



CURRICULUM VITAE



ASSOC. PROF. DR. RAJA SYAMSUL AZMIR RAJA ABDULLAH

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

T: 03-8946 4347
F: 03-8656 7127
E: r_syamsul@upm.edu.my

Education

1. Ph.D Electronic and Electrical Engineering, 2005, University of Birmingham, UK
2. M.Sc. Communications Systems Engineering, 2001, University of Birmingham, UK
3. B.Eng. Electronic and Electrical Engineering, 2000, University of Birmingham, UK

Areas of Interest

1. Radar system, GPR, Microwave and Millimeter wave, Wimax, WSN and NDT

Professional Qualification/ Membership/ Affiliation

- | | | |
|---------------------|--|------------|
| 1. Chair | IEEE Graduate of the last decade (Young Professional) : Malaysia | 2008 |
| 2. Senior Member | Institute of Electronic and Electrical Engineering | 2006 - now |
| 3. Member | IEEE Aerospace and Electronic System, Society | |
| 4. Executive Member | IEEE Graduate of the last decade: Malaysia | 2007 |
| 5. Member | European Microwave Association | 2007 |
| 6. Member | Malaysian Society for Engineering and Technology | 2008 - now |
| 7. Member | International Association of Engineers (IAENG) | 2008 - now |
| 8. Member | The Institution of Engineering and Technology (IET) | 2002 - now |

Appointments

Position	Duration
1. Lecturer, Department of Computer and Communication Systems Engineering, Faculty of Engineering, UPM	November 2005 until now
2. Head, Wireless and Photonics Research Centre, UPM	2008 – 2010
3. General manager, UPM Holdings (Business & Consultancy Company of UPM)	2011 –2013
4. Visiting Researcher and Academic, University of Birmingham, United Kingdom	2014
5. Coordinator, Development, Faculty of Engineering	2016
6. Committee member, Curriculum Review: Bachelor of Computer and Communication Systems Engineering	2016
7. Head Laboratory, Wireless Communication Systems	2015
8. Associate Researcher, Wireless and Photonics Networks Research Center	2014
9. Head Laboratory, Wireless Communication Systems	2011
10. Head Research Division, Wireless Communications Engineering	2011
11. Head Research Center, Wireless and Photonics Networks Research Center	2008-2011
12. Committee member, Occupational Health and Safety, Multipurpose Laboratory	2007 - 2009



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| 13. Head Research Division, Wireless and Networks Engineering | 2008 |
| 14. Coordinator, Development, Faculty of Engineering | 2007 - 2008 |
| 15. Head Laboratory, Network and Communications Engineering | 2007 |
| 16. Associate Researcher, Institute of Software and Multimedia,
Universiti Putra Malaysia | 2006 |
| 17. Coordinator, UPM-IPTS Joint program | 2006-2007 |

Publications

Journals (30 recent journals)

