional Technologist** from **MBOT** since 12th Oct 2020 **(PT20100371) Electrical & Electronic**
- **Member of Institute of Engineer Malaysia (IEM)** since 1st July 2014 **(MIEM; 70648)**
- **Graduate Member of BEM** since 06 Mac 2009, **(Reg. No: 58517A)** (Eng. Field: Electronic)
- **Graduate Member of Board of Technologies Malaysia** (MBOT) since June 2020, **(Reg. No: GT20060101)** (Eng. Field: Electrical & Electronics Technology - EE)
- **Senior Member of IEEE**, Account **No: 93017889**
- Member of **IEEE Antennas and Propagation Society. IEEE Communication Society & IEEE RFID Council**

3. ADMINISTRATIVE POST/ WORKING EXPERIENCE

- **Served with Telekom Malaysia Berhad (TM) from 2006 to 2009**, leading Specialized Network Services at TM Senai & providing technical consultation. Gained experience at TM HQ Bangsar &TM Kedah/Perlis.
- **Academic Committee for UniMAP - Medan Indonesia University Consortium: 2nd Aug 2024 to current**
- **Research Fellow** Advanced Communication Engineering CoE UniMAP **1st July 2020 to current**
- **Timbalan Komandan KOR-SUKSIS UniMAP from (9 July 2020 to Dis 2024)**
- **Director** of Student Development and Services Center, UniMAP (**15th Apr 20 – 31st Aug 2022**)
- **Dean** of Student Affairs and Alumni, UniMAP (**1st Mac 2019 – 14th April 2020**) during **Covid Attack**
- **Deputy Dean** of Student Affairs and Alumni, School of Computer and Communication Engineering (SCCE), Universiti Malaysia Perlis (**1st Mac 2015 – 28th Feb 2019**)
- **Executive Commitee** IEEE APMTTEMC Malaysia Joint Chapter from **1st Feb 2023 till 31st Jan 2027.**
- **Executive Commitee** IEEE Council on RFID Malaysia Chapter from **1st Feb 2021 till 31st Jan 2023.**

4. TECHNICAL CONSULTATIONS

- **MOSTI Reviewer Panel Grant** from **1st Jan 2022 to 31st Dec 2026.**
- **Intra Agency Working Committee (IAWC)** on EMF Radiation lead by Ministry of Healthcare (MoH) and Malaysian Communication and Multimedia Commission (MCMC) - **1st Jun2022 to 31st May 2026.**
- **Technical Committee** for **Sub-Working Group Digital Sound Broadcasting (DSB)** for Malaysian Technical Standard Forum Berhad (MTSFB), MCMC from **12th July 2024 to 30th June 2026.**
- **Visiting Professor** Faculty of Telecommunication, Samarkand Branch of **Tashkent University of** Information Technology, **Uzbekistan from 6th to 19th April 2025.**
- **Adjunct Research** Faculty of Engineering, **Chitkara University**, Chandigarh India from **1st Apr 2024.**
- **Visiting Professor** Nahda University of Beni-suef (NUB), **Egypt** from **2016, 2017, and 8th -31st Aug 2023.**
- **Visiting Professor** Daffodil International University, Bangladesh from **1st Feb 2022 to 31st Jan 2026.**
- **Visiting Professor** Chandpur Science & Technology University, Bangladesh **1st Mac2022 to 28th Feb 2024.**
- **G2R Sdn Bhd** for project: Speed Internet for All, Consultation period: **1st Sept 2021 to 31st Aug 2022.**
- **Spectre Solutions Sdn Bhd (panel company under TM Bhd)** for project name: **Rekabentuk 2X2/ 4X4 MIMO Antenna untuk MIMO LTE projek, start** period: **22 March 2021.**
- **Visiting Professor** Nahda University of Benisuef, Egypt from **7th to 26th Dec 2017.**
- **Visiting Professor** Dhaka University of Engineering Technology Bangladesh, **30thMay to 2ndJune 2016.**
- **Spectre Solutions Sdn Bhd (panel company under TM Bhd)** for project name: **Rekabentuk Antenna untuk Wireless Communication** consultation: **1stJan 2020 – 31st March 2020.**
- **MIMOS Bhd** "Antenna System for Port Management System", consultation: **30th Jan 2015 – 1st Feb 2016.**

5. PUBLICATIONS

	No. of papers	H-index	No. of citations
Scopus Indexed	**279**	**28**	**2831**
Google Scholar	**296**	**32**	**3473**

Updated 27th Nov 2025

SCOPUS ID: https://www-scopus-com.ezproxyunimap.idm.oclc.org/authid/detail.uri?authorId=24483755700
ORCID ID: https://orcid.org/0000-0003-3870-6773
RESEARCH GATE: https://www.researchgate.net/profile/Muzammil_Jusoh
PUBLONS: https://publons.com/researcher/3118118/muzammil-jusoh/
GOOGLE SCHOLAR: https://scholar.google.com/citations?hl=en&user=oX50HTQAAAAJ

Book Chapter

1. **AP Ir Ts Dr Muzammil Bin Jusoh,** AP Ts Dr Thennarasan Sabapathy, AP Dr Mohamed Nasrun Osman. **Title: Reconfigurable Antenna: Design & Applications.** Already been processed by **UniMAP Publisher.**
2. Prof Dr Ing Mudrik Alaydrus, Dr Umaisaroh, **AP Ir Ts Dr Muzammil Jusoh, Technical Book:** METODA INVERSI PADA PROBLEM PENCITRAAN GELOMBANG MIKRO, ISBN: 978-623-8506-89-7, Publisher: PT Mafy Media Literasi Indonesia 2024.
3. V. Vijayasarveswari, **M. Jusoh**, T. Sabapathy, S. Khatun, **Book Chapter: Performance Analysis on UWB Antennas for Breast Cancer Detection**, **Book Title:** Advanced Aspects of Engineering Research Vol. 2, 18 February 2021, Page 65-74. https://doi.org/10.9734/bpi/aaer/v2/ 7401D.
4. Jing Huey Lim, R. Badlishah Ahmad, **M. Jusoh** and T. Sabapathy, **Book Chapter: Evaluating the Performance of Hybrid Network in Fractional Frequency Reuse and Femtocell Power Control Schemes**, DOI: 10.9734/bpi/etert/v11, Print ISBN: 978-93-90431-71-7, eBook ISBN: 978-93-90431-76-2. Book Title: Emerging Trends in Engineering Research Technology.

Selected ISI-papers Publications (2020 to current)

