



PROF. IR. DR. ADUWATI SALI

Department of Computer and Communication Systems, Faculty of Engineering, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia



Updated: 29/10/2024

Tel.: ++00 603 89464355, Fax: ++00 603 86567127

Email: aduwati@upm.edu.my, ORCID: orcid.org/0000-0002-1692-6516

AREAS OF INTEREST

6G, IoT, Massive-MIMO systems, Multiple access, Satellite networks, Green communications, RF-EMF, SAR, 3D video transmission, cognitive radio networks

ACADEMIC QUALIFICATIONS

PhD in Mobile Satellite Communications

Date of Award: 30 September 2009

Title of PhD thesis: *Adaptive Techniques in Reliable Multicast Transmission over Geostationary (GEO) Satellite Networks*

Name of institution: University of Surrey, UK

MSc in Communications and Network Engineering

Date of Award: 16 April 2002

Title of MSc. thesis: *Handover Management in Mobile Satellite Communication*

Name of institution: Universiti Putra Malaysia, Malaysia

BEng in Electrical and Electronics Engineering (Communications)

Date of Award: 16 July 1999

Final year Project: *Position Location Using Global Positioning Systems (GPS)*

Dissertation: Propagation of Electromagnetic Radiation at Very High Frequency (VHF) 30MHz – 300MHz

Name of institution: University of Edinburgh, UK

PROFESSIONAL QUALIFICATION / MEMBERSHIP / AFFILIATION

- 1) Past Chair, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) since 2019
- 2) Chair, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2017 and 2018
- 3) Professional Engineer, BEM, since 4 June 2016 (Reg. No.: PE17386)
- 4) Senior Member, IEEE, since June 2015 (Reg. No.: 41320187)
- 5) Corporate Member, Institution of Engineers Malaysia (IEM) (MIEM No.: 84909, ELECTRONIC), since January 2016
- 6) Vice Chair, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2016
- 7) Past Chair, IEEE Young Professionals Malaysia, (Reg. No.: 41320187) 2016
- 8) Secretary, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2015
- 9) Chair, IEEE Young Professionals Malaysia, (Reg. No.: 41320187) 2015
- 10) Secretary, IEEE Young Professionals Malaysia, (Reg. No.: 41320187) 2014

- 11) Executive Committee, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2014
- 12) Chartered Engineer (CEng), Engineering Council, UK, since Nov 2011, Registration No.: 593790
- 13) Member, IET, (Reg. No.: 70744120) since 2011
- 14) Member, IEEE Vehicular Technology Society, (Reg. No.: 41320187) since 2010
- 15) Member, IEEE Communications Society, (Reg. No.: 41320187) since 2010
- 16) Secretary, Institution of Electrical and Electronics Engineering (IEEE) Graduates of Last Decade (GOLD), 2009
- 17) Member, Institution of Electrical and Electronics Engineering (IEEE) Malaysia Section, 2000-2004, 2009 onwards
- 18) Student Member Institution of Electrical and Electronics Engineering (IEEE) UKRI Section 2005-2008
- 19) Student Member, Institution of Engineering and Technology (IET), 2008
- 20) Member, Institution of Engineers Malaysia (IEM) since 2002
- 21) Graduate Member, Board of Engineers Malaysia (BEM) (Reg. No.: GE36545A, ELECTRONIC) since Dec 2002

APPOINTMENTS

Ahli Sidang Editor	Malaysian Journal of Mathematical Sciences (MSMS), 1 Jul 2024 – 30 Jun 2026
Jawatankuasa Kerja	Pelan Pembangunan Pendidikan Tinggi Malaysia (PPPTM) 2025 - 2036
Evaluation Panel	Qatar Research, Development, and Innovation (QRDI) Council, Academic Research Grant 03 (ARG-02) (June 2024)
Evaluation Panel	Qatar Research, Development, and Innovation (QRDI) Council, Undergraduate Research Experience Program (UREP-31) (June 2024)
Evaluation Panel	ICANN (Internet Corporation for Assigned Names and Numbers (ICANN)), European Science Foundation (ESF) (24-ICANN) (Sept 2024)
Evaluation Panel	ICANN (Internet Corporation for Assigned Names and Numbers (ICANN)), European Science Foundation (ESF) (24-FNR-CORE-126) (May 2024)
Evaluation Panel	CORE Multi-Annual Thematic Research Programme, submitted to Fonds National de la Recherche Luxembourg (FNR), European Science Foundation (ESF) Theme 1: The Internet's unique identifier systems, Theme 2: A Unified Internet (Aug 2024)
Director	Institute for Mathematical Research (INSPEM), UPM (01/02/2024 – 31/01/2027)
Engineering Accreditation Council (EAC) Mock Visit Panel	Bachelor of Electrical and Electronic Engineering with Honours, Universiti Putra Malaysia (UPM) (01 – 02 Aug 2024)
Engineering Accreditation Council (EAC) Panel	Bachelor of Electrical and Electronic Engineering with Honours, Universiti Kebangsaan Malaysia (UKM) (15 – 16 May 2024)
Engineering Accreditation Council (EAC) Observer	Bachelor of Electrical and Electronic Engineering with Honours, Asia Pacific University of Technology and Innovation (APU), (19 – 22 Feb 2023)

Academy of Sciences Malaysia (ASM)	Vetting Committee Meeting for ASM Information Technology & Computer Sciences (ITCS) Discipline 2024 Cycle (29/01/2024 – 20/02/2024)
Evaluator	Engineering Accreditation Council (EAC), Board of Engineers Malaysia (BEM) (01/01/2024 – 31/12/2029)
Ahli Jawatankuasa	Ahli Jawatankuasa Universiti Penyelidikan (JKRU) (01/01/2024 – 31/12/2024)
Evaluation Panel	Fundamental Research Grant Scheme (Dana Penyelidikan Fundamental), Ministry of Higher Education (MOHE) 2023 - 2024
Evaluation Panel	MOSTI R&D Expert Panel (01/01/2024 – 31/12/2026)
Editor	Journal IKRAM Academia – Journal of Social Wellbeing (Jan 2024 – Jan 2026)
External Assessor	Diploma of Electronic Engineering (Communications), Dept. of Electrical Engineering, Politeknik Sultan Salahudin Abdul Aziz Shah (24 Oct 2023)
External Assessor	Master of Science (Astronautics) and Master of Science (Space Science), Universiti Kebangsaan Malaysia (UKM) (3 Oct 2019)
External Assessor	Master of Engineering (Communication and Computer), Universiti Kebangsaan Malaysia (UKM) (1 – 2 Aug 2019)
Chairperson	National Science Challenge (NSC) Steering Committee, Academy of Sciences Malaysia (ASM) (13 July 2023 - 31 July 2025)
Head	WiPNET Research Centre, Dept. of Computer and Communication Systems Engineering, Faculty of Engineering, UPM (24/06/2023 – 23/06/2026)
Evaluation Panel	Call of the Academic Research Grants (ARG-01st), Qatar National Research Fund (QNRF) Programs, Qatar Research, Development, and Innovation Council (13/07/2023 – 10/08/2023)
Taskforce	Malaysia Research Assessment (MyRA), Ministry of Higher Education (01/07/2023 – 31/12/2025)
Auditor / Evaluation Panel	Malaysia Research Assessment (MyRA), Ministry of Higher Education (01/07/2023 – 31/12/2025)
ASM Representative, Permanent Committee Member	Working Committee, International Space Treaty, Ministry of Science, Technology and Innovation (MOSTI)
Ketua Jawatankuasa (Head of Committee)	UPM <i>Committee for Research Proposal Evaluation (University level)</i> 2023 – 2024 UPM Panel Penilaian Permohonan Skim Geran Penyelidikan Peringkat Universiti 2023 – 2024 (Geran UPM, DP KPT, MOSTI, geran sector awaml swasta dan antarabangsa)
Academy of Sciences Malaysia (ASM)	Vetting Committee Meeting for ASM Engineering Sciences (ES) Discipline 2023 Cycle (11/08/2022 – 10/08/2025)
Ahli Jawatankuasa	Ahli Senat UPM, Jawatankuasa Pemilih Guru (11/08/2022 – 10/08/2025)
Ahli Jawatankuasa	Ahli Senat UPM, Jawatankuasa Hadiah (11/08/2022 – 10/08/2025)

Ahli Jawatankuasa	Ahli Senat UPM, Jawatankuasa Pengajian Siswazah Universiti (11/08/2022 – 10/08/2025)
Grand Final Judge	National Science Challenge (NSC), Academy of Sciences Malaysia (ASM) (20/10/2022)
Senate Member, UPM	Committees for Postgraduates, Gift and Promotion (Senior Lecturer and Associate Professor) (11/07/2022 – 10/07/2025)
Program Coordinator	Masters in Communication Engineering (MCE), Faculty of Engineering, UPM (01/09/2022 – 31/08/2025)
Ahli Jawatankuasa	Ahli Jawatankuasa Induk Kelestarian Kampus Hijau, Pusat Strategi dan Perhubungan Korporat (01/05/2022 – 31/05/2025), Ahli Jawatankuasa Induk Kelestarian Kampus Hijau, Pusat Strategi dan Perhubungan Korporat (01/01/2024 – 31/12/2026)
Panel, Research Management Centre (RMC), UPM	AHLI JAWATANKUASA MENGHADIRI SEMINAR/ KONFERENSI/ BENGKEL/ LAWATAN KE LUAR NEGARA (SKBL) DENGAN PERUNTUKAN GERAN PENYELIDJKAN (02/01/2022 – 31/12/2023)
Evaluator, ESF: University of Luxembourg Evaluation of ADR Application - Winter 2021-22	University of Luxembourg. The European Science Foundation – Science Connect (www.esf.org)
IIUM External Assessor for Promotion Application	PENILAI LUAR CALON PROFESOR MADYA GRED DS54 DI UNIVERSITI ISLAM ANTARABANGSA MALAYSIA (01/03/2022)
UTHM External Assessor for Promotion Application	PENILAI LUAR CALON PROFESOR MADYA GRED DS54 DI UNIVERSITI TUN HUSSEIN ONN MALAYSIA (01/03/2022)
Head	WiPNET Research Centre, Dept. of Computer and Communication Systems Engineering, Faculty of Engineering, UPM (24/06/2021 – 23/06/2023)
MyRA Evaluation Panel	Malaysia Research Assessment (MyRA), Bahagian Perancangan dan Kecemerlangan IPTA (BPKI), KPT (1/1//2021 – 31/12/2022)
Representative	Malaysia Technical Standards and Forum Bhd (MTSFB), MTSFB/AM/06-05 (UPM as Associate Member)
Ahli Jawatankuasa	Ahli Jawatankuasa Dana Penyelidikan Kementerian Pendidikan Tinggi (DP KPT) tahun 2020 (1/1/2020 – 31/12/2020)
Young Scientists Network – Academy of Sciences Malaysia (YSN-ASM)	Honorary Member (from 16/04/2020)
Special Scientist (Experienced Researcher)	EU Horizon2020 MSCA ATOM Project, KIOS Research Centre, University of Cyprus (2/1/2020 – 31/1/2020)
Evaluator (Auditor) Universiti Kebangsaan Malaysia (UKM) for Self-Accreditation by Malaysia Quality Assurance (MQA)	Academic Program Evaluator – Masters in Engineering (Computer and Communications), Faculty of Engineering and Built Environment, UKM, 10 July 2019
Industry Panel	ENGENIUS '19, Faculty of Engineering, University of Malaya, 21 – 23 May 2019
Artificial Intelligence (AI) for TVET Education and Training Taskforce (KPM)	ASM Special Interest Group on Machine Learning (SIGML) - “Embracing Artificial Intelligence for TVET Institutions”
National 5G Taskforce (MCMC)	Spectrum Management & Allocation Work Group
MyRA Taskforce, Ministry of Higher Education (KPM)	Malaysia Research Assessment (MyRA), Bahagian Perancangan dan Kecemerlangan IPTA (BPKI), KPT (1/1//2019 – 31/12/2020)

Professor (UPM)	Professor, Faculty of Engineering, UPM (1/2/2019 - present)
Head of Website Committees	Research Management Centre (RMC), UPM, 1 Apr 2019 – 31 Mar 2021
Industry Adversary Panel (IAP) – IPTA/IPTS	Department of Computer Technology and Systems, Faculty of Computer Science and Information Technology, Universiti Malaya, 1 Mar 2019
Chief Editor	Synthesis 2018/2019
Academy of Sciences Malaysia (ASM)	Project Member, Strategic Thrust 4 (ST4): Transforming STI Governance for National Policy on Science, Technology and Innovation (NPSTI), Oct 2017 – Dec 2018
Academy of Sciences Malaysia (ASM)	ASEAN Science Leadership Program (ASEAN-SLP) Fellow 2017, 7 – 11 Sept 2017
Science, Technology and Industry Linkage Committee Member (STILC)	Academy of Sciences Malaysia (ASM), 2017
Science, Technology and Innovation Policy Advisory Council (STIPAC) Member	Academy of Sciences Malaysia (ASM), 2017
Co-Chair, Science Policy	Young Scientists Network – Academy of Sciences Malaysia (YSN-ASM), 2017
MyRA Taskforce, Ministry of Higher Education (KPT)	Malaysia Research Assessment (MyRA), Bahagian Perancangan dan Kecemerlangan IPTA (BPKI), KPT (1/1//2017 – 31/12/2018)
External Assessor, UNIMAS	M. Eng in Communication Systems, Dept. of Electrical and Electronics, Faculty of Engineering, UNIMAS (6/3/2017)
Young Scientists Network – Academy of Sciences Malaysia (YSN-ASM)	Member (1/12/2016 – 31/12/2019)
Deputy Director	Research Planning and Knowledge Management Division, Research Management Centre (RMC), UPM (1/6/2016 – 31/5/2019)
Head for Academic – Communication Systems Engineering	Bachelor of Engineering Computer and Communication Systems Engineering (10/8/2015 – 9/8/2017)
Committee for Curriculum Review	Bachelor of Engineering Computer and Communication Systems Engineering 2016 – 2020
Industry Attachment / Systems Engineer	National Space Agency (AAN) (1/3/2014 – 28/2/2015)
Associate Professor	Universiti Putra Malaysia (1/12/2013 – 31/2/2019)
Head of Program	MSc / PhD in Network and Communication Engineering, Dept. of Computer and Communication Systems Engineering, Faculty of Engineering, UPM (1/8/2013 – 31/7/2015)
Research Coordinator	Dept of Computer and Communication Systems Engineering, Faculty of Engineering, UPM (1/8/2011 – 31/7/2013)
Senior Lecturer	Universiti Putra Malaysia (1/4/2010 – 30/11/2013)
Research Fellow	Institute of Space Science (ANGKASA) UKM (1/1/2010 - 31/12/2012)
Head of Networking Lab	Universiti Putra Malaysia (1/8/2009 - 31/7/2011)
Lecturer	Universiti Putra Malaysia (15/7/2003 - 31/3/2010)
Tutor	Universiti Putra Malaysia (10/4/2000 - 14/7/2003)
Assistant Manager	Telekom Malaysia Berhad (16/9/1999 - 9/4/2000)

TEACHING ACTIVITIES

Semester 2 2023/2024	ECV3011 – 4 Engineers and Society (Assessment: 4.94/5.00)
Semester 1 / 2019/2020	EMM3612 Engineering Project Management (Assessment: 4.84/5.00)
Semester 2 / 2017/2018	EAB3406 Project Management (Assessment: 4.50/5.00)
Semester 2 / 2016/2017	EAB3406 Project Management (Assessment: 4.88/5.00)
Semester 2 / 2015/2016	EAB3406 Project Management (Assessment: 4.87/5.00)
Semester 1 / 2015/2016	ECC3701 Computer Networks (Assessment: 4.65/5.00)
Semester 2 / 2014/2015	ECC3401 Digital Signal Processing (Assessment: 4.95/5.00)
Semester 1 / 2013/2014	ECC3701 Computer Networks (Assessment: 4.46/5.00)
Semester 2 / 2012-2013	ECC5702 Data Networks (Assessment: 4.65/5.00)
Semester 2 / 2011-2012	ECC 3901 Industrial Training
Semester 2 / 2011-2012	ECC5702 Data Networks (Assessment: 4.56/5.00)
Semester 2 / 2010/2011	ECC1501 Computer Organisation (UNITI)
Semester 2 / 2010-2011	ECC4501 Mobile and Satellite Communications (Assessment: 4.51/5.00)
Semester 2 / 2010-2011	ECC5702 Data Networks (Assessment: 4.42/5.00)
Semester 2 / 2010-2011	ECC 3901 Industrial Training
Semester 1 / 2010-2011	ECC4502 Antenna and Propagation (Assessment: 4.63/5.00)
Semester 1 / 2010-2011	ECC 4503 Access Networks (Assessment: 4.78/5.00)
Semester 1 / 2010-2011	ECC3102 Electrical Circuit Analysis (Assessment: 4.16/5.00)
Semester 2 / 2009-2010	ECC 3901 Industrial Training
Semester 2 / 2009/2010	ECC1501 Computer Organisation (UNITI)
Semester 2 / 2009-2010	ECC4501 Mobile and Satellite Communications (Assessment: 4.31/5.00)
Semester 1 / 2009-2010	ECC3102 Electrical Circuit Analysis Tutorial Group 1 (Assessment: 4.25/5.00)
Semester 1 / 2009-2010	ECC3102 Electrical Circuit Analysis Tutorial Group 2 (Assessment: 4.41/5.00)
Semester 1 / 2009-2010	ECC3102 Electrical Circuit Analysis (Assessment: 4.20/5.00)
Semester 2 / 2008-2009	KKK4516 Mobile and Satellite Communications (Assessment: 4.22/5.00)
Semester 2 / 2003-2004	KKK3902 Electronics Lab II (Assessment: 4.38/5.00)
Semester 1 / 2004-2005	KKK3604 Communication Systems (Assessment: 4.45/5.00)
Semester 1/ 2003-2004	KKK3201 (Assessment: 4.08/5.00)

Semester 1/ 2003-2004 KKK3105 Electromagnetics (Assessment: 4.41/5.00)

Semester 1 / 2003-2004 KKK4617 Radio Frequency Engineering (Assessment: 4.60/5.00)

RESEARCH PROJECTS

Project Leader – Geran Putra Berimpak (GPB) Universiti Putra Malaysia tahun 2024 (01/06/2024 – 31/05/2026) RM99,500.00

STAR-6G: Simultaneous Transmit and Receive – Reconfigurable Intelligent Surface (STAR-RIS) – Assisted and Optimised 6G Heterogenous Networks (GBP/2023/9783500) – on-going

Project Leader – Geran Putra Inisiatif (GPI) Universiti Putra Malaysia tahun 2023 (01/12/2023 – 30/11/2025) RM6,000.00

Radiation Exposure from 5G Signals at C-band and mmWave Frequency Bands (GPI/2023/9754900) – on-going

Project Leader – Southeast Asian Regional Centre for Graduate Study and Research in Agriculture (SEARCA) (01/03/2022 – 28/02/2023) USD4,830.00

University Consortium (UC) Seed Fund for Collaborative Research Grant, ‘NAPD: Networked ASEAN Peatland Data’ (Project code: UPM - NICT 6380024-10801) – **completed**

Project Leader – Asia Pacific Telecommunity (APT) (07/01/2022 – 06/12/2022) USD60,000.00 (~RM250,680.00)

Net-Peat: Networked ASEAN Peatland Communities for Transboundary Haze Alert (International Collaborative Research – Government of Japan) (Project code: UPM - NICT 6380024-10801) - **completed**

Project Leader – FRGS (07/09/2021 – 06/03/2024) RM124,630.00

IGNITE - Interference Modelling for 5G and FSS Coexistence at mmWave with Climate Change Considerations in the Tropical Region (FRGS/1/2021/TK0/UPM/01/1, File No.: 03-01-21-2375FR. Fot No.: 5540509)

Project Leader – Geran Putra Berimpak (1/4/2021 – 30/07/2024) RM100,00

BIDANET: Parametric Big Data Analytics over Wireless Networks (UPM.RMC.800-3/3/1/GPB/2021/9696300, Fot No.: 9696300)

Project Leader – Geran Putra Berimpak (1/1/2019 – 31/12/2020) RM113,200

EMOSEN - Energy Efficient MIMO-Based Wireless Transmission for SWIPT-Enabled Network (Fot No. 9671600) (UPM/800-3/3/1/GPB/2019/9671600) – **completed**

Project Leader – Geran Putra Siswazah (IPS) (20/9/2018 – 19/9/2020) RM25,000

NOMA-MIMO: Optimising 5G Wireless Communication Performance Based on Hybrid NOMA with Partial Feedback for Multiuser MIMO (GP-IPS/2018/9663000, Fot No: 9663000) – **completed**

Project Leader – Geran Putra Siswazah (IPS) (1/11/2017 – 1/12/2019) RM20,000

Adaptive Image Transmission over LoRA Network for Mangrove Monitoring (Project Code: GP-IPS/2017/9557100, Fot No: 9557100) – **completed**

Project Leader – IEEE Region 10 (R10) Fund (24/6/2016 – 31/12/2016) USD500

Impact of Professional Activities ‘Building Next Generation Workforce in Communications and Vehicular Technology’ – **completed**

Project Leader – FRGS (1/11/2015 – 30/10/2017) RM88,000 On the Cogitation of Primary User Reappearance in Cognitive Radio Network (Project code: MOHE: FRGS/1/2015/TK10/UPM/02/2, UPSM:03-01-15-1626FR, Vote No.:5524731) – **completed**

Project Member – EU Horizon2020 MSCA-RISE-2015 - Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE) (1/2/2016 – 31/1/2020) €904,500.00 (allocation to UPM: €139,500.00 ~ RM622,170.00) **'ATOM'** - Advancing the State of the Art of MIMO: The Key to Successful Evolution of Wireless Networks (Project No.: 690750-ATOM-H2020-MSCA-RISE-2015, UPM: 6388800-10801) – **completed**

- Collaboration with Lancaster University, UK; University of Cyprus, Cyprus; University of York, UK; University of Peradeniya, Sri Lanka; Comstats Institute of Information Technology, Pakistan; University Teknologi Malaysia, Malaysia.
- Presentation on 'Green Network Planning and Operational Power Consumption Optimization in Heterogeneous Wireless Networks Using Artificial Intelligence Techniques', University of Lancaster, UK, 17-18Feb 2016
- Presentation on 'A Self-Configured Link Adaptation with Partial Feedback for Green Wireless Systems' at ATOM Workshop, UTM KL, 30 May 2016 – 2 June 2016
- Presentation on 'SWIPT Aided Massive MIMO HetNet Multi-User Scenarios with RRH Selection / Secondment at Lancaster University.
- Adaptive MAC Protocol Towards Interoperability of M2M Home Area Network Technologies / Secondment at University of York.
- Energy Efficient Transmission in 5G Massive MIMO HetNet Using Stochastic Geometry / Secondment at University of Lancaster.

