



# **CURRICULUM VITAE**

## ASSOC. PROF. DR. ADUWATI SALI

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

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# **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) Secretary, IEEE Young Professionals Malaysia, 2014
- 2) Executive Committee, IEEE Communication Society (ComSoc) Malaysia, 2014
- Chartered Engineer (CEng), Engineering Council, UK, since Nov 2011, Registration No.: 593790
- 4) Member, IET, since 2011
- 5) Member, IEEE Vehicular Technology Society, since 2010
- 6) Member, IEEE Communications Society, since 2010
- Secretary, Institution of Electrical and Electronics Engineering (IEEE) Graduates of Last Decade (GOLD), 2009
- Member, Institution of Electrical and Electronics Engineering (IEEE) Malaysia Section, 2000-2004, 2009 onwards
- Student Member Institution of Electrical and Electronics Engineering (IEEE) UKRI Section 2005-2008
- 10) Student Member, Institution of Engineering and Technology (IET), 2008
- 11) Member, Institution of Engineers Malaysia (IEM) since 2002
- 12) Member, Board of Engineers Malaysia (BEM) since 2002



	NTN	

Industry Attachment / National Space Agency (AAN) (1/3/2014 – 28/2/2014)

Network Engineer

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, heterogenenous networks, green radio resource management, cognitive radio, adaptive techniques, cross-layer approach, reliable multicast, disaster management and preparedness.

# **TEACHING ACTIVITIES**

Semester 1 / 2013/2014	ECC3701 Computer Networks	(Assessment: 4.46/5.00)
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Semester 2 / 2012-2013 ECC5702 Data Networks (Assessment: 4.65/5.00)

Semester 2 / 2011-2012 ECC 3901 Industrial Training

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	Е
UPM IPB (2/12/2013 -	IF
1/12/2015) RM 48,455	-

ECOSAN: Emergency Communications over Satellite-Assisted Network (Project code: GP-IPB/2013/9413101) – on-going

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

Project Leader – TWAS-COMSTECH (7/6/2013 – 6/2/2015) USD2,500 -

Intelligent Spectrum Sensing and Sharing in Cognitive Radio Networks (Project code: 12-202 RG/ITC/AS\_C) — on-going

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) – on-going

- Collaboration with Electrified Train System (ETS) Keretapi Tanah Melayu (KTM)

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) – on-going

- 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 UNESCI (ISTIC-TWAS) Competition "Successful Innovation in Science and Technology in Developing Countries", 20-21 October 2012, Penang, Malaysia

Project Leader – RUGS (15/4/2011 – 14/10/2013) RM107,000 MAC Layer Issues in Hybrid WSN / Satellite Communications for Emergency Communications (HySSECom) (Project code: 05-01-111332RU) – **completed** 

Project Leader – TWAS-COMSTECH (25/5/2010 – 24/11/2011) USD6,500 - Radio Resource Management for Mobile Sensor Networks (Project code: 09-101 RG/ITC/AS\_C) – completed

- 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

Invited project presentation for Wireless Sensor Network Workshop – 'Energy Management in Channel Access' organized by MyREN, 28-29 Jan 2014, Universiti Putra Malaysia

Project Leader - eScience fund (1/6/2010 -30/5/2011) RM89,500

3D Video Transmission over GEO Satellite Networks for Disaster Management Applications (Project code: 01-01-04-SF1047) - completed

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-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)

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

Dec 2008)

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 -

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

Sept 2004)

Project Leader (Sept 2003 – Car ID Monitoring and Tracking System (CIMTS) (New Lectureship Scheme) - completed



	Supervision
PhD (Main supervisor)	Abdulmajid alMqdashi (Adaptive Resource Allocation for Cognitive Radio Network) - on-going
PhD (Main supervisor)	Ali Mohamed (Multimedia Transmission over GEO Satellite at Near Equatorial Region) – on-going
PhD (Main supervisor)	Aida Ismail (Energy-Efficient Base Station Communications) – on-going
PhD (Main supervisor)	Ahmad Malic (Cognitive Radio in WLAN Transmission over TV White Space Frequencies) – ongoing
PhD (Main supervisor)	Ayyoub Akbari (QoS in WiMAX) – on-going
PhD (Main supervisor)	Saukat Jahan (Adaptive MAC protocol over Next Generation Wireless Sensor Networks) – ongoing
PhD (Co-supervisor)	Yaseein Soubhi Hussein (Routing in LTE) — on-going
PhD (Co-supervisor)	Ali Kamil Marzook (Rank-Deficient Channel Matrix Based Smart Antenna Receiver for Block Data Transmission in CDMA and UWB Systems) – <b>complete May 2013</b>
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) – ongoing
PhD (Co-supervisor)	Nazmus Sadat (Scheduling Algorithm for OFDMA-Based Networks) – on-going
MSc (Main supervisor)	Nur Syahirah Ibrahim (Interference Modeling for Cognitive Radio Networks) – on-going
MSc (Main supervisor)	Abdulmajeed Jasim (Propagation Model for Near Equatorial Region at Ku-Band) – on-going
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) – on-going
MSc (Main supervisor)	Bahman Azarbad (Cross-layer in 3D Video Transmission over GEO Satellite Networks) – <b>complete June 2013</b>
MSc (Co-supervisor)	Abofazl (Fractal Antennas for Ultra Wideband Wireless Communication Systems) – on-going
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)	Liew Chun Sum (Energy-Efficient Base Station Transmission for Wireless Network) – on-going