1. Huda A Majid, Esa Fahmiruddin Kadir, Hilman Harun, **Muzammil Jusoh**, Al-Fadhali Najib, Astuti Dian W., and Shairi Noor A, "3D Printed Waveguide Antenna at X-Band Frequency Band Using MSLA Printing Technology" Progress in Electromagnetics Research Letters, Volume 126, Pages 9-15, **2025**.
2. Nipun, Md. Murad Kabir, Islam, Md. Jahedul, **Muzammil Jusoh**, and et.al., "Interconnected Circular Ring Resonator based Single Negative Perfect Metamaterial Absorber for Wireless Communication Systems", **Optical and Quantum Electronics**, 56(6), 1053, **2024.**
3. Ibrahim A., Razali A.R., **M.Jusoh**, Faudzi, N.M., "Bending Effects on Polyvinyl Alcohol Thin Film for Flexible Wearable Antenna Substrate", Pertanika Journal of Science and Technology, **2024**, 32(5), pp. 2055–2067.
4. Noor, S.K., **Jusoh, M.**, Sabapathy, T., (...), Himdi, M., "A Patch Antenna with Enhanced Gain and Bandwidth for Sub-6 GHz and Sub-7 GHz 5G Wireless Applications", **Electronics** (Switzerland), **12(12),2555, 2023.**
5. Faizol, Z., Zubir, F., Saman, N.M., Majid, H.A., **M.Jusoh**, Yusoff, Z., "Detection Method of Partial Discharge on Transformer and Gas-Insulated Switchgear: A Review", Applied Sciences (Switzerland), **Vol.13, Issue 17, 2023.**
6. S Angadi, T Sabapathy, NS Raghava, **M Jusoh**, H Vettikalladi, "A Compact Wideband SRR-based C-Shaped Antenna for 5G New Radio Band n258", **preprint ,2023**.
7. SR Isa, **M Jusoh**, T Sabapathy, MR Kamrudin, MN Osman, A Alomainy, "Multi-Mode Yagi Uda Patch Array Antenna with Non-Linear Inter-Parasitic Element Spacing", **IEEE Access**. 11, pp. 16346-16352, **2023.**
8. MF Zambak, SS Al-Bawri, M Jusoh, AH Rambe, H Vettikalladi, AM Albishi,, "A Compact 2.4 GHz L-Shaped Microstrip Patch Antenna for ISM-Band Internet of Things (IoT) Applications," **Electronics** 12 (9), 2149, 2023.
9. NAF Mohd Zainudin, MN Osman, T Sabapathy, **M Jusoh**, MN Mohd Yasin,, "Low-Profile and Wider-Angle Beam Tilting Parasitic Array Resonator Antenna with Optimized Deflected Ground Plane on FR-4 Substrate", **Micromachines, 14 (4), 834, 2023.**
10. Obadi, A.B., El-Din Hussein, A., Al-Bawri, S.S., **M.Jusoh**, "High-Bandwidth, Low-Power CMOS Transistor Based CAB for Field Programmable Analog Array", Computers, Materials and Continua, **74(3), pp. 5885-5900, 2023.**
11. Najib NA Abd Rahman, MN Mohd Yasin, IM Ibrahim, **M Jusoh**, .. (..), "A Review of Circularly Polarized Dielectric Resonator Antennas: Recent Developments and Applications", Micromachines 13 (12), 2178. **MDPI Sensors 2022. (Q1 IF:3.523).**
12. Md Rabiul Awal, Nurul Ain Zakaria, **Muzammil Jusoh**, .. (..), "Warranty Seal Deformation Identification for Product Warranty Violation", Sensors, 22, 4688. **MDPI Sensors 2022. (Q1 IF:3.076).**
13. Amira Nur Suraya Shamsuri Agus, Thennarasan Sabapathy, **Muzammil Jusoh**, Mahmoud A. Abdelghany, Kabir Hossain, (..), Ping Jack Soh, "Combined RIS and EBG Surfaces Inspired Meta-Wearable Textile MIMO Antenna using Viscose-Wool Felt", Polymers, 2022. **(Polymer ISI IF 4.329)**.
14. AAA Halim, AM Andrew, WA Mustafa, MN Mohd Yasin, **M Jusoh**, "Optimized Intelligent Classifier for Early Breast Cancer Detection Using Ultra-Wide Band Transceiver", **Diagnostics 12 (11), 2870, 2022.**
15. Md Bellal Hossain, M.R.I. Faruque, M.T. Islam, M.Singh, **M.Jusoh**, "Triple band microwave metamaterial absorber based on double E-shaped symmetric split ring resonators for EMI shielding and stealth applications", Journal of Materials Research & Technology,2022, 18: 1653-1668. **(IJMRT ISI IF 5.039)**
16. Kabir Hossain, Thennarasan Sabapathy, **Muzammil Jusoh**, Ping Jack Soh, R.Badlishah Ahmad, (…), Nitin

Saluja, Qammer H. Abbasi, "A Frequency-Reconfigurable Microstrip Antenna with Constant Dipole-Like Radiation Patterns Using Single Bias, Triple Varactor Tuning with Reduced Complexity", **Wireless Personal Communications**, 123(2), pp. 1003-1024, 2022. **(Q3 IF: 1.2)**

17. Kabir Hossain, Thennarasan Sabapathy, **Muzammil Jusoh**, Shen-Han Lee, Khairul Shakir Ab Rahman and Muhammad Ramlee Kamarudin, "Negative Index Metamaterial-Based Frequency-Reconfigurable Textile CPW Antenna for Microwave Imaging of Breast Cancer", Sensors 22 (4), 1626. **MDPI Sensors 2022. (Q1 IF:3.076)**
18. Kabir Hossain, Thennarasan Sabapathy, **Muzammil Jusoh**, Ping Jack Soh, Samir Salem Al-Bawri, Mohamed Nasrun Osman, Hasliza A. Rahim, Danai (…)," Decagonal C-Shaped CSRR Textile-Based Metamaterial for Microwave Applications", **Computers, Material and Continua**, 71(1), pp. 1677-1693, 2022. **(Q1 IF: 3.772).**
19. Sofri, T., Rahim, H.A., Abdulmalek, M., (...), **Jusoh, M.**, Soh, P.J., "Health Effects of 5G Base Station Exposure: A Systematic Review", **IEEE Access** 2022. 10, pp. 41639–41656 **(Q1 IF: 3.367).**
20. Rosli, S.J., Rahim, H.A., Rani, K.N.A., (...), **Jusoh M.**, Ariffin, W.S.F.W., Alkhayyat, A., "A hybrid modified sine cosine algorithm using inverse filtering and clipping methods for low autocorrelation binary sequences", **Computers, Materials and Continua**, 71(2), pp. 3533-3556, 2022. **(Q2 IF: 3.772).**
21. Elkhouly, A., Andrew, A.M., Rahim, H.A., **Jusoh M.**, Sabapathy, T., Siddique, S., "A novel unsupervised spectral clustering for pure-tone audiograms towards hearing aid filter bank design and initial configurations", **Applied Sciences (Switzerland)**, 12(1),298, 2022. **(Q2 IF: 2.679).**
22. Salem Al-Bawri, S., Islam, M.T., Hossain, K., Sabapathy, T., **Jusoh, M.**, "Left-handed characteristics tunable c-shaped varactor loaded textile metamaterial for microwave applications", **Computers, Materials and Continua**, 71(1), pp. 611-628, 2022. **(Q2 IF: 3.772).**
23. Siti Rahena Isa, **Muzammil Jusoh**, Thennarasan Sabapathy, Jamel Nebhen, Muhammad Ramlee Kamarudin, Mohamed Nasrun Osman, Qammer Hussein Abbasi, (…), Ping Jack Soh,"Reconfigurable Pattern Patch Antenna for Mid-Band 5G: A Review", Computers, Material and Continua, 70(2), pp. 2699-2725, 2022 **(Q2 IF: 3.772).**
24. Abdul Halim, A.A., Andrew, A.M., Mohd Yasin, M.N., **M.Jusoh**, et al "Existing and emerging breast cancer detection technologies and its challenges: A review", **Applied Sciences (Switzerland)**, 11(22),10753, 2021.
25. Mashagba, H.A., Rahim, H.A., Adam, I., **M.Jusoh**, Ismail, A.M., Soh, P.J., "A Hybrid Mutual Coupling Reduction Technique in a Dual-Band MIMO Textile Antenna for WBAN and 5G Applications, **IEEE Access**, 9, pp. 150768-150780, 2021.
26. Ali, A., Mohd Yasin, M.N., Faiz Wan Ali, **M.Jusoh**, W.F., (...), Nurulazlina Ramli, Ali, N., "A Comprehensive Review of Midrange Wireless Power Transfer Using Dielectric Resonators", **International Journal of Antennas and Propagation**, 5493013, 2021.
27. Adam, I., Kamarudin, M.R., Rambe, A.H., (...), Jusoh, M., Yasin, M.N.M., "Investigation on Wearable Antenna under Different Bending Conditions for Wireless Body Area Network (WBAN) Applications", **International Journal of Antennas and Propagation**, 5563528, 2021.
28. Albreem, M.A., Salah, W., Kumar, A., (...), Jusoh, M., Uwaechia, A.N., "Low Complexity Linear Detectors for Massive MIMO: A Comparative Study", **IEEE Access** 9,9378541, pp. 45740-45753, 2021.
29. Albreem, M.A., Sheikh, A.M., Alsharif, M.H., **Jusoh, M.**, Mohd Yasin, M.N., "Green Internet of Things (GIoT): Applications, Practices, Awareness, and Challenges", **IEEE Access** 9,9361680, pp. 38833-38858, 2021.
30. Sabapathy, T., Soh, P.J., **Jusoh, M.**, "A Three-Year Improvement Assessment of Project-Based Learning for an Antennas and Propagation Course [Education Corner]", **IEEE Antennas and Propagation Magazine**, 62(6),9282220, pp. 76-84, 2020.
31. Ali, J., Abdullah, N., Yahya, R., (...), Das, B., **Jusoh, M.**, "Ultra-Wideband Antenna Development to Enhance Gain for Surface Penetrating Radar", **Wireless Personal Communications**, 115(3), pp. 1821-1838,2020.
32. Rosli, S.J., Rahim, H.A., Rani, K.N.A., **Jusoh M**, Sabapathy, T., Andrew, A.M., "A hybrid modified method of the sine cosine algorithm using latin hypercube sampling with the cuckoo search algorithm for optimization problems", **Electronics (Switzerland)**, 9(11),1786, pp. 1-23, 2020.
33. Ramanathan, S., **Jusoh, M.**, Sabapathy, T., (...), Osman, M.N., Wahab, Y.A., "Elastomeric polydimethylsiloxane polymer on conductive interdigitated electrode for analyzing skin hydration dynamics", **Applied Physics A**: Materials Science and Processing, 126(9),756, 2020.
34. Vijayasarveswari, V., Andrew, A.M., **Jusoh, M.**,(..), Khatun, S., Rahim, H.A., "Multi-stage feature selection (MSFS) algorithm for UWB-based early breast cancer size prediction", **PLoS ONE**, 15(8 August),e0229367, 2020.
35. Al-bawri, S.S., Goh, H.H., Islam, M.S., **Jusoh M**, Khan, R., Islam, M.T., "Compact ultra-wideband monopole antenna loaded with metamaterial", **Sensors (Switzerland)**, 20(3),796, 2020.
36. Ali, A., Mohd Yasin, M.N., **Jusoh, M.**, Ahmad Hambali, N.A.M., "Optimization of wireless power transfer using artificial neural network: A review", **Microwave and Optical Technology Letters**, 62(2), pp. 651-659, 2020.
37. Al-Bawri, S.S., Islam, M.S., Wong, H.Y., **Jusoh.,M**, Sabapathy, T., Islam, M.T., "Metamaterial cell-based superstrate towards bandwidth and gain enhancement of quad-band CPW-fed antenna for wireless applications", **Sensors (Switzerland)**, 20(2),457, 2020.
38. Awal, M.R., **Jusoh, M.**, Sabapathy, T., (...), Rahman, S.A., "A Patternless Piezoelectric Energy Harvester for Ultra Low Frequency Applications", **International Journal of Integrated Engineering**, 12(7), pp. 187-194, 2020.
39. Yah, N.F.N., Rahim, H.A., Soh, P.J., **Jusoh M**, Jamaluddin, M.H., Yasin, M.N.M., "Green Nanocomposite-Based Metamaterial Electromagnetic Absorbers: Potential, Current Developments and Future Perspectives", **IEEE Access**, 8,8966373, pp. 33289-33304, 2020.