1. **Raja Syamsul Azmir Raja Abdullah**, Ali Alnaeb, Asem Ahmad Salah, Nur Emileen Abdul Rashid, Aduwati Sali, Idrin Pasya, Micro-Doppler Estimation and Analysis of Slow Moving Objects in Forward Scattering Radar System, Remote Sensing, Accepted
2. **R.S.A. Raja Abdullah**, A.A. Salah, A. A. Alnaeb, A. Sali, N.E. Abd Rashid, I. P. Ibrahim, Micro-Doppler Detection in Forward Scattering Radar: Theoretical Analysis and Experiment, Electronics Letters, 53(6), pp 426-428, 2017, doi: 10.1049/el.2016.4163
3. Noor Hafizah Abdul Aziz, **Raja Syamsul Azmir Raja Abdullah**, Nur Emileen Abdul Rashid, Fazirulhisyam Hashim, RCS Predictions through Angle of Ground Moving Target using LTE-Based Passive Forward Scattering Radar, Journal of Telecommunication, Electronic and Computer Engineering (JTEC), vol(9), Issue1-4, pp.129-132, 2017
4. **Raja Syamsul Azmir Raja Abdullah**, Azizi Mohd Ali, Mohd Fadlee A Rasid, Nur Emileen Abdul Rashid, Asem A. Salah and Aris Munawar, Joint Time-Frequency Signal Processing Scheme in Forward Scattering Radar with a Rotational Transmitter, Remote Sensing, 8(12), 1028, 2016; doi:10.3390/rs8121028
5. **RSA Raja Abdullah**, N.H. Abdul Aziz, N. E. Abdul Rashid, Asem A. Salah and F. Hashim, Analysis on Target Detection and Classification in LTE-Based Passive Bistatic Forward Scattering Radar, Sensors, 16(10), 1607, 2016 ; doi:10.3390/s16101607
6. **Raja Syamsul Azmir Raja Abdullah**, Asem A. Salah, Alyani Ismail, Fazirul Hisham Hashim, Nur Emileen Abdul Rashid, Nor Hafizah Abdul Aziz, Experimental investigation on target detection and tracking in passive radar using long-term evolution signal, IET Radar Sonar Navigation, Vol. 10, Iss. 3, pp. 577–585, 2016
7. **RSA Raja Abdullah**, Asem A. Salah, A. Ismail, F. Hashim, N. E. Abdul Rashid and N.H. Abdul Aziz, LTE-Based Passive Bistatic Radar for Ground Moving Target Detection, ETRI Journal, Volume 38, Number 2, pp. 302-313, 2016
8. Aziz NHA, **RSA Raja Abdullah**, Speed Recognition Based PCA on Ground Vehicle in Passive Forward Scattering Radar, Journal of Telecommunication, Electronic and Computer Engineering, vol. 8(3), 2016
9. Safa N. Nafea¹, Alyani Ismail and **Raja S. A. Raja Abdullah**, “ Low Side Lobe Level Multilayer Antenna for Wireless Applications, Progress In Electromagnetics Research Letters, Vol. 58, 105–111, 2016
10. Motea Al-omari, Abd Rahman Ramli, A. Sali and **Raja Syamsul Azmir**, A Femtocell Cross-Tier Interference Mitigation Technique in OFDMA-LTE System: A Cuckoo Search based Approach, Indian Journal of Science and Technology, Vol 9(2), January 2016 DOI: 10.17485/ijst/2016/v9i2/80490,
11. Motea Al-Omari, Abd Rahman Ramli, A. Sali, **Raja Syamsul Azmir**, Deployment Of Femtocell And Its Interference Management Approaches In LTE Heterogeneous Networks, Journal of Theoretical and Applied Information Technology, Vol.87. No.1, 2016
12. Noor Hafizah Abdul Aziz and Raja Syamsul Azmir Raja Abdullah, A Passive Forward Scattering Radar for Detecting Humans and Characterizing Human Behaviours, Australian Journal of Basic and Applied Sciences, 10(11) Special, Pages: 112-118, 2016;

