

Mau-Luen THAM

mauluen.tham@berjaya.com.my

BIOGRAPHY

Ir. Ts. Dr. Tham is the General Manager - Head of AI Research at Berjaya Corporation Berhad, where he leads the development of AI solutions that advance innovation and digital transformation. He earned his Bachelor of Engineering (First Class Honours) and Doctor of Philosophy from Universiti Malaya (UM), and specialises in deep learning and reinforcement learning. Throughout his career, Dr. Tham has contributed to 32 research and development projects, leading 14 as Principal Investigator (PI). His PI-led projects include two international grants: the ICT Virtual Organization of ASEAN Institutes and NICT (ASEAN IVO), and the British Council UK-ASEAN Institutional Links. He has been granted two patents by MyIPO and has published over 30 peer-reviewed journal articles and more than 40 conference papers, including contributions to IEEE Transactions (with two papers published as first and corresponding author), IEEE Internet of Things Journal, and flagship IEEE conferences such as GLOBECOM, ICC, and WCNC. His research excellence has been recognized with awards including the IEEE Malaysia COMSOC/VTs Joint Chapter Best Paper Award 2025, the IEEE IEACon 2025 Best Paper Award, the Universiti Tunku Abdul Rahman (UTAR) Research Excellence Award 2024, and the ASEAN IVO Certificate of Excellence 2023. Dr. Tham is a Professional Engineer (Electronic) with the Board of Engineers Malaysia, a Professional Technologist (Electronic) with the Malaysia Board of Technologists, an ELITE@UM Fellow, and an Adjunct Professor at UTAR. He has successfully supervised six PhD and four Master's students to graduation.

WORK EXPERIENCE

- | | |
|---|---------------------|
| Senior Researcher, MIMOS Berhad | Feb 2015 – Feb 2016 |
| <ul style="list-style-type: none">Developed and enhanced a video-mirroring project solutionFiled two patents (2015704648 and 2016001701) | |
| Assistant Professor, Universiti Tunku Abdul Rahman | Feb 2016 – Dec 2023 |
| <ul style="list-style-type: none">Department of Electrical and Electronic Engineering | |
| Associate Professor, Universiti Tunku Abdul Rahman | Jan 2024 – Oct 2025 |
| <ul style="list-style-type: none">Department of Electrical and Electronic Engineering | |
| General Manager - Head of AI Research, Berjaya Corporation Berhad | Oct 2025 – Present |
| <ul style="list-style-type: none">Lead corporate AI research and innovation strategy, aligning advanced AI initiatives with Berjaya's long-term business objectives.Drive the application of agentic AI systems to optimize business operations, enhance decision-making efficiency, and unlock new value across diverse business units.Collaborate with executive leadership to integrate AI-driven insights into corporate strategy, digital transformation, and performance improvement initiatives.Oversee cross-functional AI projects from research to deployment, ensuring scalable and ethical implementation of emerging AI technologies. | |
| Adjunct Professor, Universiti Tunku Abdul Rahman | Nov 2025 – Oct 2027 |
| <ul style="list-style-type: none">Department of Electrical and Electronic Engineering | |

EDUCATION

- Bachelor Degree, Telecommunication Engineering, University of Malaya 2006 – 2010
- First class honours with CGPA of 3.85/4.00
- Doctor of Philosophy, Wireless Communications, University of Malaya 2011 – 2015
- Published three journal and one conference articles including one IEEE TVT

SKILLS

- Proven academic excellence with two fast-track programs: Standard3-to-Standard5 and Bachelor-to-PhD
- Competent with Linux: Shell Scripting, Hostapd, OpenVPN, GNU Radio, Traffic Control, OpenCV, Caffe, Tensorflow and OpenVINO
- Good programming skills: Matlab, C, C++, C#, Socket Programming and Python
- Strong skills in mathematical optimizations: Linear, Convex, Concave, Fractional and Numerical Programming
- Fluent in English, Mandarin, Cantonese, and Malay

SOCIETIES/MEMBERSHIPS

1. Professional Engineer (P20832), Electronic, Board of Engineers Malaysia Dec 2019 – Present
2. Professional Technologist (PT20040108), Electrical & Electronics Technology, Malaysia Board of Technologists April 2020 – Present
3. Huawei Certified ICT Associate (HCIA-AI) – Artificial Intelligence Expired 21 July 2023
4. Technical Program Committee
 1. 2019 IEEE 89th Vehicular Technology Conference (VTC 2019 Spring)
 2. 2020 International Conference On Green Energy, Environment And Sustainable Development (GEESD2020)
 3. 2020 13th International Conference On Computer And Electrical Engineering (ICCEE2020)
 4. 2021 International Workshop On Software Engineering And Applications (WSEA 2021)
 5. 2021 5th International Conference On Frontiers Of Sensors Technologies (ICFST 2021)
 6. 2021 3rd International Conference On Advanced Information Science And System (AISS 2021)
 7. 2021 4th International Conference On Sensors, Signal And Image Processing (SSIP 2021)
 8. The 5th International Conference On Biomedical Engineering 2021 (ICOBE 2021)
 9. 2021 IEEE 94rd Vehicular Technology Conference (VTC 2021 Fall)
 10. 2022 11th International Conference On Information And Electronics Engineering (ICIEE 2022)
 11. 2022 2nd International Conference On Electrical, Electronics And Computing Technology (EECT 2022)
 12. 2022 Asia Conference On Electrical, Power And Computer Engineering (EPCE 2022)
 13. 2022 International Conference On Advanced Electronics, Electrical and Green Energy (AEEGE 2022)
 14. 2022 The 15th International Conference On Computer And Electrical Engineering (ICCEE 2022)
 15. 2022 International Conference On Computational Science (ICCS 2022)
 16. 2022 5th International Conference On Sensors, Signal And Image Processing (SSIP 2022),
 17. 2022 International Conference On Electronics, Mechanical Engineering And Computer Science (EMECS 2022)

18. 7th International Conference On Emerging Trends In Electrical, Electronics & Instrumentation Engineering (EEI 2022)
19. 2022 7th International Conference On Mechatronics And Electrical Systems (ICMES 2022)
20. 2022 The 2nd International Workshop on Software Engineering and Applications (WSEA 2022)
21. 2022 6th International Conference on Frontiers of Sensors Technologies (ICFST 2022)
22. 3rd International Conference on Information Control, Electrical Engineering and Rail Transit (ICEERT 2023)
23. 2022 International Conference on Mechanical and Electronics Engineering (ICMEE2022)
24. 2023 3rd International Conference on Electrical, Electronics and Computing Technology (EECT 2023)
25. 2023 12th International Conference on Information and Electronics Engineering (ICIEE 2023)
26. 2023 The 16th International Conference on Computer and Electrical Engineering (ICCEE 2023)
27. Special Session 2, Computational intelligence and Transportation Systems (CITS 2023), Joint with 2023 8th International Conference on Business and Industrial Research (ICBIR 2023)
28. 2023 3rd International Conference on Signal Image Processing and Communication (ICSIPC 2023)
29. 2023 Asia Conference on Electronics, Circuits, Systems and Signal Processing (ECSSP 2023)
30. 2023 2nd International Conference on Algorithms, Data Mining, and Information Technology (ADMIT 2023)
31. 30th edition of the IEEE International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA 2023)
32. 2023 International Conference on Power, Electrical and Communication Engineering (CPECE 2023)
33. 2023 the 8th International Conference on Mechatronics and Electrical Systems (ICMES 2023)
34. 2023 International Conference on Computer Science, Electronics and Communications (CSEC 2023)
35. 2024 13th International Conference on Information and Electronics Engineering (ICIEE 2024)
36. 2023 International Conference on Electronics, Computers and Communication Technology (CECCT 2023)
37. The 1st International Conference on Innovations in Engineering, Science and Technology for Sustainable Development (ICEST2023)
38. The 7th International Conference on Software Engineering and Information Management (ICSIM 2024)
39. 2024 International Conference on Advanced Robotics, Automation Engineering and Machine Learning (ARAEML 2024)
40. 2024 13th International Conference on Information and Electronics Engineering (ICIEE 2024)
41. 2024 2nd International Conference on Automation, Control and Electronics Engineering (CACEE 2024)
42. The third International Conference on Green Energy, Computing and Sustainable Technology (GECOST 2024)
43. 7th International Conference on Sensors, Signal and Image Processing (SSIP2024)
44. 8th International Conference on Sensors, Signal and Image Processing (SSIP2025)
45. 2025 Vehicular Technology Conference (VTC) - Spring
46. 32nd IEEE International Symposium On The Physical And Failure Analysis Of Integrated Circuits (IPFA 2025)
47. 2024 100th IEEE Vehicular Technology Conference VTC2024-Fall

5. Session Chair

1. 2019 International Conference On Sustainable Innovation, Engineering And Technology (SIET 2019)
2. 2020 Adaptive Signal Processing Track, Asia-Pacific Signal And Information Processing Association (APSIPA) Conference
3. International Conference On Digital Transformation And Applications(ICDXA) 2020
4. 2020 13th International Conference On Computer And Electrical Engineering (ICCEE 2020)
5. 2021 4th International Conference On Artificial Intelligence And Big Data (ICAIBD 2021)
6. 2021 14th International Conference On Computer And Electrical Engineering (ICCEE 2021)
7. 2022 The 15th International Conference On Computer And Electrical Engineering (ICCEE 2022)
8. 2022 6th International Conference on Frontiers of Sensors Technologies (ICFST 2022)
9. 2022 6th International Conference on Automation, Control and Robots (ICACR 2022)

10. 2025 Second International Conference on Emerging Trends in Electric Machines, Power and Energy Systems (EMPOWER 2025)

6. Advisory Board, Virtual International Conference On Futuristic Communication And Network Technologies (VICFCNT 2021) July – Dec 2021
<https://chennai.vit.ac.in/files/vicfcnt/advisory-board.html>

7. Technical Committee, Intelligent Transport System (TC/G/3), Department of Standards Malaysia Mar 2022 – Present

8. Technical Programme Chair, WS-09: Intelligent Non-Terrestrial Networks (NTN) In Future 6G, 2023 IEEE Wireless Communications and Networking Conference (WCNC) Dec 2022 – Mar 2023
<https://wcnc2023.ieee-wcnc.org/workshop/ws-09-intelligent-non-terrestrial-networks-ntn-future-6g/committees>

9. Malaysian Delegate, The 35th Asia-Pacific Telecommunity (APT) Standardization Program Forum (ASTAP-35), 17 to 20 April 2023

- To promote, coordinate and harmonize telecommunication standardization activities across the Asia-Pacific region through regional cooperation.
- Contributed “Proposed Inclusion of New Use Case to APT Report on Local-Area Resilient Information Sharing and Communication Systems”
- Endorsed by The Ministry of Communications and Digital (KKD) and Malaysian Communications and Multimedia Commission (MCMC)
- In the Expert Group on Disaster Risk Management and Relief System (EG DRMR) of ASTAP Working Group Network and System (WG NS)

10. Malaysian Delegate, Malaysia Outstanding Young Chinese Entrepreneurs Programme, School of Continuing Education, Tsinghua University, All-China Federation of Returned Overseas Chinese, 15 to 20 October 2023

- Focused on the Belt and Road initiative and the development of the Guangdong-Hong Kong-Macao Greater Bay Area, Regional Comprehensive Economic Partnership (RCEP) and regional economic development, China's journey towards energy transition, the current state and future of artificial intelligence development, enterprise innovation thinking and innovation management, as well as the inheritance and innovation of traditional Chinese culture.
- https://mp.weixin.qq.com/s/ODxJVibLIISCENM59dppcQ?fbclid=IwAR3kKGvEyq-hbNEyZxMwhfPmDKCKEGihbv99Z_t58ubhp79DtfFkGXaYePs