6. SUPERVISION

Program	Status	As Main Supervisor	As Co-supervisor
PhD	Graduated	5	3
	Ongoing	4	6
Master Research	Graduated	4	5
	Ongoing	0	4

Updated 25th Nov 2025

Doctor of Philosophy – 5 as Main Sv (5 COMPLETED), 5 as Co-Sv (2 COMPLETED)

1. **Doctor of Philosophy (Communication) by Research, (On-going): Main Supervisor:** Oct 2025 – Nur Mardiana Bt Ramli (Lecturer in Polytechnic Kuching. Awarded HLP Scholarship under MoHE)
2. **Doctor of Philosophy (Communication) by Research, (On-going): Main Supervisor:** Oct 2025: – Noptin Harpawi, Polytechnic Caltex Riau, Indonesia.
3. **Doctor of Philosophy (Communication) by Research,** Feb 2025: (**On-going**): **Main Supervisor:** Pn Dewi Sholeha, "Steerable 2 Active Bit-Metamaterial Structure for 6G Reconfigurable Intelligent Surfaces Antenna", Faculty of Electronic Engineering Technology (FTKEN), UniMAP.
4. **Doctor of Philosophy (Communication) by Research,** Nov 2023: (**On-going**): **Main Supervisor:** Pn Nur Hasni Marzuki, "Design of Two-Dimensional Metamaterial Reconfigurable Intelligent Surfaces for 6G Wireless Communication Application", Faculty of Electronic Engineering Technology (FTKEN), UniMAP.
5. **Doctor of Philosophy (Communication) by Research,** Dec 2018: (**COMPLETED-Sept 2022**): **Main Supervisor:** Siti Rahena bt Isa, "A Development of Reconfigurable Antenna with Beam Steering and Beamwidth", Faculty of Electronic Engineering Technology (FTKEN), UniMAP.
6. **Doctor of Philosophy (Communication) by Research,** Jan **2015**: (**COMPLETED-Dec 2018**): **Main Supervisor:** Vijayasarveswari A/P Veeraperumal, "Hybridization of K-Fold with Feed Forward Backpropagation Algorithm for Insufficient Data Sample in Early Breast Cancer Detection"FTKEN, UniMAP.
7. **Doctor of Philosophy (Computer) by Research,** July **2014**: (**COMPLETED- July 2018**): **Main Supervisor:** Mohd ilman Bin Jais, "Azimuth and Elevation (AE) Localization Embedded System Using Fuzzy Interference System (FIS) Based Architecture" FTKEN, UniMAP.
8. **Doctor of Philosophy (Communication) by Research,** March **2015**: (**COMPLETED-Sept 2018**): **Main Supervisor:** Md Rabiul Awal, "Design and Implementation of A New, Low Cost, High Performance Wireless Power Transfer Technique for Rechargeable Pacemaker System", FTKEN, UniMAP.
9. **Doctor of Philosophy (Communication) by Research,** Feb **2014**: (**COMPLETED-Aug 2017**): **Main Supervisor:** Liyana Binti Zahid, "Design and Development of Microwave Absorbers using Material Waste" FTKEN, UniMAP.

Doctor of Philosophy – 1 as Co-Sv for UiTM student (external)

1. **Doctor of Philosophy (Kejuruteraan Elektrik) by Research,** Dec **2020**: (**on-going**): **Co- Supervisor:** Amirudin Bin Ibrahim, "On Body Wearable Antenna Using Flexible Material for Health" FKE, UiTM Permatang Pauh, PPinang.

Master of Science – 4 as Main Sv (4 COMPLETED), 6 as Co-Sv (2 COMPLETED)

1. **Master of Science (Communication) by Research,** Nov **2019** (**COMPLETED- OCT 2023**): **Main supervisor:** Santhana Laxmi A/P A. Muthukarpan, "Analysis of Sensor Position for Passive in Vehicle Alcohol Detection and Alert System", FTKEN, UniMAP.
2. **Master of Science (Communication) by Research, (COMPLETED-July 2022): Main-supervisor:** Mr. Mohd Iskandar Mohd Salleh, "Development of Dual Mode Quarter Wavelength Side-Coupled Ring Resonator using Inverting Vertically Port for Symmetrical Dualband Bandpass Filter", FTKEN UniMAP.
3. **Master of Science (Communication) by Research,** Jan **2016**: (**COMPLETED-Aug 2018**): **Main-supervisor:** Mr. Devakumaran A/L Subramaniam, "Beam-Reconfigurable of A Planar Pixel Antenna for X-Band Radar Application", SCCE UniMAP.
4. **Master of Science (Communication) by Research,** May **2014**: (**COMPLETED-July 2016**): **Main-supervisor:** Mr Shakhirul Bin Mat Salleh, "Reconfigurable Textile Antenna for GPS and WiFi Applications" SCCE UniMAP.