13. Mohanad Dawood Al-Dabbagh, **RSA Raja Abdullah** and F. Hashim, A new modified differential evolution algorithm scheme-based linear frequency modulation radar signal de-noising, *Engineering Optimization*, Vol. 47(6), 771-787, 2015
14. **RSA Raja Abdullah**, A.A. Salah, N.E. Abdul Rashid, Moving Target Detection by Using New LTE-Based Passive Radar, *Progress In Electromagnetics Research B*, Vol. 63, 145-160, 2015
15. N.H. Abdul Aziz, **RSA Raja Abdullah**, Baseline Recognizing on Ground Moving Target Detection via Clustering Based PCA, *International Journal of Applied Engineering Research*, Vol. 10 No.89 (2015)
16. Noor Hafizah A. A., Haziq Hazwan M.Y., Nur Emileen A.R., **RSA Raja Abdullah** , RCS Analysis On Different Targets And Bistatic Angles Using LTE Frequency, *International Journal Of Industrial Electronics And Electrical Engineering*, Volume-3, Issue-7, July-2015 pp. 1-4
17. Md. Nazmus Saadat, Borhanuddin Mohd Ali, Aduati Sali, **Raja Syamsul Azmir Raja Abdullah** and Hafizal Mohamad, Resource Allocation Algorithm for Improving Performance of the OFDMA Based Connection Oriented Networks, *Transactions on Networks and Communications*, Vol.34(6), 2015
18. A.A. Salah, **RSA Raja Abdullah**, A. Ismail, F. Hashim and N.H. Abdul Aziz, Experimental study of LTE signals as illuminators of opportunity for passive bistatic radar applications, *Electronics Letters*, Vol: 50(7), 545 – 54, 2014
19. Abbas Mehdizadeh, Fazirulhisyam Hashim, **RSA Raja Abdullah**, Borhanuddin Mohd Ali, Sabira Khatun, Mohamed Othman, Multicast-Unicast Data Delivery Method in Wireless IPv6 Networks, *Journal of Network System and Management*, vol.22, 583–608, 2014. DOI 10.1007/s10922-013-9268-2
20. A. R. H. Alhawari , A. Ismail, A.S.A Jalal, **R. S. A. R. Abdullah**, M. F Rasid, U-shaped inductively coupled feed radio frequency identification tag antennas for gain enhancement, *Electromagnetics*, Vol.34(6), 487-496, 2014. DOI: 10.1080/02726343.2014.922767
21. Abbas Mehdizadeh, **RSA Raja Abdullah**, Fazirulhisyam Hashim, Borhanuddin Mohd Ali, Mohamed Othman, Sabira Khatun, Performance Evaluation of Cost-Effective Multicast–Unicast Key Management Method, *Wireless Personal Communications*, vol.77(3), 2195–2212, 2014. DOI 10.1007/s11277-014-1633-2
22. OL Barakat, SJ Hashim, **RSA Raja Abdullah**, AR Ramli, F Hashim, ‘Malware analysis performance enhancement using cloud computing’, *Journal in Computer Virology*, vol.10 (1), 1-10 2014. DOI: 10.1007/s11416-013-0187-2
23. M. Mohammadpoor, **RSA Raja Abdullah**, A. F Abas, A. Ismail, Foreign Object Detection Based On Circular Bistatic Synthetic Aperture Radar, *Progress In Electromagnetics Research*, Vol. 134, 301-322, 2013
24. M. Mohammadpoor, **RSA Raja Abdullah**, Asem A, Saleh, Mohanad Dawood, A Bistatic Linear Frequency Modulated Radar for On-the-Ground Object Detection, *Electromagnetics*, Vol 33, 153 – 177, 2013 DOI: 10.1080/02726343.2013.756295
25. Abbas Mehdizadeh, **RSA Raja Abdullah**, Fazirulhisyam Hashim, Borhanuddin Mohd Ali, Mohamed Othman, Sabira Khatun, Reliable Key Management and Data Delivery Method in Multicast Over Wireless IPv6 Networks, *Wireless Personal Communications*, Vol 73 (3), 967-991, 2013. DOI: 10.1007/s11277-013-1226-5
26. M. Mohammadpoor, **RSA Raja Abdullah**, A. F Abas, A. Ismail, A Circular Synthetic Aperture Radar For On-The-Ground Object Detection, *Progress In Electromagnetics Research*, Vol. 122, 269-292, 2012
27. Farzan Khatib, Rozi Mahmud, M. Iqbal Saripan, Syamsiah Mashohor, **Raja Syamsul Azmir Raja Abdullah**, Enhancing Breast Ultrasound Images : A Phantom Study, *Biophysical Journal*, 102(3) pp. 186a, 2012
28. **RSA Raja Abdullah**, O. N. Samijayani, S. Adabi, A. Ismail, M. I. Saripan and S. A. Alshehri, Breast tumor detection using microwave ultra wideband (UWB) forward scattering radar system,

International Journal of Physical Sciences, Vol. 7(46), pp. 6062-6074, 2012

29. A. R. H. Alhawari , A. Ismail, M. A. Mahdi and **R. S. A. R. Abdullah**, 'Antipodal Vivaldi Antenna Performance Booster Exploiting Snug-In Negative Index Metamaterial', Progress In Electromagnetics Research C, Vol. 27, pp. 265–279, 2012
30. Mohd Hafrizal Azmi, Fakhru Zaman Rokhani, **Raja Syamsul Azmir Raja Abdullah** and M. Iqbal Saripan, Improving the Quality of Pigskin Leather Texture Images using Enhanced Image Processing, Scientific Research and Essays, Vol.7(12), pp.1304–1311, 2012