11. Malaysian Delegate, The 36th Asia-Pacific Telecommunity (APT) Standardization Program Forum (ASTAP-36), 20 to 24 May 2024

- Proposed inclusion of more explanations to section 5.1.3.4 of apt report on local-area resilient information sharing and communication systems

12. Main Local Organizer Representative, Openmind AI Brainstorming Malaysia 2025, 29 May 2025

- Organized the high-level AI forum that involves Prof. Richard Sutton, the recipient of Turing Award 2024, as the keynote speaker.
- <https://news.utar.edu.my/news/2025/June/13/02/02.html>
- <https://news.utar.edu.my/news/2025/June/13/03/03.html>

13. ELITE@UM Fellow, University Malaya Nov 2025 – Present

AWARDS

1. Huawei–Malaysia Scholastic Platinum Award, 2010

- <https://www.pressreader.com/malaysia/the-star-malaysia/20100905/286916701331763>

2. Japan Student Services Organization (JASSO) Scholarship, 2011

- 3-month exchange student at Nagaoka University of Technology, Japan

3. Good Teaching Performance

1. 2016 UEEP0014 Remedial Physics
2. 2018 UEET2533 Information Theory and Coding
3. 2018 UEET2523 Digital Communications
4. 2018 UEEA4653 Computer Architecture
5. 2018 UEET4563 Mobile and Satellite Communications
6. 2019 UEET2533 Information Theory and Coding
7. 2022 UEET3513 Advanced Digital Communications
8. 2023 UEET3513 Advanced Digital Communications
9. 2024 UEEA2224 Deep Learning

4. Best Presentation (In-Person), Session B: Information Management and multimedia technology, Artificial Intelligence of Things (AIoT) for Disaster Monitoring using Wireless Mesh Network, 2023 the 6th International Conference on Big Data and Smart Computing (ICBDSC 2023), Palmerston North, New Zealand, Jan 31-Feb 2, 2023

https://www.nict.go.jp/en/asean_ivo/ide9n20000012pch-att/craflm0000000508.pdf

5. Best Presentation (Virtual), Online Session 1: Network Design and Application in Industrial Systems, Flood Forecasting using Edge AI and LoRa Mesh Network, 12th International Conference on Industrial Technology and Management (ICITM 2023), Cambridge, United Kingdom, 16-18 Feb, 2023,

<http://www.icitm.org/icitm2023.html>

6. Certificate of Excellence, Context-Aware Disaster Mitigation using Mobile Edge Computing and Wireless Mesh Network, Highest Project Evaluation Score among 17 ASEAN IVO Projects (3.88/4.00) as Project Leader, 15 Dec 2023.

<http://surl.li/owexj>

<https://news.utar.edu.my/awards/2023/December/22/03/03.html>

7. Best Presentation (In-Person), Session Day 1, Detecting Non-Injured and Injured Humans in Thermal Imaging using "YOLOv8," presented in International Conference on Computer & Applications (ICCA 2023), Cairo, Egypt, Nov 28-30, 2023

8. UTAR Research Excellence Award 2024, Cash Prize of RM 1,000, A Certificate of Acknowledgement and A Trophy

https://hr.utar.edu.my/UTAR_Staff_Awards_Ceremony_2025.php

9. First Place, IEEE BigData Cup Challenge 2024: Building Extraction Generalization Challenge 2024

<https://news.utar.edu.my/awards/2025/Jan/10/01/01.html>

<https://www.sinchew.com.my/?p=6225480>

10. Third Place, 8th WOSDETC Drone-vs-Bird Detection Grand Challenge, International Joint Conference on Neural Networks

https://news.utar.edu.my/awards/2025/July/23/01/01.html?fbclid=IwY2xjawLuneBleHRuA2FibQIxMQABHm1K-lXvGFmaXpVOE2lJol4j7dPpIJ_cGNcj30iZkC3OpCnEOZLM39yEkQaH_aem_16J0gwCnume5tQNnwqNs-g

11. Best Paper Award, Deep Reinforcement Learning Based Resource Allocation in O-RAN, 6th IEEE Industrial Electronics and Applications Conference (IEACon 2025)

<https://news.utar.edu.my/awards/2025/Sept/24/01/01.html>

12. First Place, Challenge on Cityscape Aerial Image Dataset for Object Detection, 2025 IEEE International Conference on Image Processing

<https://news.utar.edu.my/news/2025/Oct/08/04/04.html>

<https://www.thestar.com.my/metro/metro-news/2025/10/02/utar-doctoral-students-put-malaysia-on-ai-map>

13. IEEE Malaysia COMSOC/VTS Joint Chapter Best Paper Award 2025, Joint Aerial Base Station Placement and User Association for Latency-Driven Load Balancing in Aerial Mobile Networks

<https://news.utar.edu.my/awards/2026/Mar/05/01/01.html>

COMPETITIONS

1. Team Advisor, 1st Place Qualifier, Asian Region, Rohde & Schwarz Engineering Competition World League 2017, International Level
 - Qualified for the finals in Munich, Germany
 - Enhanced the performance of a DVB-T2 coder, based on the open source project GNU Radio, including optimizations for specific hardware architecture, while maintaining compliance with the DVB-T2 standard.
2. Team Advisor, 5th Place, Intel CREST Industry-University Challenge 2017, National Level
 - <http://kcfes.utar.edu.my/2018/03/28/utar-places-5th-in-intel-crest-industry-university-challenge-2017/>
3. Team Advisor, First Runner-Up, Huawei ICT Competition Malaysia 2018-2019, National Level
 - On-the-spot HCNA lab exam related to Routing & Switching, WLAN and Security
 - <https://news.utar.edu.my/awards/2019/9/9.html>
4. Team Advisor, Champion, Innovate Malaysia Design Competition 2019, National Level
 - IoT-Bus with Network Monitoring and Passenger Counting
 - Received RM 3,000
 - <https://digitalbadge.dreamcatcher.asia/certificate/XXxcvHgtF1X>
5. Team Advisor, Champion, Intel Industry University Challenge 2019, National Level
 - Smart transportation: Traffic Light and Street Light
 - Invited to participate CREST The Great Lab (TGL) Design Challenge 2019 with project seed fund of RM 1,500
 - <https://news.utar.edu.my/awards/2019/83/83.html>
6. Team Advisor, Champion, Innovate Malaysia Design Competition 2020, National Level
 - Accurate Positioning for DHL Express Delivery Package using LoRaWAN and A-GPS
 - Champion, MathWorks Track, RM 5,000 + Matlab & Simulink License
 - First Runner-Up, DHL Design Challenge, RM 500
 - https://www.youtube.com/watch?v=wKAwgwhsqz4&ab_channel=DreamCatcherAsia
7. Team Advisor, First Runner-Up, Intel CREST Industry University Challenge 2020, National Level
 - Smart City: Pandemic Management (Pre-Pandemic)
 - Two Garmin Forerunner 245
 - <https://news.utar.edu.my/awards/2020/Dec/18/01/01.html>
8. Team Advisor, First Runner-Up, Intel CREST Industry University Challenge 2021, National Level
 - Smart City Solutions Using Internet of Things Technology
 - Two Sony WH-1000XM4 headphone
 - <https://news.utar.edu.my/awards/2022/Feb/18/01/01.html>
9. Team Advisor, Global Finalist, Rohde & Schwarz Engineering Competition 2022, International Level
 - Machine Learning in Microwave Imaging to detect deviations in tablet blisters
 - <https://news.utar.edu.my/awards/2022/May/23/01/01.html>
10. Team Advisor, First Place, 2022 Intel Building Digital Readiness Program, National Level
 - Organized by the Kementerian Komunikasi dan Multimedia Malaysia, KKMM & CREST R&D Talent Development
 - Fire Detection and Monitoring System using Federated Learning Approach
 - One Intel NUC 11 Pro Kit NUC11TNKv5
 - https://news.utar.edu.my/awards/2022/Aug/02/01/01.html?fbclid=IwAR2EJWLk8qo2DDUEieGFbHIZL6SOF4tcqJ8pE0jIR340SBmhfVfLJf3_uBU
 - <https://www.thestar.com.my/news/education/2022/08/21/utar-designs-spark-imagination?fbclid=IwAR0xEiqE0Ww7uA-tJ4qb4PmDNSLjRtHEuw3b30aYJb1s2rSs0yuA6kgN5tc>
11. Team Advisor, Merit Award, The MSC Malaysia Asia-Pacific ICT Alliance Awards (MSC Malaysia APICTA Awards), International Level
 - Organized by Multimedia Development Corporation (MDeC) and The National ICT Association of Malaysia (PIKOM)
 - Application of Intelligent Gesture Control to Simultaneously Control Multiple Remote Devices

- <https://news.utar.edu.my/awards/2023/April/14/01/01.html>
12. Team Advisor, Merit Award, Engineering Innovation Challenge 2022, International Level
 - Organized by The Institution of Engineers, Singapore (IES) under the theme Artificial Intelligence for a Sustainable Future
 - Fire Detection and Monitoring System using Federated Learning Approach
 - Prize of SGD 1,500
 - <https://news.utar.edu.my/awards/2022/Dec/14/01/01.html>
 13. Team Advisor, Country Award Winner, Intel® AI Global Impact Festival 2022, International Level
 - Fire Detection and Monitoring System using Federated Learning Approach
 - Prize of USD 1,000
 - <https://news.utar.edu.my/awards/2022/Nov/14/01/01.html>
 14. Team Advisor, Champion, Huawei ICT Competition 2022-23 (National), National Level
 - Cloud track (cloud computing, cloud service, storage, big data and artificial intelligence)
 - Huawei MateBook D14
 - <https://news.utar.edu.my/awards/2022/Dec/07/02/02.html>
 15. Team Advisor, Winner, 2022 IEEE Malaysia Section Final Year Project Competition, National Level
 - Track 04: Recent Trends in Computational Intelligence
 - IoT Based Disaster Detection using Multi-Output Classification
 - <https://news.utar.edu.my/awards/2023/Feb/10/01/01.html>
 16. Team Advisor, Qualifier, Huawei ICT Competition 2022-23 (Asia Pacific), International Level
 - Cloud track (cloud computing, cloud service, storage, big data and artificial intelligence)
 - Qualified for Global Round (24-27 May 2023) at Shenzhen, China
 - <https://news.utar.edu.my/awards/2023/April/10/01/01.html?fbclid=IwAR1HfaepfkgS66jNZVi0kb3fHbZPyq-SB9sC2yyv1cYQSWzqwWVdiq5uR4k>
 - <https://www.sinchew.com.my/20230426/%E5%8D%8E%E4%B8%BAict%E5%A4%A7%E8%B5%9B%E4%BA%9A%E5%A4%AA%E5%8C%BA%E5%86%B3%E8%B5%9B-%E4%BC%98%E5%A4%A7%E7%94%9F%E8%8E%B7%E7%A7%91%E6%8A%80%E5%A5%B3%E6%80%A7%E5%A5%96/>
 17. Team Advisor, Third Prize, Huawei ICT Competition 2022-23 (Global Final), International Level
 - https://news.utar.edu.my/awards/2023/June/15/01/01.html?fbclid=IwAR1KNoK4YIHirz2psT8WmGN5Ma9oPRxLsO6Bxy9o_YWFSWVYubdqQ24QF78
 - <https://www.digitalnewsasia.com/business/utar-secures-third-place-huawei-ict-competition-2022-2023-global-final>
 18. Team Advisor, Champion, Huawei ICT Competition 2023-24 (National), National Level
 - Cloud track (cloud computing, cloud service, storage, big data and artificial intelligence)
 - Huawei MateBook D16
 - <https://news.utar.edu.my/awards/2023/December/27/01/01.html>
 - <https://www.chinapress.com.my/20240108/%E5%8D%8E%E4%B8%BAict%E8%B5%9B-%E4%BC%98%E5%A4%A7%E5%A4%BA2%E5%A5%96/>
 - https://www.thestar.com.my/news/education/2024/01/28/utar-students-to-represent-msia?fbclid=IwAR1QBfDW53zHDvR13qa7ARWoaV-J_4N7gTljuLUNh_S97rYfdR5reLOCC4I
 - <https://study.utar.edu.my/cn/%E5%AD%A6%E7%94%9F%E6%88%90%E5%B0%B1-2023---%E5%B9%B4%E5%8D%8E%E4%B8%BAICT%E7%AB%9E%E8%B5%9B%E4%BA%9A%E5%A4%AA%E5%8C%BA-%E9%A9%AC%E6%9D%A5%E8%A5%BF%E4%BA%9A%E8%B5%9B--LKC-FES%E8%8E%B7%E5%86%A0%E5%86%9B-.php>
 19. Team Advisor, First Place, IEEE BigData Cup Challenge 2024: Building Extraction Generalization Challenge 2024, International Level
 - Cross-City Building Instance Segmentation: From More Data to Diffusion-Augmentation
 - Won cash prize of USD 1,000
 - <https://www.sinchew.com.my/?p=6225480>
 - https://www.thestar.com.my/news/nation/2025/01/19/utar-duo-top-competition?fbclid=IwY2xjawlBMdBleHRuA2F1bQlxMQABHepjtjHFndLEQjuzcDOKyB2rLW3WtuoSnBi_rbPOPn2Jvf9tsZSWChvvDg_aem_DFA5EiNDCytK3LjA33N7Zw
 20. Team Advisor, Third Place, 8th WOSDETC Drone-vs-Bird Detection Grand Challenge, International Level
 - WRN-YOLO An Improved YOLO for Drone Detection using Wide ResNet