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

# **CONSULTATIONS AND PROFESSIONAL SERVICES**

Chooi Chong Yee (Stolen Laptop Tracking System) – complete June 2010

# UNDERGRADUATE EXAMINER

Bachelor (Main supervisor)

	<u>UNDERGRADUATE EXAMINER</u>
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 Presentation (13 Jan 2014)	Ahmad Aiman Akmal Abdul Wahid Akmal (160274) 'Controllong Monochromator via ActiveX and LabView Integration'
UPM – FYP A Presentation (13 Jan 2014)	Mohd Afdhaluddin Irfan Adzhar (158673) 'Wireless Fencing for Border Protection'
UPM – FYP A 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	Khairil Farid Abdul Aziz (134594) 'Mobile Phone Automating Household Appliances – GSM Modem or Bluetooth'



(17 Nov 2009)

UPM - FYP B Presentation (17 Nov 2009)

Fam Jian Gi (138439) 'Music Playing Using Sign Language'

**POSTGRADUATE EXAMINER** 

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)

UPM - MSc Thesis Examiner (May 2011) Rania Abdelhameed Mokhtar (GS15829) 'Distributed Cooperative Spectrum Sensing in Cognitive Radio Network'

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 Yaakob Ali Ahmed Qasem Alrefaei (GS21090) 'Collision-Free Routing and Scheduling using



Examiner (Nov 2010) Multiple Transceivers for IEEE 802.16 Mesh Network' **CONSULTATIONS** Soka University, Japan Trainer for 'Satellite Communications', Exchange Student Program (Short Mobility) – (8 March 2014) RM 1.200.00 Institut Teknologi Consultant for Backbone Transmission Technology Level 1 & 2 - RM 6,000.00 **Petroleum Petronas** (Instep) (24 - 27 June 2013) Ministry of Higher Consultant for Assessment Study for IPTA Programs: Effectiveness and Relevance from Demand and Award Aspects (Technical Cluster) – RM 217,000.00 Education, Malaysia (Mar – Dec 2013) Session Chair (4 Oct 2012) T1A MIMO Communications, The 12th International Symposium on Communications & Information Technologies (ISCIT 2012), Gold Coast **National Space Agency** Consultant for Value Management for National Communication Satellite (CommSat) Program (ANGKASA) and ATSB (19 Apr 2011) Ministry of Information, Consultant for Establishment of Standards and Guidelines for WSN Implementation in Malaysia – Communications and RM 470,000.00 Cultural, Malaysia (3 Oct 2011 – 1 October 2013) Associate Consultant for Satellite Communications and Networking – RM 9,000.00 ZOHL Consultancy Sdn. Bhd. (12 Aug 2010, for 2 years) 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** Consultant for System Capacity and Link Budget Analysis, National Communication Satellite (ANGKASA) and ATSB (29-(CommSat) User Requirements Seminar 30 Apr 2010) 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 COMITTEES** Technical Program International Conference on Satellite Communications and Space (IconSpace 2015), Malaysia Committee - Disaster Management, May 2014 -August 2015 Treasurer, Nov 2013 – Oct Defense and Security Technology Conference 2014 (DSTC2014) 2014 2013 IEEE 11<sup>th</sup> Malaysia International Conference in Communications (MICC2013) Co-Technical Program Chair - Wireless Communications, July -



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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
Astro Awani – Invited Expert in Satellite Communications (16 March 2014)	'Mencari MH370' – Satellite communications in finding the missing MH370 aircraft
Astro Awani – Invited Expert in Satellite Communications (14 March 2014)	'Mencari MH370' – Satellite communications in finding the missing MH370 aircraft
Malaysia Research and Education Network (MyREN) – Invited Speaker (28 and 29 Jan 2014)	'Wireless Sensor Network Workshop' – 'Energy Management in Channel Access'
National Space Agency	'Application of Satellite Communication Seminar' - 'Satellite Networks: From emergency to