Conference Proceedings (30 recent Conference Proceedings)

1. **R S A Raja Abdullah**; Asem A Salah; N H Abdul Aziz; N E Abdul Rasid, Vehicle recognition analysis in LTE based forward scattering radar, 2016 IEEE Radar Conference (RadarConf), Year: 2016, Pages: 1 - 5, DOI: 10.1109/RADAR.2016.7485299
2. Salman, K.N., Ismail, A., **Raja Abdullah, R.S.A.**, Alhawari, A.R.H., Low cost coplanar UHF RFID tag antenna using U-shaped feeder for metallic applications, 2016 IEEE International Conference on RFID Technology and Applications, RFID-TA 2016 7750758, pp. 25-28
3. Sama Fouad Majeed; Alyani Ismail; Aduwati Sali; **Raja Syamsul Azmir Raja Abdullah**, High performances stack microstrip antenna for under water communications at 2.4 GHz, IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE), 2016, Pages: 5 - 10, DOI: 10.1109/APACE.2016.7916473
4. Wang, H., Zhou, Z., **Abdullah, R.S.A.R.**, Song, Q., Shariff, K.K.M., Three-component Decomposition based on Stokes Vector for Compact Polarimetric SAR under $\pi/4$ mode, Proceedings of the 2015 IEEE 5th Asia-Pacific Conference on Synthetic Aperture Radar, APSAR 2015, pp. 38-42, Singapore
5. **R S A Raja Abdullah**; Asem A. Salah; A. Ismail; F. Hashim; N. H. Abdul Aziz; N. E. Abdul Rashid, Ground moving target detection using LTE-based passive radar, 2015 International Conference on Radar, Antenna, Microwave, Electronics, and Telecommunications (ICRAMET), Year: 2015, Pages: 70 - 75, DOI: 10.1109/ICRAMET.2015.7380777
6. **R. S. A Raja Abdullah**; A Mohd Ali; N. E. A. Rashid, Stationary object detection in forward scattering radar, IET International Radar Conference 2015, Year: 2015
7. Mohammadpoor, M., **Abdullah, R.R.**, Ismail, A., Abas, A.F., A ground based circular synthetic aperture radar, Proceedings International Radar Symposium, pp. 521-526, Germany
8. Dawood Al-Dabbagh, M., **Abdullah, R.S.A.R.**, Dawoud Al-Dabbagh, R., Hashim, F., Differential Evolution algorithm for linear frequency modulation radar signal denoising, RFM 2013 - 2013 IEEE International RF and Microwave Conference, Proceedings, pp. 234-237
9. Salah, A.A., **Abdullah, R.S.A.R.**, Ismail, A., Roslee, M.B., Rashid, N.E.A., Feasibility study of LTE signal as a new illuminators of opportunity for passive radar applications, IEEE International RF and Microwave Conference, Proceedings, pp. 258-262
10. A. R. H. Alhawari; A. Ismail; A. S. A. Jalal; **R. S. A. Raja Abdullah**; M. F. A. Rasid, U-shaped inductively coupled feed RFID tag antenna for gain enhancement, RFID-Technologies and Applications (RFID-TA), 2013 IEEE International Conference on, Year: 2013, Pages: 1 - 4, DOI: 10.1109/RFID-TA.2013.6694498
11. Mehdizadeh, A.; **Raja Abdullah, R.S.A.**; Hashim, F., "Secure group communication scheme in wireless IPv6 networks: An experimental test-bed", Communications and Information Technologies (ISCIT), 2012 International Symposium on, 2012, Pages: 724 – 729, DOI: 10.1109/ISCIT.2012.6380997
12. Khatib, F.; Mahmud, Rozi; Mashohor, S.; Saripan, M.I.; **Abdullah, R.S.A.R.**, "Automatic Tumor Detection in Ultrasound Breast Images: A Phantom Study," Computational Intelligence, Communication Systems and Networks (CICSyN), 2012 Fourth International Conference on, 2012, 427 – 431, DOI: 10.1109/CICSyN.2012.83
13. Mohammadpoor, M.; **Raja Abdullah, R.S.A.**; Ismail, A.; Abas, A. A Linear Frequency