7. RESEARCH GRANTS (RM3,749,982 = USD907,113) *1USD=4.13MYR

Year Awarded	Title of Project	Type of Grant	Amount (RM)	Role
2025	Conceptual Framework for Short Range AESA RADAR in Malaysia Operational Environment: Antenna Aspects, Propagation Dynamics and Intelligent Target Processing	**LRGS (Long Research Grant Scheme)**	800,000	Main Researcher
2025	Development of A Fully Package Beam Steerable Patch Array Antenna with Deep-	**PRGS (Prototype Research Grant**	200,000	Co-Researcher

	Learning Based Switching for 5G/6G Small Cell Based Station Platforms	**Scheme)**		
2025	Fish Breeding System with Real-Time Water Quality and Growth Optimization	**PPRN**	35,000	Main Researcher
2025	UMSU International Matching Fund	**INTERES**	10,000	Main Researcher
2025	UniMAP International Matching Fund	**INTERES**	10,000	Main Researcher
2025	AI-Driven Power Control for Smart Cooler System	**KPT IMAP**	99,725	Main Researcher
2024	Empowering Harvest: The Solar Powered Irrigation for Agriculture	**IEEE HTB** TECH4GOOD PROJECTS 2024	34,084	Co Researcher
2024	Program Sijil Professional Pengurusan Institusi Dakwah (1st Feb – 31st July 2024)	**Consultation Fee** NGO Penggerak HUFFAZ Selangor	33,000	Main Researcher
2023	Building Seamless WiFi Bridging Connectivity at YM Education and Training Centre	**Consultation Fee** YM EDU and Training Centre	13,000	Main Researcher
2023	INTERES: Development of miniaturized reconfigurable antenna-based metamaterial for communicable disease of Point-of-Care System	INTERESS Grant: (UNIMAP - UMSU) International Matching Grant	20,000	Main Researcher
2023	Medical bandage materials characterize as a new substrate for a UWB wearable antenna towards 5G and beyond telemedicine system	FRGS Grant	88,200	Co Researcher
2023	Reflection Phase Mechanism of A Non-Destructive Reconfigurable Artificial Magnetic Conductor Array with Dielectric Properties of Mango	FRGS Grant	148,752	Co Researcher
2022	Implementation of IoT sensor network with energy harvesting using metamaterial absorber	Geran Translasi UKM	90,000	Co Researcher
2022	A High Accuracy-Hybrid Pedestrian Dead Reckoning (PDR) Technique for Indoor Localization System based Metamaterial 5G mm-Wave MIMO Antennas	Geran Translasi UKM	70,000	Co Researcher
2022	Training Course: Kursus Pemasangan dan Pengujian Kabel Fiber Optik – FTTH	KPT PENJANA PACE	150,000	Main Researcher
2022	Training Course: 5G Installation and Testing	KPT PENJANA PACE	150,000	Main Researcher
2022	Training Course on Telecommunication and Networking System (Basic Installation and Maintenance): Graduate Employability Grant	KPT PENJANA CAP	130,500	Main Researcher
2021	Investigation on the Phase Displacement between the High Scalability and Accuracy of Tunable Metasurface Array Resonator and Terrestrial InSAR for Plastic Debris Detection in River	FRGS Grant	105,360	Co Researcher
2021	Fragmented Array Topology of RFID Antenna Structure for Gain Efficiency and Electromagnetic Wave Propagation Enhancement on Metallic Surface Layer	FRGS Grant	91,000	Co Researcher
2021	RSSI Tracking System for **Stopanik Sdn Bhd**	Industrial Grant	14,950	Main Researcher
2021	Asset Tracking and Monitoring System for **KPJ Specialist Hospital (Perda)**	Industrial Grant	21,000	Main Researcher
2021	Smart Attendance and Monitoring System for **KPJ Specialist Hospital (Perda)**	Industrial Grant	23,000	Co Researcher
2021	Smart Hand Sanitizer System for **KPJ Specialist Hospital (Perda)**	Industrial Grant	21,850	Co Researcher
2020	Theoretical study on Electromagnetic Orbital Angular Momentum in the presence of dielectric media	FRGS Grant	105,200	Co Researcher
2020	Enhanced Time Difference of Arrival Algorithm (TDOA) with Kalman Filtering (KF) as Object on Ground Localization Acoustic Sensor	FRGS Grant	62,200	Co Researcher

2020	Chaotic Behavior based Secured Encryption Algorithm for Near Field Wireless Power Transfer	FRGS Grant	97,450	Co Researcher
2019	Study on the Effects of Cognitive Performance, Well Being, Physiological Parameters and Electroencephalography (EEG) of the Malaysian Adults to Short Term Exposure from 5G Radio	MCMC Grant	225,000	Co Researcher
2019	Gateless Entry Point for Access Control using RFID System	Internal Grant	16,300	Main Researcher
2019	A new model of Open-ended probe technique to characterize level of protein in raw milk	RACER	38,400	Co Researcher
2019	A fundamental approach to dual communication using electro-acoustic waves in high scale impedance mismatch	FRGS Grant	64,200	Co Researcher
2019	Investigation on the Correlation between Dielectric Properties of Malignant Tumor and Analytically Modeled Reconfigurable Metasurface Resonator Array for Early Breast Cancer Detection	FRGS Grant	91,200	Co Researcher
2019	Characterization of Metamaterial structure with reconfigurable property at millimeter wave frequency range for Internet of Medical Things (IoMT) Application	FRGS Grant	73,200	Co Researcher
2018	An Investigation of Human Skin Hydration Detection Using Non-invasive Optical Sensing for Medical Application	FRGS Grant	59,000	Main Researcher
2017	Optimization of Energy Efficient Protocols on New Statistical Game Theory Model for Wireless Sensor Networks	FRGS Grant	50,000	Co Researcher
2016	A new parametric optimization model using UWB imaging through human breast for domestic and low-cost breast health checkup	FRGS Grant	149,726	Main Researcher
2016	A fundamental Study of Insect Disinfestation Using Microwave Energy for Malaysian Post-Harvested Rice Storage	FRGS Grant	119,300	Co Researcher
2015	Improving Wireless Power Transmission Technique for Low-Cost Rechargeable Cardiac Pacemaker Circuit	FRGS Grant	118,100	Main Researcher
2015	Energy-Efficient Mobile Terminal Antennas for Green 5G Wireless Communication Networks	Science Fund-MOSTI	368,094	Co Researcher
2015	Incentive Grant from UniMAP	Publication Grant	15,000	Main Researcher
2015	Multi Directional Reconfigurable Beam Antenna	Short Term Grant	10,000	Main Researcher
	TOTAL	**USD 585,610=**	**RM3,749, 982**	