Project Mentor – Research Acculturation Collaborative Effort (RACE) Phase 3 2015/2017 (1/3/2015 – 28/2/2017) RM20,000 Investigation of Low-Energy GPS Baseband Receiver: Study on Design and Implementation Using Multi Criteria Decision-Making Techniques (lead by Dr. Bahbibah Rahmatullah (UPSI))(Project Code: 9389900) – **completed**

Project Leader – Geran UPM IPB (2/12/2013 – 1/12/2015) RM 48,455 ECOSAN: Emergency Communications over Satellite-Assisted Network (Project code: GP-IPB/2013/9413101) – **completed**

- Collaboration with Meteorological Dept (MetMalaysia) and Minerals and Geoscience Dept (JMG)

Project Leader – TWAS-COMSTECH (7/6/2013 – 6/12/2014) USD2,500 ~RM9742.50 Intelligent Spectrum Sensing and Sharing in Cognitive Radio Networks (Project code: 12-202 RG/ITC/AS_C) – **completed**

Project Leader – ERGS (1/8/2012 – 31/7/2014) RM 62,550 S-PROMOTE: Satellite Propagation Model at Near Equatorial Region for Train Environment (Project code: ERGS/1-2012/5527096) – **completed**

- Collaboration with Electrified Train System (ETS) Keretapi Tanah Melayu (KTM)
- Best Paper Award 'Hadiah Penerbitan ANGKASA 2013 - Bidang Aplikasi Angkasa', 8 Nov 2014
- Analysis of Tropospheric Scintillation Effect on Satellite Signal in Tropical Region at Ka-band – Best Final Year Project: Best Poster Award by Malaysia IEEE Young Professionals 2015

Project Leader – FRGS (1/9/2011 – 30/8/2014) RM82,000 Green Network Optimisation for Wireless Networks (Project code: FRGS/1/11/TK/UPM/02/2) – **completed**

- Keynote Speech 'Green Network Planning and Operational Power Consumption Optimization in Heterogeneous Wireless Networks Using Artificial Intelligence Techniques', International Conference on Green Computing and IoT 2015 (ICGGCIOT2015), New Delhi, India, 8-10 Oct 2015

- *Non-Disclosure Agreement (NDA) with Malaysian Communications and Multimedia Commission (MCMC)*
- *Invited project presentation for 2013 International Seminar on Communication, Electronics and Information Technology (ISCEIT2013), 7-10 May 2013, Suranaree University of Technology, Nakhon Ratchasima, Thailand*
- *Finalist for International Science, Technology and Innovation Centre for South-South Cooperation under the Auspices of UNESCO (ISTIC-TWAS) Competition "Successful Innovation in Science and Technology in Developing Countries", 20-21 October 2012, Penang, Malaysia*

<p>Project Leader – RUGS (15/4/2011 – 14/10/2013) RM107,000</p>	<p>MAC Layer Issues in Hybrid WSN / Satellite Communications for Emergency Communications (HySSECom) (Project code: 05-01-111332RU) – completed</p>
<p>Project Leader – TWAS-COMSTECH (25/5/2010 – 24/11/2011) ~RM25,330.50</p>	<p>Radio Resource Management for Mobile Sensor Networks (Project code: 09-101 RG/ITC/AS_C) – completed</p> <ul style="list-style-type: none"> - <i>Invited project presentation for 2013 International Seminar on Communication, Electronics and Information Technology (ISCEIT2013), 7-10 May 2013, Suranaree University of Technology, Nakhon Ratchasima, Thailand</i> - <i>Invited project presentation for Wireless Sensor Network Workshop – 'Energy Management in Channel Access' organized by MyREN, 28-29 Jan 2014, Universiti Putra Malaysia</i>
<p>Project Leader – eScience fund (1/6/2010 – 30/5/2011) RM89,500</p>	<p>3D Video Transmission over GEO Satellite Networks for Disaster Management Applications (Project code: 01-01-04-SF1047, Vot no.: 5450543) - completed</p>
<p>Project Leader - RUGS (1/10/2009 – 30/9/2010) RM25,000</p>	<p>Reliable and Adaptive Multicast Transmission Over GEO Satellite Network for Disaster Monitoring Applications (Project code: 91841) - completed</p>
<p>Co-Researcher – Digital Society Research Grant (DSRG) (01/03/2022 – 31/08/2022) (RM10,000.00)</p>	<p>Public Perception on Electromagnetic Field (EMF) Emissions from 5G Radio Communication Infrastructure and Consumer Premise Equipment (CPE) in Malaysia (EMFERCICE) - completed</p>
<p>Co-Researcher – Asi@Connect TEIN (01/03/2021 – 28/02/2022) €197,023 / RM 915,435</p>	<p>Sustainable Aquatic Resource Management in Mangrove Ecosystem via Internet of Things Application (MEITA) (Project code: 6380056) – on-going</p>
<p>Co-researcher – Geran Putra Berimpak (15/07/2021 – 14/07/2023) RM100,200</p>	<p>Adaptive Restricted Access Window (RAW) For QoS Provisioning in Industrial Internet Of Things (IOT) using Wi-Fi HaLow</p>
<p>Co-researcher – National Instrument (NI) (01/03/2021 – 28/03/2021) RM100,000.00</p>	<p>Nature-Inspired Advanced Design of Water Purification Filter System for Eco-Sustainable and Smart Harvesting of Rain and Dipping Air-Conditioner Water using Internet of Things (IoT) (UPM Vot No.: 6300296-10801) - on-going</p>
<p>Co-researcher – EU Erasmus+ (14/11/2018 – 14/10/2022) €952,617 (€82,029 for UPM, ~RM387,213)</p>	<p>Building Skills4.0 THrough UniversitY and Entreprise CollaboraTion/ SHYFTE (Project code: 598649-EPP-1-2018-1-FR-EPPKA2-CBHE-JP, UPM: 6380031-10801)– on-going</p>
<p>Project Leader – ASEAN IVO NICT Japan USD76,000 (~RM317, 528) (1/7/2018 – 30/6/2021)</p>	<p>NAPC: Networked ASEAN Peatswamp Communities – completed (Project code: UPM - NICT 6380024-10801)</p>

Co-researcher – EU Erasmus+ (15/01/2020 – 14/01/2023) €945,589.00 MYSUN – Malaysia Sustainable University Network (Project code: 609969-EPP-1-2019-1-MY-EPPKA2-CBHE-SP, UPM: 6282600-10801)

Co-researcher – National Instrument (NI) (01/03/2021 – 28/03/2021) RM100,000.00 Remote Monitoring of Harmful Algal Bloom via Marine Toxin Biosensor Integrated LoRA

Co-researcher – MCMC RM 119,000.00 (1/1/2018 – 31/3/2019) Development of Energy-efficient, Long-range Communication System for Environmental Monitoring using Low Power Wide Area Networks for Internet of Things (Vot no: 6300900)– **completed**

Co-researcher – PRGS (15/08/2017 – 16/01/2019) RM107,700 Development of a Cognitive Radio Wireless Sensor Network Node (PRGS/1/2017/TK04/UPM/01/1) – **completed**

Co-researcher-FRGS (01/08/2016 – 31/07/2018) RM106,800 Derivation of a Modified Free Space Path Loss (FSPL) Formulation for Satellite Links Fade Margin Operating in Malaysia – **completed**

Co-researcher-eScience fund (1/11/2015 – 30/9/2017) 228,066.00 Minimizing Feedback Overhead in the Uplink of Fifth Generation (5G) Cellular Networks for Practical Implementation of Massive-MIMO System (01-01-02-SF1297) – **completed**

Co-researcher-FRGS (02/11/2015 – 31/10/2017) RM100,500 Pilot Contamination and its Effect Towards Massive-MIMO Capacity in Fifth Generation (5G) Wireless Transmissions (Project code: FRGS/1/2015/ICT04/UKM/02/2) – **completed**

Co-researcher-FRGS (1/12/2013 – 30/11/2016) RM40,800 Investigation to Increase the Reliability of Skin Detector using Color for Images from Real Time Camera(Ref: FRGS/2/2014/ICT05/MMU/02/2) – **completed**

Co-researcher-FRGS (1/12/2013 – 30/11/2016) RM75,200 Relations Between Solar Bursts Type II and III and also their relations to Coronal Mass Ejection (CME) and Solar Flares – **completed**

Co-researcher-FRGS (1/7/2014 – 30/12/2015) RM62,200 Investigation of the use of TV White Space for Wireless Sensor Network using cognitive radio (Project code: FRGS/1/2014/TK03/UPM/01/1)

Co-researcher-FRGS (01/06/2013 – 31/05/2015) RM51,700 The Optimization of Hypercomplex Adaptive Filtering Algorithms based on Higher Order Statistics (Project code: 08-01-13-11-1178FR, Vot no.: 5524259)

Co-researcher – RUGS (2/1/2013 – 1/1/2015) RM145,000 Hyperspectral Imager on-board Autonomous Airborne Platform for Natural Resource and Environment Assessment (Project code: 05-02-12-2308RU) – on-going

Co-researcher – MCMC (1/1/2011 – 1/6/2011) RM236,000 The Effect of Emission from Short Range Devices (SRD) on Radio-communication Services (Project code: SKMM/RPD/SRP/6029.01) - **completed**

Co-researcher - MOSTI escience Fund (1/1/2010 – 30/6/2011) RM83,500 Object Based Error Concealment for Stereoscopic 3D Video (Project code: 01-02-01-SF0153) - **completed**

Co-researcher - MOHE FRGS (1/4/2010 – 30/9/2011) RM32,000 A Study on Error Resilience for 3D Video (Project code: FRGS/1/10/TK/MMU/03/19) – **completed** – *Nominated as Best Project Ministry of Higher Education Malaysia 2013*

Co-researcher (27/8/2009 – 26/8/2011) RM92,000	– RUGS	Reduction of PAPR in OFDM Wireless Communication systems Using Statistical Techniques (Project code: 91729) - completed
Researcher (Oct 2004 – Dec 2008)		WP53000 Specifications of Evaluation Scenarios and Simulator Architecture, European Space Agency (ESA) Inmarsat Broadband Global Access Network with Multicast Extension (BGAN-X) - completed
Researcher (Oct 2004 – Apr 2006)		JA2230 Radio Resource Allocation and Adaptation, EU-IST Satellite Network of Excellence (SatNEx) I (Contract No. IST-027393) - completed
Researcher (May 2006 – Dec 2008)		JA2430 IP QoS and Radio Resource Management with Cross-Layer Approach, EU-IST Satellite Network of Excellence (SatNEx) II (Contract No. IST- 507052) - completed
Project Leader (Sept 2003 – Sept 2004)		Car ID Monitoring and Tracking System (CIMTS) (New Lectureship Scheme) - completed

SUPERVISION

PhD (Main supervisor)		Lu Li ' <i>Machine Learning for Prediction of Fire Danger Rating System (FDRS) Indices for Peatland Forest Management</i> ' – on-going
PhD (Main supervisor)		Sangin Qahtan ' <i>Evaluation of RF-EMF at C-band considering Indoor and Outdoor Scenarios</i> ' – on-going
PhD (Main supervisor)		Abdulmajeed H. J. Al-jumaily ' <i>Coexistence Between 5g Cellular And Fixed Satellite Services in C-Band Based on Machine Learning Models</i> '- completed December 2022
PhD (Main supervisor)		Qasim Mohammed Khalaf ' <i>SWIPT-based Rectifier Design</i> ' – on-going
PhD (Main supervisor)		Nor Khairiah Ibrahim ' <i>Multiple Description Coding (MDC) for Video Transmission over Cognitive Radio Network</i> ' - on-going
PhD (Main supervisor)		Jalal Faraj Salem Almadani ' <i>Congestion Control for V2I Transmission for Internet of Vehicles (IoV) Network</i> ' - on-going
PhD (Main supervisor)		Mohanad Mohammed ' <i>Multi-User Beamforming, Fairness and Device-to-Device Channel State Information Sharing in Downlink NOMA Systems</i> ' – completed May 2021
PhD (Main supervisor)		Sumaya Dhari Awad Mfarej ' <i>End-to-End DVB-S2X System Design with Deep Learning-Based Channel Estimation over Satellite Fading Channels</i> ' – completed May 2021
PhD (Main supervisor)		Vahid Khodamoradi ' <i>Energy-Efficient CRAN Location in Massive-MIMO Framework</i> ' – completed May 2021
PhD (Main supervisor)		Oussama Messadi ' <i>SWIPT Aided Massive MIMO HetNet Multi-User Scenarios with RRH Selection</i> ' - completed May 2020
PhD (Main supervisor)		Mas Haslinda Mohammad (Interference Management for Cognitive Radio Network) - completed May 2019
PhD (Main supervisor)		Ahmad Nuzli Anas ' <i>Adaptive and Intelligent Resource Allocation for Cognitive Radio Network</i> ' - on-going
PhD (Main supervisor)		Abdulmajid AL-Mqdashi ' <i>Blind Rendezvous Schemes for Cognitive Radio Ad-hoc Networks</i> ' - completed Mar 2019
PhD (Main supervisor)		Ali Mohamed ' <i>Channel Characterisation and Modeling for GEO Satellite-to-Land Terminals at Ku-band with Tropical Awareness</i> ' – complete Apr 2015

PhD (Main supervisor)	Aida Ismail ' <i>Green Network Planning and Operational Power Consumption Optimization in LTE-A Using Artificial Intelligence Techniques</i> ' – complete Dec 2015
PhD (Main supervisor)	Ahmad Mohamedou ' <i>Cognitive Radio in WLAN Transmission over TV White Space Frequencies</i> ' – complete Oct 2015
PhD (Main supervisor)	Saukat Jahan ' <i>Adaptive MAC protocol over Next Generation Wireless Sensor Networks</i> ' – complete July 2015
PhD (Co-supervisor)	Mustafa Sabah Noori ' <i>Intrusion Detection System for Heterogeneous Data Traffic in IoT Environment Based Machine Learning</i> ', on-going
PhD (Co-supervisor)	Suhaila Zeinelabideen Omer Belal ' <i>Enhancing security in the Internet-based SDN WANs by choosing the suitable SDN controller</i> ', on-going
PhD (Co-supervisor)	Zahraa Raad Mayoof Hajiyat ' <i>Design and analysis of helical antenna for short-range ultra-high-speed THz wireless applications</i> ' – completed July 2023
PhD (Co-supervisor)	Abeer Abdalla Zakaria Ibrahim ' <i>Controller Placement Problem Optimised in 5G-based SDN and NFV Architecture</i> ' – completed Feb 2022
PhD (Co-supervisor)	Zuhura Juma Ali ' <i>MIMO for 5G Wireless Comm</i> ' – completed May 2021
PhD (Co-supervisor)	Motea Saleh Mohamad Al-Omari ' <i>Interference Avoidance Techniques for Densely Deployed Two-Tier WiMax Femto Cells</i> ' - completed May 2017
PhD (Co-supervisor)	Mustafa Ismail Salman ' <i>Self-Configured Link Adaptation using Channel Quality Indicator-Modulation and Coding Scheme Mapping with Partial Feedback for Green Long-Term Evolution Cellular Systems</i> ' - complete May 2015
PhD (Co-supervisor)	Yaseein Soubhi Hussein ' <i>Mobility Management Schemes Based on Multiple Criteria for Optimisation of Seamless Handover in LTE Networks</i> ' – complete Mar 2015
PhD (Co-supervisor)	Ali Kamil Marzook ' <i>Rank-Deficient Channel Matrix Based Smart Antenna Receiver for Block Data Transmission in CDMA and UWB Systems</i> ' – complete May 2013
PhD (Co-supervisor)	Khalid Abdullahi Ali ' <i>Self-Healing and Service Management in Wireless Sensor Network</i> ' – on-going
PhD (Co-supervisor)	Nazmus Sadat ' <i>Scheduling Algorithm for OFDMA-Based Networks</i> ' – complete May 2015
MSc (Main supervisor)	Mohammed Riyadh , ' <i>Machine Learning Modeling for Radiofrequency Electromagnetic Fields (RF-EMF) Signals from mmWave 5G Signals</i> ' – complete July 2022
MSc (Main supervisor)	Jafar Kadum , ' <i>5G NR Massive MIMO Base Station sub-6 GHz Exposure: Assessment Methodology Investigation</i> ' – complete July 2021
MSc (Main supervisor)	Lu Li , ' <i>Impact of Climate Change in Rain Attenuation at mmWave Transmission in Tropical Region</i> ' – complete Mar 2022
MSc (Main supervisor)	Sangin Qahtan Wali , ' <i>Investigation of RF-EMF Exposure for 5G over mmWave Base Station with MIMO Antenna</i> ' – complete July 2021
MSc (Main supervisor)	Mohamed Mustafa Mohamed Ohaiba ' <i>Optimization of Exclusion Zone for 5G and FSS Coexistence</i> ' – complete July 2020
MSc (Main supervisor)	Nur Syahirah Ibrahim ' <i>Relay-Assisted Cognitive Radio Networks for Interweave and Underlay Spectrum Sharing</i> ' – complete Apr 2017

MSc (Main supervisor)	Faraz Talebpour ' <i>Digital Quadrature Compensator Scheme for Analog Imperfections of Quadrature Modulator in Wireless Communication Systems</i> ' – complete July 2016
MSc (Main supervisor)	Zahraa Raad Mayoof Hajiyat ' <i>Channel Coding Scheme for 5G Mobile Communication System for Short Length Message Transmission</i> ' – complete May 2015
MSc (Main supervisor)	Akram Hussein A Jebriil ' <i>Adaptive Image Transmission over LoRA Network for Mangrove Monitoring</i> ' – complete May 2015
MSc (Main supervisor)	Haafizah Rameeza Shaukat ' <i>Danger Theory Based Node Replication Attack Detection and Mitigation in Mobile Wireless Sensor Networks</i> ' – complete Jan 2015
MSc (Main supervisor)	Abdulmajeed H. J. Al-Jumaily ' <i>Propagation Models for Train Environment over GEO Satellite Networks in Malaysia</i> ' – complete Feb 2015
MSc (Main supervisor)	Mohamad Reza Ranjbari ' <i>Multiple Description Coding over GEO Satellite Networks</i> ' – complete Sept 2014
MSc (Main supervisor)	Zahraa Dahham ' <i>Energy Efficient MAC Protocol in WSN</i> ' – complete June 2013
MSc (Main supervisor)	Sin Yong You ' <i>Radio Resource Management in WiMAX</i> ' – complete March 2013
MSc (Main supervisor)	Bahman Azarbad ' <i>Cross-layer in 3D Video Transmission over GEO Satellite Networks</i> ' – complete June 2013
MSc (Co-supervisor)	Abofazi ' <i>Fractal dielectric resonator antenna for Ultra Wideband Wireless Communication Systems</i> ' – complete May 2015
MSc (Co-supervisor)	Hussam Kareem ' <i>Energy Efficient Two-Stage Chain Routing Protocol for Wireless Sensor Network</i> ' – complete May 2014
MSc (Co-supervisor)	Bilal Abdulhaq Ahmed ' <i>Enhanced Open Shortest Path First (OSPF) Protocol Using Parallel Tabu-Search-Ring in WiMAX Mesh Network</i> ' – complete July 2013
MSc (Co-supervisor)	Omar Ceesay ' <i>Coverage Extension in Wireless Sensor Networks</i> ' – complete June 2011
MSc (Co-supervisor)	Wasan Ahmad Suleiman Alfaraihat ' <i>Fast Convergent Energy Efficient MAC Protocol for Wireless Sensor Networks</i> ' – complete Oct 2010
Bachelor (Main supervisor)	Amirul Hussin Mohamad Ansahari ' <i>Machine Learning Formulation for Drought Code in For Peatland Management</i> ' – complete 2023, Silver Award, Final Year Project Exhibition 2023, Faculty of Engineering, UPM, 17 – 18 July 2023
Bachelor (Main supervisor)	Abdullah Adli Suhaimi ' <i>Machine Learning for Lora Transmission over-the-sea</i> ' – complete 2023, Best Graduates Award in the Universiti Putra Malaysia (UPM) Final Year Project (FYP) Open Day, 17 July 2023
Bachelor (Main supervisor)	Ahmad Azim Fikri Ahmad Tarmizi ' <i>Investigation of RF-EMF in Malaysia</i> ' – complete 2022
Bachelor (Main supervisor)	Adriana Nabilah Ahmad Rizal ' <i>Investigation of Machine Learning for Rain Attenuation Prediction considering Climate Change in Malaysia</i> ' – complete 2022
Bachelor (Main supervisor)	Siti Nur Baiti Abdul Rahim ' <i>Adaptive Coding and Modulation (ACM) for Satellite and LiFi communications</i> ' – complete 2020
Bachelor (Main supervisor)	Masra Razab ' <i>Adaptive Coding and Modulation (ACM) for DVB-S2X Satellite Transmission</i> ' – complete 2019, Excellent Project Award by Malaysia IEEE Communications Society / Vehicular Technology Joint Chapter
Bachelor (Main supervisor)	Nur Syaqeena Mohamad Afsoor ' <i>Integrate Satellite – LiFi Wireless Communications</i> ' – complete 2019

Bachelor (Main supervisor)	Afiq Syahif Kamal Azmi 'Adaptive Downlink GEO Satellite Transmission in Tropical Region' – complete 2018
Bachelor (Main supervisor)	Muhammad Syazwan Azizan 'Adaptive Uplink Power Control For GEO Satellite Transmission In Tropical Region' – complete 2018
Bachelor (Main supervisor)	Muhammad Badri Amsyar Zulkefli 'Fade Mitigation Techniques on Satellite Signal in Tropical Region at Ka-band' – complete 2017
Bachelor (Main supervisor)	Muhammad Nurzulzabri Danial 'Propagation Model for Satellite Communication at Ka-band in Tropical Region' – complete 2017
Bachelor (Main supervisor)	Mohammad Amirul Asraff Abdul Khamas 'Measurement of Rain Attenuation Effect on Satellite Signal in Tropical Region at Ka-Band' – complete 2016
Bachelor (Main supervisor)	Mohammad Azhar Nawayi (Measurement of Scintillation Effect on Satellite Signal in Tropical Region at Ka-Band) – complete 2016: Excellent Project Award by Malaysia IEEE Communications Society / Vehicular Technology Joint Chapter
Bachelor (Main supervisor)	Muhamad Fazrul Hisyam bin Ramli 'Analysis of Rain Attenuation Effect on Satellite Signal in Tropical Region at Ka-band' – complete 2016
Bachelor (Main supervisor)	Melvin John Thomas (Analysis of Tropospheric Scintillation Effect on Satellite Signal in Tropical Region at Ka-band) – Best Final Year Project: Best Poster Award by Malaysia IEEE Young Professionals 2015
Bachelor (Main supervisor)	Liew Chun Sum 'Energy-Efficient Base Station Transmission for Wireless Network' – complete June 2014
Bachelor (Main supervisor)	Thian Laah Leang 'Energy-Driven Scheduling for DVB-S2/RCS' – complete June 2012
Bachelor (Main supervisor)	Loh Yit Lin 'Analysis of Link Adaptation for Video Transmission' – complete April 2011
Bachelor (Main supervisor)	Teoh Eng Keat 'MAC Protocol for DVB-S2/RCS' – complete April 2011
Bachelor (Main supervisor)	Abdul Rahman 'e-Tracker Parking Space Ab Razak' – complete June 2010
Bachelor (Main supervisor)	Nur Akma Ishak 'Speed Trap Auto-Reporting' – complete June 2010
Bachelor (Main supervisor)	Chooi Chong Yee 'Stolen Laptop Tracking System' – complete June 2010