- Modulated bistatic radar for on-the-ground object detection, CIE International Radar Conference, China, 2011, 63 - 66, DOI: 10.1109/CIE-Radar.2011.6159476
14. Alshehri, S.; Jantan, A.; **Raja Abdullah, R.S.A.**; Mahmud, Rozi; Khatun, S.;Awang, Z.." A UWB imaging system to detect early breast cancer in heterogeneous breast phantom," Electrical, Control and Computer Engineering (INECCE), 2011 International Conference on, 2011, 238 – 242, DOI: 10.1109/INECCE.2011.5953883
 15. M. Mohammadpoor, **RSA Raja Abdullah**, A. F Abas, A. Ismail ,A Multistatic Circular Synthetic Aperture Radar for small Object Detection, Radar Conference (RADAR), USA 2011, 262 - 266, DOI: 10.1109/RADAR.2011.5960540
 16. Arvin, F.; Majid, H.A.; Hashim, S.J.; **Abdullah, R.S.A.R.**; Ali, A.M.; Rasid, M.F.A.; Sali, A.; Ismail, A.; Hashim, F.,"Effects of emission from different UWB short-range communication devices," Communications (APCC), 2011 17th Asia-Pacific Conference on, 2011, 875 – 879, DOI: 10.1109/APCC.2011.6152932
 17. A. R. H. Alhawari; A. Ismail; M. A. Mahdi; R. S. A. R. Abdullah, Tunable dual-band metamaterial using open stub-loaded stepped-impedance resonator, The 17th Asia Pacific Conference on Communications, Pages: 496 - 500, DOI: 10.1109/APCC.2011.6152860, 2011
 18. Ahmad Mohammadi; Alyani Ismail; Mohd Adzir Mahdi; Raja Syamsul Azmir Raja Abdullah; Maryam Mohd Isa; Bahman Azarbad, Carbon nanotube — Poly pyrrol based microwave resonant circuit for napropamide detection, The 17th Asia Pacific Conference on Communications, Pages: 890 - 893, DOI: 10.1109/APCC.2011.6152935, 2011
 19. Farhad Mesrinejad; Fazirulhisyam Hashim; N. K. Noordin; M. F. A. Rasid; R. S. A. Raja Abdullah,The Effect Of Fragmentation And Header Compression On IP-Based Sensor Networks (6LoWPAN), The 17th Asia Pacific Conference on Communications, Year: 2011, Pages: 845 - 849, DOI: 10.1109/APCC.2011.6152926
 20. Mardeni Roslee, **RSA Raja Abdullah**, Helmi Zulhaidi Mohd Shafri, Road Pavement Density Measurement by Using Non-Destructive Ground Penetrating Radar System, Fifth International Conference on Construction in the 21st Century, Turkey, 2009
 21. A Munawar, S Adabi, Al Ismail, MI Saripan, R Mahmood, WNL Wan Mahadi, **RSA Raja Abdullah**, Breast Cancer Detection Using Forward Scattering Radar Technique, International RF and Microwave Conference, Malaysia, **2008**.
 22. Mardeni R., **RSA Raja Abdullah**, Helmi Zulhaidi Mohd Shafri, Field Test Validation of Optimized Ground Penetrating Radar (GPR) Mixture Model at Frequency Range 1.7 GHz to 2.6 GHz, International RF and Microwave Conference, Malaysia, 2008.
 23. Chee Kyun Ng, Kong Seng Wee, Nor Kamariah Noordin, M. Iqbal Saripan and **RSA Raja Abdullah**, Theft Prevention using Wireless Security System (WSS), International RF and Microwave Conference, Malaysia, 2008.
 24. N.E.A. Rashid, M. Antoniou, P. Jancovic, V. Sizov, **R. Abdullah**, M. Cherniakov, Automatic Target Classification in a Low Frequency FSR Network, European Microwave Week, European radar Conference, Amsterdam, 2008
 25. Mohamed K.H, M Cherniakov, MF A Rasid, **RSA Raja Abdullah**, Automatic Target Detection using Wavelet Technique in Forward Scattering Radar, European Microwave Week, European Radar Conference, Amsterdam, 2008
 26. M.Antonio, V.Sizov, Chen Hu, P.Jancovic, **R. Abdullah**, NEA rashid, M Cherniakov, The Concept of a Forward scattering Micro-Sensors radar Network for Situational Awareness, International RADAR Conference, Australia, 2008
 27. Iman Avazpour, M. Iqbal Saripan, Abdul Jalil Nordin, **R. S. A. Raja Abdullah**, Segmenting Cancerous Lesions In Computed Tomography Images Using Positron Emission Tomography Intensity Markers ,Symposium on Engineering and Technology , Labuan, Malaysia, 2008
 28. **RSA Raja Abdullah**, MF A.Rasid, A Ismail, Mutaz Sadiq and Mohamed Khalafalla Speed Estimation And Target Detection In Forward Scattering Radar, Global Knowledge Forum, Saudi