8. PATENT FILING/ COPYRIGHT

- **MyIPO No: LY2025P04445** Multi-Mode Yagi Uda Patch Array Antenna with Non-Linear Inter-Parasitic Element
- **MyIPO No: LY2025P04447** IoT-Powered Multi-Sensor System for Detecting Human Presence in Vehicle
- **MyIPO No: LY2025P04446** A Fuzzy-Based Angle-of-Arrival Estimation System (AES) Using Radiation Pattern Reconfigurable (RPR) Antenna and Modified Gaussian Membership Function for RADAR Application
- **MyIPO No: CRLY2023P03995.** Fabrication process of Reconfigurable Metamaterial Breast Cancer Detection.
- **MyIPO No: P12019004328.** Blood Vessel Detection on Retinal Image and Monitoring System
- **UK Copyright 284735465,** Product: Switchable Antenna System Based High Speed Wireless Railway Communication **(Expired Date: 8 Jun 2025)**
- **UK Copyright 284735974,** Product: An IoT based Interactive Smart Sanitizer System **(Expired Date: 4thAug 25.**
- **UK Copyright 284739299,** Product:A Flexible and Compact Metamaterial UHF RFID Tag. **(Exp.Date: 9thFeb 26**
- **Republik Indonesia, Kementerian Hukum dan Hak Asasi Manusia,** Product: New Algorithm Development Technique in Magnetic Induction Tomography for Non-invasive Low Conductivity Material Imaging Application. **(No pencatatan: 000235433)**

9. TEACHING

Subjects	Level	Role
NMJ10203 Analog Electronic Circuit 1, NMJ32903 Communication	Undergraduate	Coordinator/

System, NMJ20904/4 Analog Electronic Circuit 2, NMJ10803 Electronic Circuit 2, NMJ31603 Management for Engineers, EKT104 Basic Electronic Circuit, EKT341 Antenna and Propagation, EKT450 Mobile Communication System, EKT446 Final Year Project 1, EKT445 Final Year Project 2, EKT451 Group Design Project, EKT314 Electronic Instrumentation, DKT224 Data Communication & Network		Lecturer
NSJ17203 Advanced Mobile and Wireless Communication, EKT450 Research Methodology	Postgraduate	Coordinator/ Lecturer

10. RESEARCH AWARDS (Selected 2020 – current)

- **GOLD Medal Award in Carnival of Research and Innovation (CRI2024):** Smart Paddy Soil Tester
- **National Agricultural and Food Engineering Convention (NAFEC 2024)**: Smart Paddy Soil Tester
- **GOLD Medal Award in PECIPTA 2022**: Slope Health Monitoring System
- **GOLD Medal Award in ITEX 2022:** In-situ nutrient Soil Tester with real time monitoring system
- SV to recipient (my FYP student- Nur Syazwanee) for **IEEE MTT-S Undergraduate Scholarships 2021** Cycle 1 Awardees (October 2020 Competition)- **the only Malaysian recipient**
- **Asian Youth Innovation Awards 2021** – The Malaysia-Croatia Technology Exchange 2021: Wearable UHF RFID Tag Antenna Based Metamaterial for Monitoring and Tracking of Covid19 Patient
- **Silver Award of Youth Category in MTE 2021:** Wearable UHF RFID Tag Antenna Based Metamaterial for Monitoring and Tracking of Covid19 Patient
- **Special Award from Turkish Inventors and Innovators Network in MTE 2021**: Dielectric Materials Measurement System
- **GOLD Medal Award in MTE 2021**: Dielectric Materials Measurement System
- **GOLD Medal Award in MTE 2021**: Dual Band Circularly Polarized Textile Antenna for WLAN and 4G Health Wear Application
- **Silver Medal Award in MTE 2021**: A Flexible and Compact Metamaterial UHF RFID Tag for Remote Sensing in Human Health
- **Gold Medal Award in UniMAP Expo (EREKA 2021):** A Flexible and Compact Metamaterial UHF RFID Tag for Remote Sensing in Human Health
- **2020 IEEE Malaysia Best Final Year Project Competition** (my FYP student- Mr Fuad Hassan Adan): Switchable Antenna System Based High Speed Wireless Railway Communication
- **IEEE AP-MTT 2020 Excellence Paper Award**: Reconfigurable four-parasitic-elements patch antenna for high gain beam switching application.
- **UniMAP Young Scientist** with H-Index of 16 in 2020
- **Best Paper Award** from **UCET2020-** The 5th International Conference UK-China Emerging Technologies – paper title: ENG and NZRI Characteristics of Decagonal Shaped Metamaterial for Wearable App.
- **Best Paper Award** from **BCWSP2020**- International Conference on Broadband Communication, Wireless Sensors and Powering, paper title: 1x4 Patch Array Textile Antenna for WLAN Applications

11. SPEAKERS (International and Local Speakers, selected 2019 to current)

A. Keynote Speakers

1. **Keynote Speaker for ICARECS2025 – International Conference on Advanced Research in Electronics and Communication Systems** organized by SRM IST University, Chennai, India on **26-27th Feb 2025.**
2. **Keynote Speaker for 4th ICASI2022** - International Conference on Advanced and Science Innovation organized by Cendana Polytechnic on **19th December 2022**.
3. **Keynote Speaker for ACHOST2021**-Annual Conference on Health and Food Science Technology organized by Kresna Nusantara and Relawan Jurnal Indinesia on **20th November 2021**.
4. **Keynote Speaker for ICMER2020**-International Conference on Multidisciplinary Engineering Research Towards Industrial Revolution 4.0 organized by **Universitas Mercu Buana**, 6th February 2021.
5. **Keynote Speaker for ICEAS2019**-International Conference Applied Engineering and Science conference at Madiun, Jawa Timur on **21st Aug 2019** organized by Universitas PGRI Madiun, Indonesia.
6. **Keynote Speaker** for **ICCSET2018**- 1st International Conference on Computer Science and Engineering Technology at Kudus, Jawa Tengah on **25th Oct 2018** organized by Universiti Muria Kudus, Indonesia.

B. Local Media Guest Speakers and Newspaper Write-up

1. Jemputan Penceramah BernamaTV Siri Apa Kabar Malaysia: Tajuk: **Bakti ASEAN UniMAP Santuni Warga Medan, 11 Jun 2025**.
2. Jemputan Penceramah BernamaTV Siri Apa Kabar Malaysia: Tajuk: **Kesan Radiasi Teknologi Tanpan Wayar, 15 March 2023.**
3. Jemputan Penceramah BernamaTV Siri Apa Kabar Malaysia: Tajuk: **Meremajakan Semangat Cintakan Negara, 19 Oct 2022.**

4. Jemputan Penceramah BernamaTV Siri Apa Kabar Malaysia: Tajuk: **RMK12 (Kajian Separuh Penggal)-17 Anjakan Radikal, 13 Sept 2023.**