CONSULTATIONS AND PROFESSIONAL SERVICES

Undergraduate Examiner

UM – FYP Panel (30 June 2020)	ENGENIUS'20 Final Year Project Evaluation, Universiti Malaya (UM)
UKM – FYP Panel (25 May 2016)	Final Year Project Award Competition, UKM
IIUM - FYP Presentation (27 Jan 2015)	Final Year Project Award Competition, IIUM
UNITEN – FYP Presentation (21 Feb 2014)	Final Year Project Award Competition, Dept. of Electronics & Communication Engineering and Dept. of Electrical Power Engineering, College of Engineering, UNITEN
UPM – FYP A/B Presentation (13 Jan 2014)	Ahmad Aiman Akmal Abdul Wahid Akmal (160274) 'Controlling Monochromator via ActiveX and LabView Integration'
UPM – FYP A/B Presentation (13 Jan 2014)	Mohd Afdhaluddin Irfan Adzhar (158673) 'Wireless Fencing for Border Protection'
UPM – FYP A/B Presentation (13 Jan 2014)	Liew Jiun Terng (156234) 'Performance analysis of Coordinated MultiPoint (CoMP) in Long

Jan 2014)	Term Evolution-Advanced (LTE-A)
UKM – Bachelor Poster Presentation (23 May 2012)	Bachelor of Computer and Communications, Dept. of Electrical and Electronics Engineering, UKM
UPM – FYP A/B Presentation (21 Oct 2011)	Choo Hong Ning (149241) ‘DSP Implementation of Adaptation Algorithm in Digital Predisortion’
UPM – FYP A/B Presentation (21 Oct 2011)	Afendi Othman (146436) ‘Design and Development of WSN-based Environment Monitoring System’
UPM – FYP A/B Presentation (21 Oct 2011)	Mohd. Amir Hamzah Bahidon (146184) ‘Development of Multimedia Multicast Transmission in IPv6 Testbed’
UPM – FYP A/B Presentation (21 Oct 2011)	Jobarteh Ebrima (150738) ‘Open Source Dynamic Routing Comparison and Performance Analysis’
UPM – FYP A/B Presentation (25 Apr 2011)	Ng Boon Quan (143262) ‘Embedded Web Services over WSN’
UPM – FYP A/B Presentation (25 Apr 2011)	Low Chin Lin (143318) ‘Green Power Harvesting for WSN Implementation’
UPM – FYP A/B Presentation (25 Apr 2011)	Ting Kok Seng (143378) ‘Analysis study of routing protocol in WSN IEEE 802.11 and 802.15.4’
UPM – FYP A/B Presentation (25 Apr 2011)	Tiong Kuok Hua (143396) ‘Performance analysis of handover protocol in WIMAX’
UPM – FYP B Presentation (17 Nov 2009)	Khairil Farid Abdul Aziz (134594) ‘Mobile Phone Automating Household Appliances – GSM Modem or Bluetooth’
UPM – FYP B Presentation (17 Nov 2009)	Fam Jian Gi (138439) ‘Music Playing Using Sign Language’

Postgraduate Examiner

UPM – PhD Thesis Examiner (Feb 2020)	Nori Mohammed Abdulkarem Al-Kharasani (GS28518) ‘Adaptive OLSR Routing Protocol for Route Selection Stability’
UPM – PhD Thesis Examiner (Feb 2020)	Atiqah Balqis Basri (G1629768) ‘Free Space Path Loss (FSPL) Formulation for Tropical Region
UTeM – PhD Thesis Examiner (Aug 2019)	Haider Rasheed AbdIshaheed ‘Management Platform for Reliable-Integrating Solution between WSN and Cloud Computing Infrastructures’
UPM – PhD Thesis Chairman (June 2019)	Wael A Y Alihasan (GS26446) ‘Design and Evaluation of Routing Protocol for Wireless Multimedia Sensor Network’
UTP – PhD Thesis Examiner (June 2019)	Wai Kheong Chong (G01615) ‘Mitigating False Blocking Problem in Wireless Ad Hoc Networks’
UPM – PhD Thesis Examiner (June 2019)	Mayada Salih Abdalla Mustada (GS35926) ‘Proactive Energy Deviation Awareness Based Traffic Routing Approach to Immunise WSN against Sink Energy Holes’
UPM – PhD Thesis Examiner (May 2019)	Mohd Nazrin Mohd Yassin (GS33992) ‘Software Defined Instrumentation for Microwave Network Analysis Measurement System Incorporating Virtual Calibration Technique’
UPM – PhD Thesis Examiner (Mar 2019)	Ali Azarnia (GS36970) ‘Compensating the Nonlinearity Effects in All-Optical Orthogonal Frequency Division Multiplexing (AO-OFDM) Systems’
UPM – PhD Thesis Chairman (Mar 2019)	Azlinda Ramli (GS37422) ‘Integrated X-Band Miniaturised Stack Bandpass Filtenna with Metamaterial Superstrate’
UPM – PhD Thesis Chairman (Feb 2019)	Kharina Khairi (GS34890) ‘Investigation on Dispersion Compensation using Chirped Fibre Bragg Gratings for Repeaterless Transmission System’
UTM – PhD Thesis Examiner (Nov 2018)	Sarah Aimi Saad ‘Arrival Time Prediction using Double Exponential Smoothing’
UPM – PhD Thesis Examiner (Oct	Emad Hmood Salman (GS38989) ‘Energy Detection-Spectrum Sensing Schemes in Cooperative

2018)		and Non-Cooperative Cognitive Radio Networks'
UISM – PhD Thesis Examiner (Sept 2018)		Mohammed I. M. Alfaqawi (G1324265) 'Wireless Distributed Computing with Cognitive Radio Energy Harvesting Network'
UPM – MSc Thesis Examiner (Aug 2018)		Abdulraqueb Shaif Ahmed Alhammadi (GS36722) 'Off the Shelf Indoor Localisation using RF for WLAN'
UTP – PhD Thesis Examiner (Aug 2018)		Khurram Shabih Zaidi (G01971) 'Fading Characteristics of Evaporation Ducts: Availability and Capacity of Wireless Communication Link over the Sea'
UIAM – MSc Thesis Examiner (Aug 2018)		Mohamad Ismat Hafizi Mansor (G1610783) 'An Enhanced Packet Scheduling Algorithm for Downlink Cognitive LTE-A'
UPM – PhD Thesis Examiner (June 2018)		Noor Hafizah Abdul Aziz (GS36859) 'LTE-Based Forward Scattering Radar Geometry for Ground Moving Target Detection and Classification'
UPM – PhD Thesis Examiner (May 2018)		Intan Helina Hasan (GS40457) 'Ferrites Based Thick Film for Enhanced Microstrip Patch Antenna'
UTM – PhD Thesis External Examiner (Apr 2018 and July 2019)		Arfah Ahmad Hasbullah 'Vehicular Location Prediction Handover Algorithm'
UKM – PhD Thesis External Examiner (Mar 2018)		Noor Shahida Mohd Kasim (P68080) 'Algoritma Peruntukan Kuasa Berkompleksi Rendah dan Penambahbaikan Pengisian Air di Dalam Pemancaran Tanpa Wayar Antena Berganda Termaju'
UPM – PhD Thesis Examiner (March 2018)		Mohd Azlan Abu (GS34955) 'Reconfigurable Decoder for Power Optimisation via Adaptive Viterbi'
UPM – PhD Thesis Chairman (Dec 2017)		Nadiah Hussein Zainol Abidin (GS35320) 'Hybrid Erbium Random Fiber Laser'
UPM – PhD Thesis Examiner (Dec 2017)		Mohamed Kadhim Khudaier (GS39897) 'Single Band and Dual-Band Microstrip Filter Antenna for Wireless Applications'
UPM – MSc Thesis Examiner (Dec 2017)		Sunday Dauda Balami (GS43945) 'Development of Low Cost, Lossy and Low Dielectric Constant OPEFB-HDPE Composite Material for Microwave Applications'
UPM – PhD Thesis Chairman (Nov 2017)		Mohammad Ahmed Mohammad Alomari (GS26874) 'Development of Parallel IEEE XTS-AES Storage Encryption for Mobile Devices'
UIAM – PhD Thesis Examiner Examiner (Oct 2017)		Alhareth M. T. Zoyd (G1034033) 'Femtocell Pathloss and Interference Modeling in Wireless Networks'
UPM – PhD Thesis Examiner (Sept 2017)		Kamal Ali Alezabi (GS33431) 'Security and Performance Enhancements of Authentication Protocols in Wireless Network'
UPM – PhD Thesis Examiner (July 2017)		Izyani Mat Rusni (GS30429) 'Development of Metamaterial Based Sensor'
UPM – PhD Thesis Examiner (July 2017)		Mohammadreza Sahebishahamabadi (GS31202) 'An Efficient Network Mobility Management for a 6LOWPAN Mobile Network in Smart Building'
UIAM – MSc Thesis Examiner Examiner (30 May 2017)		Nor Fatin Muhd Ariffin (G122080) 'Development of a Frequency Modulated Continuous Wave Radar for Slow Moving Target Detection'
UPM – MSc Thesis Examiner (June 2017)		Mohammed Ayad Saadon (GS43290) 'Linearisation of Power Amplifiers with Memory Effects Using Memory Polynomial and Linearly Interpolated Look-Up Table Predistorter'
UPM – PhD Thesis Examiner - Reviva (May 2017)		Amir Kombo Mwinyi (GS31558) 'Optimised Rsync Algorithm using Multi-Agent Systems for Synchronisation in Heterogeneous Learning Management Systems'
UPM – PhD Thesis Examiner (Apr 2017)		Nasser Hasan Ali (GS39795) 'Protection of Smart Substation based on WLAN Complies with IEC61850 using Travelling Wave Analysis'
UPM – PhD Thesis Chairman (Jan 2017)		Majid Moghaddasi (GS35076) 'SAC-OCDMA in FSO Networks using Multi Wavelength Laser Source'
UPM – PhD Thesis Examiner (Mar 2017)		Khalid Taher Mohammed Al-Hussaini (GS35753) 'Design and Implementtion of An Energy-Efficient OFDM Modulator for Broadband Wireless Devices'
UPM – PhD Thesis Examiner (Feb		Nasseer Hassan Ali 'Protection of Smart Substation Based on WLAN Complies with IEC61850

2017)		Using Travelling Wave Analysis'
UPM – PhD Thesis Examiner (Dec 2016)	Mohammad Ahmed Mohammad Alomari	'An Embedded Database Implementation of a Parallel IEEE XTS Storage Encryption for Mobile Devices'
UPM – PhD Thesis Examiner (Dec 2016)	Muayad Khalil Murtadha Al-Wajedi	'Network Based Fully Distributed Mobility Management for Heterogeneous Wireless Networks'
UPM – PhD Thesis Examiner (Oct 2017)	Mohd Amiruddin Abd Rahman	'Kernel and Multi-Class Classifiers for Multi-Floor WLAN Localisation'
UTHM- MSc Thesis Examiner (June 2016)	Labeeb Mohamed Ahmed Adam	'Co-Existence and Interference Between LTE-FDD and LTE-TDD: A Solution Frequency Bands Between 2500 – 2690MHz'
UPM – PhD Thesis Examiner (June 2016)	Anwar Sabah Mekki (GS36869)	'Microwave Sensor for Rebar Sensing in Non-Destructive Test'
UPM – MSc Thesis Examiner (June 2016)	Ali Raed Faisal (GS38649)	'Efficient Beamforming and Spectral Efficiency Maximization in a Joint Transmission LTE-A System'
UPM – PhD Thesis Examiner (June 2016)	Mahmoud Sami (GS33339)	'Energy-Efficient Medium Access Control Strategy for Cooperative Wireless Networks'
UPM – MSc Thesis Examiner (June 2016)	Safa Nassr Nafea (GS40413)	'High Gain and Bandwidth Multilayer Antenna for Point-to-Point Wireless Applications over ISM Band (5.725-5.785) GHz'
UPM – MSc Viva Chairman (May 2016)	Mohammad Boroon (GS35039)	'Effect of Gamma-Gamma Distribution on Performance of Optical Differential 8-Level PSK in Free Space Optic Communications'
UPM – PhD Viva Chairman (Apr 2016)	Punithavathi a/p M. Thirunavakkarasu (GS29340)	'Development of Fibre Bragg Grating-Based Ethanol Sensors using Nanostructured Material'
UIAM – MSc Thesis Examiner (Jan 2016)	Nurul Wahida M. Saad @ Md Saad (G1213850)	'Rain Fade Mitigation Technique Time Diversity for Future Millimetre Wave Satellite Communications in Tropical Regions'
UPM - PhD Thesis Examiner (Dec 2015)	Amir Kombo Mwinyi (GS31558)	'Optimised Rsync Algorithm to Minimise Communication Cost using Multi-Agent Systems for Synchronisation in Heterogeneous Learning Management Systems'
UIAM – MSc Thesis Examiner (Nov 2015)	Muhammad Towfiqur Rahman (G1310061)	'Performance Evaluation of Different Modulation Techniques in Optical OFDM'
UKM – PhD Thesis Examiner (Aug 2015)	Mohammed H. M. Alsharif (P64813)	'Intelligent Cooperation Management Among Solar Powered Base Stations Towards Green Cellular Networks in Malaysia'
UNITEN – MSc Thesis Examiner (July 2015)	Hiew Yik Kuan (SE21839)	'A Cognitive Based Smart Grid Communication Framework Network in Malaysia: An Investigation into Spectrum Occupancy and Capacity Maximisation'
UPM – PhD Viva Chairman (May 2015)	Chairman to Viva Voce Examination: Asem A. M. Salah (GS32103)	'LTE-Based Passive Radar for Ground Targets Detection and Tracking'
UM - MSc Thesis Examiner (May 2015)	Ehsan Mostajeran,	'A Path Loss Modelling in Grid Urban Environment for Vehicle Ad Hoc Networks'
UTeM - MSc Thesis Examiner (May 2015)	Ammar bin Anuar,	'Adaptive Traffic Prioritisation Algorithm over IEEE 802.16e'
UPM – MSc Thesis Examiner (May 2015)	Fawaz Mohammed Jumaah (GS32327)	'Power Management Controller for Low Power GPS Baseband Receiver'
UniMaP – MSc Thesis Examiner (Jan 2015)	Normaliza Omar	'Performance Evaluation of Scheduling Algorithms in Downlink Transmission System of Long Term Evolution (LTE) Network'
UTP – MSc Thesis Examiner (Jan 2015)	Iskandar Slaiman (G02424)	'Enhancement of Bandwidth and Power Efficiencies for Indoor Free Space Optical Communications'
UPM – PhD Thesis Chairman (Nov 2014)	Chairman to Viva Voce Examination: Noran Azizan Cholan (GS26560)	'Multiple Wavelengths Generation Utilizing Nonlinear Optics of Four Wave Mixing'
UPM – MSc Thesis (Oct 2014)	Thale Saedi	'Design of High-Gain Triple Band Active Antenna for Agriculture Applications'
UPM – MSc Thesis Examiner (July 2014)	Muntadher Qasim Abdulhasan (GS33085)	'Adaptive Threshold Feedback Compression Scheme Based Channel Quality Indicator (CQI) in Long Term Evolution (LTE) System'

UNITEN – MSc thesis Examiner (July 2014)	Alaaldin H Jaber (SE21301) ‘Spectrum Occupancy Measurement and Analysis in Kuala Lumpur for Cognitive Radio Based Smart Grid Application’
UPM – MSc Thesis Examiner (reviva) (Jan 2014)	Melad M. Ali Salleh (GS20962) ‘Study of Relay Deployment in Mobile Multihop Relay Network’
MMU – PhD thesis Examiner (Apr 2013)	Ng Yin Hoe (GS20230) ‘Signal Design Based Channel Identification Techniques for Fiber-Wireless Systems’
UM – MSc thesis Examiner (Apr 2013)	Mohd Fahmi Azman (KGA 100057) ‘Radio Resource Allocation Strategies Based on Interference Coordination for Multimedia Broadcast Multicast Service over Single Frequency Network (MBSFN) in LTE’
UKM – MSc thesis Examiner (Mar 2013)	Yasser Asrul Ahmad (P57905) ‘System Development of a Homodyne Satellite Transmitter using and Ultra-Low Phase Noise Amplifier’
UPM – MSc Thesis Examiner (Feb 2013)	Ee Gee Keng (GS24687) ‘Path Recovery for LOAD-Based 6LoWPAN Routing Protocol’
UNITEN – MSc Thesis Examiner (Jan 2013)	Methaq Jassam Swadi al-Obaidi (ST21337) ‘Evaluation of Energy Efficiency of MANET Routing Protocol’
UNITEN – MSc Thesis Examiner (Nov 2012)	Muhsen Hammoud (UNITEN – ST21318) ‘LTE-Advanced Simulation Framework Based on OMNETT++’
UNITEN - MSc Thesis (re-viva) Examiner (Aug 2012)	Omar Salah Farhan (UNITEN - ST21058) ‘Finding Optimum Wavelet Decomposition Level for Denoising’
UPM – MSc Thesis (July 2012)	Ng Wei Lun (GS24795) ‘Wireless Controller Area Network Using Token Frame Scheme’
UPM – MSc Thesis Examiner (Jan 2012)	Melad M Ali Saleh (GS20962) ‘An Effect of Relay Stations Deployment to Increase the Link Capacity and Data Rate in IEEE 802.16j’
UPM – MSc Thesis Examiner (Feb 2012)	Aws Ali Shakir (GS20963) ‘Adaptive Back-off Mechanism in Multimedia Support in 802.11e EDCA Wireless Ad-hoc Networks’
UNITEN - MSc Thesis Examiner (Jan 2012)	Omar Salah Farhan (UNITEN - ST21058) ‘Optimisation Modulation Technique for Wireless Communication Using Wavelet Transform’
UPM - PhD Thesis Examiner (July 2011)	Rania Abdelhameed Mokhtar (GS15829) ‘Distributed Cooperative Spectrum Sensing in Cognitive Radio Network’
UPM - MSc Thesis Examiner (May 2011)	Octarina Nur Samijayani (GS22689) ‘Simulation of UWB Microwave Forward Scattering Radar Design for Breast Cancer Detection Application’
UPM - MSc Thesis Examiner (Mar 2011)	Asem Ahmad Mohamad Salah (GS21684) ‘An Efficient Resource Allocation Algorithm for OFDMA Cooperative Relay Networks with Fairness and QoS Guarantee’
UPM - MSc Thesis Examiner (Nov 2010)	Yaakob Ali Ahmed Qasem Alrefaei (GS21090) ‘Collision-Free Routing and Scheduling using Multiple Transceivers for IEEE 802.16 Mesh Network’

Consultations

Project Member, 08 July 2022 – 07 July 2023	<i>Kajian Kesedaran Awam Mengenai Sains, Teknologi dan Inovasi Malaysia 2022</i> , MASTIC, MOSTI, RM635,847.79
Project Member, 15 July 2021 – 14 Jan 2023	<i>Kajian Baseline Petunjuk Dasar Sains, Teknologi dan Inovasi (DSTIN) 2021 - 2030</i> , MOSTI, RM1,297,940.43
Project Member, 1 Mac – 31 Aug 2021	<i>Development of LoRa Network and Devices Evaluation Framework</i> , National Technology and Innovation Sandbox (NTIS), MOSTI (in collaboration with Vectolabs Sdn Bhd), RM50,000.00
Consultation Committee, 23 March 2021	Committee of Consultations on Assessment for Science, Technology and Innovation Policy (DSTIN) 2021 - 2030 (<i>Jawatankuasa Penilaian Perunding Kajian Baseline Petunjuk Dasar Sains, Teknologi dan Inovasi (DSTIN) 2021 - 2030</i>)
Trainer, 12 Nov 2019	Bringing Sense Back in Policy! YSN-ASM Science Policy Workshop, Academy of Sciences Malaysia
Invited Speaker, 27 Mar – 7 Apr	Pocket Talk and Science Show Program, in conjunction with Minggu Sains Negara, Pusat Sains

2019	Negara KL
Session Chair (29 – 30 Apr 2019)	Satellite Networks and HAPS; Modulation and Coding II, IEEE 2019 VTC-Spring, Kuala Lumpur
Invited Trainer on Satellite Technologies (17 Aug 2017)	Mid Term Review – Technology Update, Directorate for Information War, Ministry of Defense (MinDef) - RM1,000.00
Task Force Shakemap (13 May 2015 – 12 May 2016)	Development and Application of Shake Map, in collaboration with US Geological Survey (USGS) and MetMalaysia
Technical Working Group (TWG) Member, 30 Apr 2015 – 29 Apr 2018	Research Project on Meteorological Satellite, UPM Deputy Vice Chancellor for Research and Innovation (TNCPI) Office
ASEAN Regional Forum (ARF), 24 – 29 May 2015	After Action Review (AAR) – Head of Communications and Media, Logistics and Support Group
Joint NBTC-TTC-MTSFB Workshop on Telecommunications and Public Protection and Disaster Relief (PPDR), Gold Mountain, Nakhon Ratchasima, Thailand (3-4 Dec 2014)	REM-SAN: Remote Earthquake Monitoring over Satellite-Assisted Network ~ USD 2,200.
Science and Technology Research Institute for Defence (STRIDE) (13 Oct 2014)	Technical Talk on Digital Radio Communications – RM200
Defense and Security Technology Conference (DSTC) (26 Sept 2014)	Workshop on Satellite Communications and Technology
Soka University, Japan (8 March 2014)	Trainer for ‘Satellite Communications’, Exchange Student Program (Short Mobility) – RM 1,200.00
Institut Teknologi Petroleum Petronas (Instep) (24 – 27 June 2013)	Consultant for Backbone Transmission Technology Level 1 & 2 – RM 6,000.00
Ministry of Higher Education, Malaysia (Mar – Dec 2013)	Consultant for Assessment Study for IPTA Programs: Effectiveness and Relevance from Demand and Award Aspects (Technical Cluster) (Vot. No.: 6379900) – RM 217,000.00
Session Chair (4 Oct 2012)	T1A MIMO Communications, The 12th International Symposium on Communications & Information Technologies (ISCIT 2012), Gold Coast
National Space Agency (ANGKASA) and ATSB (19 Apr 2011)	Consultant for Value Management for National Communication Satellite (CommSat) Program
Ministry of Information, Communications and Cultural, Malaysia (3 Oct 2011 – 1 October 2013)	Consultant for Establishment of Standards and Guidelines for WSN Implementation in Malaysia – RM 470,000.00
ZOHL Consultancy Sdn. Bhd. (12 Aug 2010, for 2 years)	Associate Consultant for Satellite Communications and Networking – RM 9,000.00
MOSTI (20 & 21 Dec 2010)	Interviewer and Assessor for National Science Foundation (NSF) Scholarship
MOSTI (10 Aug 2010)	Interviewer and Assessor for National Science Foundation (NSF) Scholarship
National Space Agency (ANGKASA) and ATSB (29-30 Apr 2010)	Consultant for System Capacity and Link Budget Analysis, National Communication Satellite (CommSat) User Requirements Seminar
Session Chair (3 Oct 2011)	Resource Management and Mobility Management Sessions, Asia-Pacific Conference on