(ANGKASA) – Invited Speaker (24 October 2013) 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

- M. I. Salman, C. K. Ng, N. K. Noordin, B. M. Ali, A. Sali, 'A Self-Configured Link Adaptation for Green LTE Downlink Transmission', to appear in Transactions on Emerging Telecommunications Technologies (IF: 1.049)
- 2) 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' to appear in ETRI journal (IF: 0.742)
- 3) H. F. Zmezm, S. J. Hashim, Aduwati Sali, 'Fast and Secure Handover Authentication Scheme in Mobile WiMAx', to appear in Journal of Theoretical and Applied Information Technology (Scopus-indexed)
- 4) Husam Kareem, S. J. Hashim, Shamala Suberamaniam, Aduwati Sali, 'Energy Efficient Two-Stage Chain Routing Protocol for Wireless Sensor Network', to appear in Journal Of Theoretical And Applied Information Technology (Scopus-indexed)
- 5) Arafat A. A. Shabaneh, Azizi Mohd Ali, Chee Kyun Ng, Nor Kamariah Noordin, Aduwati Sali, Mohd Hanid Yaacob, 'Review of Energy Conservation Using Duty Cycling Schemes for IEEE 802.15.4 Wireless Sensor Network (WSN)', Springer Wireless Personal Communications, Oct 2013, DOI 10.1007/s11277-013-1524-y (IF: 0.428)
- 6) 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 (IF: 0.428)
- 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 (IF: 1.667)
- 8) A.A.Zaidan, H.Abdul Karim, N.N.Ahmad, B.B.Zaidan, A.Sali, 'Image skin segmentation based on multi-agent learning', Engineering Application of Artificial Intelligence, Vol. 32, June 2014, pp. 136-150 (IF: 1.625)
- 9) 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 (IF: 0.624)
- 10) A.A.Zaidan, H.Abdul Karim, N.N.Ahmad, B.B.Zaidan, A.Sali, 'An automated anti-pornography algorithm based on multi-agent learning neural and bayesian methods', Neurocomputing, Vol. 131, May 2014, pp397-418 (IF: 1.634)
- 11) 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)
- 12) 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 (IF: 0.624)
- 13) 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 (IF: 0.52).
- 14) 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
- 15) 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. (IF: 0.724)
- 16) 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
- 17) 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.
- 18) 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', accepted in International Journal of Ad-Hoc and Ubiquitous Computing (IF: 0.848)
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**Book Chapter** 

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- 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
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- A. M. Al-Saegh, A. Sali, J. S. Mandeep, A. Ismail, A. H. J. Aljumaily, '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
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- 16) 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
- 17) 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
- 18) 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, 1<sup>st</sup> – 3<sup>rd</sup> October 2008, pp211-215
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- 28) A. Sali, S. Khatun, A.G. E. Abdalla, 'Queuing of Handover Calls in Mobile Satellite Communication', 5<sup>th</sup> 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**

- Laporan Interim: 'Penilaian Program-Program IPTA: Keberkesanan dan Kerelevanan dari Aspek Penawaran dan Permintaan', 20 June 2013
- Inception Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 24 Nov 2011
- Interim Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 18 June 2012
- Progress Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 2 Oct 2012
- Final Report: 'Establishment of Standards and Guidelines for WSN Implementation in Malaysia', 20 Nov 2012

#### Others

- 1) 'Technical Standards for IMT-Advanced', MTSFB 003:2013
- 'Implementation of Wireless Sensor Network in Malaysia Guidelines: Operating in the Frequency Band 433MHz, 869MHz and 2,4GHz', Dec 2012
- 3) In Person: Dr Aduwati Sali, 'CEng, PEng, who cares?', WiPTimes A Wireless and Photonic Networks Research Centre's Newsletter, Issue 3, Jan June 2012