C. Invited Speaker from International/Local Universities/Community (from 2019 to current)

1. **Invited Speaker by MBOT** for Sesi Perkongsian Telecommunication and Broadcasting Technology (TB) Seminar 2025 "Empowering Community of Practice, **14 Jun 2025** at UniKL.
2. Penghargaan Sebagai **Tenaga Pengajar Program Sijil Professional Pengurusan Institusi Dakwah** (SSPPID), **1 Februari - 31 Disember 2025.**
3. **Invited Speaker** with title "Smart Health Care: Leveraging IoT for Real-Time Monitoring and Diagnostics" organized by UNPRI- Universitas Prima Indonesia, **8 Oct 2024** in Meda-n, Indonesia.
4. Penghargaan Sebagai **Tenaga Pengajar Program Sijil Professional Pengurusan Institusi Dakwah** (SSPPID), **1 Februari - 31 Julai 2024.**
5. **AJK Penasihat Program** Sijil Teknologi Peranti Mudah Alih, Kolej Komuniti Kuala Pilah, KPT bermula 1 Sept 2023 sehingga 1 Sept 2025.
6. **Invited Speaker for ICED2024** with title of Publishing in High Impact Factor Journal Leveraging AI Tools on **3rd Sept 2024** in Bertam Resorts and Spa Hotel, Penang, Malaysia.
7. **Penceramah** Kursus Route to BEM, Inspectors of Works (IoW)/Semakan Dokumen ETAC oleh POLIMAS Kedah pada **7 Ogos 2024** di Dewan Kuliah 6, POLIMAS.
8. **Penceramah** bagi Program bersama para pelajar Jabatan Perdagangan, Politeknik Tuanku Syed Sirajudin (PTSS), Perlis pada **2 April 2024 di PTSS.**
9. **Speaker for Hands on Workshop** for Wireless Connectivity at Institut Latihan Perindustrian (ILP) Kepala Batas, Penang in collaboration with IEEE AP/MTT/EMC Malaysia Joint Chapter,12-14 Aug 2024.
10. **Invited Speaker** for Webinar IEEE AP/MTT/EMC workshop organized by **IEEE AP/MTT/EMC Malaysia Joint Chapter** on April 2023.
11. **Invited Speaker for** Pelaksanaan Pengembangan dan Peninjeuan Kurikulum berbasis OBE dalam bentuk kegiatan workshop organized by UMSU- Universitas Muhammadiyah Sumatera Utara, **22 May 2023** in UMSU, Indonesia.
12. **Invited Speaker** for Kuliah Umum International organized by UNPRI- Universitas Prima Indonesia, **16 May 2023** in Medan, Indonesia.
13. **Resource Speaker at Daffodil International University workshop on** "Sharing Strategies to Write High Impact Factor Journal & 5G as IoT catalyst" and seminar on "Climbing the Ladder: Tips and Trick Professionalism Talk for the Young Researcher & Lecturer" from **22 – 23rd Aug 2022.**
14. **Jemputan dari Pertubuhan Berita Nasional Malaysia (BERNAMA)** Menjadi Tetamu untuk Program "Apa Kabar Malaysia"- Meremajakan Semangat Cintakan Negara pada **19 Ogos 2022.**
15. **Guest Speaker** of Microwave and Renewable Energy by MercuBuana University Jakarta, **20thJune 22.**
16. **Guest Speaker** for Kuliah Umum International by UNPRI- Universitas Prima Indonesia, **21st June 2022.**
17. **Invited Speaker** for Smart and Green Building by IMAT Institute of Medan, **21st June 2022.**
18. **Invited Speaker** for Creative Thinking and Innovative organized by **GIAT MARA Perlis**, 5th Apr 2022
19. **Invited Speaker** for Online Workshop on Scientific Writing and Submission of Articles to International Journals on **1st April 2022** organized by **Universitas Harapan Medan, Indonesia**.
20. **Invited Speaker** for Convention IMDS with title: New Innovation, 5G, IoT and Big Data, **23 – 25th March 2022** organized by **International Medical Device School, Malaysia**.
21. **Invited Speaker** for International Symposium on Multidisciplinary Research Studies **(ISMRS 2022), 15th March 2022** organized by **Republic of Yemen, Hadhramout University**.
22. **Invited Speaker** for international seminar with Title: Strategies of Becoming a Good Writer and How to Write Paper to be Published in High Impact Factor Journal, **Thursday, 10th March 2022** organized by STEBIES Al-Ulum Terpadu Medan.
23. **Invited Speaker** for Bicara Professional anjuran NGO HALUAN with entitled **Dunia Tanpa Wayar: Cabaran dan Peluang, 11th Dis 2021**.
24. **Invited Speaker** on The Intellectual Convention- The Rise of Gig Economy organized by UniSHAMS on 14 Sept 2021.
25. **Invited Speaker** on Publish in ISI Journal: Myth and reality of academic publishing organized by **Al-Rasheed University, Iraq on 17th Dec 2020.**
26. **Invited Speaker** on Strategies of Becoming a Good ISI Journal Writer organized by **Nahda University Benisuef, Eqypt on 20 November 2020**.
27. **Invited Speaker** for Motivational Talk and Tips to be an Excellence Student for Form Six of SMK Tengku Suleiman, Perlis **organized by KEMAS- Jabatan Kemajuan Negeri Perlis on 28 Sept 2020.**
28. **Invited Speaker** on **How to Find Novelty in Research** organized by **Akademi Farmasi YPPM Mandiri Banda Aceh on 6 Aug 2020**.
29. **Invited Speaker** at **Universitas Mercu Buana Jakarta Indonesia** with title Reconfigurable 5G mm-wave Antenna Design for Future Wireless: MIMO Technology and Cognitive Radio on **27th July 2020**.
30. **Invited Speaker at Chitkara University, Punjab, India for Webinar Talk Series** with title **Reconfigurable Antenna Design for Future Wireless: 5mm Wave and Cognitive Radio** on **26thJune20.**

31. **Invited Speaker** at **Universitas Serambi Mekkah, Banda Aceh** with title Emerging Embedded System with Wireless Communication System and Strategies on Becoming A Good Writer on **13th March 2020.**
32. **Chitkara University Punjab INDIA**: Invitation for **Teaching Sharing** and Discussion on Potential Research Collaboration in 14th Global Week Program at Faculty of Computer Science Engineering, Chitkara Uni, India from **7th to 26th Oct 2019**.
33. **Universitas Harapan Medan (UnHAR)**: Invitation as **Invited Speaker** for Transdisciplinary Project: Connecting Embedded System with Wireless Communication System at UnHAR Indonesia on **25thJan 19.**

12. INTERNATIONAL/NATIONAL/UNIVERSITY/COMMUNITY COMMITTEES (Selected 2020 to current)

A. International Committee

1. **Organizing Committee** for IEEE Radio Frequency and Microwave **(RFM2025)** organized by IEEE AP/MTT/EMC Malaysia Joint Chapter.
2. **Organizing Committee** for International Conference on Electronic Design **(ICED2024)** FKTEN UniMAP.
3. **Organizing Committee** of International Symposium on Antenna and Propagation **(ISAP2023)** from 30 Oct to 2 Nov 2023 at Berjaya Times Square Hotel, KL.
4. **Editorial Board Member** for **Hadhramout University Journal of Natural & Applied Sciences** from Oct 2021 to Sept 2023.
5. **Sponsorship Committee of ISETech**-2nd International Symposium on Engineering and Technology held on 5th Oct 2021 organized by Advanced Communication Engineering, Center of Excellence, UniMAP.
6. **Treasurer of IMTGT - Indonesia_Malaysia_Thailand Growth Triangle** consists of 12 Universities (**Indonesia**_USU Medan, ITM, UniMED, Unsyiah Kuala Acheh, **Malaysia**_UniMAP, UUM, USM, UiTM, **Thailand**_PSU, Rajamanggala Uni, Thaksin, Walailak Uni) from **March 2019 to Dis 2021.**
7. **Scientific Committee for ICASI2020** The 3rd International Conference on internet and application. Focus on electromagnetics, **20th June 2020**.
8. **Scientific Committee for InCEESS2020** Conference on Economics, Engineering and Social Science, Bekasi Indonesia, **27th July 2020.**

B. National Committee

9. **Panel Penilai ETAC** bagi Program **Diploma Kejuruteraan Komputer** Politeknik Behrang, Selangor pada **Ogos 2024**.
10. **Panel Penilai Luar** bagi Program **Diploma Kejuruteraan Komunikasi** Politeknik Sultan Abdul Halim Muadzam Shah, Kedah pada **24 Oct 2023**.
11. **Panel Penilai Luar** bagi Program **Diploma Kejuruteraan Komunikasi** Politeknik Tuanku Syed Sirajuddin, Perlis pada **19 Sept 2023**.
12. **Lantikan Pemberi Latihan Kursus kepada Komuniti** bersama PKSM dibawah dana **NCER**- Northern Corridor Economic Region bagi **6 program** dari **Dis 2021 sehingga Mei 2022**.
13. **Panel Penilai Luar** bagi Program **Diploma Kejuruteraan Komunikasi** Politeknik Tuanku Syed Sirajuddin, Perlis pada **7 April 2021**.
14. **Panel Pakar Projek Dana Penyelidikan dan Pembangunan (R&D)** Kementerian Sains, Teknologi dan Inovasi **(MOSTI)** dari **1 Jan 2021 sehingga 31 Disember 2026**.
15. **Panel Forum Diskusi Nasional** anjuran PINTAR pada 18 Feb 2021, Tajuk: Sugarbaby: Sejauhmana Seriusnya Gejala Sugarbaby di IPT.