Technical Committees

Jury	INVENTX2023, Multimedia University (MMU), 17 – 29 Sept 2023
Digital Outlook Series (DOS)	Moderator for Session 1: Readiness of Malaysian Digital Network in Facing COVID-19, 20 Nov 2020, by MCMC and MTSFB
EMF Technical Code (TC) Member, Mar – July 2020	EMF Sub-Working Group (SWG) Technical Code (TC) Member, Mar - July 2020, by MCMC
IMT Technical Code (TC) Member, Mar – July 2020	IMT Technical Code (TC) Member, Mar - July 2020, by MCMC
Judging Committee, 7 Nov 2019	RICES 2019, MMU
Organising Committee, 1 Apr – 31 Dec 2019	General Co-Chair, 2019 IEEE Malaysia International Conference on Communications (MICC2019)
Subject Matter Expert Panel, UPM, 2 Aug 2019	Panel for PRGS (01/08/2019 to 09/08/2019)
Subject Matter Expert Panel, UPM, 5 Feb 2018	Panel for FRGS, PRGS, TRGS and eDana MOSTI (2018 – 2019)
Subject Matter Expert Panel, MOHE, 23 Feb 2018	Panel for PRGS 2018 (University Level)
Subject Matter Expert Panel, MOSTI, 22 Aug 2017	Panel for Evaluation of Technical and Commercial Proposals (No. 14/2017)
Subject Matter Expert Panel, MOSTI, 1 June 2017 – 31 May 2019	Panel for Evaluation of R, D & C Ministry of Science, Technology and Innovation (MoSTI)
Moderator, MOSTI, 16 Feb 2017	Workshop on Stakeholders Engagement on Priority and Strategic Research under the 11 th Malaysia Plan
Research Team Member, 2 Feb 2017	Satu Dekad Penubuhan Universiti Penyelidikan: Kajian Impak, JPT, KPT (MoHE)
Assessment Panel for Geran Insentif Penyelidikan dalam Pengajaran dan Pembelajaran (GIPP), UPM, 1 June 2016	Centre for Academic Development (CADe), UPM
Assessment Panel for Research Grant at University Level, 2016-2017, UPM	Research Funds from UPM (UPM Grant Schemes), MoE Grant Schemes (FRGS, PRGS, TRGS), MoSTI Grant Scheme (eScience fund)
Assessment Panel, 2016 UPM, Technology and Engineering Cluster	Research Funds from Ministry of Education (MoE)
Chair, IEEE Malaysia Section, IEEE YP and IEEE UKM SB, 26 Jan 2016	2016 IEEE Regional Young Professionals (YP) and Students Workshop, UPM
Assessment Panel, 2015 UPM, ICT Cluster; UMP Technology and Engineering Cluster	Research Funds from Ministry of Education (MoE) and Ministry of Science, Technology and Innovation (MOSTI) Malaysia – FRGS, PRGS, TRGS and Science Fund
Working Group (WG) Member, June – Dec 2015	Development of Shake Map Malaysia, Malaysian Meteorological Department
sTechnical Program Chair and	‘Wireless / Radio Access Technologies’ Track, MICC2015, Kuching, Sarawak, Malaysia

Track Chair – Malaysian International Conference in Communications 2015 (MICC2015), Feb – Nov 2015

Technical Program Committee – IEEE Vehicular Technology Conference 2015 (VTC2015), Oct 2014 – May 2015 'Satellite Networks, Positioning Technologies, Localization and Navigation' track of the IEEE Vehicular Technology Conference VTC2015-Spring, Glasgow, UK

Technical Program Committee – Disaster Management, May 2014 – August 2015 International Conference on Satellite Communications and Space (IconSpace 2015), Malaysia

Treasurer, Nov 2013 – Oct 2014 Defense and Security Technology Conference 2014 (DSTC2014)

Co-Technical Program Chair – Wireless Communications, July – Nov 2013 2013 IEEE 11th Malaysia International Conference in Communications (MICC2013)

Technical Program Committee – Communication Systems (June 2013 – May 2014) ECTI-CON 2014 Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI) Association, Thailand

Advisory Board (Jan – May 2013) 2013 International Seminar on Communication, Electronics and Information Technology (ISCEIT2013)

Technical Committee (Jan – Dec 2012) International Mobile Telecommunications Working Group (IMT WG), Malaysian Technical Forum Sdn Bhd (MTFSB)

Secretariat and Technical Committee (Jan – Dec 2012) Establishment of WSN Standards and Guidelines in Malaysia, National Centre for Sensor Technology (NEST)

Technical Program Committees (Jan – Oct 2012) International Conference on Wireless Communications and Applications 2012 (ICWCA 2012), Kuala Lumpur

Technical Program Committees (Jan – Oct 2012) The 12th International Symposium on Communications & Information Technologies (ISCIT 2012), Gold Coast

Logistics Committee (Aug –Nov 2011) Human Space Technology Expert Meeting, co-organised by Institute of Space Science (ANGKASA), UKM and The United Nations Office for Outer Space Affairs (UNOOSA), Kuala Lumpur

Technical Committee (July 2010 – July 2011) International Conference on Satellite Communications and Space (IconSpace 2011), P. Pinang

Dept. of Computer and Communication Systems (23 Dec 2010) Technical Course for Technical Staff (KUTEK), UPM

ANGKASA UKM (1 Aug 2010) Member of Technical Committee for International Conference on Space Science and Satellite Communications 2011 (IconSpace'11), P. Pinang

SUBJECT MATTER EXPERT

Forum Panelist (21 Oct 2020)

VIRTUAL IGEM 2020, Malaysian Climate Change Group (MCCG) Conference, A Session by Global Environment Centre - *NAPC: Networked ASEAN Peat Swamp Forest Communities, ICT Virtual Organisation of ASEAN Institutes and NICT (ASEAN IVO)*

Monash University Malaysia (1 Aug 2019)

Forum Panelist, Advanced Engineering Colloquium (AEC) – 'Nurturing Connections: Academia & Industry'

IEEE Student Branch, UPM (7 Nov 2015)

Invited Speaker at 2015 IEEE Malaysia Student Congress, Faculty of Engineering, UPM

Keynote Speech (8-10 Oct 2015) 'Green Network Planning and Operational Power Consumption Optimization in Heterogeneous Wireless Networks Using Artificial Intelligence Techniques', International Conference on Green Computing and IoT 2015 (ICGCOT2015), New Delhi, India

Astro Awani – Invited Expert in Satellite Communications (16 March 2014) 'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 16 March 2014)

Astro Awani – Invited Expert in Satellite Communications (14 March 2014) 'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 14 March 2014)

Astro Awani – Invited Expert in Satellite Communications (25 March 2014) 'Mencari MH370: Memahami Isyarat Satelit' - Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 25 March 2014)

Harian Metro – Invited Expert in Satellite Communications (25 March 2014) 'Tragedi MH370: Kaedah Satelit Inmarsat Kesan Pesawat' – Invited Expert in Satellite Communications (*Harian Metro* 25 March 2014)

TV AlHijrah – Invited Expert in Satellite Communications (26 March 2014) 'Tragedi MH370' – Invited Expert in Satellite Communications (TV alHijrah 26 March 2014)

RTM TV1 – Invited Expert in Satellite Communications (27 March 2014) 'Bual Bicara' – Invited Expert in Satellite Communications (RTM TV1, 10:00 – 11:00 27 March 2014)

BERNAMA – Invited Expert in Satellite Communications (27 March 2014) 'Ruang Bicara – MH370' – Invited Expert in Satellite Communications (BERNAMA 17:00 – 18:00 27 March 2014)

RTM TV1 – Invited Expert in Satellite Communications (2 April 2014) 'Kegunaan Cloud Computing dan Satelit Komunikasi untuk Komplemen kepada Black Box' – Invited Expert in ICT (Berita RTM TV1 8:00 – 9:00 pm 2 April 2014)

TV AlHijrah – Invited Expert in Satellite Communications (3 April 2014) 'Assalamualaikum - Mata di Langit (Satelit)' – Invited Expert in Satellite Communications (TV AlHijrah 8:30 – 09:00am 3 April 2014)

Astro Awani – Invited Expert in Satellite Communications (5 May 2014) 'MH370 – Pencarian Memasuki Fasa Baru' - Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 5 May 2014)

Metro Ahad – Invited Expert in Satellite Communications (1 June 2014) 'Masih di Lautan Hindi' – Metro Ahad, 1 Jun 2014

RTM TV1 – Invited Expert in Satellite Communications (16 June 2014) '100 Hari Tragedi MH370' – RTM1, 1:00 – 3:00pm, 16 Jun 2014

Astro Awani – Invited Expert in Satellite Communications (13 June 2014) 'MH370: Penelitian dan Analisis Semula Data' - Invited Expert in Satellite Communications, Agenda Awani 8:30 – 9:30pm, 13 June 2014

Astro Awani – Invited Expert in Satellite Communications (8 March 2015) 'Agenda Awani Khas Setahun MH370'- Invited Expert in Satellite Communications, Agenda Awani Khas 8:30 – 10:30pm, 8 March 2015

Astro Awani – Invited Expert in Satellite Communications (8 March 2016) 'Agenda Awani Khas Dua Tahun Kehilangan MH370: Pencarian Masih Diteruskan'- Invited Expert in Satellite Communications, Agenda Awani Khas 9:30 – 10:00pm, 8 March 2016

Malaysia Research and Education Network (MyREN) – 'Wireless Sensor Network Workshop' – 'Energy Management in Channel Access'

Invited Speaker (28 and 29 Jan 2014)

National Space Agency (ANGKASA) – Invited Speaker (24 October 2013)

‘Application of Satellite Communication Seminar’ - ‘Satellite Networks: From emergency to aeronautical communications’

Suranaree University of Technology (SUT), Thailand – Invited Speaker to 2013 International Seminar on Communication, Electronics and Information Technology (ISCEIT2013) (8 May 2013)

‘Green Network Optimisation for Wireless Networks’

UKM – Invited Speaker to Institute of Space Science (ANGKASA) Seminar Series (3 September 2012)

‘Satellite Networks: From emergency to aeronautical communications’

UKM – Evaluator to Bachelor Poster Presentation (23 May 2012)

Bachelor of Computer and Communications, Dept. of Electrical and Electronics Engineering, UKM

Wireless and Networking Research Group, UPM (23 Sept 2010)

Research Management Talk for Publication Workshop

Networking and Wireless Research Group, UPM (Dec 2009)

Invited presentation on system-level simulation using ns2

MIMOS Bhd. (July 2009)

Invited presentation on MAC layer from simulation perspective

PUBLICATIONS

Journals

- 1) Ibrahim, A.A.Z., Hashim, F., Sali, A., Navaie, K., Fadul, S. M. E., ‘Reliability-aware swarm based multi-objective optimization for controller placement in distributed SDN architecture’, Digital Communications and Networks, 2024
- 2) S. Q. Wali et al., "An Assessment of Extrapolated Field Strengths vs. Distance, Measurement Time and Induced Traffic from 5G Base Station in C-Band," in IEEE Access, doi: 10.1109/ACCESS.2024.3448257.
- 3) L. Li, A. Sali, J. T. Liew, N. L. Saleh and A. M. Ali, "Machine Learning for Peatland Ground Water Level (GWL) Prediction via IoT System," in IEEE Access, doi: 10.1109/ACCESS.2024.3419237.
- 4) Marieh Talebkah, Aduwati Sali, Vahid Khodamoradi, Touraj Khodadadi, Meisam Gordan, ‘Task offloading for edge-IoV networks in the industry 4.0 era and beyond: A high-level view’, Engineering Science and Technology, an International Journal, Volume 54, 2024, 101699, ISSN 2215-0986, <https://doi.org/10.1016/j.jestch.2024.101699>.
- 5) M. S. Noori, R. K. Z. Sahbudin, A. Sali and F. Hashim, "Feature Drift Aware for Intrusion Detection System Using Developed Variable Length Particle Swarm Optimization in Data Stream," in IEEE Access, vol. 11, pp. 128596-128617, 2023, doi: 10.1109/ACCESS.2023.3333000.
- 6) Sumaya D. Awad, A. Sali, Mohanad M. Al-Wani, Ali M. Al-Saegh, J.S. Mandeep, R.S.A. Raja Abdullah, ‘End-to-end DVB-S2X system design with DL-based channel estimation over satellite fading channels at Ka-band’, Computer Networks, Volume 236, 2023, 110022,

- 7) M. Talebkhah, A. Sali, M. Gordan, S. J. Hashim and F. Z. Rokhani, "Comprehensive Review on Development of Smart Cities Using Industry 4.0 Technologies," in *IEEE Access*, vol. 11, pp. 91981-92030, 2023, doi: 10.1109/ACCESS.2023.3302262.
- 8) H. Basarudin, "Evaluation of Climate Change Effects on Rain Rate Distribution in Malaysia using Hydro-Estimator for 5G and Microwave Links", *Eng. Technol. Appl. Sci. Res.*, vol. 13, no. 4, pp. 11064–11069, Aug. 2023.
- 9) Víctor P. Gil Jiménez, Abdulmajeed Al-Jumaily, A. Sali, Dhiya Al-Jumeily, 'Hybrid Chaos Particle Swarm Optimization algorithm for smart Cloud Service System based on optimization resource scheduling and allocation', *Journal of Autonomous Intelligence*, Volume 6, No 2 (2023). <http://dx.doi.org/10.32629/jai.v6i2.652>
- 10) Li, L.; Sali, A.; Noordin, N.K.; Ismail, A.; Hashim, F. Prediction of Peatlands Forest Fires in Malaysia Using Machine Learning. *Forests* 2023, 14, 1472. <https://doi.org/10.3390/f14071472>
- 11) Li, L.; Sali, A.; Noordin, N.K.; Ismail, A.; Hashim, F.; Rasid, M.F.A.; Hanafi, M.; Razali, S.M.; Aziz, N.A.; Sukaesih Sitanggang, I.; et al. Modeling of Evaporation Rate for Peatland Fire Prevention Using Internet of Things (IoT) System. *Fire* 2023, 6, 272. <https://doi.org/10.3390/fire6070272>
- 12) Al-Jumaily, A.; Sali, A.; Jiménez, V.P.G.; Lagunas, E.; Natrah, F.M.I.; Fontán, F.P.; Hussein, Y.S.; Singh, M.J.; Samat, F.; Aljumaily, H.; et al. Evaluation of 5G and Fixed-Satellite Service Earth Station (FSS-ES) Downlink Interference Based on Artificial Neural Network Learning Models (ANN-LMS). *Sensors* 2023, 23, 6175. <https://doi.org/10.3390/s23136175>
- 13) A. Al-Jumaily, A. Sali, M. Riyadh, S. Q. Wali, L. Li and A. F. Osman, "Machine Learning Modeling for Radiofrequency Electromagnetic Fields (RF-EMF) Signals From mmWave 5G Signals," in *IEEE Access*, vol. 11, pp. 79648-79658, 2023, doi: 10.1109/ACCESS.2023.3265723.
- 14) L. Li et al., "Estimation of Ground Water Level (GWL) for Tropical Peatland Forest Using Machine Learning," in *IEEE Access*, vol. 10, pp. 126180-126187, 2022, doi: 10.1109/ACCESS.2022.3225906.
- 15) X. Xiong, Q. Li, X. Ge, A. Sali and B. M. Ali, "Power Allocation Optimization for OAM-MIMO Systems With Unaligned Antennas," in *IEEE Wireless Communications Letters*, vol. 11, no. 7, pp. 1523-1527, July 2022, doi: 10.1109/LWC.2022.3178809.
- 16) K. M. Shalghum, N. K. Noordin, A. Sali and F. Hashim, "Worst-Case Latency Analysis for AVB Traffic under Overlapping-Based Time-Triggered Windows in Time-Sensitive Networks," in *IEEE Access*, doi: 10.1109/ACCESS.2022.3168136.
- 17) A. Al-Jumaily et al., "Evaluation of 5G Coexistence and Interference Signals in the C-Band Satellite Earth Station," in *IEEE Transactions on Vehicular Technology*, vol. 71, no. 6, pp. 6189-6200, June 2022, doi: 10.1109/TVT.2022.3158344.
- 18) A. A. Z. Ibrahim, F. Hashim, A. Sali, N. K. Noordin and S. M. E. Fadul, "A Multi-Objective Routing Mechanism for Energy Management Optimization in SDN Multi-Control Architecture," in *IEEE Access*, vol. 10, pp. 20312-20327, 2022, doi: 10.1109/ACCESS.2022.3149795.
- 19) V. Khodamoradi, A. Sali, O. Messadi, A. Khalili and B. B. M. Ali, "Energy-Efficient Massive MIMO SWIPT-Enabled Systems," in *IEEE Transactions on Vehicular Technology*, vol. 71, no. 5, pp. 5111-5127, May 2022, doi: 10.1109/TVT.2022.3153323.
- 20) N. K. Ibrahim, A. Sali, H. A. Karim, A. F. Ramli, N. S. Ibrahim and D. Grace, "Multiple Description Coding for Enhancing Outage and Video Performance Over Relay-Assisted Cognitive Radio Networks," in *IEEE Access*, vol. 10, pp. 11750-11762, 2022, doi:

10.1109/ACCESS.2022.3146396.

- 21) S. Q. Wali, A. Sali, J. K. Allami and A. F. Osman, "RF-EMF Exposure Measurement for 5G Over Mm-Wave Base Station With MIMO Antenna," in *IEEE Access*, vol. 10, pp. 9048-9058, 2022, doi: 10.1109/ACCESS.2022.3143805.
- 22) K. M. Shalghum, N. K. Noordin, A. Sali and F. Hashim, "Critical Offset Optimizations for Overlapping-Based Time-Triggered Windows in Time-Sensitive Network," in *IEEE Access*, vol. 9, pp. 130484-130501, 2021, doi: 10.1109/ACCESS.2021.3110585.
- 23) F. Samat, M. J. Singh, A. Sali and N. Zainal, "A Comprehensive Review of the Site Diversity Technique in Tropical Region: Evaluation of Prediction Models Using Site Diversity Gain of Greece and India," in *IEEE Access*, doi: 10.1109/ACCESS.2021.3100363.
- 24) M. A. Eissa, A. Sali, F. A. Ahmad and R. R. Darwish, "Observer-Based Fault Detection Approach Using Fuzzy Adaptive Poles Placement System With Real-Time Implementation," in *IEEE Access*, vol. 9, pp. 83272-83284, 2021, doi: 10.1109/ACCESS.2021.3086040.
- 25) P. M. Kalaivaanan, A. Sali, R. S. A. R. Abdullah, S. Yaakob, M. J. Singh and A. M. Al-Saegh, "On-The-Move Measurement Analysis for Ka-Band High Throughput Satellite and LiFi Communication Networks in Tropical Region," in *IEEE Access*, vol. 9, pp. 71344-71355, 2021, doi: 10.1109/ACCESS.2021.3076484.
- 26) Shalghum, K.M.; Noordin, N.K.; Sali, A.; Hashim, F. "Network Calculus-Based Latency for Time-Triggered Traffic under Flexible Window-Overlapping Scheduling (FWOS) in a Time-Sensitive Network (TSN). *Appl. Sci.* 2021, 11, 3896. <https://doi.org/10.3390/app11093896>
- 27) Mohanad Mohammed Al-Wani; Aduwati Sali; Sumaya Dhari Awad; Asem Salah; Zhiguo Ding; Nor Kamariah Noordin; Shaiful Jahari Hashim, Chee Yen Leow, "Interference Cancellation via D2D CSI Sharing for MU-MISO-NOMA System with Limited Feedback," in *IEEE Transactions on Vehicular Technology*, doi: 10.1109/TVT.2021.3070989.
- 28) M. Talebkhah, A. Sali, M. Marjani, M. Gordan, S. J. Hashim and F. Z. Rokhani, "IoT and Big Data Applications in Smart Cities: Recent Advances, Challenges, and Critical Issues," in *IEEE Access*, vol. 9, pp. 55465-55484, 2021, doi: 10.1109/ACCESS.2021.3070905.
- 29) F. Samat, M. J. Singh, A. Sali and P. M. Kalaivaanan, "Observation of Site Diversity Gain Dependency on Separation Distance Using an Attenuation-Dependent Logarithmic Model in a Tropical Region," in *IEEE Access*, vol. 9, pp. 33994-34006, 2021, doi: 10.1109/ACCESS.2021.3056183.
- 30) Messadi O, Sali A, Khodamoradi V, Salah AA, Pan G, Hashim SJ, Noordin NK. Optimal Relay Selection Scheme with Multi-antenna Power Beacon for Wireless-Powered Cooperation Communication Networks. *Sensors*. 2021; 21(1):147.
- 31) A. A. Z. Ibrahim, F. Hashim, N. K. Noordin, A. Sali, K. Navaie and S. M. E. Fadul, "Heuristic Resource Allocation Algorithm for Controller Placement in Multi-Control 5G based on SDN/NFV Architecture," in *IEEE Access*, doi: 10.1109/ACCESS.2020.3047210.
- 32) Shahid Bashir, Mohammed H. Alsharif, Imran Khan, Mahmoud A. Albreem, Aduwati Sali, Borhanuddin Mohd Ali and Wonjong Noh, 'MIMO-Terahertz in 6G Nano-Communications: Channel Modeling and Analysis', *CMC Computers, Materials & Continua*, DOI:10.32604/cmc.2020.012404, 2020
- 33) P. M. Kalaivaanan, A. Sali, R. S. A. R. Abdullah, S. Yaakob, M. J. Singh and A. M. Al-Saegh, "Measuring Contention and Congestion on Ad-Hoc Multicast Network Towards Satellite on Ka-Band and LiFi Communication Under Tropical Environment Region," in *IEEE Access*, vol. 8, pp. 108942-108951, 2020, doi: 10.1109/ACCESS.2020.3001619.
- 34) V. Khodamoradi, A. Sali, O. Messadi, A. A. Salah, Mohanad M. Al-Wani, B.M.Ali, "Optimal

Energy Efficiency Based Power Adaptation for Downlink Multi-Cell Massive MIMO Systems," in *IEEE Access*, vol. 8, pp. 203237-203251, 2020, doi: 10.1109/ACCESS.2020.3037530.