- https://news.utar.edu.my/awards/2025/July/23/01/01.html?fbclid=IwY2xjawLuneBleHRuA2FibQlxMQABHm1K-IXvGFmaXpVOE2IJoI4j7dPpJJ_cGNcj30iZkC3OpCnEOZLM39yEkQaH_aem_16J0gwCnume5tQNnwgNs-g

21. Team Advisor, First Place, Challenge on Cityscape Aerial Image Dataset for Object Detection, International Level

- 2025 IEEE International Conference on Image Processing (ICIP 2025)
- Tri-Axial Scaling in Aerial Object Detection: Model Size, Dataset Size and Quality, and Test-Time Inference in the Cadot Challenge
- <https://news.utar.edu.my/news/2025/Oct/08/04/04.html>

TALKS

1. Invited Panel, The Role of Intelligent Transportation, Forum Strategic Plan for Smart City Penang Island, Penang State Government 2019
2. Speaker, The Impact of ICT in Education, Teacher's Workshop in the Huawei ICT Academy Development Southern Pacific Region, 2019
<https://mp.weixin.qq.com/s/VpWy0zMFXPe5QJS52nGIQA?fbclid=IwAR33IHm1CLoCSOQswJEBziWq7QOaO3JQHVMGfRP4AthaVySgAUFwmMezkBY>
3. Presenter, Performance Study of Deep Learning Based Surveillance Systems, International Conference on Sustainable Innovation, Engineering and Technology, 2019
4. Invited Speaker, Deep Reinforcement Learning for Resource Allocation in 5G Communications, Asia-Pacific Signal and Information Processing Association (APSIPA) Conference, 2019
5. Speaker, Introduction To Artificial Intelligence, Duriane Professionals Sdn Bhd, 2020
6. Speaker, Webinar, The Power of Combining 5G and AI, 2020
<https://www.youtube.com/watch?reload=9&v=-sdsvK3pHgA>
7. Speaker, Guest Lecture, 4G Orthogonal Frequency Division Multiple Access, SRM Institute of Science and Technology (SRMIST), 2020
8. Speaker, IoT In Industry 4.0 For Electrical Engineers, SRM Institute of Science and Technology (SRMIST), 2021
9. Presenter, Double Deep Q-Network for Power Allocation in Cloud Radio Access Network, 2020 IEEE the 3rd International Conference on Computer and Communication Engineering Technology
10. Speaker, Context-Aware Disaster Mitigation Using Mobile Edge Computing and Wireless Mesh Network, 52nd Asia Pacific Advanced Network: IoT Working Group, 52nd Asia Pacific Advanced Network, Indonesia, 2021, https://whova.com/embedded/session/apan_202108/1757367/
11. Speaker, Let's Collaborate featuring Centre for Communication Systems and Networks (CCSN), IEEE Malaysia ComSoc/VTS Joint Chapter, 2021,
https://www.youtube.com/watch?v=duocsAYNqh4&list=PLbk6ocbPOxv-Q30ST-t9Y-EX4vqzVh2v9&index=2&ab_channel=IEEEMalaysiaComSocVTSJointChapter
12. Speaker, What We Can Learn From IoT Competition Projects, IET Student Chapter, 2021
13. Presenter, IoT Based License Plate Recognition System Using Deep Learning And OpenVINO, 2021 4th International Conference On Sensors, Signal And Image Processing, 2021
14. Speaker, Artificial Intelligence Of Things: When Ai Meets Iot, International Symposium On Recent Trends In Computing Technology (ISRTCT), 2021
15. Invited Panel, Forum on Implementation of IR 4.0 in Biogas Sector, Universiti Malaya, 2021
16. Trainer, Virtual Workshop On AI Using Python And OpenVINO, UTAR IEEE Student Branch And IEEE Council On RFID Malaysia Chapter, 2022
17. Speaker, 5G Trends in Telecommunications, Authority for Info-communications Technology Industry, Brunei, Jan 2022
18. Speaker, 5G: Career Prospect, Politeknik Ungku Omar, June 2022
19. Presenter, Efficient Device-Edge Inference for Disaster Classification, 2022 Thirteenth International Conference on Ubiquitous and Future Networks (ICUFN), July 2022
20. Speaker, What to Study in the area of AI, 5G and Big Data, Pejabat Pendidikan Daerah Hulu Langat, 23 July 2022
21. Speaker, The Importance of Edge Computing for IoT, Technological Association Malaysia, 24 Sep 2022
<https://www.tam.org.my/the-importance-of-edge-computing-for-iot/>
22. Presenter, Optimizing Deep Learning Inference to Detect PCB Soldering Defects, 2022 IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAET), Sep 2022
23. Exhibitor, Application of Artificial Intelligence of Things (AIoT), The 3rd Symposium on Railway Infrastructure & Engineering (SRIE), 13 Oct 2022

24. Presenter, Twin Delayed DDPG based Dynamic Power Allocation for Internet of Robotic Things, The 30th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2022)
25. Presenter, Artificial Intelligence of Things (AIoT) for Disaster Monitoring using Wireless Mesh Network, 2023 The 6th International Conference on Software Engineering and Information Management (ICSIM 2023), Jan 2023
26. Presenter, Flood Forecasting using Edge AI and LoRa Mesh Network, 12th International Conference on Industrial Technology and Management (ICITM 2023), Feb 2023
27. Invited Speaker (Fully Sponsored by Japan NICT), Integration of Artificial Intelligence (AI) and Internet of Things (IoT) for Disaster Resilient Smart Cities, [World BOSAI Forum 2023](#), 10-12 Mar 2023, Sendai, Japan
 - o <https://mercato.gr.jp/2023/02/28/post-16533/>
 - o Conducted site visit to Chikuma City and Shirahama Town
 - o <https://news.utar.edu.my/news/2023/July/28/03/01.html?fbclid=IwAR3ergMLnBfyKpWM1n0wbGsFWtz4cOtkqezw1k7AmXum78n0Xk2CJuPf3o>
28. Presenter, Performance Study of Disaster-Resilient Mesh Networking using NerveNet Wi-Fi and LoRa, 2023 6th Conference on Cloud and Internet of Things (CIoT), March 2023
29. Speaker, Panel discussion about future-oriented education from ChatGPT-Children's education in the era of artificial intelligence, Malaysia Children's Literature Association, May 2023
 - o <https://msiachild.org/event/ai/>
30. Presenter, Deep Reinforcement Learning Based Bus Stop-Skipping Strategy, The 38th International Technical Conference on Circuits/Systems, Computers, and Communications (ITC-CSCC), June 2023
31. Speaker, Deep Reinforcement Learning for Secrecy Energy-Efficient UAV Communication with Reconfigurable Intelligent Surface, Workshop of UAS and NTN towards 6G, July 2023
 - o https://www.eventbrite.com/e/uas-and-ntn-towards-6g-tickets-653956811427?aff=oddtcreator&fbclid=IwAR0-I_yf8wUR5dgYLLvqzHbZnRwWZQh38XQfkWW1XCcZIFVwRth7knrFHfw
32. Speaker, Internet of Things (IoT) Applications in Construction Industry, Mega Jati Academy, 16 Oct 2023
 - o <https://www.webinar.megajatiacademy.com/checkouts/iot-technologies-for-construction-industry/>
33. Exhibitor, Deep Learning based Person Counting, Kuala Lumpur Engineering Science Fair 2023, 27-29 Oct 2023.
34. Speaker, The Application of Deep Reinforcement Learning in ICT, University of West London, Virtual Guest Lecture, 10 Nov 2023.
35. Presenter, Detecting Non-Injured and Injured Humans in Thermal Imaging using YOLOv8," International Conference on Computer & Applications (ICCA 2023), 28 Nov 2023
36. Speaker, The Journey from Preliminary to Global Final in Huawei ICT Competition Cloud Track, Huawei Instructor Workshop, 21 March 2024
<https://www.mmu.edu.my/2024/03/fci-academic-shares-his-insights-on-professional-courses/>
37. Keynote Speaker, Using Internet of Things and Artificial Intelligence for Disaster Resilient Smart Cities, Emerging Trends in Electrical Machines, Power and Energy Systems (EMPOWER), 26 April 2024
<https://srmmp.edu.in/emerging-trends-in-electrical-machines-power-and-energy-systems-empower/>
38. Keynote Speaker, The Application of Deep Reinforcement Learning in Smart Cities, IEEE Symposium on Acoustics, Speech and Signal Processing (SASSP) 2024, 24 July 2024.
<https://sps.ieeemy.org/sassp-2024/>
39. Exhibitor, Deep Learning based Person Counting, Kuala Lumpur Engineering Science Fair 2024, 8-10 Nov 2024
40. Exhibitor, Smart Wearable Systems for Driver Health Monitoring, The 4th Symposium on Railway Infrastructure & Engineering (SRIE), 28 Nov 2024
41. Trainer, Huawei Certified ICT Associate-AI, <https://news.utar.edu.my/awards/2024/Dec/10/01/01.html>
42. Participant, Huawei ICT Academy Support Center (IASC) Instructor Workshop: Course Integration, 4 Dec 2024
43. Exhibitor, STEM, Sekolah Menengah Kebangsaan Bandar Baru Sungai Long, 17 July 2024
44. Presenter, Multi-Task YOLO for Vehicle Colour Recognition and Automatic License Plate Recognition," IEEE International Conference on Evolving and Adaptive Intelligent Systems 2024 (IEEE EAIS 2024), 23-24 May 2024.