## **AWARDS**

## Media Coverage

- 1) 'Mencari MH370' Astro Awani Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 9:00pm, 16 March 2014)
- 2) 'Mencari MH370' Astro Awani Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 9:00pm, 14 March 2014)
- 3) 'Mencari MH370: Memahami Isyarat Satelit' Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 9:00pm, 25 March 2014)
- 4) 'Tragedi MH370: Kaedah Satelit Inmarsat Kesan Pesawat' Invited Expert in Satellite Communications (*Harian Metro* 25 March 2014)
- 5) 'Tragedi MH370' Invited Expert in Satellite Communications (TV alHijrah 26 March 2014)
- 6) 'Bual Bicara' Invited Expert in Satellite Communications (RTM TV1, 10:00 11:00 27 March 2014)
- 7) 'Ruang Bicara MH370' Invited Expert in Satellite Communications (BERNAMA 17:00 18:00 27 March 2014)
- 8) '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)
- 9) 'Assalamulaikum Mata di Langit (Satelit)' Invited Expert in Satellite Communications (TV AlHijrah 8:30 09:00am 3 April 2014)
- 10) 'MH370 Pencarian Memasuki Fasa Baru' Invited Expert in Satellite Communications (*Buletin Awani Khas*, 8:30 9:00pm, 5 May 2014)
- 11) 'Masih di Lautan Hindi' Metro Ahad, 1 Jun 2014



## Scholarship awards

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

## Research awards

- 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
- 2) Level 1 TRIZ Practitioner, 10 April 2012
- S. Khatun, S. Rajaratnam, A. Sali, F. Hashim, 'Adaptive Remote Control Using RF Device', Silver Medal, UPM R&D Exhibition, '8-10<sup>th</sup> July 2003
- 4) S. Khatun, K.C. Ong, **A.Sali**, H.Hambali, C.K.Ng, 'Video on Demand (VoD) Systems for Independent Network', *Bronze Medal*, 14<sup>TH</sup> International Invention, Innovation, Industrial Design and Technology, (I-TEX 2003), 16<sup>TH</sup> 18<sup>TH</sup> May 2003
- 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, 30<sup>th</sup> July-1<sup>st</sup> Aug 2002
- 6) 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, 30<sup>th</sup> July-1<sup>st</sup> Aug 2002

### Administrative awards

- 1) 2012 Excellence Award in Service, UPM, 16 December 2013
- 2) 2011 Excellence Award in Service, UPM, 26 June 2012
- 3) 2010 Excellence Award in Service, Faculty of Engineering, UPM
- 2010 Excellence Award in Teaching in conjunction with Appreciation and Quality Day, Faculty of Engineering, UPM
- 2009 Excellence Award in Teaching in conjunction with 13<sup>th</sup> 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) ECTI-CON 2014
- 2) 2014 IEEE TENSYMP IEEE Region 10 Symposium
- 3) International Conference on Satellite Communications and Space (IconSpace 2013)
- 4) International Symposium on Telecommunication Technologies (ISTT 2012)
- 5) International Conference on Wireless Communications and Applications (ICWCA 2012)
- 6) Asia Pacific Conference on Communications (APCC 2012)
- 7) IEEE Global Communications Conference, GLOBECOM 2007
- The 12th International Symposium on Communications & Information Technologies (ISCIT 2012)
- 9) International Conference on Satellite Communications and Space (IconSpace 2011)
- 10) Asia Pacific Conference on Communications (APCC 2011)
- 11) World Engineering Congress, Conf on Electrical Electronics Technologies (CEET) 2010
- 12) IEEE International Conference on Wireless Communications, Networking and Information Security Wireless Networks (IEEE WCNIS2010-WN)
- 13) IEEE Wireless Communications and Networking Conference, WCNC 2010
- 14) IEEE Malaysian International Conference on Communications, MICC 2009



- 15) IEEE 2<sup>nd</sup> International Workshop on Wireless Sensor Networks: Theory and Practice, WSN 2009
- 16) IEEE Global Communications Conference, GLOBECOM 2006

**Journals** 

- 1) Elsevier International Journal Engineering Science and Technology, Jan 2014
- 2) Jurnal Kejuruteraan UKM, July 2013
- 3) Jurnal Teknologi Special Edition (Communication Engineering), July 2013
- 4) Computer, Communication & Collaboration, May 2013
- 5) Springer Wireless Personal Communications, May 2013
- 6) Springer Wireless Personal Communications, Feb 2013
- 7) Iranian Journal of Science and Technology Transactions on Electrical Engineering, Nov 2012
- 8) Springer Wireless Personal Communications, March 2012
- 9) Springer Wireless Personal Communications, May 2011
- 10) Springer Wireless Personal Communications, Dec 2010
- 11) Springer Wireless Personal Communications, Sept 2010
- 12) Springer Wireless Personal Communications, March 2010
- 13) Special Issue on Hybrid/Integrated Satellite/Terrestrial Networks, International Journal of Satellite Communications and Networking, Aug 2009
- 14) International Journal of Satellite Communications and Networking, Oct 2008