- 35) Z. J. Ali, N. K. Noordin, A. Sali and F. Hashim, "Fair Energy-Efficient Resource Allocation for Downlink NOMA Heterogeneous Networks," in *IEEE Access*, vol. 8, pp. 200129-200145, 2020, doi: 10.1109/ACCESS.2020.3035212.
- 36) Ali, Z.J., Noordin, N.K., Sali, A., Hashim, F., Balfaqih, M., 'Novel resource allocation techniques for downlink non-orthogonal multiple access systems', *Applied Sciences (Switzerland)*, 2020, 10(17), 5892
- 37) Abdullah, R.S.A.R., Musa, S.A., Rashid, N.E.A., ...Salah, A.A., Ismail, A., 'Passive forward-scattering radar using digital video broadcasting satellite signal for drone detection', *Remote Sensing*, 2020, 12(18), 3075
- 38) Abdulazeez-Ahmed, M., Nordin, N.K., Sali, A.B., Hashim, F., 'Multi-criteria handover decision for heterogeneous networks: Carrier aggregation deployment scenario', *International Journal of Computer Networks and Communications*, 2020, 12(4), pp. 41-54
- 39) Al-Hubaishi, A.S., Noordin, N.K., Sali, A., ...Mansoor, A.M., Ghaleb, S.M., 'Partial pilot allocation scheme in multi-cell massive MIMO systems for pilot contamination reduction', *Energies*, 2020, 13(12), 3163
- 40) Ali, K., Rasid, M.F.A., Sali, A., Ali, B., 'Face-Based Mobile Target Tracking Technique in Wireless Sensor Network', *Wireless Personal Communications*, 2020, 111(3), pp. 1853-1870
- 41) Almohammed, B., Ismail, A., Sali, A., 'Electro-textile wearable antennas in wireless body area networks: materials, antenna design, manufacturing techniques, and human body consideration—a review', *Textile Research Journal*, 2020
- 42) Eissa, M.A., Sali, A., Hassan, M.K., Bassiuny, A.M., Darwish, R.R., 'Observer-Based Fault Detection with Fuzzy Variable Gains and Its Application to Industrial Servo System', *IEEE Access*, 2020, 8, pp. 131224-131238, 9143074
- 43) Sumaya D. Awad, A. Sali, Ali M. Al-Saegh, Mohanad M. Al-Wani, R. S. A. Raja Abdullah, J. S. Mandeep, 'Beamforming and Scheduling Techniques for Multibeam DVB-S2X over Rainy Fading Satellite Channel', *IEEE Access*, Vol. 1, Issue 8, Dec 2020, pp41116-41127, Print ISSN: 2169-3536, Online ISSN: 2169-3536, DOI: 10.1109/ACCESS.2020.2976709
- 44) P. M. Kalaivaanan, A. Sali, R. S. A. Raja Abdullah, S. Yaakob, M. Jit Singh and A. M. Al-Saegh, "Evaluation of Ka-Band Rain Attenuation for Satellite Communication in Tropical Regions Through a Measurement of Multiple Antenna Sizes," in *IEEE Access*, vol. 8, pp. 18007-18018, 2020, doi: 10.1109/ACCESS.2020.2966873.
- 45) M. M. Al-Wani, A. Sali, N. K. Noordin, S. J. Hashim, C. Y. Leow, and I. Krikidis, 'Robust Beamforming and user clustering for guaranteed fairness in downlink NOMA with partial feedback', *IEEE Access*, pp121599 – 121611, August 2019.
- 46) Liew, J.T., Hashim, F., Sali, A., Rasid, M.F.A., Jamalipour, A., 'Probability-based opportunity dynamic adaptation (PODA) of contention window for home M2M networks', *Journal of Network and Computer Applications*, 144, pp. 1-12
- 47) Almohammed, A.A., Noordin, N.K., Sali, A., (...), Jabbar, W.A., Saeed, S., 'Modeling and analysis of IEEE 1609.4 MAC in the presence of error-prone channels', 2019, *International Journal of Electrical and Computer Engineering*, 9(5), pp. 3531-3541
- 48) Magnetic resonance coupling for 5G WPT applications Kamarudin, S.I., Ismail, A., Sali, A., Ahmad, M.Y.2019 *Bulletin of Electrical Engineering and Informatics* 8(3),

pp. 1036-1046

- 49) Collaborative Adaptive Filtering Approach for the Identification of Complex-Valued Improper Signals Amadi, C.C., Ujang, B., Sali, A., Hashim, F. 2019 *Circuits, Systems, and Signal Processing* 38(8), pp. 3860-3879
- 50) Low-slow-small (LSS) target detection based on micro doppler analysis in forward scattering radar geometry Musa, S.A., Abdullah, R.S.A.R., Sali, A., Ismail, A., Rashid, N.E.A., 2019, *Sensors (Switzerland)*, 19(15),3332
- 51) Resource allocation in heterogeneous cognitive radio sensor networks, Al-Medhwahi, M., Hashim, F., Ali, B.M., Sali, A., Alkholidi, A. 2019 *International Journal of Distributed Sensor Networks*, 15(7)
- 52) Full embroidery designed electro-textile wearable tag antenna for WBAN application Abbas, B., Khamas, S.K., Ismail, A., Sali, A. 2019 *Sensors (Switzerland)*, 19(11),2470
- 53) Channel Coding Scheme for 5G Mobile Communication System for Short Length Message Transmission Hajiyat, Z.R.M., Sali, A., Mokhtar, M., Hashim, F. 2019 *Wireless Personal Communications*, 106(2), pp. 377-400
- 54) Idris Abubakar Umar, Zurina Mohd Hanapi, A. Sali, Zuriati A. Zulkarnain, 'Towards overhead mitigation in state-free geographic forwarding protocols for wireless sensor networks', *Springer Wireless Networks*, 25(3), pp. 1017-1030, 2019 (Q3, IF: 1.584)
- 55) Al-Hubaishi, A.S., Noordin, N.K., Sali, A., Subramaniam, S., Mansoor, A.M., 'An efficient pilot assignment scheme for addressing pilot contamination in multicell massive mimo systems', *Electronics (Switzerland)*, 8(4),372, 2019
- 56) Hajiyat, Z.R.M., Sali, A., Mokhtar, M., Hashim, F., 'Channel Coding Scheme for 5G Mobile Communication System for Short Length Message Transmission', *Wireless Personal Communications*, 2019
- 57) Mohamad, M.H., Sali, A., Hashim, F., Nordin, R., Takyu, O., 'Clustering transmission opportunity length (CTOL) model over cognitive radio network', *Sensors (Switzerland)*, 18(12),4351
- 58) Al-Mqdashi, A., Sali, A., Noordin, N.K., Hashim, S.J., Nordin, R., 'Efficient matrix-based channel hopping schemes for blind rendezvous in distributed cognitive radio networks', *Sensors (Switzerland)*, 18(12),4360
- 59) Jebri, A.H., Sali, A., Ismail, A., Rasid, M.F.A., 'Overcoming limitations of LoRa physical layer in image transmission', *Sensors (Switzerland)*, 18(10),3257
- 60) Mok, L.S., Noordin, N.K., Sali, A., Hashim, F., Ng, C.K., 'Low Complexity Iterative-QR (IQR) Precoder Design Based on Structure Blocks for Massive MIMO System', *Wireless Personal Communications*, 102(1), pp. 19-30
- 61) Jumaah, F.M., Zaidan, A.A., Zaidan, B.B., (...), Qahtan, M.Y., Sali, A. 'Technique for order performance by similarity to ideal solution for solving complex situations in multi-criteria optimization of the tracking channels of GPS baseband telecommunication receivers', *Telecommunication Systems*, 68(3), pp. 425-443
- 62) Quzwain, K., Ismail, A., Sali, A., 'A high gain double-octagon fractal microstrip yagi antenna', *Progress in Electromagnetis Research*, 72, page 83-89
- 63) Akram A. Almohammed ; Nor Kamariah Noordin ; Aduwati Sali ; Fazirulhisyam Hashim ; Mohammed Balfaqih, 'An Adaptive Multi-Channel Assignment and Coordination Scheme for IEEE 802.11P/1609.4 in Vehicular Ad-hoc Networks' *IEEE Access*, Vol. 6, 2018 (Q1, IF: 3.244)
- 64) A. Almgdashi, A. Sali, M. J. AbdelRahman, S.J.Hashim, R. Nordin, 'Efficient rendezvous schemes for fast-varying cognitive radio ad hoc networks', *Transactions on Emerging*

- 65) Nasimi, M., Hashim, F., Sali, A., Sahbudin, R.K.Z., QoE-Driven Cross-Layer Downlink Scheduling for Heterogeneous Traffics Over 4G Networks, *Wireless Personal Communications*, 96 (3), pp. 4755-4780, 2017
- 66) Anabi, H.K., Nordin, R., Abdulghafoor, O.B., A. Sali, Almqdshi, A., Abdullah, N.F., 'From Sensing to Predictions and Database Technique: A Review of TV White Space Information Acquisition in Cognitive Radio Networks', *Wireless Personal Communications*, 96 (4), pp. 6473-6502, 2017
- 67) Alsaedi, N., Hashim, F., Sali, A., Rokhani, F.Z., 'Detecting sybil attacks in clustered wireless sensor networks based on energy trust system (ETS)', *Computer Communications*, 110, pp. 75-82, 2017
- 68) Quzwain, K., Ismail, A., Sali, A., 'Octagon fractal microstrip Yagi antenna with a combined DNG and DPS layer structure', *Microwave and Optical Technology Letters*, 59 (8), pp. 1988-1993, 2017
- 69) Abdullah, R.S.A.R., Alnaeb, A., Salah, A.A., (...), Sali, A., Pasya, I., 'Micro-Doppler estimation and analysis of slow moving objects in Forward Scattering Radar system', *Remote Sensing*, 9 (7), 699, 2017
- 70) Raja Syamsul Azmir Raja Abdullah, Asem A Salah, Ali A Alnaeb, Aduwati Sali, Nur Emileen Abd Rashid, Idnin Pasya Ibrahim, 'Micro-Doppler Detection in Forward Scattering Radar: Theoretical Analysis and Experiment', *Electronics Letters*, 53 (6), pp. 426-428, 2017
- 71) Md Nazmus Saadat, Borhanuddin Mohd Ali, Aduwati Sali, Raja Syamsul Azmir Raja Abdullah, Hafizal Mohamad, 'Resource Allocation Algorithm for Improving Performance of the OFDMA Based Connection Oriented Networks', *Transactions on Networks and Communications*, Vol. 3, No. 6, 2015
- 72) M. I. Salman, C. K. Ng, N. K. Noordin, B. M. Ali, A. Sali, 'A Partial Feedback Reporting Scheme for LTE Mobile Video Transmission with QoS Provisioning', *Elsevier Computer Networks*, Vol. 112, pp108-121, Jan 2017 (Q2, IF: 1.445)
- 73) Kamelia Quzwain, Alyani Ismail, Aduwati Sali, 'Compact High Gain and Wideband Octagon Microstrip Yagi Antenna', *Electromagnetics*, Volume 36, Issue 8, 16 November 2016, Pages 524-533 (Q4, IF: 0.333)
- 74) Ibrahim Mustapha, Borhanuddin Mohd Ali , Mohd Fadlee A. Rasid, Aduwati Sali and Hafizal Mohamad, 'An Energy Efficient Reinforcement Learning Based Cooperative Channel Sensing for Cognitive Radio Sensor Networks', *Elsevier Pervasive and Mobile Computing*, Volume 35, February 2017, Pages 165–184 (Q2, IF: 1.719)
- 75) M. A. Gadam, N. K. Nordin, F. Hisham, A. Sali, 'Hybrid Channel Gain Prioritized Access-Aware Cell Association with Interference Mitigation in LTE Advanced HetNets', *International Journal of Communication Systems*, Volume 29, Issue 18, 1 December 2016, Pages 2650-2668 (Q3, IF: 1.099)
- 76) Mohammed Al-Medhwahi, Fazirulhisyam Hashim, Borhanuddin Mohd Ali, A. Sali, 'Pliable Cognitive MAC for Heterogeneous Adaptive Cognitive Radio Sensor Networks', accepted in *Sensors*, 11 (6), e0156880, <http://dx.doi.org/10.1371/journal.pone.0156880>, June 2016 (Q1, IF: 2.245)
- 77) Idris Abubakar Omar, Zurina Mohd Hanapi, A. Sali, Zuriati A. Zulkarnain, 'FuGeF: A Resource Bound Secured Forwarding Protocol for Wireless Sensor Networks', *Sensors* 2016, 16(6), 943 (Q1, IF: 2.245)
- 78) Ali M. Al-Saegh, A. Sali, J. S. Mandeep, and Fernando Pérez Fontán³, 'Channel Measurements, Characterization, and Modeling for Land Mobile Satellite Terminals in Tropical Regions at Ku-band', *IEEE Transactions in Vehicular Technology*, 66 (2),

7464863, pp. 897-911, Feb 2017 (Q1, IF: 1.978)

- 79) Al-Omari, M., Ramli, A. R, Sali, A., Azmir, R. S., 'Deployment of femtocell and its interference management in approached in LTE Heterogenous Networks', *Journal of Theoretical and Applied Information Technology*, 87 (1), pp. 54-79, 2016 (Scopus-indexed)
- 80) Al-Omari, M., Ramli, A. R, Sali, A., Azmir, R. S., 'A femtocell cross-tier interference mitigation technique in OFDMA-LTE system: A cuckoo search based approach', *Indian Journal of Science and Technology*, 9 (2), 2016 (Scopus-indexed)
- 81) Peter O. Aiyelabowo, A. Sali, Samsul Bahari b. Noor, Nor Kamariah Noordin, 'Outage Probability Assessment of Power Line Cooperative Communication (PLCC) System', *International Journal of Advanced Engineering Research and Science*, Vol. 3, Issue 4, Apr 2016, ISSN: 2349-6495 (Scopus-indexed)
- 82) Al-Samawi, Aida, A. Sali, Nor Kamariah Noordin, Mohamed Othman, and Fazirulhisyam Hashim, 'Feasibility of Green Network Deployment for Heterogeneous Networks', *Springer Wireless Personal Communications*, Apr 2016, DOI: 10.1007/s11277-016-3691-0 (Q4, IF: 0.653)
- 83) Ahmed Mohamedou, A. Sali, Borhanuddin M. Ali, M. Othman, 'Dynamical Spectrum Sharing and Medium Access Control for Heterogeneous Cognitive Radio Networks', *International Journal of Distributed Sensor Networks*, Vol. 2016 (2016), Article ID 3630593, 15 pages <http://dx.doi.org/10.1155/2016/3630593>, Apr 2016 (Q4, IF: 0.665)
- 84) A. Mohammed, M. Ovayi, C. K. Ng, N. K. Noordin, A. Sali, F. Hashim, 'Review of Adaptive Cell Selection Techniques in LTE-Advanced Heterogeneous Networks', *Journal of Computer Networks and Communications*, Article ID 7394136, <http://dx.doi.org/10.1155/2016/7394136>, April 2016 (Scopus-indexed)
- 85) Hamzah F. Zmezm, S. J. Hashim, Aduwati Sali, Kamal Ali Alezabi, 'Pre-authentication design for seamless and secure handover in Mobile WiMAX', *International Review on Computers and Software (IRECOS)*, Vol. 10, No 7, August 2015 (Scopus-indexed)
- 86) Ibrahim Mustapha, Borhanuddin Mohd Ali, Mohd Fadlee A. Rasid, Aduwati Sali and Hafizal Mohamad, 'An Energy-Efficient Spectrum Aware Reinforcement Learning Based Clustering Algorithm for Cognitive Radio Sensor Networks', *Sensors* 2015, 15(8), 19783-19818; doi:10.3390/s150819783 (Q1, IF: 2.245)
- 87) Y. S. Hussein, B. M. Ali, M. F. A. Rasid, A. Sali, 'A Novel Cell-Selection Optimization Handover for Long-Term Evolution (LTE) Macrocell Using Fuzzy TOPSIS' *Elsevier Computer Communications (COMCOM)*, Volume 73, Part A, 1 January 2016, pp 22–33 (Q1, IF: 1.695)
- 88) Al-Samawi, Aida, A. Sali, Nor Kamariah Noordin, Mohamed Othman, and Fazirulhisyam Hashim, 'Wireless Network Power Optimization using Relay Stations Blossoming and Withering Technique', *Transactions on Emerging Telecommunications Technologies*, June 2015, 28 (3), e2954 (Q2, IF: 1.354)
- 89) Y. S. Hussein, B. M. Ali, M. F. A. Rasid, A. Sali, 'Handover in LTE networks with proactive multiple preparation approach and adaptive parameters using Fuzzy Logic Control', *KSII Transactions on Internet and Information Systems*, Vol. 9, No7, July 2015 (Q4, IF: 0.561)
- 90) Abdulmajeed H. J. Al-Jumaily, A. Sali, J. S. Mandeep, and Alyani Ismail, 'Propagation Models on Earth-sky Signal Effects for High Speed Train Satellite Channel in Tropical Region at Ku-band,' *International Journal of Antennas and Propagation*, Volume 2015 (2015), Article ID 270949, 10 pages, Feb 2015 (Q3, IF: 0.660)
- 91) Haafizah Rameeza Shaukat, Fazirulhisyam Hashim, Aduwati Sali, and M. Fadlee Abdul Rasid, 'Node Replication Attacks in Mobile Wireless Sensor Network: A Survey',

International Journal of Distributed Sensor Networks, Volume 2014 (2014), Article ID 402541, pp1-15, <http://dx.doi.org/10.1155/2014/402541> (Q4, IF: 0.665)

- 92) A. Mohamedou, A. Sali, B. M. Ali, M. Othman, H. Mohamad, 'Bayesian Inference and Fuzzy Inference for Spectrum Sensing Order in Cognitive Radio Networks', *Transactions on Emerging Telecommunications Technologies*, DOI: 10.1002/ett.2916 Dec 2014 (Q2, IF: 1.049)

- 93) Hamzah F. Zmezm, S. J. Hashim, Aduwati Sali, Kamal Ali Alezabi, 'Seamless and Secure Design for Subsequent Handover in Mobile WiMAX Networks', *International Review on Computers and Software (IRECOS)*, Vol. 9, No. 8, August 2014 (Scopus-indexed)
- 94) Ali Al-Saegh, Aduwati Sali, J.S. Mandeep and Alyani Ismail, 'Tracking- and Scintillation-Aware Channel Model for GEO Satellite to Land Mobile Terminals at Ku-Band', *International Journal of Antennas and Propagation*, Vol. 2015, Article ID 392714, <http://dx.doi.org/10.1155/2015/392714> (Q3, IF: 0.660)
- 95) Shahideh Kiehbardroudezhad, Nor Kamariah Noordin, A. Sali, Zamri Zainal Abidin, 'Optimization of an Antenna Array Using Genetic Algorithms', *The Astronomical Journal*, Vol. 147, Issue No. 6 (2014) (Q2, IF: 4.024)
- 96) M. I. Salman, C. K. Ng, N. K. Noordin, B. M. Ali, A. Sali, 'A Self-Configured Link Adaptation for Green LTE Downlink Transmission', *Transactions on Emerging Telecommunications Technologies*, Volume 26, Issue 2, pages 258–275, February 2015 (Q2, IF: 1.049)
- 97) Y. S. Hussein, B. M. Ali, M. F. A. Rasid, A. Sali, 'Reduction of outage probability due to handover by mitigating inter-cell interference in Long Term Evolution (LTE) Networks', *ETRI Journal*, Vol. 36, pp.554-563, 2014 (Q3, IF: 0.771)
- 98) H. F. Zmezm, S. J. Hashim, Aduwati Sali, 'Fast and Secure Handover Authentication Scheme in Mobile WiMAX', *Journal of Theoretical and Applied Information Technology*, Vol. 59, No. 2, 2014 (Scopus-indexed)
- 99) Husam Kareem, S. J. Hashim, Shamala Suberamaniam, Aduwati Sali, 'Energy Efficient Two-Stage Chain Routing Protocol for Wireless Sensor Network', *Journal Of Theoretical And Applied Information Technology*, Vol. 59, No. 2, 2014 (Scopus-indexed)
- 100) Arafat A. A. Shabaneh, Azizi Mohd Ali, Chee Kyun Ng, Nor Kamariah Noordin, Aduwati Sali, Mohd Hanif Yaacob, 'Review of Energy Conservation Using Duty Cycling Schemes for IEEE 802.15.4 Wireless Sensor Network (WSN)', *Springer Wireless Personal Communications*, July 2014, Volume 77, Issue 1, pp 589-604 (Q4, IF: 0.653)
- 101) Zahraa Dahham, Aduwati Sali, Borhanuddin M. Ali, 'An Efficient Backoff Algorithm for IEEE 802.15.4 Wireless Sensor Networks', *Springer Wireless Personal Communications*, Issue 4, Vol. 75, pp 2073-2088, Apr 2014 (Q4, IF: 0.653)
- 102) A. Azari, A. Ismail, A. Sali, F. Hashim, 'A new super wideband fractal monopole-dielectric resonator antenna', *IEEE Antenna and Wireless Propagation Letters*, Vol. 12, pp. 1014-1016, 2013 (Q2, IF: 1.579)
- 103) A.A.Zaidan, H.Abdul Karim, N.N.Ahmad, B.B.Zaidan, A.Sali, 'Image skin segmentation based on multi-agent learning Bayesian and neural network', *Engineering Application of Artificial Intelligence*, Vol. 32, June 2014, pp. 136-150 (Q1, IF: 2.207)
- 104) A.A.Zaidan, H.Abdul Karim, N.N.Ahmad, B.B.Zaidan, A.Sali, 'A four-phases methodology to propose anti-pornography system based on neural and bayesian methods of artificial intelligence', *International Journal of Pattern Recognition and Artificial Intelligence*, No. 1, Vol. 28, 2014 (Q4, IF: 0.669)
- 105) A.A.Zaidan, H.Abdul Karim, N.N.Ahmad, B.B.Zaidan, A.Sali, 'On multi-agent learning neural and bayesian methods: An automated anti-pornography system',

- 106) A. M. Al-Saegh, A. Sali, J. S. Mandeep, A. Ismail, 'Extracted Atmospheric Impairments on Earth-Sky Signal Quality in Tropical Regions at Ku-Band', Elsevier Journal of Atmospheric and Solar-Terrestrial Physics, Vol. 104, pp. 96-105, Nov 2013, (Q3, IF: 1.474) – ANGKASA Publication Award 2013 – Space Application Category ('Hadiah Penerbitan ANGKASA – Bidang Aplikasi Angkasa 2013')
- 107) A.A.Zaidan, H.Abdul Karim, N.N.Ahmad, B.B.Zaidan, A.Sali, 'An Automated Anti-Pornography System Using Skin Detector based on Artificial Intelligence: A Review', International Journal of Pattern Recognition and Artificial Intelligence, Vol. 27, Issue 4, pp. 1-35, June 2013 (Q4, IF: 0.669)
- 108) A. Marzook, A. Ismail, A. Sali, B. M. Ali, S. Khatun, 'A New technique for Multi-Cell Joint Channel Estimation in Time Division Code Division Multiple Access Based on Reduced Rank Singular Value Decomposition', Springer Wireless Networks, Vol. 20, No. 4, pp. 759-773, 2014 (Q3, IF: 0.961).
- 109) Md. S. Jahan, A. Sali, W. Usaha, N. A. A. Kadir, M. F. A. Rasid, Borhanuddin Mohd. Ali, 'Comparison and Analysis of Energy-Efficient Geographical and Power Based Clustering Algorithm for Heterogeneous WSNs', Journal of Information and Communication Technologies, Vol. 3, Issue 9, pp. 1-8, Sept 2013 (Scopus-indexed)
- 110) Mustafa Ismael Salman, Chee Kyun Ng, Nor Kamariah Noordin, Borhanuddin Mohd Ali, Aduwati Sali, and Muntadher Qasim Abdulhasan, 'Radio Resource Management (RRM) for Green 3GPP Long Term Evolution (LTE) Cellular Networks: Review, and Trade-offs', The Institution of Electronics and Telecommunication Engineers (IETE) Technical Review, Vol. 30, No. 3, pp. 257-269, May-Jun 2013. (Q3, IF: 0.888)
- 111) Zahariah Manap, Chee Kyun Ng, Borhanuddin Mohd Ali, Nor Kamariah Noordin and Aduwati Sali, 'A Review on Hierarchical Routing Protocols for Wireless Sensor Networks,' Wireless Personal Communications, Springer Netherlands, Vol. 72, Issue 2 (2013), pp. 1077-1104 (Q4, IF: 0.653)
- 112) Ayyoub Akbari-Moghanjoughi, Aduwati Sali, Jose Roberto Amazonas, Borhanuddin Mohd Ali, Shamala Subramaniam, Sabira Khatun, 'Tightly-Coupled Integrated LR-WPAN/WiMAX Network: Architecture and Performance Modeling', IERI Procedia, Elsevier, ISSN 2212-6678, Vol. 4, pp. 59-67, April 2013 (Scopus-indexed)
- 113) A. Marzook, A. Ismail, A. Sali, B. M. Ali, S. Khatun, 'Reduced Rank Technique For Multi-Cell Channel Estimation and Detection in TD-SCDMA Systems', International Journal of Ad-Hoc and Ubiquitous Computing (IF: 0.848)
- 114) Ali M. Al-Saegh, A. Sali, J. S. Mandeep, A. Ismail, A. H. J. Aljumaily, 'Earth-Sky Link Quality Performance for Fixed and Mobile Scenarios in Tropical Regions', Progress in Electromagnetic Research (PIER) C, Vol. 39, page 61-75, 2013 (Q2, IF: 1.229)
- 115) Bilal Abdulhaq, Makhfudzah binti Mokhtar, Aduwati Sali, 'Wireless Mesh Networks Protocols: State of the Art Review', International Journal of Advances in Computing and Information Technology, Vol. 1, Issue 5, pp. 496-500, Oct 2012 (Scopus-indexed)
- 116) A. Marzook, A. Ismail, A. Sali, B. M. Ali, S. Khatun, 'Singular Value Decomposition Rank-Deficient-based Estimators in TD-SCDMA Systems', Vol. 32, Issue 1, Journal of Springer Circuits, Systems and Signal Processing, Feb 2013, pp. 205-221 (Q3, IF.: 1.118)
- 117) A. Marzook, A. Ismail, A. Sali, B. M. Ali, S. Khatun, 'Reduced Rank Technique for Joint Channel Estimation and Joint Data Detection in TD-SCDMA Systems', Springer Personal Wireless Communication, April 2013, Vol. 69, Issue 4, pp. 1629-1646 (Q4: IF.: 0.653)
- 118) A. Marzook, A. Ismail, A. Sali, B. M. Ali, S. Khatun, 'Reduced Rank Technique for Joint

