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ACADEMIC QUALIFICATIONS

PhD in Mobile Satellite Communications	Date of Award: 30 September 2009 Title of PhD thesis: <i>Adaptive Techniques in Reliable Multicast Transmission over Geostationary (GEO) Satellite Networks</i> Name of institution: University of Surrey, UK
MSc in Communications and Network Engineering	Date of Award: 16 April 2002 Title of MSc. thesis: <i>Handover Management in Mobile Satellite Communication</i> Name of institution: Universiti Putra Malaysia, Malaysia
BEng in Electrical and Electronics Engineering (Communications)	Date of Award: 16 July 1999 Final year Project: <i>Position Location Using Global Positioning Systems (GPS)</i> Dissertation: Propagation of Electromagnetic Radiation at Very High Frequency (VHF) 30MHz – 300MHz Name of institution: University of Edinburgh, UK

PROFESSIONAL QUALIFICATION / MEMBERSHIP / AFFILIATION

- 1) Professional Engineer, BEM, since 4 June 2016 (Reg. No.: 17386)
- 2) Senior Member, IEEE, since June 2015 (Reg. No.: 41320187)
- 3) Corporate Member, Institution of Engineers Malaysia (IEM) (MIEM No.: 84909, ELECTRONIC), since January 2016
- 4) Vice Chair, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2016
- 5) Past Chair, IEEE Young Professionals Malaysia, (Reg. No.: 41320187) 2016
- 6) Secretary, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2015
- 7) Chair, IEEE Young Professionals Malaysia, (Reg. No.: 41320187) 2015
- 8) Secretary, IEEE Young Professionals Malaysia, (Reg. No.: 41320187) 2014
- 9) Executive Committee, IEEE Communication Society/ Vehicular Technology Society (ComVT) Malaysia, (Reg. No.: 41320187) 2014
- 10) Chartered Engineer (CEng), Engineering Council, UK, since Nov 2011, Registration No.: 593790
- 11) Member, IET, (Reg. No.: 70744120) since 2011
- 12) Member, IEEE Vehicular Technology Society, (Reg. No.: 41320187) since 2010
- 13) Member, IEEE Communications Society, (Reg. No.: 41320187) since 2010
- 14) Secretary, Institution of Electrical and Electronics Engineering (IEEE) Graduates of Last Decade (GOLD), 2009
- 15) Member, Institution of Electrical and Electronics Engineering (IEEE) Malaysia Section, 2000-2004, 2009 onwards
- 16) Student Member Institution of Electrical and Electronics Engineering (IEEE) UKRI Section 2005-2008
- 17) Student Member, Institution of Engineering and Technology (IET), 2008
- 18) Member, Institution of Engineers Malaysia (IEM) since 2002
- 19) Graduate Member, Board of Engineers Malaysia (BEM) (Reg. No.: GE36545A,

ELECTRONIC) since Dec 2002

APPOINTMENTS

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 – present)
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)

AREAS OF INTEREST

Mobile and satellite communications, wireless sensor network, heterogeneous networks, green radio resource management, cognitive radio, adaptive techniques, cross-layer approach, reliable multicast, disaster management and preparedness.

TEACHING ACTIVITIES

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 – 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’ – on-going
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, UPM:03-01-15-1626FR, Vote No.:5524731) – on-going
Project Member - 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)	<p>‘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) – on-going</p> <ul style="list-style-type: none"> - <i>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.</i> - <i>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</i> - <i>Presentation on ‘A Self-Configured Link Adaptation with Partial Feedback for Green Wireless</i>