Arabia, 2008

29. Leila Borooshak, Chee Kyun Ng and Nor Kamariah Noordin, **Raja S. A. Raja Abdullah**, Adaptive Channel Allocation To Increase Capacity Base On Rate Proportional Constraint In Ofdma System, 3rd International Conference on Postgraduate Education (ICPE 2008), Malaysia, 2008
30. Maryam Vahabi, MFA Rasid, M H Fotouhi, **RSA R Abdullah**, Adaptive MAC Protocol for Wireless Sensor Networks in Periodic Data Collection Applications, International Symposium on Information Technology, Malaysia, 2008

Chapter in Books (If any)

1. M.H.Fotouhi Ghazvini, M. Vahabi, M.F.A Rasid, **R.S.A Raja Abdullah**, Improvement of MAC Performance for Wireless Sensor Networks, Advances in Computer Science and Engineering, Springer Berlin Heidelberg, Vol. 6, pp.147-152, 2008. ISBN 978-3-540-89984-6
2. Abbas Mehdizadeh, S. Khatun, Borhanuddin .M. Ali, **R.S.A. Raja Abdullah**, G. Kurup, Route Optimization Security In Mobile Ipv6 Wireless Networks, Advances in Computer Science and Engineering, Springer Berlin Heidelberg, Vol.6, pp. 153-159, November 2008. ISBN 978-3-540-89984-6
3. Mohd Hafrizal Azmi, M. Iqbal Saripan and **Raja Syamsul Azmir Raja Abdullah**, Illumination Compensation for Document Images Using Local-Global Block Analysis, Lecture Notes Computer Series, Vol 5857, pp646-646 2009.

Research Grants

PRINCIPLE INVESTIGATOR

No	Project Title	Amount (RM)	Duration	Source of Fund
1.	Developing Aid Device for Blind Human Echolocation	14,900	2016 – 2018	UPM - Geran Putra
2.	The Study Of Biological Signal From A Blind Person For Radar Application	81,200	2015 – 2017	UPM - Geran Putra
3.	Multistatic Synthetic Aperture Radar for Airport Runway Safety	301,000	2012 – 2013	Ministry of Science and Technology
4.	Netted Passive Radar For Low Altitude Flying Target Detection And Classification	131,000	2011 – 2013	Ministry of Higher Education
5.	High Doppler Resolution by Multistatic Shadow Synthetic Aperture Radar	300,000	2010 – 2012	UPM (RUGS)
6.	Emissions From Short Range Devices to Radio Communications	236,000	2009 – 2010	Malaysian Communication and Multimedia Commissions
7.	UWB Radar for Human Internal Organ Monitoring System	80,000	2007 – 2009	Ministry of Higher Education
8.	Security Enhancement of Mobile IPv6 Route Optimization	174,998	2006 – 2009	Ministry of Science and Technology
9.	Forward Scattering Radar for Biodiversity Conservation Monitoring System	85,996	2006 – 2008	Ministry of Science and Technology