Channel Estimation in TD-SCDMA Systems', International Journal of Electronics, Vol. 100, No. 2, Feb 2013, pp.274-287 (Q4, IF.: 0.459)

- 119) Y. S. Hussein, B. M. Ali, P. Varahram, A. Sali, 'Enhanced Handover Mechanism in Long Term Evolution (LTE) networks', Scientific Research and Essays, Vol. 6, Issue 24, Oct 2011, pp. 5138-5152
- 120) S. Ismail, C. K. Ng, N. K. Noordin, A. Sali, B. M. Ali, 'Review of Interference Avoidance Schemes in Femtocell Networks', Scientific Research and Essays, Vol. 6, Issue 15, August 2011, pp. 3261-3271
- 121) S. Hitam, K. L. Tan, R. K. Z. Sahbudin, M. Mokhtar, S. B. Ahmad Anas, A. Sali, 'Digital Visual Schedule and Training System for Centre of Autistic Children', Journal of Applied Sciences, Vol. 11, Issue 5, May 2011, pp. 788-796
- 122) A. Sali, G. Acar, B. G. Evans, G. Giambene, 'Multicast Link Adaptation in Reliable Transmission over Geostationary Satellite Networks', Springer Personal Wireless Communication, Vol. 62, Issue 4, 2012, pp759-782 (Q4, IF.:0.653)
- 123) H. A. Karim, N. S. Mohamad Anil Shah, N. M. Arif, A. Sali, S. Worrall, 'Reduced Resolution Depth Coding for Stereoscopic 3D Video', IEEE Transactions on Consumer Electronics, Vol.56, No. 3, August 2010, pp1705-1712 (Q2, I.F.: 1.045)
- 124) H. A. Karim, A. Sali, S. Worrall, A. H. Sadka, A. M. Kondo, 'Multiple description video coding for stereoscopic 3D', IEEE Transactions on Consumer Electronics, Vol.55, No. 4, November 2009, pp2048-2056 (Q2, I.F.: 1.045)
- 125) S. Hitam, M. K. Abdullah, M. A. Mahdi, H. Harun, A. Sali, M. Fauzi, 'Impact of Increasing Threshold Level on Higher Bit Rate in Free Space Optical Communications', Journal of Optical and Fiber Communication Research, Vol. 6, No. 1-6, December 2009, pp22-34
- 126) G. Giambene, S. Giannetti, C. P. Niebla, M. Ries, A.Sali, 'Traffic Management in HSDPA via GEO Satellite', Special Issue on Satellite Network for Mobile Services, International Journal of Space Communications, Vol. 21, Number 1-2 / 2007, pp51-68 (I.F.: 0.25)
- 127) S.A.R. Al-Haddad, M. W. Azis, S. A. Samad, A. Sali, A. B. Jantan, E. Ahmed, A. R. Ramli, W. Z. W. Hassan, 'Simulation For Transmitting of MPEG-4 Over Satellite Networks' , WSEAS Transactions on Communications, Vol. 5, Issue 1, ISSN 1109-2742, January 2006, pp57-65

BOOK

- 1) Alyani Ismail, Aduwati Sali, 'Di Manakah MH370?', Sains-Lah 2 Catatan Saintis Muda, ISBN No. 9789672011545, Simptomatik Press, 2017
- 2) Zahraa Dahham, Aduwati Sali, Borhanuddin b. Mohd Ali, 'Efficient Backoff Mechanism for IEEE 802.15.4 Wireless Sensor Networks', LAP LAMBERT Academic Publishing, 2015, ISBN 978-3-659-76193-5
- 3) Laporan Kajian Penilaian Program-Program IPTA: Keberkesanan dan Kerelevanan dari Aspek Penawaran dan Permintaan: Kluster Teknikal, Fakulti Kejuruteraan UPM 2014, ISBN 9789789832408
- 4) A. Sali, 'Reliable Multicast Transmission over Satellite Networks: Using Cross-Layer Approach', LAP LAMBERT Academic Publishing, 2011, ISBN 978-3-8433-9116-0, 3843391165

Book Chapter

- 1) 'Chapter 16: Green Network for Wireless Systems: Malaysia', in 'Innovations in Science and Technology in Developing Countries – Vol. 2', The World Academy of Sciences (TWAS), Trieste, Italy, 2014
- 2) A. M. Al-Saegh, A. Sali, J. S. Mandeep, A. Ismail, 'Chapter 9: Atmospheric Propagation

Model for Satellite Communications’ in ‘MATLAB Applications for Practical Engineers’, InTech Publishing, 2014, ISBN 978-953-51-1719-3

- 3) B. Azarbad, A. Sali, ‘DVB-S2 Model in Matlab: Issues and Impairments’, in ‘MATLAB / Book 2’, InTech Publishing, 2012, ISBN 980-953-307-501-8
- 4) G. Giambene, C. P. Niebla, V. Y. H. Kueh, A. Sali, et al. ‘Access Schemes and Scheduling Techniques’, in ‘Adaptive Resource Management and Optimization in Satellite Networks: Optimization and Cross-Layer Design’, Chapter 5, pp. 119-175, Springer, Apr. 2007, ISBN 978-0-387-36897-9
- 5) Contributor to Chapter 2, ‘Packet Scheduling and Congestion Control’, Lecture Notes in Electrical Engineering, "Traffic and QoS Management in Wireless Multimedia Networks", COST 290 Final Report, pp13-87, Springer, 2009, ISBN 0387855726, 9780387855721

Conferences

- 1) G. Betta; D. Capriglione; G. Cerro; G. Miele; S. Qahtan Wali; M. Ruttner; A. Sali; D. Šuka., "Human exposure to 5G systems: experimental analysis and measurement issues in FR1 and FR2 operating bands," 2023 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), Kuala Lumpur, Malaysia, 2023, pp. 01-06, doi: 10.1109/I2MTC53148.2023.10176034.
- 2) A. Sali, Abdulmajeed Al-Jumaily, Víctor P. Gil Jiménez, Harith Aljumaily, and Dhiya Al-Jumeily. "Cybersecurity Threat Perception Technology Based on Knowledge Graph" (Accepted: IOP, Conference Scopus, International Conference on Emerging Electronic & Automation Technology (ICEEAT 2022). **Winning the best paper award at the ICEEAT, 2022.**
- 3) Víctor P. Gil Jiménez, Abdulmajeed Al-Jumaily, A. Sali, Mandeep Jit Singh, Harith Aljumaily, and Dhiya Al-Jumeily. "Hybrid Chaos Particle Swarm Optimization Algorithm for Smart Cloud Service System Based on Optimization Resource Scheduling and Allocation" (Accepted: IOP, Conference Scopus, International Conference on Emerging Electronic & Automation Technology (ICEEAT 2022)). **Winning the best paper award at the ICEEAT, 2022.**
- 4) Dhiya Al-Jumeily, Abdulmajeed Al-Jumaily, A. Sali, Víctor P. Gil Jiménez, Mandeep Jit Singh, Harith Aljumaily. "Design of Medical Data Statistical Analysis Algorithm Based on Fuzzy Clustering and Machine Learning" (Accepted: IOP, Conference Scopus, International Conference on Emerging Electronic & Automation Technology (ICEEAT 2022)).
- 5) A. Sali, S. Q. Wali and A. F. Osman, "Evaluation of RF-EMF Exposure for sub-6GHz 5G NR Massive MIMO Base Station," 2022 IEEE 6th International Symposium on Telecommunication Technologies (ISTT), 2022, pp. 16-21, doi: 10.1109/ISTT56288.2022.9966552.
- 6) L. Li, A. Sali and S. Q. Wali, "Attenuation of mmWave Based on Measured Data via Rain Sensor in Tropical Region," 2022 IEEE 6th International Symposium on Telecommunication Technologies (ISTT), 2022, pp. 50-55, doi: 10.1109/ISTT56288.2022.9966549.
- 7) Aduwati Sali, Azizi Mohd Ali, Borhanuddin Mohd Ali, Sharifah Mumtazah Syed Ahmad Abdul Rahman, Jiun Terng Liew, Nur Luqman Saleh, Ahmad Ainuddin Nuruddin, Sheriza Mohd Razali, Ibtisam G. Nsaif, Nordin Ramli, Hafizal Mohamad, Naomi Terada, 'Peatlands Monitoring in Malaysia with IoT Systems: Preliminary Experimental Results'. In: Suhaili W.S.H., Siau N.Z., Omar S., Phon-Amuaisuk S. (eds) Computational Intelligence in Information Systems. CIIS 2021. Advances in Intelligent Systems and Computing, vol 1321. Springer, Cham. https://doi.org/10.1007/978-3-030-68133-3_23.
- 8) A. Sali, J. T. Liew, N. K. Noordin, F. Hashim, S. Mashohor, A. Shekari, Y. Ouzrut, 'Development of Skills 4.0 in Wireless Networks and Analytics Domain', International Putra InnoCreative Carnival Teaching and Learning – PiCTL, 22 – 30 Oct 2020.

- 9) Vahid Khodamoradi ; A. Sali ; Asem A. Salah ; B. M. Ali ; R. S. A. Raja Abdullah ; I. Krikidis, 'Energy Efficient Base Station Transmit Power Adaptation for Green 5G Massive MIMO Systems', 2019 IEEE 89th Vehicular Technology Conference, 28 April - 1 May 2019, Kuala Lumpur, Malaysia.
- 10) Awad, S.D., Sali, A., Al-Saegh, A.M., Abdullah, R.S.A.R., Mandeep, J.S., On Capacity and Error Performance of DVB-S2X System over Rician Fading Channel, International Conference on Space Science and Communication, IconSpace, 2019-July,8905933, pp. 68-72.
- 11) Jiun Terng Liew, Fazirulhisyam Hashim, Aduwati Sali, M. Fadlee A. Rasid, †Kananathippillai Cumanan, 'Performance Evaluation of Backoff Misbehaviour in IEEE 802.11ah Using Evolutionary Game Theory', 2019 IEEE 89th Vehicular Technology Conference, 28 April - 1 May 2019, Kuala Lumpur, Malaysia.
- 12) O. Messadi, A. Sali, Gaofeng Pan, Zhiguo Ding, Nor Kamariah Noordin, and Shaiful Jahari Hashim, 'Outage Performance for Power Beacon-Assisted Wireless-Powered Cooperative Communications', 2019 IEEE 89th Vehicular Technology Conference, 28 April - 1 May 2019, Kuala Lumpur, Malaysia.
- 13) Mohanad M. Al-Wani, A. Sali, Asem A. Salah, Borhanuddin M. Ali, Nor K. Noordin, S. J. Hashim, Keivan Navaie, Chee Yen Leow, 'On Short Term Fairness and Throughput of User Clustering for Downlink Non-Orthogonal Multiple Access System', 2019 IEEE 89th Vehicular Technology Conference, 28 April - 1 May 2019, Kuala Lumpur, Malaysia.
- 14) Ibrahim Mustapha, Borhanuddin Mohd Ali , Mohd Fadlee A. Rasid, Aduwati Sali and Hafizal Mohamad, 'A Weighted Hard Combination Scheme for Cooperative Spectrum Sensing in Cognitive Radio Sensor Networks', 12th International Malaysia International Conference in Communications 2015 (MICC2015), 23 -25 Nov 2015, Kuching, Sarawak.
- 15) Noor Alsaedi, Fazirulshiyam Hashim, A. Sali, 'Energy Trust System for Detecting Sybil Attack in Clustered Wireless Sensor Networks', 12th International Malaysia International Conference in Communications 2015 (MICC2015), 23 -25 Nov 2015, Kuching, Sarawak.
- 16) N.S. Ibrahim, A. Sali, M.H Mohamad, S.J. Hashim, 'Outage Performance in Relay-Assisted Overlay Cognitive Radio Networks', 12th International Malaysia International Conference in Communications 2015 (MICC2015), 23 -25 Nov 2015, Kuching, Sarawak.
- 17) Mustafa I. Salman, Muntadher Q. Abdulhassan, Nor K. Noordin, Borhanuddin M. Ali, Aduwati Sali, Chee K. Ng, 'An Adaptive Threshold Based CQI Compression Scheme for LTE Cellular Networks', Network Research Workshop 2015, 40th Asia Pacific Advanced Network Meeting, Kuala Lumpur, Aug 10, 2015 – *Best Student Paper Award*.
- 18) Aduwati Sali, Dasimah Zainal, Noor Hidayah Tauhid Ahmad, Mohd Farid Omar, Syafiah Mohamad, 'Remote Earthquake Monitoring over GEO Satellite Network', 7th International Conference on Recent Advances on Space Technologies, 16 – 19 June 2015, Istanbul, Turkey.
- 19) Peter O. Aiyelabowo, Aduwati Sali, Samsul Bahari Noor, Bamidele Adebisi, Nor Kamariah Noordin, 'Reed-Solomon and Convolutional Codes on Modulation Schemes for Power Line Communication (PLC)', International Conference on Robotics, Automation and Communication Engineering (ICRACE2015), Kuala Lumpur, Malaysia, 2 May 2015 - ***The IIER Excellent Paper Award for Category of Best Presentation / Best Content at 25th IIER International Conference.***
- 20) H. A. Karim H. Mohamad, N. Ramli, A. Sali, 'Multiple Description Coding for Underlay Cognitive Radio Network', 10th International Conference on Cognitive Radio Oriented

Wireless Networks and Communications (CROWNCOM2015), Doha, Qatar, 21-23 Apr 2015.

- 21) Al-Samawi, Aida, A., Sali, Nor Kamariah Noordin, Mohamed Othman, and Fazirulhisyam Hashim, 'Base Station Blossoming and Withering Technique for Heterogeneous Wireless Networks Using Fuzzy Logic,' International Symposium on Telecommunication Technologies (ISTT), Langkawi, Malaysia, 2014.
- 22) Ali Al-Saegh, A. Sali, J.S. Mandeep, A. Ismail, 'Analysis and Modeling of Cloud Impairments of Satellite-to-Land Mobile Channel at Ku and Ka Bands', 7th Advanced Satellite Multimedia Systems 2014 (ASMS2014) / 13th Signal Processing for Satellite Communication Workshop (SPSC2014), Livorno, Italy, 8 – 10 Sept 2014.
- 23) Aida Al-Samawi, Aduwati Sali, Nor Kamariah Noordin, Mohamed Othman, Fazirulhisyam Hashim, 'Base Station Location Optimisation in LTE using Genetic Algorithm', International Conference on ICT Convergence 2013(ICTC2013), Jeju Island, Korea, 14-16 Oct 2013.
- 24) A. H. J. Aljumaily, A. Sali, J. S. Mandeep, A. Ismail, A. M. Al-Saegh, 'Performance Analysis of Rain Attenuation in Malaysia using two Models At Ku-Band', 2013 IEEE International Conference on Space Science and Communication, Malacca, 1-3 July 2013.
- 25) A. M. Al-Saegh, A. Sali, J. S. Mandeep, A. Ismail, 'Energy-Driven Scheduling for Digital Video Broadcasting - Satellite Second Generation (DVB-S2)', 2013 IEEE International Conference on Space Science and Communication, Malacca, 1-3 July 2013
- 26) Sin Yong You, Aduwati Sali, Nor Kamariah Noordin, Chee Kyun Ng, 'An Enhanced Weighted Fair Queuing Scheduling for WIMAX Using QualNet', CIMSIM '12: Proceedings of the 2012 Fourth International Conference on Computational Intelligence, Modeling and Simulation, September 2012, Kuantan, Pahang.
- 27) Z. Dahham, A. Sali, B. M. Ali, S. Jahan, 'An Efficient CSMA-CA Algorithm for IEEE 802.15.4 Wireless Sensor Networks', International Symposium on Telecommunication Technologies (ISTT) 26 - 28 November 2012.
- 28) A. Mohamedou, A. Sali, B.M.Ali, M. Othman, 'Genetic Fuzzy Scheduler for Spectrum Sensing in Cognitive Radio Networks', 2012 International Symposium on Communications and Information Technologies (ISCIT), 2-5 October 2012, Gold Coast.
- 29) H. A. Karim, H. Mohamad, N. Ramli, A. Sali, 'Scalable Video Streaming over Overlay/Underlay Cognitive Radio Network', 2012 International Symposium on Communications and Information Technologies (ISCIT), 2-5 October 2012, Gold Coast.
- 30) N. A. M. Arif, H. A. Karim, H. Mohamad, A. Sali, M. R. Mokhtar, 'User Perception Evaluations of 3D Video Telephony as Compared to Actual Experience for Face-to-Face Immersive Communications', 15th IEEE International Symposium on Consumer Electronics, ISCE 2011, 14 - 17 June 2011, Singapore.
- 31) M. S. Jahan, A. Sali, B. Azarbad, W. Usaha, M. F. A. Rasid, B. M. Ali, 'Energy Efficient Geographical and Power Based Clustering Algorithm for Heterogeneous Wireless Sensor Networks', Asia-Pacific Conference on Communications 2011, APCC'11, 2-5 October 2011, Kota Kinabalu, Sabah.
- 32) F. Arvin, H. Majid, S. J. Hashim, R. S. A. R. Abdullah, A. M. Ali, M. F. A. Rasid, A. Sali, A. Ismail, F. Hashim, 'Effects of Emission from Different UWB Short-Range Communication Devices', Asia-Pacific Conference on Communications 2011, APCC'11, 2-5 October 2011, Kota Kinabalu, Sabah.
- 33) A. Marzook, A. Ismail, B. M. Ali, A. Sali, S. Khatun, M. Khalaf, 'Study of Joint Channel Estimation and Joint Data Detection in TD-SCDMA Systems', Asia-Pacific Conference on Communications 2011, APCC'11, 2-5 October 2011, Kota Kinabalu, Sabah.
- 34) B. Azarbad, A. Sali, B.M. Ali, 'Study of BER in DVB-S2 Satellite Implemented in

- Matlab', International Conference on Space and Satellite Communications 2011, IConSpace 2011, 12-13 July 2011, Penang, Malaysia.
- 35) H. A. Karim, N. A. M. Arif, A. Sali, S. Worrall, A. H. Sadka, 'An Error Resilience Method for Depth in Stereoscopic 3D Video', IEEE International Conference on Signal and Image Processing Applications, ICSIPA, November 2009, Kuala Lumpur, Malaysia.
 - 36) W. L. Ng, J. H. Chong, C. K. Ng, A. Sali, N. K. Noordin, 'GPS-Based Childcare System using RSSI Technique', Malaysia International Communications on Communications 2009, MICC'09, 15-17 Dec 2009, Kuala Lumpur.
 - 37) A. Sali, H. Karim, G. Acar, B. G. Evans, G. Giambene, 'Integrated Adaptive Approach for Reliable Transmission of Multicast Data over Geostationary Satellite Network', International Conference on Space Communications, IConSpace 2009, 26-27 Oct 2009, Port Dickson, Malaysia.
 - 38) G. Fairhurst, G. Giambene, C.P. Niebla, A. Sali, 'Cross-layer study for resource management in DVB-S2 with mobile users', International Workshop on Satellite and Space Communications 2009, IWSSC'09, Sienna, 10 – 11 September 2009, pp257-261.
 - 39) A. Sali, G. Acar, B. G. Evans, G. Giambene, 'A Comparison of Multicast Adaptive Techniques in Reliable Delivery over GEO Satellite Networks', accepted for IEEE 69th Vehicular Technology Conference VTC2009-Spring, 26–29 April 2009, Barcelona, Spain.
 - 40) G. Fairhurst, G. Giambene, G. Giannetti, C. Parraga, A. Sali, 'Multimedia Traffic Scheduling in DVB-S2 Networks with Mobile Users', International Workshop on Satellite and Space Communications 2008 IWSSC'08, Toulouse, 1st – 3rd October 2008, pp211-215
 - 41) A. Sali, G. Acar, B. G. Evans, G. Giambene, 'Channel-Aware Scheduling Algorithms with Channel Prediction for Reliable Multicast Data Transmission over Geostationary Satellite Networks, International Workshop on Satellite and Space Communications 2008 IWSSC'08, Toulouse, 1 – 3 October 2008, pp85-89.
 - 42) Sali, G. Acar, B. Evans, G. Giambene, 'Change Detection Mechanism in Feedback Implosion Suppression Algorithm for Reliable Transmission of Multicast Data over Geostationary Satellite Network', 26th AIAA International Communications Satellite Systems Conference (ICSSC-2008), California, 10th-12th June 2008, (published)
 - 43) Sali, G. Acar, B. Evans, G. Giambene, 'Feedback Implosion Suppression Algorithm for Reliable Multicast Data Transmission over Geostationary Satellite Networks', International Workshop on Satellite and Space Communications 2007 IWSSC'07, Salzburg, 12th-14th September 2007, pp139-144
 - 44) Sali, G. Acar, B. Evans, 'A Channel-Aware Scheduler with Feedback Implosion Suppression in Reliable Multicast Data Transmission over Geostationary Satellite Networks', 25th AIAA International Communications Satellite Systems Conference (ICSSC-2007), Seoul, 10th - 13th April 2007.
 - 45) Sali, G. Acar, B. Evans, 'A Cross-Layer Approach for Packet Scheduling in reliable Multicast Data Transmission over Geostationary Satellite Networks', IEEE 65th Vehicular Technology Conference VTC2007, Dublin, 23rd-25th April 2007, pp1395-1399.
 - 46) Sali, G. Acar, B. Evans, G. Giambene, 'Cross-Layer Design Approach for Multicast Scheduling over Satellite Networks', International Workshop on Satellite and Space Communications 2005 IWSSC'05, Sienna, 8th-9th September 2007, pp701-705.
 - 47) S.A.R. Al-Haddad, M. W. Azis, S. A. Samad, A. Sali, A. B. Jantan, E. Ahmed, A. R. Ramli, W. Z. W. Hassan, 'Simulation For Transmitting of MPEG-4 Over Satellite Networks" ,

Proceeding of the 5th WEAS Int. Conf. On Signal Processing, Computational Geometry & Artificial Vision, Malta, Greece, Sept 15 -18, 2005, , pp188-195.