45. Presenter, A Comparative Analysis of RT-DETR and YOLOv8 for Urban Zone Aerial Object Detection," 2024 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS), 29 June 2024
46. Presenter, Performance Evaluation of Vision Transformer and YOLOv8 in Plant Disease Classification," 2024 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS), 29 June 2024.
47. Presenter, Performance Evaluation of Video Streaming in Wireless Mesh Networks, 2024 IEEE 12th Conference on Systems, Process & Control (ICSPC), 7 Dec 2024.
48. Participant, The Sixth International Conference on Distributed Artificial Intelligence (DAI 2024), 18-22 Dec 2024
49. Speaker, Deep Reinforcement Learning in Smart Cities, Foreign Expert Lecture, School of Electronics Engineering, Vellore Institute of Technology (VIT), 12 Mar 2025
50. Speaker, Deep Reinforcement Learning for Secrecy Energy-Efficient UAV Communication with Reconfigurable Intelligent Surface, Academy Report, South China University of Technology, 23 April 2025 <https://www2.scut.edu.cn/ee/2025/0421/c35968a586921/page.htm>
51. Speaker, Challenges & Opportunities in the Era of Experience, Openmind AI Brainstorming, 29 May 2025
52. Presenter, WRN-YOLO An Improved YOLO for Drone Detection using Wide ResNet, International Joint Conference on Neural Networks 2025 (IJCNN 2025), 30 June 2025
53. Speaker, Feasibility Analysis of LoRa Mesh Network Deployment in Rural Areas, ASEAN IVO 10th Anniversary, 25 Sep 2025
https://www.nict.go.jp/en/asean_ivo/qhacf700000004nl-att/qhacf700000004yd.pdf
54. Speaker, Agentic AI & Automation, UM Elite Fellow Industry Talk, 8 Jan 2026
55. Speaker, Reinforcement Learning for LLMs in the ASEAN Context: Challenges and Opportunities, 2026 CHINA-ASEAN AI Capacity Building Training Program, jointly organized by the Federation of Engineering Institutions of Asia and the Pacific (FEIAP), The Institution of Engineers, Malaysia (IEM), Universiti Tunku Abdul Rahman (UTAR), Xiamen University Malaysia (XMUM), and the Chinese Association of Automation (CAA), 24 Jan 2026
https://www.sohu.com/a/978989052_121118938
<https://global.unair.ac.id/2026/01/13/2026-china-asean-ai-capacity-building-training-program/>
56. Participant, Openmind 2026 Winter Research Retreat, 31 Jan - 1 Feb 2026

MASS MEDIA

1. Radio FM, Ai FM, Discussed the 5G topics such as the potential applications of 5G and the status of 5G deployment in Malaysia, <https://rb.gy/xckcr0>, 2019
2. Newspaper, Oriental Daily News Malaysia, How 5G will affect our daily lives, <https://rb.gy/7dtuoi>, 2019
3. TV Show, 8TV, 8TV Chinese Talk Show called "Living Delight",
<https://www.youtube.com/watch?v=9OuZa7roQgc&feature=youtu.be>, 2020
4. Newspaper, Oriental Daily News Malaysia, Current Trend about 5G and Artificial Intelligence,
<https://rb.gy/j9drj>, 2020
5. Newspaper, Malaysia Sin Chew Daily, Received international grant from Japan,
https://www.sinchew.com.my/content/content_2250552.html, 2020
6. Newspaper, The Star, Received industry grant from Tin Industry (Research and Development) Board,
<https://www.thestar.com.my/news/education/2021/07/25/utar-to-develop-tin-tech-with-rm10k-grant?fbclid=IwAR2rDG69IeYnq7NpUUycBb3Ca5Ic7U-eTOeiVID85vDv3rgrlvBuarsSypo>, 2021
7. Newspaper, China Press, Badminton Friendly Match with China Press, 2023
<https://www.chinapress.com.my/20230407/%E7%BE%BD%E6%AF%9B%E7%90%83%E5%8F%8B%E8%B0%8A%E8%B5%9B-%E4%B8%AD%E5%9B%BD%E6%8A%A53-2%E6%8C%AB%E4%BC%98%E5%A4%A7/>
8. Newspaper, Sin Chew Daily, Badminton Friendly Match with Sin Chew, 2023
<https://metro.sinchew.com.my/20230415/%e7%ba%a6%e5%ae%9a%e6%af%8f%e5%b9%b4%e9%83%bd%e8%bf%9b%e8%a1%8c%e7%be%bd%e7%90%83%e5%88%87%e7%a3%8b-%e6%98%9f%e6%b4%b2%e4%bc%98%e5%a4%a7%e5%bc%80%e5%90%af%e5%8f%8b%e8%b0%8a%e4%b9%8b%e6%97%85/>
9. Newspaper, Sin Chew Daily, Huawei ICT Competition 2022-23 (Asia Pacific), 2023
<https://www.sinchew.com.my/?p=4637667>
10. Newspaper, Enanyang, Huawei ICT Competition 2022-23 (Global), 2023
<https://www.enanyang.my/%E6%96%87%E6%95%99/%E4%BC%98%E5%A4%A7%E5%9B%A2%E9%98%9F%E5%8F%82%E5%8A%A0%E5%8D%8E%E4%B8%BAict%E5%A4%A7%E8%B5%9B-%E8>

[%86%BA%E5%85%A8%E7%90%83%E6%80%BB%E5%86%B3%E8%B5%9B%E4%B8%89%E7%AD%89%E5%A5%96](#)

11. Newspaper, Enanyang, Highest ASEAN IVO Project Evaluation Score, 2023
<http://surl.li/owexj>
12. Newspaper, Enanyang, ACCCIM STI Competition 2024, Oct 2024
<https://www.enanyang.my/%E8%B4%A2%E7%BB%8F%E6%96%B0%E9%97%BB/%E5%BB%BA%E8%AE%AE%E6%9C%AA%E8%8E%B7%E5%9B%9E%E5%BA%94%C2%B7%E4%B8%AD%E6%80%BB%E5%B0%86%E8%87%B4%E5%87%BD%E5%AE%89%E5%8D%8E-%E5%86%80%E6%A3%80%E8%AE%A8%E5%A4%96%E5%8A%B3%E7%BC%B4%E5%85%AC%E7%A7%AF%E9%87%91>
13. Newspaper, Sin Chew Daily, Huawei ICT Competition 2024-25, Jan 2025
<https://www.sinchew.com.my/news/20250115/nation/6222672>
14. Newspaper, Sin Chew Daily, IEEE BigData Cup Challenge 2024, Jan 2025
<https://www.sinchew.com.my/?p=6225480>

PUBLICATIONS

Journal (* indicating Corresponding Author)

(26 ISI-Index Journal, 6 Scopus-index Journal, 19 as First or Corresponding Author)

1. Y.-H. Xu, C.-O. Chow, **M.-L. Tham**, and H. Ishii, "An Enhanced Framework for Providing Multimedia Broadcast/Multicast Service (MBMS) over Heterogeneous Networks," Journal of Zhejiang University-SCIENCE C (Q4 & IF 0.297), vol. 15, no. 1, pp. 63 – 80, Jan 2014. [10.1631/jzus.C1300205](https://doi.org/10.1631/jzus.C1300205)
2. **M.-L. Tham***, C.-O. Chow, M. Iwahashi, and H. Ishii, "BER-driven resource allocation for scalable bitstreams over OFDMA networks," IEEE Transactions on Vehicular Technology (Q1 & IF 2.642), vol. 63, no. 6, pp. 2755 – 2768, July 2014. [10.1109/TVT.2013.2295417](https://doi.org/10.1109/TVT.2013.2295417)
3. Y.-H. Xu, C.-O. Chow, G.-X. Kok, and **M.-L. Tham**, "A Load-aware Scheme for Providing Heterogeneous Multimedia Broadcast/Multicast Service (Het-MBMS)," Wireless Personal Communications (Q3 & IF 0.979), vol. 77, no. 3, pp. 2391 – 2414, Aug 2014. [10.1007/s11277-014-1628-z](https://doi.org/10.1007/s11277-014-1628-z)
4. **M.-L. Tham***, C.-O. Chow, Y.-H. Xu, K. N. Choong, and C. S. Lee, "Seamless handover between unicast and multicast multimedia streams," Journal of Zhejiang University-SCIENCE C (Q4 & IF 0.380), vol. 15, no. 10, pp. 929 – 942, Oct 2014. [10.1631/jzus.C1400052](https://doi.org/10.1631/jzus.C1400052)
5. **M.-L. Tham***, C.-O. Chow, and Y.-H. Xu, "Impact of Random Packet Arrival on the Performance of Video Streaming over OFDMA Downlink Systems," Wireless Personal Communications (Q4 & IF 0.653), vol. 85, no. 3, pp. 655 – 669, Dec 2015. [10.1007/s11277-015-2800-9](https://doi.org/10.1007/s11277-015-2800-9)
6. **M.-L. Tham***, C.-O. Chow, Y.-H. Xu, and N. Ramli, "Two-Level Scheduling for Video Transmission over Downlink OFDMA Networks," PLOS ONE (Q1 & IF 3.234), vol. 11, no. 2, pp. 1 – 15, Feb 2016. [10.1371/journal.pone.0148625](https://doi.org/10.1371/journal.pone.0148625)
7. Y.-H. Xu, W.-L. Wu, Y. Xu, **M.-L. Tham**, and N. Ramli, "A Framework of Fuzzy Control-Based Intelligent Control System for Greenhouse," Artificial Intelligence Research (Scopus Indexed), vol. 6, no. 1, pp. 1 – 5, 2017. [10.5430/air.v6n1p1](https://doi.org/10.5430/air.v6n1p1)
8. **M.-L. Tham***, S. F. Chien, D. W. Holtby and S. Alimov, "Energy-Efficient Power Allocation for Distributed Antenna Systems with Proportional Fairness," IEEE Transactions on Green Communications and Networking (N/A, Q2 & IF 3.525 for 2021), vol. 1, no. 2, pp. 145 – 157, June 2017. [10.1109/TGCN.2017.2697452](https://doi.org/10.1109/TGCN.2017.2697452)
9. C. H. Pu, E. M. A. Gnanamuthu, F. L. Lo and **M.-L. Tham**, "Robust Impulsive Noise Suppression Technique for Iterative Timing Recovery", ARPN Journal of Engineering and Applied Sciences (Scopus Indexed), vol. 14, no. 15, pp. 2716 – 2726, August 2019. http://www.arpnjournals.org/jeas/research_papers/rp_2019/jeas_0819_7863.pdf
10. C. H. Pu, E. M. A. Gnanamuthu, F. L. Lo and **M.-L. Tham**, "Reduced Complexity Per-Survivor Iterative Timing Recovery using Max-Log-MAP algorithm", International Journal of Information and Communication Technology (Scopus Indexed), vol. 17, no. 2, pp. 147 – 163, July 2020. [10.1504/ijict.2020.108964](https://doi.org/10.1504/ijict.2020.108964)
11. **M.-L. Tham***, J. L. Foo, Y. C. Chang, E. Morris and N. Ramli, "Performance Study of Deep Learning Based Surveillance Systems", International Journal of Advanced Science and Technology (Scopus Indexed), vol. 29, no. 1, pp. 206 – 212, Jan 2020. <http://sersc.org/journals/index.php/IJAST/article/view/2990>
12. A. Iqbal, **M.-L. Tham*** and Y. C. Chang, "Double Deep Q-Network based Energy-Efficient Resource Allocation in Cloud Radio Access Network", IEEE Access (Q1 & IF 3.745), vol. 9, pp. 20440-20449, Jan 2021. [10.1109/ACCESS.2021.3054909](https://doi.org/10.1109/ACCESS.2021.3054909)