Systems' at ATOM Workshop, UTM KL, 30 May 2016 – 2 June 2016

<p>Project Mentor – Research Acculturation Collaborative Effort (RACE) Phase 3 2015/2017 (1/3/2015 – 28/2/2017) RM20,000</p>	<p>Investigation of Low-Energy GPS Baseband Receiver: Study on Design and Implementation Using Multi Criteria Decision-Making Techniques (lead by Dr. Bahbib Rahmatullah (UPSI))(Project Code: 9389900) – on-going</p>
<p>Project Leader – Geran UPM IPB (2/12/2013 – 1/12/2015) RM 48,455</p>	<p>ECOSAN: Emergency Communications over Satellite-Assisted Network (Project code: GP-IPB/2013/9413101) – completed</p> <p>- <i>Collaboration with Meteorological Dept (MetMalaysia) and Minerals and Geoscience Dept (JMG)</i></p>
<p>Project Leader – TWAS-COMSTECH (7/6/2013 – 6/12/2014) USD2,500 ~RM9742.50</p>	<p>Intelligent Spectrum Sensing and Sharing in Cognitive Radio Networks (Project code: 12-202 RG/ITC/AS_C) – completed</p>
<p>Project Leader – ERGS (1/8/2012 – 31/7/2014) RM 62,550</p>	<p>S-PROMOTE: Satellite Propagation Model at Near Equatorial Region for Train Environment (Project code: ERGS/1-2012/5527096) – completed</p> <ul style="list-style-type: none"> - <i>Collaboration with Electrified Train System (ETS) Keretapi Tanah Melayu (KTM)</i> - <i>Best Paper Award 'Hadiah Penerbitan ANGKASA 2013 - Bidang Aplikasi Angkasa', 8 Nov 2014</i> - <i>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</i>
<p>Project Leader – FRGS (1/9/2011 – 30/8/2014) RM82,000</p>	<p>Green Network Optimisation for Wireless Networks (Project code: FRGS/1/11/TK/UPM/02/2) – completed</p> <ul style="list-style-type: none"> - <i>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 (ICGCIIOT2015), New Delhi, India, 8-10 Oct 2015</i> - <i>Non-Disclosure Agreement (NDA) with Malaysian Communications and Multimedia Commission (MCMC)</i> - <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>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</i>
<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) USD6,500 ~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)</p>	<p>3D Video Transmission over GEO Satellite Networks for Disaster Management Applications (Project code: 01-01-04-SF1047, Vot no.: 5450543) - completed</p>

RM89,500

Project Leader - RUGS
(1/10/2009 – 30/9/2010)
RM25,000

Reliable and Adaptive Multicast Transmission Over GEO Satellite Network for Disaster Monitoring Applications (Project code: 91841) - **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) – **on-going**

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) – **on-going**

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) – **on-going**

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 – **on-going**

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 – RUGS
(27/8/2009 – 26/8/2011)
RM92,000

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)	Vahid Khodamoradi (Energy-Efficient CRAN Location in Massive-MIMO Framework) – on-going
PhD (Main supervisor)	Mas Haslinda Mohammad (Interference Management for Cognitive Radio Network) - on-going
PhD (Main supervisor)	Ahmad Nuzli Anas (Adaptive and Intelligent Resource Allocation for Cognitive Radio Network) - on-going
PhD (Main supervisor)	Abdulmajid alMqdashi (Adaptive Resource Allocation for Cognitive Radio Network) - on-going
PhD (Main supervisor)	Ali Mohamed (Channel Characterisation and Modeling for GEO Satellite-to-Land Terminals at Ku-band with Tropical Awareness) – complete Apr 2015
PhD (Main supervisor)	Aida Ismail (Green Network Planning and Operational Power Consumption Optimization in LTE-A Using Artificial Intelligence Techniques) – complete Dec 2015
PhD (Main supervisor)	Ahmad Mohamedou (Cognitive Radio in WLAN Transmission over TV White Space Frequencies) – complete Oct 2015
PhD (Main supervisor)	Saukat Jahan (Adaptive MAC protocol over Next Generation Wireless Sensor Networks) – complete July 2015
PhD (Co-supervisor)	Mustafa Ismail Salman (Self-Configured Link Adaptation using Channel Quality Indicator-Modulation and Coding Scheme Mapping with Partial Feedback for Green Long-Term Evolution Cellular Systems) - complete May 2015
PhD (Co-supervisor)	Yaseein Soubhi Hussein (Mobility Management Schemes Based on Multiple Criteria for Optimisation of Seamless Handover in LTE Networks) – complete Mar 2015
PhD (Co-supervisor)	Ali Kamil Marzook (Rank-Deficient Channel Matrix Based Smart Antenna Receiver for Block Data Transmission in CDMA and UWB Systems) – complete May 2013
PhD (Co-supervisor)	Motea Saleh Mohamad Al-Omari (Interference Avoidance Techniques for Densely Deployed Two-Tier WiMax Femto Cells) – on-going
PhD (Co-supervisor)	Khalid Abdullahi Ali (Self-Healing and Service Management in Wireless Sensor Network) – on-going
PhD (Co-supervisor)	Nazmus Sadat (Scheduling Algorithm for OFDMA-Based Networks) – complete May 2015
MSc (Main supervisor)	Faraz Talebpour (Digital Quadrature Compensator Scheme for Analog Imperfections of Quadrature Modulator in Wireless Communication Systems) – complete July 2016
MSc (Main supervisor)	Haafizah Rameeza Shaukat (Danger Theory Based Node Replication Attack Detection and Mitigation in Mobile Wireless Sensor Networks) – complete Jan 2015
MSc (Main supervisor)	Nur Syahirah Ibrahim (Performance Analysis on Relay-Assisted Cognitive Radio Networks) – on-going