- 48) A. Sali, N. K. Noordin, A. G.E. Abdalla, 'Location Based Knowledge (LBK) Algorithm for 4G Mobile Satellite Communication', 2ND World Engineering Congress, 22nd-25th July 2002, Kuching, Sarawak, Malaysia.
- 49) Sali, N.K. Noordin, B.M. Ali, R.K.Z. Sahbudin, A. Anthony, C.K. Ng, 'Modelling of Handover of Multimedia Traffic in Mobile Satellite Communication', Student Conference on Research and Development SCORer2002, 16th – 17th July 2002, Shah Alam, pp237-241.
- 50) A. Sali, S. Khatun, A.G. E. Abdalla, 'Queuing of Handover Calls in Mobile Satellite Communication', 5th IEEE Malaysia International Conference on Communications and 2nd East Asean Conference on Lightwave Systems Lasers & Optoelectronics(MICC2001 + LISLO`2001), Kuala Lumpur, 21 – 24 October, 2001.

CONSULTATION REPORTS

- 1) Framework to Establish Fair and Neutral LoRA Network for Smart Cities and Communities, 2021, NTIS MOSTI, in collaboration with Vectolabs Sdn Bhd and Perbadanan Putrajaya (PPJ).
- 2) Dasar Sains, Teknologi dan Inovasi Negara (DSTIN) 2021 – 2030, Dec 2020 https://www.mosti.gov.my/web/dasar-halatuju/?fbclid=IwAR3MTZjTSGotXfOMJwGiE_ta4wKq8wdbN3IQ-RH5AMGMWj0-BcOuWjMi4_w.
- 3) APT Recommendation on Standard Specification Information and Communication System using Vehicle during Disaster, APT/ASTAP/REC-02, Oct 2018, <https://www.apr.int/APTASTAP-OUTCOMES>.
- 4) After Action Review of DiREx 2015, Malaysia 25-28 May 2015.
- 5) Laporan Interim: 'Penilaian Program-Program IPTA: Keberkesanan dan Kerelevanan dari Aspek Penawaran dan Permintaan', 20 June 2013.
- 6) Inception Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 24 Nov 2011.
- 7) Interim Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 18 June 2012.
- 8) Progress Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 2 Oct 2012.
- 6) Final Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 20 Nov 2012.

OTHERS

- 1) ITU For Good - Innovate for Impact, An Interim Report, 2024, ITU Publications, International Telecommunications Union, Telecommunications Standardisation Sector, ISBN 978-92-61-39101-0 (Electronic version), 978-92-61-39111-9 (EPUB version), 978-92-61-39121-8 (Mobi version), July 2024, https://s41721.pcdn.co/wp-content/uploads/2021/06/2400805_Use-cases-collection.pdf
- 2) Climate and Health: Science-based policy solutions - a collection of case studies, June 2024, The InterAcademy Partnership (IAP) ISBN 978-88-9407-849-7, https://www.interacademies.org/sites/default/files/2024-06/IAP_Climate%20and%20Health_single%20page.pdf
- 3) Glosari MyRA I & II (Pindaan 2023) – Penilaian Malaysia Research Assessment (MyRA), Edisi Pertama, Jabatan Pendidikan Tinggi, 2024, ISBN ISBN 978-967-19706-5-2
- 4) IAP Science Policy Brief, Climate Change Adaptation for Health: Systems-based Approaches to Formulating Solutions and Guiding Policy – Evidence from Case Studies, November 2023, InterAcademy Partnership (IAP) <https://www.interacademies.org/news/successful-cop28-side-event-explores-climate->

[change-adaptation-health](#)

- 5) Technical Code Industrial Internet of Things (IIoT) Connectivity and Communications Framework, MCMC MTSFB TCG039:2023, 23 May 2023
https://www.mcmc.gov.my/skmmgovmy/media/General/registers/MCMC-MTSFB-TC-G039_2023-IIoT-Connectivity-And-Communication-Framework.pdf
- 6) TECHNICAL CODE END-TO-END (E2E) QUALITY OF SERVICE (QoS) AND QUALITY OF EXPERIENCE (QoE) USING CROWDSOURCE APPLICATION APPROACH, MCMC MTSFB TC G038:2022, June 2022
https://www.mcmc.gov.my/skmmgovmy/media/General/registers/MCMC-MTSFB-TC-G038_2022-End-to-End-E2E-Quality-of-Service-QoS-and-Quality-of-Experience-QoE-using-Crowdsourcing-Applications-Approach.pdf
- 7) Preventing forest fire with IoT, http://www.mimos.my/wp-content/uploads/2020/11/Preventing-Forest-fire_latest27Oct.pdf.
- 8) University of Surrey, Graduate Profile, 16 March 2021 <https://www.surrey.ac.uk/student-life/what-our-students-say/aduwati-sali>.
- 9) Technical Code, Prediction and Measurements of EMF Exposure from Base Station, July 2020.
- 10) Technical Specifications for IMT-2020 (Fifth Generation) System, MCMC MTSFB TC TXXX:2020 Technical Code, May 2020,
https://www.mtsfb.org.my/sites/default/files/MTSFB2002R0_Technical%20Specifications%20for%20IMT-2020%20%28Fifth%20Generation%29%20System.pdf.
- 11) IEEE VTS ASEAN Summer School, VTS Mobile World, Apr 2020, <http://newsmanager.commpartners.com/ieeevents/issues/2020-04-01/8.html>.
- 12) Going Global with the IEEE Malaysia ComSoc/VTS Joint Chapter, Global Communications Newsletter (GCN), June 2019, <https://gcn.comsoc.org/going-global-ieee-malaysia-comsocvts-joint-chapter>.
- 13) Blaze of Glory: IEEE Communications Society and Vehicular Technology Society Joint Chapter – Winner of the 2016 IEEE ComSoc Chapter-of-the-Year Award, Jan 2017, <https://gcn.comsoc.org/blaze-glory-ieee-communications-society-and-vehicular-technology-society-malaysia-joint-chapter>.
- 14) 'Malaysia Education Blueprint 2015 – 2025 (Higher Education)', Ministry of Education Malaysia 2015, ISBN 978-967-D334-98-1.
- 15) Guidelines for International Mobile Telecommunications – Advanced (IMT- Advanced) System and Specifications, 'Technical Standards for IMT-Advanced', MTSFB 003:2013.
- 16) 'Implementation of Wireless Sensor Network in Malaysia – Guidelines: Operating in the Frequency Band 433MHz, 869MHz and 2.4GHz', Dec 2012.
- 17) In Person: Dr Aduwati Sali, 'CEng, PEng, who cares?', WiPTimes A Wireless and Photonic Networks Research Centre's Newsletter, Issue 3, Jan – June 2012.
- 1) Patent "System and Method for Predicting Peatland Forest Fires" (formerly known as "Prediction of Peatland Forest Fires in Malaysia Using Machine Learning") - PI 2024003825
- 2) Copyright 'Sourcecode interface for Machine Learning (ML) Formulation to Predict Drought Code (DC)' – Source Code – LY2023W06590
- 3) Copyright 'Estimation of Ground Water Level (GWL) for Tropical Peatland Forest Using Machine Learning – Manual and Source Code' – LY2023W01545
- 4) Copyright 'Optimal Energy Efficiency Based Power Adaptation for Download Multi-cell Massive MIMO Systems – Flow Chart - LY2022W05064
- 5) Copyright 'Optimal Energy Efficiency Based Power Adaptation for Download Multi-cell

INTELLECTUAL PROPERTY

Massive MIMO Systems – Source Code - LY2022W05065

- 6) Copyright 'Optimal Relay Selection Scheme with Multiantenna Power Beacon for Wireless-Powered Cooperation Communication Network – Source Code' – LY2022W01929.
- 7) Copyright 'LoRA Optimisation for Peatland Monitoring – Manual' - LY2021W06024.
- 8) Copyright 'Data Analysis for Peatland Monitoring – Source Code' - LY2021E06013.
- 9) Copyright '10-Step Procedure to Identify Seismic Stations in Sabah that can Detect Aftershock Earthquake Events (I-SHOCK) – LY2017001439.
- 10) Hakcipta '10-Langkah bagi Prosedur Mengenalpasti Stesen-stesen Seismik yang akan Mengesan Kejadian Gegar Penghujung Gempa Bumi (I-SHOCK) – LY2017001440.
- 11) Copyright 'LoRa with Image Sensor for Mangrove Monitoring' – LY2018006889 / CRLY00016681.

MEDIA AND AWARDS

MEDIA COVERAGE

- 1) Sistem IoT cegah kebakaran hutan, tanah gambut, 07 Aug 2023, <https://www.kosmo.com.my/2023/08/07/sistem-iot-cegah-kebakaran-hutan-tanah-gambut/>
- 2) Sistem CPS Tangani Kebakaran Hutan Paya Gambut, 31 Jul 2023, https://sciencepark.upm.edu.my/news/sistem_cps_tangani_kebakaran_hutan_paya_gambut-74291
- 3) UPM Jalinkan Kerjasama Dengan Penyelidik Luar Demi Kebaikan Hutan di Paya Gambut, 03 Nov 2022, https://web.upm.edu.my/news/upm_jalinkan_kerjasama_dengan_penyelidik_luar_demi_kebaikan_hutan_di_paya_gambut-69896.
- 4) Clean Air and Clean Water for ASEAN – ASEAN-US Prize for Women 2021, Kiran Sagoo and Pricilla Putri Nirmala Sari, The ASEAN Magazine, Issue 2021 (2022), ISSN 2721-8058, <https://asean.org/serial/the-asean-volume-may-2022-issue-21/>.
- 5) Sensor cegah kebakaran tanah gambut, 07 May 2021, <https://www.utusan.com.my/premium/2021/05/sensor-cegah-kebakaran-tanah-gambut/>.
- 6) INTROP, UPM dan MIMOS bangun aplikasi baharu, kekang kebakaran hutan paya gambut, 23 March 2021, <http://www.onenews.my/introp-upm-dan-mimos-bangunkan-aplikasi-baharu-kekang-kebakaran-hutan-paya-gambut/>.
- 7) WiPNET, INTROP, MIMOS to develop applications to curb peat swamp forest fires, 5 April 2021, https://www.upm.edu.my/news/wipnet_introp_mimos_to_develop_applications_to_curb_peat_swamp_forest_fires-61074.
- 8) IoT for better forest care, 2 April 2021, <http://www.mimos.my/paper/iot-for-better-forest-care/>.
- 9) 'Apa kata data tentang MH370' - #OnTakOn, IKRAM TV, 5 Oct 2020. <https://www.youtube.com/watch?reload=9&v=GpOD58pv4>.
- 10) 'Teknologi 5G: Apa anda perlu tahu'- #OnTakOn, IKRAM TV, 28 Sept 2020, https://www.youtube.com/watch?v=l2-0fab-334&feature=youtu.be&fbclid=IwAR2DrKgN799u1C_GYHd3wSxsP2ecMclSyXCoGMO0LbFxmOngFsl3zCAh-o.
- 11) 'HiCoE proof of higher education institutions' effectiveness', 21 Sept 2020,

- https://www.nst.com.my/opinion/columnists/2020/09/626124/hicoe-proof-higher-education-institutions-effectiveness?fbclid=IwAR0vplIXPj3ghDcyK_4A8dR19KLPZBJUFRJty-Xuuy6StdShmkKn-9E-pT4.
- 12) 'Jurutera 'Network' – Frontliner yang Dilupakan?' - #OnTakOn, IKRAM TV, 21 Sept 2020
https://www.youtube.com/watch?v=w-uf_zlN1ns&t=2s&fbclid=IwAR2ak461OODHw12WE8ofDT39eKNF1Wpfm9SaZ8EYOBX4k3Y4xLondDRoNvs .
 - 13) 'UPM dan MIMOS menubuhkan sistem berasaskan IOT di Hutan Simpan Raja Musa untuk mengurangkan kejadian kebakaran', 8 Sept 2020, TechSemut
<http://techsemut.com/upm-dan-mimos-menubuhkan-sistem-berasaskan-iot-di-hutan-simpan-raja-musa-untuk-mengurangkan-kejadian-kebakaran/>.
 - 14) 'IoT atasi kebakaran tanah gambut', 14 Sept 2020, Utusan Malaysia',
<https://www.utusan.com.my/gaya/2020/09/iot-atasi-kebakaran-tanah-gambut/>.
 - 15) 'UPM, Mimos partner to develop IoT-based early warning system to curb peat fires', 18 Aug 2020, Digital News Asia, <https://www.digitalnewsasia.com/digital-economy/upm-mimos-partner-develop-iot-based-early-warning-system-curb-peat-fires>.
 - 16) 'Demystifying Science, One Drink at a Time', 2 Apr 2017, The Malay Mail,
<https://www.malaymail.com/news/malaysia/2017/04/02/demystifying-science-one-drink-at-a-time/1347623>.
 - 17) 'MH370 Tetap Dikenang, Misi Diteruskan' - Invited Expert in Satellite Communications, Agenda Awani Khas 4:30 – 5:00pm, 8 March 2019,
<http://www.astroawani.com/video-malaysia/dua-tahun-mh370-pencarian-masih-diteruskan-108185>.
 - 18) 'Misteri MH370', - Invited Expert in Satellite Communications, 9:30 – 10:00pm, Program 100 Hari Malaysia Baharu , 2 Aug 2018.
 - 19) Agenda Awani Khas - 3rd Anniversary of MH 370 tomorrow night, 9 – 10pm, 8 March 2017.
 - 20) 'Agenda Awani - Pengiktirafan Anugerah Seri Angkasa 2016' – Invited Expert in Sharing of Knowledge and Opinion during Agenda Awani – Setahun MH370 which won the Anugerah Pengacara Terbaik Anugerah Seri Angkasa 2016, 8:30 – 9:00, 23 May 2016 <https://www.youtube.com/watch?v=2K1rpgn3iQY>.
 - 21) 'Agenda Awani Khas Dua Tahun Kehilangan MH370: Pencarian Masih Diteruskan'- Invited Expert in Satellite Communications, Agenda Awani Khas 9:30 – 10:00pm, 8 March 2016, <http://www.astroawani.com/video-malaysia/dua-tahun-mh370-pencarian-masih-diteruskan-108185>.
 - 22) Icon for 'School Bus Heroes Program', RTM1, 9:00 – 17:00, 22 Oct 2015.
 - 23) 'Agenda Awani Khas Setahun MH370'- Invited Expert in Satellite Communications, Agenda Awani Khas 8:30 – 10:30pm, 8 March 2015,
<https://www.youtube.com/watch?v=A7oSTjmdVJA&index=99&list=PLspdXQtUvxlywSFC0NVkIc2W-tX8PaY6F>.
 - 24) 'MH370: Penelitian dan Analisis Semula Data' - Invited Expert in Satellite Communications, Agenda Awani 8:30 – 9:30pm, 13 June 2014.
 - 25) '100 Hari Tragedi MH370' – RTM1, 1:00 – 3:00pm, 16 June 2014,
<https://www.youtube.com/watch?v=A7oSTjmdVJA&index=99&list=PLspdXQtUvxlywSFC0NVkIc2W-tX8PaY6F>.
 - 26) 'Masih di Lautan Hindi' – Metro Ahad, 1 June 2014.

- 27) 'MH370 – Pencarian Memasuki Fasa Baru' - Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 5 May 2014), https://www.youtube.com/watch?v=E6xXu5PBH_Y.
- 28) 'Assalamualaikum - Mata di Langit (Satelit)' – Invited Expert in Satellite Communications (TV AlHijrah 8:30 – 09:00am 3 April 2014).
- 29) 'Kegunaan Cloud Computing dan Satelit Komunikasi untuk Komplemen kepada Black Box' – Invited Expert in ICT (Berita RTM TV1 8:00 – 9:00 pm 2 April 2014).
- 30) 'Bual Bicara' – Invited Expert in Satellite Communications (RTM TV1, 10:00 – 11:00 27 March 2014).
- 31) 'Mencari MH370: Memahami Isyarat Satelit' - Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 25 March 2014), https://www.youtube.com/watch?v=xZ5-esin_zY.
- 32) 'Tragedi MH370: Kaedah Satelit Inmarsat Kesan Pesawat' – Invited Expert in Satellite Communications (*Harian Metro* 25 March 2014), <https://www.youtube.com/watch?v=8ojDRiisnuc>.
- 33) 'Ruang Bicara – MH370' – Invited Expert in Satellite Communications (BERNAMA 17:00 – 18:00 27 March 2014)
- 34) 'Tragedi MH370' – Invited Expert in Satellite Communications (TV alHijrah 26 March 2014).
- 35) 'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 16 March 2014), https://www.youtube.com/watch?v=xZ5-esin_zY.
- 36) 'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 14 March 2014), <https://www.youtube.com/watch?v=O6bAgMRHS-I>

SCHOLARSHIP AWARDS

- 1) UPM – SLAB and Ministry of Higher Education (MoHE) award for PhD studentship in University of Surrey from 1st October 2004 until 31st November 2008.
- 2) UPM – SLAB and Public Service Department (PSD) award for MSc. studentship in Universiti Putra Malaysia from 29th May 2000 until 28th February 2002.
- 3) Telekom Malaysia Berhad award for Bachelor degree studentship in University of Edinburgh from 1st October 1997 until 14th July 1999.
- 4) Telekom Malaysia Berhad award for Diploma in Electronics Engineering in Institute of Telecommunications and Information Technology from 1st May 1995 until 30th Sept 1997.

RESEARCH AWARDS

- 1) **2024 Best FYP Project Award – Wireless Network and Systems Engineering**, Nureen Natasha Mohd Saufi, 'Machine Learning Formulation for Drought Code (DC) in Peatland Management', FYP Day 2023, 31 July 2024
- 2) **Gold Medal**, ITEX2024, 'NET-PEAT: Machine Learning (ML) Formulation to Predict Drought Code (DC) for Fire Danger Rating System (FDRS)', 15 – 16 May 2024
- 3) **Gold Medal**, MTE 2023 Sustainable Development Goals International Innovation Awards and Expo (MTE-SDG), Environment and Natural Resources Category, 'IoT-based Peatland Monitoring with Data Analytics', 18 – 20 October 2023
- 4) **2023 IEEE Malaysia ComSoc/VTS Joint Chapter Outstanding Dissertation Award for PhD Thesis**, Abdulmajeed Jasim, Aduwati Sali, Alyani Ismail, 'Coexistence Between 5G

Cellular and Fixed Satellite Services in C-Band Based on Machine Learning Models, 03 Feb 2024

- 5) **2023 Engineering Innovation Exhibition (EIE2023) – Gold Award**, 'NET-PEAT: Estimation of Ground Water Level (GWL) for Tropicla Peatland Forest using Machine Learning (ML)', 25 Jul 2023
- 6) **2023 Best FYP Project Award – Wireless Network and Systems Engineering**, Amirul Hussin Mohamad Ansahari, 'Machine Learning Formulation for Drought Code (DC) in Peatland Management', FYP Day 2023, 18 Jul 2023
- 7) **2023 Best FYP Project Award – IEEE Malaysia ComSoc/VTS Joint Chapter**, Abdullah Adli Suhaimi, Machine Learning for LoRa Transmission over the Sea, FYP Day 2023, 17 Jul 2023
- 8) **2022 IEEE Malaysia ComSoc/VTS Joint Chapter Awards Outstanding Dissertation Award for Master Thesis**, Lu Li, Aduwati Sali, Nor Kamariah Noordin, 'Impact of Climate Change in Rain Attenuation at mmWave Transmission in the Tropical Region', 28 Jan 2023
- 9) **Best Paper Award**, 'Cybersecurity Threat Perception Technology based on Knowledge Graph', InterMYSTional Conference on Emerging Electronics and & Automation Technology 2022 (ICEEAT 2022), 10-11 Dec 2022
- 10) **Gold Medal**, MYSUN MOOC: Sustainability Education through Inter-Institutional Co-creation of MOOC for Campus Sustainability, International Putra InnoCreative Poster Competition 2022, 28 Oct 2022.
- 11) **Winner (Category: Institution of Higher Learning)**, Anugerah Inovasi Negeri Selangor 2022 (AINS2022), 'NAPC/NET-PEAT: Networked ASEAN Peatland Forest Communities for Transboundary Haze Alert', 09 Oct 2022.
- 12) **Winner (Category: Institution of Higher Learning)**, Pertandingan Inovasi Terbuka, Majlis Perbandaran Sepang, 'NAPC/NET-PEAT: Networked ASEAN Peatland Forest Communities for Transboundary Haze Alert', 22 Aug 2022.
- 13) **Silver Award**, International Innovation Awards 2022, Malaysia Technology Expo (MTE) 2022, 'IoT-based Peatland Monitoring with Data Analytics', 25 Mar 2022 https://mte.org.my/2022/MTE/Result/IIA_Silver.pdf
- 14) **2021 IEEE Malaysia ComSoc/VTS Joint Chapter Outstanding Dissertation Award for Master Thesis**, Sangin Qahtan, Aduwati Sali, 'Investigation of RF-EMF Exposure for 5G over mm-Wave Base Station with MIMO Antenna', 17 May 2022.
- 15) **2021 IEEE Malaysia ComSoc/VTS Joint Chapter Outstanding Dissertation Award for PhD Thesis**, Sumaya Dhari Awad, Aduwati Sali, Raja Syamsul Azmir Raja Abdullah, Mandeep Singh Jit, Ali Mohamed Al-Saegh, 'End-to-End DVB-S2X System Design with Deep Learning-Based Channel Estimation over Satellite Fading Channels', 12 Feb 2022.
- 16) **2020 Journal Publication Incentive**, Inisiatif Pemerkasaan Penerbitan Jurnal Tahun 2020, RM14,741.69 (Pusat Kos: 9044002), 24 Mar 2021.
- 17) **Honourable Mention and Regional Finalist, 7th Annual Underwriters Laboratories-ASEAN-U.S. Science Prize for Women 2021 (Prize)**, 13 Oct 2021.
- 18) **MTSFB Members Excellence Awards 2020**, 18 and 19 June 2021.
- 19) **National Finalist, 7th Annual Underwriters Laboratories-ASEAN-U.S. Science Prize for Women 2021 (Prize)**, 17 May 2021.
- 20) **International Award of Merit** in conjunction with The Malaysia – Croatia Technology Exchange 2021, 'LoRa Optimisation for Peatland Monitoring', 26 Mar 2021.