13. W.H. Png, H.S. Lin, C.H. Pua, **M.-L. Tham** and F. A. Rahman, "An Adaptive Leak Localization System based on a Multi-level Analytics framework in a Piping Network", *International Journal of Sensor Networks* (Q4 & IF 1.302), vol. 36, no. 3, pp. 146 – 158, July 2021. [10.1504/IJSNET.2021.117231](https://doi.org/10.1504/IJSNET.2021.117231)
14. A. Iqbal, **M.-L. Tham*** and Y. C. Chang, "Resource Allocation for Joint Energy and Spectral Efficiency in Cloud Radio Access Network based on Deep Reinforcement Learning", *Transactions on Emerging Telecommunications Technologies* (Q3 & IF 2.638), vol. 33, no. 4, Dec 2021. [10.1002/ett.4417](https://doi.org/10.1002/ett.4417)
15. A. Iqbal, **M.-L. Tham*** and Y. C. Chang, "Convolutional Neural Network-Based Deep Q-Network (CNN-DQN) Resource Management in Cloud Radio Access Network", *China Communications* (Q3 & IF 3.170), vol. 19, no. 10, pp. 129 – 142, Oct 2022. [10.23919/JCC.2022.00.025](https://doi.org/10.23919/JCC.2022.00.025)
16. Y. J. Wong, **M.-L. Tham***, B.H. Kwan, E. M. Abraham, and Y. Owada, "An Optimized Multi-Task Learning Model for Disaster Classification and Victim Detection in Federated Learning Environments", *IEEE Access* (Q2 & IF 3.476), vol. 10, pp. 115930-115944, Nov 2022. [10.1109/ACCESS.2022.3218655](https://doi.org/10.1109/ACCESS.2022.3218655)
17. Y. J. Wong, **M.-L. Tham***, B.H. Kwan, and Y. Owada, "FedDdrl: Federated Double Deep Reinforcement Learning for Heterogeneous IoT with Adaptive Early Client Termination and Local Epoch Adjustment", *Sensors* (Q2 & IF 3.847), vol. 23, no. 5, Feb 2023, <https://doi.org/10.3390/s23052494>
18. H. Kabir, **M.-L. Tham***, and Y. C. Chang, "Twin Delayed DDPG based Dynamic Power Allocation for Mobility in IoRT," *Journal of Communications Software and Systems* (Scopus Indexed), vol. 19, no. 1, pp. 19-29, March 2023, [10.24138/jcomss-2022-0141](https://doi.org/10.24138/jcomss-2022-0141)
19. B. H. Woo, **M.-L. Tham** and S. Y. Chua, "Adaptive Coarse-to-fine Single Pixel Imaging With Generative Adversarial Network Based Reconstruction, *IEEE Access* (Q2 & IF 3.476), vol. 11, pp. 31024-31035, Mar 2023. [10.1109/ACCESS.2023.3262165](https://doi.org/10.1109/ACCESS.2023.3262165)
20. O. R. A. Almanifi, C.-O. Chow, **M.-L. Tham**, J. H. Chuah, and J. Kanesan, "Communication and computation efficiency in Federated Learning: A survey", *Internet of Things* (Q1 & IF 5.711), vol. 22, July 2023, <https://doi.org/10.1016/j.iot.2023.100742>
21. H. Kabir, **M.-L. Tham***, Y. C. Chang, C.-O. Chow, and Y. Owada, "Mobility-Aware Resource Allocation in IoRT network for Post-Disaster Communications with Parameterized Reinforcement Learning", *Sensors* (Q2 & IF 3.847), vol. 23, no. 14, July 2023, <https://doi.org/10.3390/s23146448>
22. S.Q. Jiang, Y.L. Lee, **M.-L. Tham**, Y.C. Chang, A. Sim and D. Qin, "Proportional-Fair Load Balancing with Statistical Quality of Service Provisioning for Aerial Base Stations," *ETRI Journal* (Q4 & IF 1.622), Aug 2023, vol. 45, no. 5, pp. 1-12, <https://doi.org/10.4218/etrij.2023-0035>
23. W.S. Chong, Y.L. Lee, **M.-L. Tham**, Y.C. Chang, F. Ke, N. Ramli and L.-C. Wang, "Maximizing Effective Energy Efficiency for Wireless-Powered BackCom Networks," *IEEE Communications Letters* (Q2 & IF 3.553), vol. 27, no. 8, pp. 2093-2097, Aug 2023, [10.1109/LCOMM.2023.3283105](https://doi.org/10.1109/LCOMM.2023.3283105)
24. A. Iqbal, **M.-L. Tham***, Y. J. Wong, A.-H. ALA'A, G. Wainer, Y. X. Zhu and T.Dagiuklas, "Empowering Non-Terrestrial Networks with Artificial Intelligence: A Survey, *IEEE Access* (Q2 & IF 3.476), vol. 11, pp. 100986 - 101006, Sep 2023, [10.1109/ACCESS.2023.3314732](https://doi.org/10.1109/ACCESS.2023.3314732)
25. H. Kabir, **M.-L. Tham***, and Y. C. Chang, "Internet of Robotic Things for Mobile Robots: Concepts, Technologies, Challenges, Applications, and Future Directions," *Digital Communications and Networks* (Q1 & IF 6.348), vol. 9, no. 6, pp. 1265-1290, Dec 2023, <https://doi.org/10.1016/j.dcan.2023.05.006>
26. N. T. Sze Yang, **M.-L. Tham***, S. Y. Chua, and Y. Loong Lee, "Accurate and fast classification of natural disasters using CNN-LSTM and inference acceleration," *Journal of Communications Software and Systems* (Scopus Indexed), vol. 20, no. 1, pp. 58-68, Jan 2024, doi: [10.24138/jcomss-2023-0129](https://doi.org/10.24138/jcomss-2023-0129)
27. W. L. Tey, **M.-L. Tham**, Y.-N Phua and S. Y. Chua, "Self Adaptive Sampling for Fourier Single-Pixel Imaging Using Probability Estimation," *Journal of Electronic Imaging* (Q4 & IF 1.1), vol. 33, no. 2, pp. 1-18, April 2024 <https://doi.org/10.1117/1.JEI.33.2.023044>
28. Z.Y. Li, B.H. Kwan, **M.-L. Tham**, and O.-E. Ng, "Abnormal Detection of Commutator Surface Defects Based on YOLOv8," *International Journal of Pattern Recognition and Artificial Intelligence* (Q4 & IF 0.9), vol. 38, no. 12, August 2024, doi: [10.1142/S0218001424500137](https://doi.org/10.1142/S0218001424500137)
29. Y. J. Wong, **M.-L. Tham***, B.H. Kwan, and A. Iqbal, "Addressing Environmental Stochasticity in Reconfigurable Intelligent Surface aided Unmanned Aerial Vehicle Networks: Multi-Task Deep Reinforcement Learning based Optimization for Physical Layer Security," *Internet of Things* (Q1 & IF 6.0), vol. 27, Oct 2024, <https://doi.org/10.1016/j.iot.2024.101270>
30. H. Kabir, **M.-L. Tham***, Y. C. Chang and C.-O. Chow, "Deep Reinforcement Learning based Mobility Management in an MEC-Enabled Cellular IoT Network," *Pervasive and Mobile Computing* (Q2 & IF 3.0), vol. 105, Dec 2024. <https://doi.org/10.1016/j.pmcj.2024.101987>
31. Y. J. Wong, **M.-L. Tham***, B. H. Kwan, Y. C. Chang and F. Ke, "Efficient Client Selection for Asynchronous Federated Learning for Adaptive Bitrate Streaming", *Transactions on Multimedia Computing Communications and Applications* (Q1 & IF 6.0), vol. 21, no. 12, pp. 1-22, Nov 2025, <https://dl.acm.org/doi/10.1145/3765759>
32. W. L. Tey, **M.-L. Tham**, Y. N. Phua, L. Liu, and S. Y. Chua, "Training-free spectrum sampling strategy in Fourier single-pixel imaging via Deep Image Prior", *Optics Communications* (Q2 & IF 2.5), vol. 596, Dec 2025, <https://doi.org/10.1016/j.optcom.2025.132502>

33. S.Q. Jiang, Y. L. Lee, **M.-L. Tham**, Y. C. Chang, Y. K. Tee and D.H. Qin, "Joint Aerial Base Station Placement and User Association for Latency-Driven Load Balancing in Aerial Mobile Networks", IEEE Internet of Things Journal (Q1 & IF 8.9), vol. 12, no. 24, pp. 53538-53552, 15 December 2025, [10.1109/JIOT.2025.3617469](https://doi.org/10.1109/JIOT.2025.3617469)

Conference

1. K. N. Choong, C. S. Lee, **M.-L. Tham**, and C.-O. Chow, "Prototype implementation of a connection handover system for video streaming with different delivery methods," in Proc. Asia-Pacific Conference on Communications (APCC), 2-5 Oct. 2011. [10.1109/APCC.2011.6152916](https://doi.org/10.1109/APCC.2011.6152916)
2. **M.-L. Tham**, C.-O. Chow, K. Utsu, and H. Ishii, "BER-driven resource allocation in OFDMA systems," in Proc. IEEE 24th Personal Indoor and Mobile Radio Communications (PIMRC), London, 8-11 Sept. 2013. [10.1109/PIMRC.2013.6666381](https://doi.org/10.1109/PIMRC.2013.6666381)
3. S. F. Chien, **M.-L. Tham**, T. O. Ting, and K. S. Kim, "Energy-Aware Subchannel Assignment in OFDMA Systems with Proportional Rate Constraints," 24th Wireless and Optical Communication Conference (WOCC), Taiwan, June 2015. [10.1109/WOCC.2015.7346195](https://doi.org/10.1109/WOCC.2015.7346195)
4. K. N. Choong, D. Naghshbandi, **M.-L. Tham**, and H. H. M. Shariff, "Wireless Presentation Management System," in Proc. The Fourth International Conference on E-Learning and E-Technologies in Education (ICEEE2015), Indonesia, Sep. 2015. https://www.academia.edu/15572866/Wireless_Presentation_Management_System
5. **M.-L. Tham**, A. Iqbal, and Y. C. Chang, "Deep Reinforcement Learning for Resource Allocation in 5G Communications," in Proc. Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC) 2019, China, 18-21 Nov. 2019. [10.1109/APSIPAASC47483.2019.9023112](https://doi.org/10.1109/APSIPAASC47483.2019.9023112)
6. A. Iqbal, **M.-L. Tham** and Y. C. Chang, Double Deep Q-Network for Power Allocation in Cloud Radio Access Network, in Proc. 2020 IEEE 3rd International Conference on Computer and Communication Engineering Technology (CCET), China, pp. 272-277, 14-18 Aug 2020. [10.1109/CCET50901.2020.9213138](https://doi.org/10.1109/CCET50901.2020.9213138)
7. W.H. Png, C.H. Pua and **M.-L. Tham**, Multiple Paths Leak Localization System in Water Distribution Network, in Proc. SSIP 2020: 2020 3rd International Conference on Sensors, Signal and Image Processing, Prague Czech Republic, pp. 70-74, 9-11 Oct 2020. <https://doi.org/10.1145/3441233.3441243>
8. A. Iqbal, **M.-L. Tham** and Y. C. Chang, Energy- and Spectral- Efficient Optimization in Cloud RAN based on Dueling Double Deep Q-Network, in Proc. 2021 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS 2021), Malaysia, pp. 311-316, 26 June 2021. [10.1109/I2CACIS52118.2021.9495912](https://doi.org/10.1109/I2CACIS52118.2021.9495912)
9. **M.-L. Tham** and W.K. Tan, "IoT Based License Plate Recognition System Using Deep Learning and OpenVINO," in Proc. 2021 4th International Conference on Sensors, Signal and Image Processing (SSIP), pp. 7-14, 22-24 October 2021. <https://doi.org/10.1145/3502814.3502816>
10. M.M. Sein, J. Phyto, **M.-L. Tham**, Y. Owada, N. Ramli and S. Poomrittigul, Effective Evacuation Route Strategy for Emergency, in Proc. 2021 IEEE 10th Global Conference on Consumer Electronics (GCCE), Oct 2021, pp. 764-765, [10.1109/GCCE53005.2021.9621935](https://doi.org/10.1109/GCCE53005.2021.9621935)
11. N.H.Z. Lim, Y.L. Lee, **M.-L. Tham**, Y.C. Chang, A. Sim and D. Qin, "Coverage Optimization for UAV Base Stations using Simulated Annealing", 2021 IEEE 15th Malaysia International Conference on Communication (MICC), Kuala Lumpur, pp. 43-48, 1-2 Dec 2021. [10.1109/MICC53484.2021.9642136](https://doi.org/10.1109/MICC53484.2021.9642136)
12. **M.-L. Tham**, Y.J. Wong, B.H. Kwan, Y. Owada, M.M. Sein, and Y.C. Chang, Joint Disaster Classification and Victim Detection using Multi-Task Learning, in Proc. 2021 IEEE 12th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), 2021, pp. 0407-0412, [10.1109/UEMCON53757.2021.9666576](https://doi.org/10.1109/UEMCON53757.2021.9666576)
13. B. H. Woo, **M.-L. Tham** and S. Y. Chua, "Deep Learning Based Single Pixel Imaging Using Coarse-to-fine Sampling," 2022 IEEE 18th International Colloquium on Signal Processing & Applications (CSPA), May 2022, pp. 127-131, [10.1109/CSPA55076.2022.9781926](https://doi.org/10.1109/CSPA55076.2022.9781926)
14. N. T. Sze Yang, **M.-L. Tham**, S. Y. Chua, Y. Loong Lee, Y. Owada and S. Poomrittigul, "Efficient Device-Edge Inference for Disaster Classification", 2022 Thirteenth International Conference on Ubiquitous and Future Networks (ICUFN), July 2022, pp. 314-319, [10.1109/ICUFN55119.2022.9829668](https://doi.org/10.1109/ICUFN55119.2022.9829668)
15. H. Kabir, **M.-L. Tham**, and Y. C. Chang, "DRL based Energy-Efficient Radio Resource Allocation Algorithm in Internet of Robotic Things", 2022 IEEE Symposium on Wireless Technology & Applications (ISWTA), Aug 2022, pp. 104-109, [10.1109/ISWTA55313.2022.9942743](https://doi.org/10.1109/ISWTA55313.2022.9942743)
16. **M.-L. Tham**, B. Y. Chong, Y. H. Tan, Y. K. Wong, S. L. Chean, and W. K. Tan, "Optimizing Deep Learning Inference to Detect PCB Soldering Defects", in Proc. 2022 IEEE International Conference on