C. University Committee

1. **Jawatankuasa Kerjasama Akademik Konsortium UniMAP di Medan**: 1stSept2024 to 31st Ogos2025.
2. **Internal Examiner for FRGS application** by UniMAP staff from 2022 to current.
3. **AJK Pemurnian Kriteria Kenaikan Pangkat** untuk Staf Akademik UniMAP bagi tahun 2023.
4. **Advisor to Majlis Perwakilan Pelajar UniMAP** effective from 1st March 2019 to 2022.
5. **Committee of Jk Kebajikan UniMAP** effective from March 2019 to 2022.
6. **Committee of Jk Aduan UniMAP** effective from Oct 2020 to 2022.
7. **Senate member of UniMAP** starting from 1st March 2019 to 30th Oct 2020.
8. **Committee of Jk Kebajikan, Tabung Amanah dan Zakat** pelajar dan staf UniMAP from 1stOct 2019.
9. **Committee of Jk Smart Campus UniMAP** effective 1st November 2019 to 2022.
10. **Committee of Jk Majlis Tindakan Tatatertib Pelajar** effective 1st October 2019 to 2022.
11. **Committee of Jk Sasterawan Negara@UniMAP** effective 1st August 2019 to 2022.
12. **Committee of Cluster Kesejahteraan Pelajar** for UniMAP 2025 plan to 2022.
13. **Committee** pembangunan **statut Pusat Aktiviti dan Kecemerlangan Bakat** UniMAP.
14. **Committee of Graduate Employability of UniMAP** effective from 1st Nov 2019 to 2022.
15. **Jury of Pi-Envex 2020** Perlis International Engineering Invention &Innovation Exhibition_18-19May2020

D. Community Committee

1. AJK PIBG Sek. Men. Agama Arau Ulul Albab, Perlis dari Mac 2024 sehingga kini.
2. YDP PIBG SRAATI- Sek Ren Agama Attarbiyah Islamiyah dari Mac 2022 sehingga Feb 2024

3. AJK PIBG SRAATI dari 2020 to 2021.
4. Khidmat kepakaran projek Solar Kawasan Beseri oleh Exco Kerajaan Negeri Perlis pada 11April 2022.
5. Urusetia bengkel K-Ekonomi dalam Karnival Anak Muda Merdeka ADUN Beseri pada 9 Ogos 2022.
6. Mentor subjek umum IPTIPs- Institut Pengajian Islam Perlis bagi tahun 2019.

13. INTERNAL AND EXTERNAL EXAMINERS

External Examiner Thesis (ABROAD)

1. **PhD, 18th Oct 2022, Mr Kartheek Viswanadha,** "Design of Milimeter Microwave Devices Using Metamaterials and Electromagnetic Bandgap Structures", **Departmental of Electronics and Communication Engineering, Delhi Technological University (DTU), INDIA.**
2. **PhD, 12th Apr 2023, Mr Rajiv Kumar Nehra,** "Development of Implantable Antennas for Biomedical Devices", **Departmental of Electronics and Communication Engineering, Delhi Technological University (DTU), INDIA.**
3. **PhD, Dec 2025,** Design and Performance Analysis of High Birefringent Teraherts Photonic Crystal Fibers for Snesing Application", **SRM IST University, Chennai, India.**

External Examiner Thesis (MALAYSIA)

4. **PhD, 20th Nov 2025, Sura Khalil Ibrahim,** "Development Of 5G Massive Mimo Antenna Loaded with Metamaterial For Mid-Band Applications", Fakulti Kejuruteraan dan Alam Bina (FKAB), **Universiti Kebangsaan Malaysia (UKM).**
5. **MsC, 19th Nov 2025, Fahmida Hossain,** "Design and Development of Planar 6 Element Mimo Array on Flexible Substrate ForMid-band 5g Applications", Faculty of Electronics and Computer Technology and Engineering, **Universiti Teknikal Melaka (UTeM).**
6. **MsC, 8th Aug 2025, Muhammad Sukriyllah Bin Yusri,** "New Inductive Power Transfer Using Integrated Low Loss Dielectric Technique On Planar Spiral Coil Antenna", Faculty of Electronics and Computer Technology and Engineering, **Universiti Teknikal Melaka (UTeM).**
7. **PhD, 5th Feb 2025, Siti Harliza Mohd Razali,** "Antennas Design for Underwater Radio Frequency Communication Application", Fakulti Kejuruteraan Elektrik, **Universiti Teknologi Malaysia (UTM).**
8. **PhD, 28th Nov 2024, Mr Md Afzalur Rahman, "**Metamaterial Multiband MIMO Antenna Systems Development for 5G IOT Applications Based Machine Learning Verification", Climate Change Institute, **Universiti Kebangsaan Malaysia (UKM).**
9. **PhD, 29th April 2024, Mohd Azlan Bin Mohd Yusof, "**Mitigating Peak to Average Power Ratio Using GCS F-CPOFDM with Precoding Technique in 5G System**"**, Fakulti Kejuruteraan Elektrik, **Universiti Teknologi MARA (UiTM).**
10. **PhD, 7th Feb 2024, Nur Hazwani Binti Hussin,**"High Efficient Wireless Power Transfer Security Algorithm for Near Field Range", Fakulti Kejuruteraan Alam Bina, **Universiti Sains Islam Malaysia.**
11. **PhD, 27th Dec 2023, Mr Syah Alam,** "Multifunctional Microwave Sensor And Antenna For Material Characterization and Data Transfer Capabilities", Fakulti Kejuruteraan Alam Bina, **UTeM.**
12. **PhD, 2nd Nov 2023, Mr Md Salah UddinN Afsar,** "Development of Miniturized Metamaterial Absorber for Electromagnetic Radiation Absorption in the Microwave and Near Infrared Regime", Fakulti Kejuruteraan Alam Bina, **Universiti Kebangsaan Malaysia (UKM).**
13. **PhD, 23rd Aug 2023, Mr Md Moniruzzaman,** "Analysis of Metamaterial Structures for Wireless Communication System", Fakulti Kejuruteraan Alam Bina, **Universiti Kebangsaan Malaysia (UKM).**
14. **PhD, 17th July 2023, Mr Husam Hamid Ibrahim,** "Meander Line and Microstrip Rectennas For Wireless Radio Frequency Energy Harvesting, **Universiti Kebangsaan Malaysia (UKM).**
15. **PhD, 12th May 2022, Mr Tayaallen Ramachandran,** "Development of Coding Based Metamaterial for C- and Ku-Band Applications", Climate Change Institute, **Universiti Kebangsaan Malaysia (UKM).**
16. **MsC, 11th Jan 2022, Mr Zayed Abdo Abdullah Nasser,** "Design of Integrated Filtenna and SPDT Switch for Wireless Communication", Fak Kej Elektronik & Komputer, **Universiti Teknikal Melaka (UTeM)**
17. **PhD, 19th Jan 2021, Mr Ahasanul Hoque,** "Development of Single Negative and Double Negative Metamaterial Based Microwave Sensing using Uniform Transmission Line", Fak Kej Alam Bina, **Universiti Kebangsaan Malaysia (UKM).**
18. **MsC, 24th Oct 2019, Mr Eistiak Ahamed,** "Development of A Tunnel Resonator Inspired Left-Handed Metamaterial for Sensing Application", **Climate Change Institute, UKM.**
19. **PhD, 30 Aug 2019, Mr Usman Ilahi,** "The design of Circularly Polarized Wearable DRA for WBAN Applications", Faculty of Electrical and Electronics Engineering, **Universiti Kuala Lumpur (UniKL).**
20. **PhD, 29 Aug 2019, Mr Javed Iqbal,** "A Multiple-Input Multiple Wideband Circularly polarized DRA for Wimax Application", Faculty of Electrical and Electronics Engineering, **Universiti Kuala Lumpur (UniKL).**
21. **PhD, 31 July 2019, Mr Muhannad Kalm Abdulhameed,** "Radiation Pattern Control of Microstrip Antenna Antenna Using Electromagnetic Band Gap", Faculty of Electronic&Computer Engineering, **UTEM.**
22. **MsC, 18th Jan 2019, Miss Siti Nor Hidayah Kamarudin,** "Design of Integrated Microstrip Patch Antenna with Light Emitting Diode As Monopole Antenna", FKE, **Universiti Teknologi MARA (UiTM).**