MSc (Main supervisor)	Abdulmajeed Jasim (Propagation Models for Train Environment over GEO Satellite Networks in Malaysia) – complete Feb 2015
MSc (Main supervisor)	Zahraa Dahham (Energy Efficient MAC Protocol in WSN) – complete June 2013
MSc (Main supervisor)	Sin Yong You (Radio Resource Management in WiMAX) – complete March 2013
MSc (Main supervisor)	Mohamad Reza Ranjbari (Multiple Description Coding over GEO Satellite Networks) – complete Sept 2014
MSc (Main supervisor)	Bahman Azarbad (Cross-layer in 3D Video Transmission over GEO Satellite Networks) – complete June 2013
MSc (Co-supervisor)	Abofazi (Fractal dielectric resonator antenna for ultra wideband wireless communication systems) – complete May 2015
MSc (Co-supervisor)	Hussam Kareem (Energy Efficient Two-Stage Chain Routing Protocol for Wireless Sensor Network) – complete May 2014
MSc (Co-supervisor)	Bilal Abdulhaq Ahmed (Enhanced Open Shortest Path First (OSPF) Protocol Using Parallel Tabu-Search-Ring in WiMAX Mesh Network) – complete July 2013
MSc (Co-supervisor)	Omar Ceesay (Coverage Extension in Wireless Sensor Networks) – complete June 2011
MSc (Co-supervisor)	Wasan Ahmad Suleiman Alfaraihat (Fast Convergent Energy Efficient MAC Protocol for Wireless Sensor Networks) – complete Oct 2010
Bachelor (Main supervisor)	Mohammad Amirul Asraff Abdul Khamas (Measurement of Rain Attenuation Effect on Satellite Signal in Tropical Region at Ka-Band)
Bachelor (Main supervisor)	Mohammad Azhar Nawayi (Measurement of Scintillation Effect on Satellite Signal in Tropical Region at Ka-Band) – 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)
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

UNDERGRADUATE EXAMINER

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 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 Predistortion'
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

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'
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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 Milimetre 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 Examiner (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	Muntadher Qasim Abdulhasan (GS33085) ‘Adaptive Threshold Feedback Compression Scheme

Examiner (July 2014)	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 (reviva) 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

Task Force Shakemap (13	Development and Application of Shake Map, in collaboration with US Geological Survey (USGS)
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May 2015 – 12 May 2016)	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 Communications 2011, APCC 2011, 3-5 October, 2011, Kota Kinabalu, Sabah

TECHNICAL COMMITTEES

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; UPM 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

Technical Program Chair and Track Chair – Malaysian International Conference in Communications 2015 (MICC2015), Feb – Nov 2015 'Wireless / Radio Access Technologies' Track, MICC2015, Kuching, Sarawak, Malaysia

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 11 th 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
<u>SUBJECT MATTER EXPERT</u>	
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 (ICGCIOT2015), New Delhi, India
Astro Awani – Invited Expert in Satellite Communications (16 March 2014)	'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (<i>Buletin Awani Khas</i> , 8:30 – 9:00pm, 16 March 2014)
Astro Awani – Invited Expert in Satellite Communications (14	'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (<i>Buletin Awani Khas</i> , 8:30 – 9:00pm, 14 March 2014)

March 2014)

Astro Awani – Invited Expert in Satellite Communications (25 March 2014)	‘Mencari MH370: Memahami Isyarat Satelit’ - Invited Expert in Satellite Communications (<i>Buletin Awani Khas</i> , 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 (<i>Harian Metro</i> 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 (<i>Buletin Awani Khas</i> , 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	‘Agenda Awani Khas Setahun MH370’ - Invited Expert in Satellite Communications, Agenda Awani Khas 8:30 – 10:30pm, 8 March 2015

Communications (8 March 2015)

Astro Awani – Invited Expert in Satellite Communications (8 March 2016)

Malaysia Research and Education Network (MyREN) – Invited Speaker (28 and 29 Jan 2014)

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

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

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

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

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

Networking and Wireless Research Group, UPM (Dec 2009)

MIMOS Bhd. (July 2009)