- Artificial Intelligence in Engineering and Technology (IICAET), Kota Kinabalu, 13-15 Sep 2022, [10.1109/IICAET55139.2022.9936776](https://doi.org/10.1109/IICAET55139.2022.9936776)
17. H. Kabir, **M.-L. Tham**, and Y. C. Chang, "Twin Delayed DDPG based Dynamic Power Allocation for Internet of Robotic Things", in Proc. The 30 th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2022), Croatia, 22-24 Sep 2022, [10.23919/SoftCOM55329.2022.9911277](https://doi.org/10.23919/SoftCOM55329.2022.9911277)
 18. **M.-L. Tham**, Y. J. Wong, A. Iqbal, N. Ramli, Y. X. Zhu, and T. Dagiuklas, "Deep Reinforcement Learning for Secrecy Energy-Efficient UAV Communication with Reconfigurable Intelligent Surface," IEEE Wireless Communications and Networking Conference (WCNC), Glasgow, United Kingdom, March 2023, pp. 1-6, [10.1109/WCNC55385.2023.10118891](https://doi.org/10.1109/WCNC55385.2023.10118891)
 19. W. L. Tey, **M.-L. Tham**, Y.-N Phua and S. Y. Chua, "Adaptive Fourier Single-Pixel Imaging Based on Probability Estimation," in Proc. the 18th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISAPP 2023), vol. 4, Lisbon, 19-21 Feb 2023, [10.5220/0011658300003417](https://doi.org/10.5220/0011658300003417)
 20. **M.-L. Tham**, Y. J. Wong, B.-H. Kwan, X. H. Ng, and Y. Owada, "Artificial Intelligence of Things (AIoT) for Disaster Monitoring using Wireless Mesh Network", in Proc. 2023 The 6th International Conference on Software Engineering and Information Management (ICSIM 2023), January 31–February 02, 2023, Palmerston North, New Zealand, pp. 234-239, [10.1145/3584871.3584905](https://doi.org/10.1145/3584871.3584905)
 21. **M.-L. Tham**, X. H. Ng, R.-C. Leong and Y. Owada, Flood Forecasting Using Edge AI and LoRa Mesh Network. In: Wang, CC., Nallanathan, A. (eds) 6th International Conference on Signal Processing and Information Communications. ICSPIC 2023. Signals and Communication Technology. Springer, Cham. https://doi.org/10.1007/978-3-031-43781-6_7
 22. **M.-L. Tham**, C. H. Lean, W.-S. Lim, R.-C Leong, Y. Owada, and M. M. Sein, "Performance Study of Disaster-Resilient Mesh Networking using NerveNet Wi-Fi and LoRa, in Proc. 2023 6th Conference on Cloud and Internet of Things (CIoT), Lisbon, Portugal, 20 - 23 March 2023, pp. 219-224, [10.1109/CIoT57267.2023.10084890](https://doi.org/10.1109/CIoT57267.2023.10084890)
 23. M. Enoch, **M.-L. Tham**, and K.-C. Khor, "Evaluating classifiers' performance on a consolidated DDoS data set, in Proc. The 1st International Conference On Frontier Of Digital Technology Towards A Sustainable Society, 22 May 2023, vol. 2808, no. 1, <https://doi.org/10.1063/5.0133063>
 24. P.-A. Somnuk, T.S. Jiann, K. C. Khor, **M.-L. Tham**, Y.-W. Chong, M. Omar, I. Mashud, N. F. Ibrahim and M. N. Yusoff (2023), "Non-GPS-Based ETA Models Constructed From Historical GPS Data and Traffic Contexts", in Proc. 8th International Conference on Business and Industrial Research (ICBIR 2023), Thailand, 18-19 May 2023. [10.1109/ICBIR57571.2023.10147536](https://doi.org/10.1109/ICBIR57571.2023.10147536)
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 26. **M.-L. Tham**, B.-S. Tay, K. C. Khor, and P.-A. Somnuk, "Deep Reinforcement Learning Based Bus Stop-Skipping Strategy", in Proc. The 38th International Technical Conference on Circuits/Systems, Computers, and Communications (ITC-CSCC), 25-28 June 2023, Korea, [10.1109/ITC-CSCC58803.2023.10212607](https://doi.org/10.1109/ITC-CSCC58803.2023.10212607)
 27. W.S. Chong, Y.L. Lee, **M.-L. Tham**, Y.C. Chang, F. Ke, N. Ramli and L.-C. Wang, "Power Allocation for 6G Networks with Backscatter-Enabled D2D Communications," in Proc. The 2023 IEEE Global Communications Conference (GLOBECOM), 04-08 Dec 2023, [10.1109/GLOBECOM54140.2023.10436794](https://doi.org/10.1109/GLOBECOM54140.2023.10436794)
 28. **M.-L. Tham**, T.H. Cham, and B.-H. Kwan, "Detecting Non-Injured and Injured Humans in Thermal Imaging using YOLOv8," 2023 International Conference on Computer and Applications (ICCA), Cairo, Egypt, 2023, pp. 1-5, doi: [10.1109/ICCA59364.2023.10401590](https://doi.org/10.1109/ICCA59364.2023.10401590)
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 30. Y.-L. Khor, Y. J. Wong, **M.-L. Tham**, Y. C. Chang, B.-H. Kwan and K.-C. Khor, "Multi-Task YOLO for Vehicle Colour Recognition and Automatic License Plate Recognition," IEEE International Conference on Evolving and Adaptive Intelligent Systems 2024 (IEEE EAIS 2024), 23-24 May 2024, [10.1109/EAIS58494.2024.10570013](https://doi.org/10.1109/EAIS58494.2024.10570013)
 31. E. T. J. Lai, **M.-L. Tham**, and B.-H. Kwan, "A Comparative Analysis of RT-DETR and YOLOv8 for Urban Zone Aerial Object Detection," 2024 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS), 29 June 2024, [10.1109/I2CACIS61270.2024.10649836](https://doi.org/10.1109/I2CACIS61270.2024.10649836)
 32. J.-Y. Cheng, **M.-L. Tham**, B.-H. Kwan and C. K. F. Wong, "Performance Evaluation of Vision Transformer and YOLOv8 in Plant Disease Classification," 2024 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS), 29 June 2024, [10.1109/I2CACIS61270.2024.10649856](https://doi.org/10.1109/I2CACIS61270.2024.10649856)

33. M. S. C, Thomas, **M.-L. Tham**, Y. J. Wong and Y. C. Chang, "Performance Evaluation of Video Streaming in Wireless Mesh Networks, 2024 IEEE 12th Conference on Systems, Process & Control (ICSPC), 7 Dec 2024, [10.1109/ICSPC63060.2024.10862838](https://doi.org/10.1109/ICSPC63060.2024.10862838)
34. W L Tey, S. Y. Chua, **M.-L. Tham** and Y.-N. Phua, Fourier Single Pixel Imaging Reconstruction using Deep Image Prior, Proceedings of the 2024 7th Artificial Intelligence and Cloud Computing Conference (AICC 24), 14-16 Dec 2024, <https://doi.org/10.1145/3719384.3719415>
35. Y. J. Wong, Y. L. Khor, **M.-L. Tham**, B.-H. Kwan, A. Mokraoui, and Y. C. Chang, "Cross-City Building Instance Segmentation: From More Data to Diffusion-Augmentation," 2024 IEEE International Conference on Big Data (BigData), 15-18 December 2024, [10.1109/BigData62323.2024.10825702](https://doi.org/10.1109/BigData62323.2024.10825702)
36. C. R. Qiu, L. D. Simone, Y. X. Zhu, **M.-L. Tham**, and T. Dagiuklas, "Coverage Optimization Approach in Aerial-Ground Integrated Wireless Networks", 2025 IEEE International Conference on Communications (ICC), 08-12 June 2025, [10.1109/ICC52391.2025.11161611](https://doi.org/10.1109/ICC52391.2025.11161611)
37. M. F. Khalid, Y.J. Wong, **M.-L. Tham**, S. H. Baharom, H. Ahmad, and M. N. M. Sehmi, Feasibility Analysis of LoRa Mesh Network Deployment in Rural Areas, 10th IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS2025), 27-28 June 2025, [10.1109/I2CACIS65476.2025.11101101](https://doi.org/10.1109/I2CACIS65476.2025.11101101)
38. WRN-YOLO An Improved YOLO for Drone Detection using Wide ResNet, International Joint Conference on Neural Networks 2025 (IJCNN 2025), 30 June 2025 - 05 July 2025, [10.1109/IJCNN64981.2025.11229346](https://doi.org/10.1109/IJCNN64981.2025.11229346)
39. Y. J. Wong, J. J. Tan, **M.-L. Tham**, B.-H. Kwan, and Y. C. Hum, Tri-Axial Scaling in Aerial Object Detection: Model Size, Dataset Size and Quality, and Test-Time Inference in the Cadot Challenge, 2025 IEEE International Conference on Image Processing Workshops (ICIPW), 14-17 September 2025, [10.1109/ICIPW68931.2025.11386287](https://doi.org/10.1109/ICIPW68931.2025.11386287)
40. X. Y. Tan, **M.-L. Tham**, Y. L. Lee, C. O. Chow, Y. J. Wong and C. H. Pu, "Deep Reinforcement Learning Based Resource Allocation in O-RAN", 6th IEEE Industrial Electronics and Applications Conference (IEACon 2025), 08-09 September 2025, [10.1109/IEACon64690.2025.11253720](https://doi.org/10.1109/IEACon64690.2025.11253720)
41. Y.L. Khor, Y. J. Wong, and **M. L. Tham**, "Generalized Real-Time Road Damage Detection using Ensemble YOLO", 2025 IEEE 15th International Conference on System Engineering & Technology (ICSET 2025), 4 October 2025, [10.1109/ICSET65917.2025.11283866](https://doi.org/10.1109/ICSET65917.2025.11283866)
42. S.F. Chien, Y. J. Wong, and **M. L. Tham**, "Sum Secrecy Rate Optimization in UAV Communications Using Quantum Actor-Critic Reinforcement Learning", The 2025 IEEE Global Communications Conference (GLOBECOM), accepted on 1 Sep 2025.
43. S. Rajkumar, **M. L. Tham**, M. V. Sathappan, S.T. Sathagan, and A. Rathish, "Sustainable Smart Lock for Vehicle Rentals in Controlled Environment", 2025 Innovations in Power and Advanced Computing Technologies (i-PACT), 25-26 September 2025 [10.1109/i-PACT65952.2025.11307942](https://doi.org/10.1109/i-PACT65952.2025.11307942)
44. Y. Liu, F. Ke, G. Zhang, **M. L. Tham**, and Xiu Yin Zhang, "Deep Reinforcement Learning for Accurate Sensing in NOMA-aided ISAC Systems", 2026 IEEE 103rd Vehicular Technology Conference (VTC2026-Spring), 9 - 12 June 2026. Accepted.