23. **PhD, 17th Okt 2018, Md Jubaer Alam** bertajuk "Development of A Metamaterial Based Bandpass Filter for GPS, WLAN and WIMAX Applications", Climate Change Institute, **UKM.**
24. **PhD, 14th Sept 2018, Pn Yusmarnita bt Yusop bertajuk "**Capacitive Power Transfer for Low Power Contactless Charging Applications" Faculty of Electronic and Computer Engineering, **UTEM.**
25. **PhD, 23rd May 2018, Md Zulfikar** bertajuk "Design of A UWB Antenna for Breast Cancer Detection", Fakulti Kejuruteraan dan Alam Bina, **Universiti Kebangsaaan Malaysia (UKM).**
26. **MsC, 4th Mac 2016, Miss Hazwani Bt Azman** bertajuk "Spanar Antenna for Heart Rate Monitoring System", Faculty of Electronic and Computer Engineering, **Universiti Teknikal Melaka (UTEM).**
27. **MsC, 18th Oct 2016, Mr Ong Teik Kean**, "Characterization of Split Ring Resonator on New Hybrid Material in Microwave Frequency Region", Faculty of Electronic and Computer Engineering, **UTEM.**

Internal Examiner Thesis

1. **PhD, Nov 2021, Mr Bashaar Bahaa Noori Qas Elias, "**Design and Characterization of Flexible Antennas Using Characteristics Mode Analysis", in Communication Engineering, Faculty of Electronic Engineering Technology (FTKEN), UniMAP.
2. **PhD, Jan 2019, Mr Tan Gan Siang, "**Development of Six-port Interferometer using Substrate Integrated Waveguide Technique for Radar-Based Sensor Application" in Communication Engineering, School of Computer and Communication Engineering (SCCE), UniMAP.
3. **PhD, 24th Aug 2018, Ridzwan Khan** in Communication Engineering, SCCE UniMAP.
4. **PhD, Aug 2017, Mr Taih Gatte** in Communication Engineering SCCE UniMAP.
5. **Msc, 24th Aug 2017, Mr Mohamad Ashraf Halim** in Communication Engineering SCCE UniMAP.
6. **PhD, Dec 2016, Mr Omar Khaldun**, "Enhanced Multi-Cell Coordination in Wireless Communication System Using Beamforming Methods", SCCE UniMAP.
7. **PhD, 14th Jan 2015, Miss Suzanna**, "Development of Asian Size Hand Phantom and Investigation of SAR and HSP in Brain Tissue for Mobile Phone Application", SCCE, UniMAP.
8. **PhD, 17 May 2015, PRA-VIVA, Mr Rasim Aziz Khadim**, "Development of New Multi-Dimensional Code for OCDMA System", SCCE UniMAP.
9. **Conversion MsC to PhD, 24 Feb 2014, Pemeriksa Thesis, Lee Yen Seng**, "Development of Wideband Frequency Microwave Absorber Using Carbon Nanotubes/ Rice Husk Composites", SCCE UniMAP.

14. UNIMAP4SOCIETY@TRANSLATIONAL PROJECT

1. NGO PENGGERAK HUFFAZ- Consultant Project@Project Leader for Program Sijil Professional Pengurusan Institusi Dahwah (HUFFAZ) in collaboration with NGO PENGGERAK HUFFAZ, PDCE UNIMAP dan FKTEN UNIMAP starting from 1st Feb until 31st July 2024 with total sponsored of RM34,500- **2024.**
2. NGO Yayasan Ikhlas- Project Leader@Consultation Title: High Speed Network with Low-Cost Solution for Community Kg Bahagia, Kuala Krai, Kelantan. Worth Project of Site Survey Work: RM2,500. - **2023**
3. NGO Yayasan Maghfirah(YM EDU)-Project Leader@Consultation Title: Building Seamless WiFi Bridging Connectivity at YM Education and Training Centre, Lenggeng, N. Sembilan. Total: RM13,000. - **2023**
4. Sek Men Agama IMTIAZ- Project Leader@Consultation Title: Wireless Fidelity System with Bridging Concept for IMTIAZ Melaka. Worth Project: RM42,000. - **2023**
5. Madrasah Pondok Moden Darussalam Changlun (PMDC)- Project Leader@Consultation Title: WiFi Canopy Concept powered by 4G Network at PMDC. Worth Project: RM7,000. - **2022**
6. Madrasah Attarbiyah Islamiyah (MATRI)- Project Leader@Consultation Title: WiFi Bridging with Point-to-Point Technology. Worth Project: RM5,000. - **2022**
7. Madrasah Muhammadiyah Jeneri, Sik Kedah- Project Leader@Consultation Title: 4G Network utilization and migration to WiFi Link for High-Speed Live Broadcasting. Total: RM7,000. - **2022**
8. Appoinment as Project Leader@Trainer by UniMAP Holdings under PKSM company funded by Northern Corridor Economic Region (NCER) for SIX Training Program. Worth Project: RM37,500 (RM1500/community participant). - **2021**

Bio-Statement

MUZAMMIL JUSOH is an Associate Professor and Research Fellow at the Advanced Computing Engineering (AdvComp) Centre of Excellence, Universiti Malaysia Perlis (UniMAP). He began his career as an RF and Microwave Engineer at Telekom Malaysia Berhad (TM), where he led the Specialized Network Services (SNS) team in Senai, Johor, and managed preventive and corrective maintenance of ILS, NDB, DVOR, microwave links, VHF/UHF systems and repeaters. He earned his B.Eng. in Electrical, Electronic and Telecommunication Engineering (2006) and M.Sc. in Electronic Telecommunication Engineering (2010) from Universiti Teknologi Malaysia (UTM) and completed his Ph.D. in Communication Engineering in 2013. With an H-Index of 27 (Scopus), he has secured over USD600k in research funding from the Ministry of Higher Education Malaysia, industry grants and MOSTI, serving as principal and co-researcher. He currently supervises more than 20 postgraduate students and has authored over 250 peer-reviewed articles in venues such as IEEE Access, MDPI Sensors, Materials and IEEE Antennas and Wireless Propagation Letters. His research interest in antenna design, reconfigurable beam-steering arrays, RFID, MIMO, UWB and

wireless communication systems. He also provides technical consultancy to firms including MNF Infra and G2R Sdn Bhd and has served as an executive member of the IEEE Malaysia AP/MTT/EMC Joint Chapter since 2023. He received Professional Engineer in September 2020, Professional Technologist (October 2020) and ASEAN Chartered Professional Engineer in Feb 2022.

REFEREES

1. **PROF IR. TS. DR. RIZALAFANDE CHE ISMAIL,**
   Deputy Vice Chancellor Research and Innovation,
   Universiti Malaysia Perlis (UniMAP), PERLIS.
   rizalafande@unimap.edu.my

2. **PROF IR DR MOHD HAFIZAL MOHAMAD**
   Director of Research Management Centre,
   Universiti Sains Islam Malaysia (USIM), Selangor.
   hafizal@usim.edu.my