- 21) **Silver Award**, International Innovation Awards 2021, Malaysia Technology Expo (MTE) 2021, 'LoRa Optimisation for Peatland Monitoring', 26 Mar 2021 <https://www.youtube.com/watch?v=VgVkC87Ont&t=114s>.
- 22) **Finalist, Study UK Alumni Award – Professional Achievement Award 2020-21**, 26 Jan 2021.
- 23) **2020 IEEE Malaysia ComSoc/VTS Joint Chapter Best Paper Award**, Zuhura J. Ali, Nor Kamariah Noordin, Aduwati Sali, Fazirulhisyam Hashim, 'Fair Energy-Efficient Resource Allocation for Downlink NOMA Heterogeneous Networks', 6 Feb 2021.
- 24) **Best Paper Presentation Award**, Peatlands Monitoring in Malaysia with IoT Systems: Preliminary Experimental Results, The 4th International Conference on Computational Intelligence in Information Systems (CIIS), 25-27 Jan 2021.
- 25) **2020 FYP Award**, Siti Nur Baiti Abdul Rahim (190228), 'Adaptive Coding and Modulation in Satellite and LiFi Communications', 14-24 Sept 2020.
- 26) Development of Skills 4.0 in Wireless Networks and Analytics Domain, **Putra InnoCreative in Teaching and Learning (PICTL2020), Gold Medal Award**, 30 Oct 2020.
- 27) CRSN-RL: Cognitive Radio Sensor Network Setup (Spectrum Sensing And Clustering Based On Reinforced Learning), **European Commission's Innovation Radar**, 19 June 2020.
- 28) **IEEE Malaysia ComSoc/VTS Joint Chapter Outstanding Doctoral Dissertation Award**, Abdulmajid Almqdashi, Aduwati Sali, Nor Kamariah Noordin, Rosdiadee Nordin, Efficient Blind Rendezvous Schemes for Cognitive Radio Ad-Hoc Networks, 18 Jan 2020.
- 29) **IEEE Malaysia ComSoc/VTS Joint Chapter Outstanding Master's Dissertation Award**, Akram Jebri, Aduwati Sali, Alyani Ismail, Mohd Fadlee A Rasid, Image Transmission over LoRa for Mangrove Monitoring, 18 Jan 2020.
- 30) **2019 Excellent Project Award by Malaysia IEEE Communications Society / Vehicular Technology Joint Chapter**, Masra Razab (*Adaptive Coding and Modulation for Ka Band Satellite Communications in Tropical Region*), 28 May 2019.
- 31) **2018 IEEE ComSoc/VTS Best Paper Award** - Akram A. Almohammed ; Nor Kamariah Noordin ; Aduwati Sali ; Fazirulhisyam Hashim ; Mohammed Balfaiah, 'An Adaptive Multi-Channel Assignment and Coordination Scheme for IEEE 802.11P/1609.4 in Vehicular Ad-hoc Networks' IEEE Access, Vol. 6, 2018, awarded on 19 Jan 2019.
- 32) **2018 Top Research Scientists Malaysia (TRSM)**, 1 Nov 2018.
- 33) **Best Paper Award** - 'An Efficient Quorum-based Rendezvous Scheme for Multi-Radio Cognitive Radio Networks' ISTT2016 on 28-30 Nov 2016.
- 34) **2016 Excellent Project Award by Malaysia IEEE Communications Society / Vehicular Technology Joint Chapter**, Mohammad Azhar Nawayi (*Measurement of Scintillation Effect on Satellite Signal in Tropical Region at Ka-Band*), 28 June 2016.
- 35) **2015 IEEE ComSoc/VTS Outstanding Dissertation Award (PhD Level)**, Mustafa Ismael Salman, Nor Kamariah Noordin, Borhanuddin Mohd Ali and Aduwati Sali, Self-Configured Link Adaptation using Channel Quality Indicator-Modulation and Coding Scheme Mapping with Partial Feedback for Green Long-Term Evolution Cellular Systems, awarded on 30 Jan 2016.
- 36) **Best Student Paper Award** - Mustafa I. Salman, Muntadher Q. Abdulhassan, Nor K. Noordin, Borhanuddin M. Ali, Aduwati Sali, Chee K. Ng, 'An Adaptive Threshold Based CQI Compression Scheme for LTE Cellular Networks', Network Research Workshop 2015, 40th Asia Pacific Advanced Network Meeting, Kuala Lumpur, 10 Aug 2015.
- 37) **The IIER Excellent Paper Award for Category of Best Presentation / Best Content at 25th IIER International Conference** - Peter O. Aiyelabowo, Aduwati Sali, Samsul Bahari Noor, Bamidele Adebisi, Nor Kamariah Noordin, 'Reed-Solomon and Convolutional Codes on Modulation Schemes for Power Line Communication (PLC)', International

Conference on Robotics, Automation and Communication Engineering (ICRACE2015), Kuala Lumpur, Malaysia, 2 May 2015.

- 38) **Best Final Year Project: Best Poster Award by Malaysia IEEE Young Professionals 2015** - Melvin John Thomas (Analysis of Tropospheric Scintillation Effect on Satellite Signal in Tropical Region at Ka-band), June 2015.
- 39) **ANGKASA Publication Award – Space Application Category ('Hadiah Penerbitan ANGKASA – Bidang Aplikasi Angkasa')** – A. M. Al-Saegh, A. Sali, J. S. Mandeep, A. Ismail, 'Extracted Atmospheric Impairments on Earth-Sky Signal Quality in Tropical Regions at Ku-Band', Elsevier Journal of Atmospheric and Solar-Terrestrial Physics, Vol. 104, pp. 96-105, Nov 2013, (IF: 1.417), 8 Nov 2014.
- 40) Nor Kamariah Nordin, Mustafa Ismael Salman, Chee Kyun Ng, Borhanuddin Mohd Ali, Aduwati Sali, 'A Self-Configured Link Adaptation for Green LTE Downlink Transmission', **Silver Medal**, PRPI 2014, 30 Sept – 1 Oct 2014, UPM.
- 41) **Finalist**, International Science, Technology and Innovation Centre for South-South Cooperation under the Auspices of UNESCO (ISTIC-TWAS) Competition "Successful Innovation in Science and Technology in Developing Countries", 20-21 October 2012, Penang, Malaysia.
- 42) **Level 1 TRIZ Practitioner**, 10 April 2012.
- 43) S. Khatun, S. Rajaratnam, **A. Sali**, F. Hashim, 'Adaptive Remote Control Using RF Device', **Silver Medal**, UPM R&D Exhibition, '8-10th July 2003.
- 44) S. Khatun, K.C. Ong, **A.Sali**, H.Hambali, C.K.Ng, 'Video on Demand (VoD) Systems for Independent Network', **Bronze Medal**, 14TH International Invention, Innovation, Industrial Design and Technology, (I-TEX 2003), 16TH – 18TH May 2003.
- 45) S. Khatun, K.C. Ong, **A.Sali**, H.Hambali, C.K.Ng, 'Video on Demand (VoD) Systems for Independent Network', **Bronze Medal**, UPM Research and Development Exhibition and Invention Competition, 30th July-1st Aug 2002.
- 46) B.M. Ali, N.K. Noordin, C.K. Ng, **A.Sali**, 'Inter-Satellite Handover for Non-Geo Satellite Using ASB Algorithms', **Silver Medal**, UPM Research and Development Exhibition and Invention Competition, 30th July-1st Aug 2002.

ADMINISTRATIVE AWARDS

- 1) Anugerah Setia Putra (20 years of service at UPM), 28 May 2024
- 2) 2020 Anugerah Perkhidmatan Cemerlang, 15 July 2021.
- 3) 2017 Anugerah Perkhidmatan Cemerlang, 3 May 2018.
- 4) 2015 Anugerah Perkhidmatan Cemerlang (Excellence Award in Service), UPM Majlis Gemilang Putra dan Sambutan Hari Pekerja 2016, 10 May 2016.
- 5) 2014 Excellence Award in Service, UPM, 23 April 2015.
- 6) 2013 Excellence Award in Service, UPM, 15 May 2013.
- 7) 2012 Excellence Award in Service, UPM, 16 December 2013.
- 8) 2011 Anugerah Perkhidmatan Cemerlang (Excellence Award in Service), UPM Majlis Gemilang Putra, 26 June 2012.
- 9) 2010 Excellence Award in Service, Faculty of Engineering, UPM.
- 10) 2010 Excellence Award in Teaching in conjunction with Appreciation and Quality Day, Faculty of Engineering, UPM.
- 11) 2009 Excellence Award in Teaching in conjunction with 13th Quality Day, Faculty of Engineering, UPM.

REVIEWING

BOOKS

- 1) Recent Advancement in Wireless Communications, UTM Publisher, July 2013.
- 2) S. Dhawan, 'Communication Satellite Systems Engineering', Wiley, Mar 2011.

CONFERENCES

- 1) ESTCON2022.
- 2) ISTT2022.
- 3) Multimedia University Engineering Conference 2022 (MECON 2022).
- 4) IconSpace2021.
- 5) APCC2021.
- 6) International Telecommunications in Telecommunication Technologies (ISTT2020).
- 7) 2020 International Workshop on 5G, Connectivity and Mobility (5GCM2020).
- 8) MICC2019.
- 9) IEEE ICSIPA 2019.
- 10) ICSCC2019.
- 11) IEEE VTC2019 – Spring.
- 12) ISTT2018.
- 13) ICACCI-2018.
- 14) AEROTECH 2018.
- 15) 4th INTERNATIONAL CONFERENCE ON ELECTRONIC DESIGN 2018 (ICED2018).
- 16) ICOCOE2018 2018 5th International Conference on Communication and Computer Engineering.
- 17) 2nd International Conference on Telematics and Future Generation Networks (TAFGEN2018).
- 18) IEEE WCNC 2018 (Emerging Technologies, Architecture and Service).
- 19) 2017 IEEE SCOREd.
- 20) ICIMu2017.
- 21) TENCON2017.
- 22) ICEESI2017.
- 23) 13th 2017 IEEE Malaysia International Conference on Communications 2017 (MICC2017).
- 24) TENCON 2017 - 2017 IEEE Region 10 Conference.
- 25) International Conference on Electrical and Electronic Engineering 2017 (IC3E2017).
- 26) 2017 IEEE International Conference on Signal and Image Processing Applications (ICSIPA).
- 27) ICEESI 2017.
- 28) 2017 International Conference in Signal Processing and Applications (ICSIPA2017).
- 29) 2016 International Symposium on Telecommunication Technology (ISTT2016).
- 30) 2015 IEEE 12th Malaysia International Conference in Communications (MICCC2015).
- 31) 2015 First International Conference on Telematics and Future Generation Networks (TAFGEN2015).
- 32) IEEE International Conference on Vehicular Technology-Spring 2015 (VTC-Spring2015).
- 33) International Symposium on Telecommunication Technologies 2014 (ISTT2014).
- 34) International Conference on Defense and Security Technologies (DSTC2014).
- 35) ECTI-CON 2014.
- 36) 2014 IEEE TENSYPMP - IEEE Region 10 Symposium.
- 37) International Conference on Satellite Communications and Space (IconSpace 2013).
- 38) International Symposium on Telecommunication Technologies (ISTT 2012).
- 39) International Conference on Wireless Communications and Applications (ICWCA 2012).
- 40) Asia Pacific Conference on Communications (APCC 2012).
- 41) IEEE Global Communications Conference, GLOBECOM 2007.
- 42) The 12th International Symposium on Communications & Information Technologies (ISCIT 2012).
- 43) International Conference on Satellite Communications and Space (IconSpace 2011).
- 44) Asia Pacific Conference on Communications (APCC 2011).
- 45) World Engineering Congress, Conf on Electrical Electronics Technologies (CEET) 2010.
- 46) IEEE International Conference on Wireless Communications, Networking and Information Security - Wireless Networks (IEEE WCNIS2010-WN).
- 47) IEEE Wireless Communications and Networking Conference, WCNC 2010.
- 48) IEEE Malaysian International Conference on Communications, MICC 2009.
- 49) IEEE 2nd International Workshop on Wireless Sensor Networks: Theory and Practice, WSN 2009.
- 50) IEEE Global Communications Conference, GLOBECOM 2006.

JOURNALS

Awards and Recognition as a Reviewer

- 1) Special Issue - Antennas and Propagation for 6G Wireless Communications
- 2) Guest Editor Team, Special Issue "5G-and-Beyond Communications for Smart Cities: Networks, Systems and Applications"
- 3) Associate Editor board of '*Communication Theory*', a specialty section in journal *Frontiers in Communications and Networks*, since May 2020
- 4) Editorial Board of Elsevier Journal of King Saud University – Computer and Information Sciences (JKSUCI), since June 2017
- 5) Certificate of Reviewing, Editors of Elsevier *Computer Networks*, Aug 2016
- 6) Associate Editor, Wiley International Journal of Communication Systems, since July 2016

Reviews

- 1) *Electromagnetic Biology and Medicine*, Aug 2024
- 2) *Computer Networks*, Jul 2024
- 3) *IEEE Transactions on Machine Learning in Communications and Networking*, Jul 2024
- 4) *Computer Networks*, Mar 2024
- 5) *IEEE Access*, Mar 2024
- 6) *Computer Networks*, Mar 2024
- 7) *IEEE Internet of Things Journal*, Feb 2024
- 8) *IET Microwaves, Antennas & Propagation*, Jan 2024
- 9) *IET Microwaves, Antennas & Propagation*, Nov 2023
- 10) *IEEE Wireless Communications Letters*, Nov 2023
- 11) *Applied Sciences*, Oct 2023
- 12) *Remote Sensing*, May 2023
- 13) *IEEE Access*, Apr 2023
- 14) *Computer Networks*, Feb 2023
- 15) *IEEE Open Journal of the Communications Society*, Feb 2023
- 16) *Drones*, Dec 2022
- 17) *Computer Networks*, Nov 2022
- 18) *IEEE Microwave Magazine*, Oct 2022
- 19) *Computer Networks*, Oct 2022
- 20) *Fire MDPI*, Aug 2022
- 21) *Computer Communications*, June 2022
- 22) *Computer Networks*, May 2022
- 23) *International Journal of Manufacturing Technology and Management (IJMTM)*, Apr 2022
- 24) *IEEE Transactions on Vehicular Technology*, Apr 2022
- 25) *IEEE Access*, Mar 2022
- 26) *Computer Networks*, Jan 2022
- 27) *Journal of Electrical & Electronic Systems Research*, Jan 2022
- 28) *IEEE Access*, Jan 2022
- 29) *IEEE Transactions on Vehicular Technology*, Jan 2022
- 30) *IEEE Access*, Dec 2021
- 31) *Ad-Hoc Networks*, Dec 2021
- 32) *IEEE Access*, Dec 2021
- 33) *IEEE Access*, Nov 2021
- 34) *Elsevier Wireless Communications and Mobile Computing*, Nov 2021
- 35) *IEEE Open Journal of the Communications Society*, Nov 2021
- 36) *IEEE Access*, Oct 2021
- 37) *IEEE Access*, Oct 2021
- 38) *IEEE Access*, Aug 2021
- 39) *IEEE Open Journal of the Communications Society*, Aug 2021
- 40) *IEEE Access*, Aug 2021
- 41) *IEEE Access*, Aug 2021
- 42) *Bulletin of Electrical Engineering and Informatics*, July 2021
- 43) *Jurnal Manajemen Hutan Tropika*, July 2021

- 44) IEEE Access, July 2021
- 45) Journal of Electrical & Electronic Systems Research (JEESSR), June 2021
- 46) IEEE Access, June 2021
- 47) IEEE Access, June 2021
- 48) Computer Networks, June 2021
- 49) IEEE Access, May 2021
- 50) Computer Networks, Mar 2021
- 51) Jurnal Manajemen Hutan Tropika, Mar 2021
- 52) IEEE Access, Mar 2021
- 53) IEEE Access, Feb 2021
- 54) Computer Networks, Feb 2021
- 55) International Journal Engineering Science and Technology, Feb 2021
- 56) IEEE Access, Feb 2021
- 57) Computer Networks, Jan 2021
- 58) IEEE Access, Jan 2021
- 59) Journal of Experimental and Theoretical Artificial Intelligence, Jan 2021
- 60) IEEE Access, Dec 2020
- 61) IEEE Access, Dec 2020
- 62) Computer Networks, Nov 2020
- 63) IEEE Access, Nov 2020
- 64) IEEE Access, Oct 2020
- 65) Neural Processing Letter, Oct 2020
- 66) IEEE Access, Oct 2020
- 67) IEEE Access, Sept 2020
- 68) IEEE Access, Sept 2020
- 69) IEEE Wireless Communication Letters, Sept 2020
- 70) Computer Networks, Sept 2020
- 71) IEEE Access, Aug 2020
- 72) IEEE Transactions on Industrial Informatics, Aug 2020
- 73) IEEE Access, Aug 2020
- 74) Journal Review Department, July 2020
- 75) IEEE Transaction on Vehicular Technology, July 2020
- 76) IEEE Access, July 2020
- 77) IEEE Wireless Communications Letters, June 2020
- 78) IEEE Access, June 2020
- 79) IETE Journal of Research, June 2020
- 80) Journal of Network and Computer Applications, May 2020
- 81) Acta Geophysica, May 2020
- 82) Journal of Communication Networks, May 2020
- 83) IEEE Access, May 2020
- 84) IEEE Communication Letters, May 2020
- 85) IEEE Transactions on Intelligent Transportation Systems, Apr 2020
- 86) IEEE Sensors Journal, Apr 2020
- 87) IETE Journal of Research, Apr 2020
- 88) Journal of Network and Computer Applications, Apr 2020
- 89) Ad-Hoc Networks, Mar 2020
- 90) International Journal Engineering Science and Technology, Mar 2020
- 91) IEEE Access, Feb 2020
- 92) Journal of Communications Software and System, Jan 2020
- 93) IEEE Access, Jan 2020
- 94) Ad-Hoc Networks, Jan 2020
- 95) IEEE Access, Jan 2020
- 96) Acta Geophysica, Dec 2019
- 97) IEEE Access, Nov 2019
- 98) IEEE Access, Nov 2019
- 99) IETE Technical Review, Sept 2019
- 100) IEEE Access, Sept 2019
- 101) IEEE Access, Sept 2019

- 102) IEEE Access, July 2019
- 103) Ad-Hoc Networks, July 2019
- 104) Ad-Hoc Networks, July 2019
- 105) IEEE Access, June 2019
- 106) IETE Technical Review, June 2019
- 107) Progress in Electromagnetic Research (PIER, PIER B,C,M, PIER Letters), June 2019
- 108) IEEE Access, May 2019
- 109) Journal of Systems and Software, May 2019
- 110) Computer Networks, Apr 2019
- 111) IEEE Access, Apr 2019
- 112) Computer Networks, June 2019
- 113) Journal of Communications and Networks, Apr 2019
- 114) Journal of Educational Research, Feb 2019
- 115) Journal of Communications Software and Systems, Jan 2019
- 116) Computer Networks, Jan 2019
- 117) IEEE Access, Jan 2019
- 118) International Journal of Distributed Sensor Networks, Oct 2018
- 119) IEEE Access, Sept 2018
- 120) IEEE Journal of Selected Topics in Signal Processing, Sept 2018
- 121) Computer Standards & Interfaces, Aug 2018
- 122) International Journal of Integrated Engineering (IJIE), Aug 2018
- 123) International Journal of Mobile Communications, Aug 2018
- 124) Journal of Communications Software and Systems, July 2018
- 125) Journal of Network and Computer Applications, July 2018
- 126) Journal of Experimental and Theoretical Artificial Intelligence, July 2018
- 127) Journal of Communications Software and Systems, June 2018
- 128) Journal of Network and Computer Applications, May 2018
- 129) IEICE Communication Express (ComEx), March 2018
- 130) Progress in Electromagnetics Research (PIER, PIER B,C,M, PIER Letters), Jan 2018
- 131) International Journal of Distributed Sensor Networks, Jan 2018
- 132) Elsevier Computer Standards and Interfaces, Dec 2017
- 133) Elsevier Computer and Communications (COMCOM), Dec 2017
- 134) IEICE Communication Express (ComEx), Sept 2017
- 135) International Journal of Physical Sciences, Sept 2017
- 136) IEICE ComEX Letter, Sept 2017
- 137) **International Journal of Advanced Intelligence Paradigms (IJAIIP), Aug 2017**
- 138) Hindawi Mobile Information Systems, Apr 2017
- 139) Elsevier Computer Communications, March 2017
- 140) International Journal of Advanced Intelligence Paradigms (IJAIIP), Jan 2017
- 141) International Journal of Electronics and Communications, Jan 2017
- 142) Journal of ICT Research and Applications, Dec 2016
- 143) International Journal of Electronics and Communications, Dec 2016
- 144) Journal of King Saud University - Computer and Information Sciences, Nov 2016
- 145) Computer Networks, Oct 2016
- 146) Journal of ICT Research and Applications, Sept 2016
- 147) Int. J. of Ad Hoc and Ubiquitous Computing, Sept 2016
- 148) The ECTI Transactions on Electrical Engineering, Electronics and Communications, July 2016
- 149) Int. J. of Ad Hoc and Ubiquitous Computing, Aug 2016
- 150) Elsevier Journal of King Saud University in Computer and Information Sciences, Apr 2016
- 151) IEEE Transactions on Communications, Apr 2016
- 152) Elsevier International Journal of Engineering Science and Technology, Mar 2016
- 153) International Journal of Wireless and Mobile Computing (IJWMC), Jan 2016
- 154) Elsevier Journal of King Saud University in Computer and Information Sciences, Nov 2015
- 155) PERTANIKA Journals, Oct 2015
- 156) The ECTI Transactions on Electrical Engineering, Electronics and Communications, Oct 2015
- 157) Springer Wireless Networks, Oct 2015
- 158) InderScience International Journal of Wireless and Mobile Computing (IJWMC), Oct 2015
- 159) International Journal of Engineering and Technology (IJET), May 2015

- 160) Jurnal Teknologi (Sciences and Engineering), May 2015
- 161) International Journal of Physical Sciences, May 2015
- 162) Jurnal Kejuruteraan UKM, Feb 2015
- 163) The ECTI Transactions on Electrical Engineering, Electronics and Communications, Jan 2015
- 164) Elsevier Journal of King Saud University in Computer and Information Sciences, Jan 2015
- 165) Springer Wireless Networks, Nov 2014
- 166) Springer Wireless Personal Communications, Oct 2014
- 167) Elsevier International Journal Engineering Science and Technology, Jan 2014
- 168) Jurnal Kejuruteraan UKM, July 2013
- 169) Jurnal Teknologi - Special Edition (Communication Engineering), July 2013
- 170) Computer, Communication & Collaboration, May 2013
- 171) Springer Wireless Personal Communications, May 2013
- 172) Springer Wireless Personal Communications, Feb 2013
- 173) Iranian Journal of Science and Technology Transactions on Electrical Engineering, Nov 2012
- 174) Springer Wireless Personal Communications, March 2012
- 175) Springer Wireless Personal Communications, May 2011
- 176) Springer Wireless Personal Communications, Dec 2010
- 177) Springer Wireless Personal Communications, Sept 2010
- 178) Springer Wireless Personal Communications, March 2010
- 179) Special Issue on Hybrid/Integrated Satellite/Terrestrial Networks, International Journal of Satellite Communications and Networking, Aug 2009
- 180) International Journal of Satellite Communications and Networking, Oct 2008