Patent

1. **M.-L. Tham**, K. N. Choong, D. Naghshbandi, M. H. M. Shariff, 2015. A System and Method for Distributing Presentation Content. Intellectual Property Corporation of Malaysia (MyIPO) Patent Application PI 2015704648, filed 18 December 2015. Published 18 June 2017. Granted 21 Aug 2020. Expiry Date: 18 Dec 2035. <http://patentscope.wipo.int/search/en/detail.jsf?docId=MY203072539>
2. K. N. Choong, D. Naghshbandi, M. H. M. Shariff, **M.-L. Tham**, 2016. A System and Method for Assisted Presentation. Intellectual Property Corporation of Malaysia (MyIPO) Patent Application PI 2016001701, filed 20 September 2016. Published 20 March 2018, Granted 24 Aug 2022, Expiry Date: 20 Sep 2036. <http://patentscope.wipo.int/search/en/detail.jsf?docId=MY224203678>

Book Chapter

1. **M.-L. Tham**, S. F. Chien. (2017). Chapter 4: Energy-Efficient Power Allocation with Hard Proportional Rate Guarantee in OFDMA Systems. In Julian E. Perez (Ed.), Energy Efficiency: Performance, Improvement Strategies and Future Directions. pp. 43-64, New York, NY: NOVA Science Publishers. <https://www.amazon.com/Energy-Efficiency-Performance-Improvement-Strategies/dp/153611040X>

Magazine

1. V.J. Chew, **M.-L. Tham**, Y.C. Chang, Intelligent Transportation Systems with Network Monitoring and Passenger Recognition, The Institution of Engineers Malaysia (IEM) Bulletin December 2019. <http://dspace.unimap.edu.my/xmlui/bitstream/handle/123456789/64115/Intelligent%20transportation%20systems%20with%20networks%20monitoring%20and%20passenger%20recognition.pdf?sequence=1&isAllowed=y>

RESEARCH FUNDING

(14 as Principal Investigator)

1. QoS-Constraint Resource Allocation Algorithm Based on Lagrangian Relaxation for OFDMA Networks, Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia, 1 August 2016 – 31 July 2018, Co-Investigator, National, RM 70,943.40
2. Energy-Efficient Optimization for Multiuser Video Transmission over Wireless Networks, UTAR Research Fund (UTARRF), UTAR, Malaysia, 20 December 2016 – 19 December 2017, **Principal Investigator**, Internal, RM 40,200
3. Energy Efficient Robust Transmission of 3D Video over Wireless Networks, Embassy of France to Malaysia, 1 October 2017 – 30 September 2018, Co-Investigator, National, € 7380
4. Study and Evaluation of Heterogeneous Network for Smart Community and Smart City Applications, ICT Virtual Organization of ASEAN Institutes and NICT (ASEAN IVO), June 2017 – June 2019, Co-Investigator, **International**, USD 80,000
5. On the Duality Gap in Energy Efficiency Maximization for Green Cellular Networks, UTAR Research Fund (UTARRF), UTAR, Malaysia, 1 January 2018 – 31 December 2018, **Principal Investigator**, Internal, RM 49,600
6. Resource Allocation for Distributed Wireless Video Surveillance System, UTAR Research Fund (UTARRF), UTAR, Malaysia, 20 December 2019 – 19 December 2020, **Principal Investigator**, Internal, RM 44,408
7. Design and Characterization of Intelligent Leak Detection System in Water Distribution Network, UTAR Research Fund (UTARRF), UTAR, Malaysia, 1 June 2019 - 31 May 2020, Co-Investigator, Internal, RM 36,000
8. Context-Aware Disaster Mitigation using Mobile Edge Computing and Wireless Mesh Network, ICT Virtual Organization of ASEAN Institutes and NICT (ASEAN IVO), 1 April 2020 – 31 March 2023, **Principal Investigator, International**, USD 80,000
<https://news.utar.edu.my/awards/2023/December/22/03/03.html>
9. An Investigation of Resource Allocation for Multicell Device-to-Device Communications using Machine Learning Method and Big Data Analytics, Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia, 1 Nov 2020 – 31 Oct 2023, Co-Investigator, National, RM 96,800
10. Assessing Dynamic Radio Access Technology Performance in 5G Network for Precision Agriculture In Rural Areas, Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia, 1 Nov 2020 – 31 Oct 2022, Co-Investigator, National, RM 60,200
11. Intelligent Load Balancing in Energy-Efficient Unmanned Aerial Vehicle-Assisted Heterogeneous Networks for 5G and Beyond, UTAR Research Fund (UTARRF), UTAR, Malaysia, 20 Dec 2020 – 19 Dec 2021, Co-Investigator, Internal, RM 33,600
12. Deep Learning Strategy for Computational Single Pixel Imaging, UTAR Research Fund (UTARRF), UTAR, Malaysia, 20 Dec 2020 – 19 Dec 2021, Co-Investigator, Internal, RM 28,000
13. Non-Myopic and Energy-Efficient Resource Allocation for Cloud Radio Access Network using Deep Reinforcement Learning, UTAR Research Fund (UTARRF), UTAR, Malaysia, 1 July 2021 - 30 June 2022, **Principal Investigator**, Internal, RM 33,600
14. Deep Learning-Based Machine Vision for Tin Soldering Defect Detection In Low Powered Embedded Platform, Tin Industry (Research and Development) Board Research Grant 2021, 1 July 2021 - 30 June 2022, **Principal Investigator**, National, RM 10,000
15. Computational Single Pixel Imaging with Efficient Sub-Nyquist Sampling and Reconstruction Through Compressive Sensing, Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia, 7 Sep 2021 - 6 Sep 2023, Co-Investigator, National, RM 140,600
16. AI-Powered Security and Privacy in UAV-Communication Systems, UK-ASEAN Institutional Links Early Career Researchers, British Council, 1 April 2022 - 31 March 2023, **Principal Investigator, International**, £ 45,379
17. Face Recognition Program, Greatech Technology Bhd, 1 June 2022 - 31 May 2025, **Principal Investigator**, Industry, RM 77,200
18. An IoT-based Public Transport Data Collection and Analytics Framework using Bluetooth Proximity Beacons, ICT Virtual Organization of ASEAN Institutes and NICT (ASEAN IVO), 1 June 2022 - 31 May 2025, Co-Investigator, **International, USD 80,000**
19. Intelligent and Energy-Efficient Resource Allocation for Backscatter-Enabled 6G Networks, UTAR Research Fund (UTARRF), UTAR, Malaysia, 20 Dec 2022 – 19 Dec 2023, Co-Investigator, Internal, RM 24,000
20. Deep Learning in Computer Vision Applications, Doctoral Research Mobility Grant, Embassy of France to Malaysia, 1 Oct 2023 - 31 Dec 2023, **Co-Principal Investigator**, National, € 5100

21. Deep Reinforcement Learning for Joint Video Adaptation and Resource Allocation in Cloud Radio Access Networks, Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia, 1 Oct 2023 - 30 Sep 2026, **Principal Investigator**, National, **RM 99,350**
22. Elucidating Model-Free Proximal Policy Optimization (MF-PPO) in Electric Vehicle Routing and Vehicle-to-Grid Load Balancing for Real-Time 5G-Enabled Charging Scheduling, Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia, 1 Oct 2023 - 30 Sep 2026, Co-Investigator, National, RM 107,000.
23. 5G Application Development for Smart Retail Analytics, Alnair Photonics Sdn Bhd, 1 Jan 2024 - 30 April 2024, **Principal Investigator**, Industry, RM 27,800.
24. AI Smart Mobility Joint R&D Lab, ACO Tech, 1 Feb 2024 - 31 Jan 2026, Co-Investigator, Industry, RM 40,000.
25. Intelligent Resource Allocation For Efficient Task-Oriented Semantic Communication Systems, UTAR Research Fund (UTARRF), UTAR, Malaysia, 1 June 2024 - 31 May 2025, Co-Investigator, Internal, RM 24,000
26. Multimodal Data Fusion based Tracking, China-Malaysia Institute of Science and Technology Innovation (CM-ISTI), Xidian University, China, 27 Sep 2024 – 26 Sep 2025, Co-Investigator, External, RMB 30,000
27. Cooperative Research and Innovation on Theory and Technology of Reconfigurable Intelligent Surface-assisted Communication for Passive Internet of Things, South China University of Technology, 科技部创新人才交流外国专家项目, Ministry of Science and Technology of China, China, 1 Jan 2024 - 31 Dec 2025, Co-Investigator, External, RMB 200,000
28. IoT-based Monitoring System Of Injection Moulding Machine, Unique Diamond Sdn Bhd, 1 March 2025 - 30 Sep 2025, **Principal Investigator**, Industry, RM 9,890
29. Optimal Design Parameters for Bifacial Photovoltaic System in the Tropics, 1 April 2025 - 31 March 2028, Co-Investigator, the Chinese Academy of Sciences (CAS) and the Alliance of National and International Science Organizations for the Belt and Road Regions (ANSO), **International**, USD 149,900
30. Improvement of Malay capabilities for SEA-LION models, 1 June 2025 - 31 May 2028, **Principal Investigator**, AI Singapore, International, SGD 200,000
31. Efficient Wireless Communication Protocol for Smart Vehicular Surveillance System, 1 Jan 2025 - 31 Dec 2027, Co-Investigator, UTARSRF, Internal, RM 48,000
32. Efficient Deep Neural Networks For Real-Time Vehicle Plate Recognition, 1 Aug 2025 - 31 July 2026, **Principal Investigator**, UTARRF, RM 24,000