‘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

‘Wireless Sensor Network Workshop’ – ‘Energy Management in Channel Access’

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

‘Green Network Optimisation for Wireless Networks’

‘Satellite Networks: From emergency to aeronautical communications’

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

Research Management Talk for Publication Workshop

Invited presentation on system-level simulation using ns2

Invited presentation on MAC layer from simulation perspective

PUBLICATIONS

Journals

- 1) 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’, accepted in Elsevier Pervasive and Mobile Computing, July 2016 (Q2, IR: 1.719)
- 2) 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’, accepted in International Journal of Communication Systems, June 2016 (Q3, IF: 1.099)

- 3) Mohammed Al-Medhwahi, Fazirulhisyam Hashim, Borhanuddin Mohd Ali, A. Sali, 'Pliable Cognitive MAC for Heterogeneous Adaptive Cognitive Radio Sensor Networks', accepted in *Sensors*, June 2016 (Q1, IF: 2.245)
- 4) Idris Abubakar Omar, Zurina Mohd Hanapi, A. Sali, Zuriati A. Zulkarnain, 'FuGeF: A Resource Bound Secured Forwarding Protocol for Wireless Sensor Networks', accepted in *Sensors*, June 2016 (Q1, IF: 2.245)
- 5) 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*, May 2016, 10.1109/TVT.2016.2563038 (Q1, IF: 1.978)
- 6) 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)
- 7) 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)
- 8) 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)
- 9) Al-Samawi, Aida, A. Sali, Nor Kamariah Noordin, Mohamed Othman, and Fazirulhisyam Hashim, 'Feasibility of Green Network Deployment for Heterogeneous Networks', accepted in *Springer Wireless Personal Communications*, Apr 2016 (Q4, IF: 0.653)
- 10) 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)
- 11) 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)
- 12) 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)
- 13) 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)
- 14) 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)
- 15) 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, DOI 10.1002/ett.2954 (Q2, IF: 1.354)
- 16) 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*

- 17) 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)
- 18) 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)
- 19) 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)
- 20) 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)
- 21) 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)
- 22) Shahideh Kiehadrouinezhad, 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)
- 23) 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)
- 24) 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)
- 25) 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)
- 26) 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)
- 27) 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)
- 28) 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)
- 29) 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)
- 30) 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)
- 31) 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)
- 32) 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', Neurocomputing, Vol. 131, May 2014, pp397-418 (Q2, IF: 2.083)
- 33) 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')**
- 34) 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)
- 35) 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).
- 36) 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)
- 37) 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)
- 38) 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)
- 39) 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)
- 40) 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)
- 41) 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)
- 42) 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)
- 43) 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)
- 44) 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)

- 45) 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)
- 46) 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
- 47) 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
- 48) 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
- 49) 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)
- 50) 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)
- 51) H. A. Karim, A. Sali, S. Worrall, A. H. Sadka, A. M. Kondoz, '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)
- 52) 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
- 53) 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)
- 54) 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

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- 9) 'Assalamualaikum - Mata di Langit (Satelit)' – Invited Expert in Satellite Communications (TV AlHijrah 8:30 – 09:00am 3 April 2014)
- 10) '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)
- 11) 'Bual Bicara' – Invited Expert in Satellite Communications (RTM TV1, 10:00 – 11:00 27 March 2014)
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- 13) 'Tragedi MH370: Kaedah Satelit Inmarsat Kesan Pesawat' – Invited Expert in Satellite Communications (*Harian Metro* 25 March 2014)
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- 16) 'Mencari MH370' Astro Awani – Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 – 9:00pm, 16 March 2014)
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- 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
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- 2) **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, 30 Jan 2016
- 3) **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
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- 8) **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
- 9) **Level 1** TRIZ Practitioner, 10 April 2012
- 10) S. Khatun, S. Rajaratnam, **A. Sali**, F. Hashim, 'Adaptive Remote Control Using RF Device', **Silver Medal**, UPM R&D Exhibition, '8-10th July 2003
- 11) 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
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- 13) 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

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- 2) 2014 Excellence Award in Service, UPM, 23 April 2015
- 3) 2013 Excellence Award in Service, UPM, 15 May 2013
- 4) 2012 Excellence Award in Service, UPM, 16 December 2013
- 5) 2011 Anugerah Perkhidmatan Cemerlang (Excellence Award in Service), UPM Majlis Gemilang Putra, 26 June 2012
- 6) 2010 Excellence Award in Service, Faculty of Engineering, UPM
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