CONSULTANCY

1. A Study on the Productivity Impact of the Electrical and Electronic Industry in Malaysia, Malaysia Productivity Corporation, 19 Mar 2018 - 23 Sep 2018
2. External Examiner for the Computer and Information Technology Section, 2018
3. External Examiner for the Computer and Information Technology Section, 2019
4. External Examiner for the Computer and Information Technology Section, 19 April 2020
5. Mobility as a Service (MaaS) and Urban Mobility Innovation to Increase Use of Public Transport in Klang Valley, Newton-Ungku Omar Fund Grand Challenge Programme: Phase 1, 1 July 2020 – 31 Aug 2020, **International**, RM 18660.47
6. Wireless Communication Protocol and Standard for Mobile Robots, Pentamaster Corporation Berhad, 11 Aug 2020 - 7 Sep 2020
7. Trainer for 'Introduction to 5G Enabling Technologies' (1003/2102/KPR), Centre for Corporate and Community Development, 6 Feb 2021
8. External Examiner for the Computer and Information Technology Section, 10 May 2021
9. Trainer for 5G Network Technologies, 2 - 4 Aug 2021
10. Trainer for 5G Network Technologies, 2 - 4 March 2022
11. Trainer for 5G Mobile Networks and Ecosystem Deployment, 16-17 June 2022
12. Trainer for 5G Technologies & Applications, 28-29 June 2022
13. Online Consultation on 5G Technologies & Applications, 26 Aug 2022, 21 Sep 2022
14. Face Recognition Program, 15-30 Sep 2023
15. Webinar on Internet of Things (IoT) Applications in Construction Industry, 16 Oct 2023
16. Trainer for 5G Network Technologies, 25 - 26 Dec 2023
17. Research and Development (R&D) Technical Support and Services for 5G Application Development, 1 Jan 2024 - 30 April 2024
18. External Examiner for the Computer and Information Technology Section, 17 July 2024
19. IoT Deployment with LoRa Mesh Network, 1 March - 31 Oct 2024

POSTGRADUATE SUPERVISION

COMPLETED

1. Pu Chuan Hsian, Doctor of Philosophy (Engineering), Robust And Lightweight Iterative Timing Recovery in Gaussian And Non-Gaussian Channels With Timing Errors, Feb 2019 – Feb 2020, Co-Supervisor
2. Png Wen Hao, Doctor of Philosophy (Engineering), A Leak Localisation System In Water Distributed Network Using Artificial Intelligence, June 2021 – March 2022, Co-Supervisor
3. Amjad Iqbal, Doctor of Philosophy (Engineering), Development of Deep Reinforcement Learning Based Resource Allocation Techniques in Cloud Radio Access Network, Feb 2019 – May 2022, **Main Supervisor**
4. Woo Bing Hong, Master of Engineering Science, Deep Learning Based Single Pixel Imaging Using Coarse-To-Fine Sampling, May 2021 – Jan 2024, Co-Supervisor
5. Chong Woon Shing, Master of Engineering Science, Energy-Efficient Resource Allocation Schemes for Backscatter-Enabled Communication Networks, Jan 2022 – Apr 2024, Co-Supervisor
6. Homayun Kabir, Doctor of Philosophy (Engineering), Deep Reinforcement Learning for Radio Resource Management in Cellular Internet of Things, Jan 2021 – Feb 2024, **Main Supervisor**
7. Nathaniel Tan Sze Yang, Master of Engineering Science, Deep Learning for Natural Disaster Classification in Edge Computing, Jan 2022 – Feb 2024, **Main Supervisor**
8. Tey Wei Lun, Master of Engineering Science, Adaptive Fourier Spectrum Acquisition and Untrained Reconstruction Network for Enhancing Single Pixel Imaging, Feb 2022 – March 2024, Co-Supervisor
9. Wong Yi Jie, Doctor of Philosophy (Engineering), Deep Reinforcement Learning for Federated Learning Framework, Sep 2022 – July 2025, **Main Supervisor**
10. Jiang Shengqi, Doctor of Philosophy (Engineering), Intelligent Load Balancing in Energy-Efficient Unmanned Aerial Vehicle-Assisted Heterogeneous Networks for 5G and Beyond, Oct 2021 – August 2025, Co-Supervisor

ONGOING

11. Li ZhiYuan, Doctor of Philosophy (Engineering), Automatic Vision Inspection System for Commutator Surface Defect, March 2021 – Present, Co-Supervisor
12. Omair Rashed Abdulwareth, Doctor of Philosophy (Engineering), University of Malaya, Optimization For Communication Efficiency in AIoT-Based Federated Learning, May 2022 – Present, Co-Supervisor
13. Tan Xin Yi, Doctor of Philosophy (Engineering), Ai-Aided Resource Management in Next-Generation Networks, Dec 2024 – Present, **Main Supervisor**
14. Li Yang, Doctor of Philosophy (Engineering), Intelligent Resource Management for Aerial-Terrestrial Communication Networks, Jan 2025 – Present, Co-Supervisor
15. Luan JieKun, Doctor of Philosophy (Engineering), University of Malaya, Semantic Communication and Federated Learning Based On Machine Learning In IoT, April 2025 – Present, Co-Supervisor
16. Ma Ke Yu, Doctor of Philosophy (Engineering), Integration of AI in Driver Behavior Analysis, July 2025 – Present, Co-Supervisor
17. Shaw Chun Lin, Master of Engineering Science, Simulation-Based Framework for Testing and Validation of AI Algorithms in Autonomous Driving, June 2025 – Present, **Main Supervisor**
18. Fan WenFeng, Doctor of Philosophy (Engineering), Efficient Visual Perception with Vision Transformers: Toward Lightweight and Deployable Architectures for Real-World Applications, July 2025 – Present, Co-Supervisor

REVIEWER

Journal

1. VT-2016-00617, IEEE Transactions on Vehicular Technology, 2016
2. VT-2016-00920, IEEE Transactions on Vehicular Technology, 2016
3. VT-2016-02012, IEEE Transactions on Vehicular Technology, 2016
4. COMCOM_2017_4, Elsevier Computer Communications, 2017
5. CL2017-20, IEEE Communications Letters, 2017
6. D-17-32593, PLOS ONE, 2017
7. IASC 8011, Intelligent Automation & Soft Computing Journal (AUTOSOFT Journal), 2018
8. D-17-16778, PLOS ONE, 2017

9. D-18-24114, PLOS ONE, 2018
10. TGCN-TPS-18-0179, IEEE Transactions on Green Communications and Networking, 2018
11. 143825-349042, Indian Journal of Science & Technology, 2019
12. SJ-RE-20-08991, IEEE Systems Journal, 2020
13. TCOM-TPS-20-1023, IEEE Transactions on Communications, 2020
14. MOP-20-0883, Microwave and Optical Technology Letters, 2020
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18. ASOC-D-21-01419, Applied Soft Computing Journal, 2021
19. TCOM-TPS-21-0687, IEEE Transactions on Communications, 2021
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23. COMCOM-D-22-00246, Computer Communications, 2022
24. 1451, ASM Science Journal, 2022
25. TGCN-RP-A2-22-0072, IEEE Transactions on Green Communications and Networking, 2022
26. COMCOM-D-22-01643, Computer Communications, Feb 2023
27. PONE-D-22-31902R1, PLOS ONE, Feb 2023
28. ASOC-D-21-01419R3, Applied Soft Computing, May 2023
29. COMCOM-D-23-00829, Computer Communications, Jun 2023
30. COMCOM-D-23-00731, Computer Communications, Jun 2023
31. IPM-D-23-03246, Information Processing and Management, Feb 2024
32. COMMAG-23-00519, IEEE Communications Magazine, Sep 2023
33. 2921690, International Journal of Digital Multimedia Broadcasting, Jan 2024
34. JCISE-24-1101, Journal of Computing and Information Science in Engineering, Mar 2024
35. TCCN-TPS-24-0149, IEEE Transactions on Cognitive Communications and Networking, Mar 2024
36. PONE-D-24-05290, PLOS ONE, Apr 2024
37. ICOMPUTING-D-24-00001, Intelligent Computing, Apr 2024
38. COMMAG-24-00211, IEEE Communications Magazine, May 2024
39. COMPUTING-OPEN-D-24-00007, Computing Open, Aug 2024
40. NETWORK-24-00605, IEEE Network Magazine, Dec 2024
41. Access-2024-42536, IEEE Access, Jan 2025
42. AESM-2024-0094, IEEE Aerospace and Electronic Systems Magazine, Feb 2025
43. JSAC-00316-2025, IEEE Journal on Selected Areas in Communications, Mar 2025

Conference

1. IEEE 12th Malaysia International Conference on Communications (MICC 2015) x3
2. IEEE Conference on Systems, Process and Control (ICSPC 2016) x2
3. International Conference on Computational Science 2017
4. 7th International Conference on Electronics, Communications and Networks (CECNet 2017)
5. IEEE Vehicular Technology Conference 2018
6. IEEE Vehicular Technology Conference 2021 x 2
7. 2021 14th International Conference on Computer And Electrical Engineering
8. 2022 2nd International Conference On Electrical, Electronics And Computing Technology
9. 2021 3rd International Conference On Advanced Information Science And System
10. 6th International Conference on Frontiers of Sensors Technologies (ICFST 2022)
11. IEEE Vehicular Technology Conference 2022 Spring
12. 2023 12th International Conference on Information and Electronics Engineering (ICIEE 2023) x3
13. The 8th International Conference on Business and Industrial Research (ICBIR2023) x3
14. The 2023 3rd International Conference on Electrical, Electronics and Computing Technology (EECT 2023) x1
15. The 2023 IEEE Global Communications Conference (GLOBECOM) x2
16. 2023 Asia Conference on Electronics, Circuits, Systems and Signal Processing (ECSSP 2023) x1
17. 2023 International Conference on Computer Science, Electronics and Communications (CSEC 2023) x1
18. 2023 6th International Conference on Applied Computational Intelligence in Information Systems (ACIIS) x1
19. 2023 International Conference on Electronics, Computers and Communication Technology (CECCT 2023) x1

20. 2024 International Conference on Green Energy, Computing and Sustainable Technology (GECOST) x1
21. 2024 International Conference on Electrical, Information and Communication Engineering (CEICE 2024) x1
22. 2024 13th International Conference on Information and Electronics Engineering (ICIEE 2024) x1
23. 2024 The 8th International Conference on Software Engineering and Information Management (ICSIM 2024) x1
24. 2024 International Conference on Advanced Robotics, Automation Engineering and Machine Learning (ARAEML 2024) x1

Judge

1. ACCCIM STI Competition 2018
2. ACCCIM STI Competition 2019
3. ACCCIM STI Competition 2020
4. ACCCIM STI Competition 2021
5. Pertandingan Usahawan Inovasi Piala Menteri Pengajian Tinggi 2022, UTAR
6. ZTE IoT Innovation Challenge 2022
7. ACCCIM STI Competition 2022
8. FYP Project 2023, Faculty of Engineering, University Malaya
9. ACCCIM STI Competition 2023
10. FYP Project 2024, Faculty of Engineering, University Malaya
11. ACCCIM STI Competition 2024
<https://www.pickastock.info/news?id=388123>

Thesis

1. Improving Sound Recovery via Negligible Object Vibrations in Videos using the Complex Steerable Pyramid Technique, Master of Science, 2019, UTAR
2. Quality Of Service Aware User Association For Efficient Network Slicing In Multi-Tenant 5G Networks, Master of Science, 2022, UTAR
3. A Unified Meta Based Machine Learning Model for Sustainable Manufacturing Using Characterisation And Regression Of Machining Data, Doctor of Philosophy, 2023, UTAR
4. Optimization of Antenna Selection based on Branch and Bound Algorithm, Master of Engineering Science, 2025, University of Malaya