10. Forward Scattering Multi Frequency Sensor for Ground Target Classification 9,000 2006 – 2007 UPM (PLB)

CO-INVESTIGATOR

No	Project Title	Amount (RM)	Duration	Source of Fund
1.	Ubiquitous Pond Sensing for Proactive and Precision Aquaculture Farming	212,300	2006 – 2009	Ministry of Science and Technology
2.	Low Loss Micromachined Microwave Transmission Line and Filters for RF MEMS Application	209,000	2006 – 2009	Ministry of Science and Technology
3.	Vertical Fast Handoff Technique in MIPv6-Enabled Heterogeneous Networks	186,000	2007 – 2009	Ministry of Science and Technology
4.	Development of a Non-destructive Ground Penetrating Radar (GPR) Device for Road Pavement Density Measurement	165,000	2007 – 2009	Ministry of Science and Technology
5.	Emerging Wireless Technologies – issues of reliable communications above 25GHz in the Topics	930,000	2007 – 2009	Malaysian Communication and Multimedia Commissions
6.	Novel Real-time Range Finder Algorithm and System for High Accuracy Long Range Measurement	100,000	2007 – 2009	Ministry of Higher Education
7.	The Development And Implementation Of An Intelligent Tracking and Monitoring system using Embedded WSN with RFID For Industrial Automation	Undisclosed	2012 – 2014	Ministry of Science and Technology
8.	Development of Head Monitoring System Using Array Transceiver for Microwave Imaging Application	Undisclosed	2013 – 2015	Ministry of Science and Technology
9.	Setting up of VLBI stations in Malaysia	944,000	2013 – 2015	University Malaya Research Grant
10.	Design of High Sensitive Terahertz Metamaterial Biosensor for Biomolecule Detection	49,000	2014 – 2016	UPM - Geran Putra
11.	Private Partner Research Driven - Soft ice-cream	31,000	2016 - 2017	Ministry of Higher Education
12.	Applicator chamber design - study on energy intensity on high power microwave heating for biomass	25,000	2015 – 2016	Ministry of Higher Education:
13.	An Adaptive Widely Distributed MIMO radar in Unmanned Surface Vehicle (USV) networks for Maritime Security	242,500	2016 – 2018	Collaborative Research in Engineering, Science & Technology (CREST)

Awards/Recognition (Current)

Num	Name of awards	Award Authority	Year
1.	Expert Panel for Sensor Networks	Appointed by Ministry of Multimedia and Communications Malaysia	2017
2.	Excellent Consultant Award	Universiti Putra Malaysia	2013
3.	Excellent Service Award	Universiti Putra Malaysia	2006,2007,2008, 2009, 2010, 2011,2016
4.	Excellent Consultant Award	Universiti Putra Malaysia	2008,2009,2010, 2011, 2015,2016
5.	Excellent Service Award	Universiti Putra Malaysia	2016
6.	Finalist	Teaching and Learning Innovation Best Practice	2009
7.	Gold medal	Invention, Research and Innovation Exhibition: GPR Road Pavement System	2009
8.	Best of the Best Award	Malaysian Technology Expo: Secured Route Optimization in Mobile IPv6 Networks	2009
9.	Gold medal	Invention, Research and Innovation Exhibition: An Intelligent Route Discovery Framework for Load-Balancing in Wireless Networks	2008
10.	Bronze medal	National Research and Innovation Competition (NRIC): Tsunami Detection Using Radar	2008
11.	Gold medal	Invention, Research and Innovation Exhibition: Enhanced Micro-Mobility Solution in Multicast-Based Mobile IPv6 with Enhanced Security	2007
12.	Bronze medal	Invention, Research and Innovation Exhibition: Secured Route Optimization in Mobile IPv6 Networks	2007
13.	Bronze medal	Invention, Research and Innovation Exhibition: Laptop Security Using Radio Frequency Identifications (RFID),	2006

Professional Services/Consultation

No	Title	Authority	Amount (RM)
1.	Analysis of Telecommunication Exchange to Data Centres	Transafe ICT Sdn Bhd	21,000
2.	Biomass Microwave Carboniser:	Ralit Enterprise	18,000
3.	Implementation of WSN- based Slope Monitoring Application:	Ministry of Communication and Multimedia	2, 001,400
4.	Implementation of WSN- based Structure and Infrastructure Monitoring Application	Ministry of Communication and Multimedia	4,510,000

5.	Development of WSN- Based System for Precision Agriculture:	Ministry of Communication and Multimedia	3,636,000
6.	Awareness on WSN Technology & Applications	Ministry of Communication and Multimedia	300,000
7.	Technical Product New Formulation	LT Sdn Bhd	40,000
8.	Wimax Mesh Protocol Design:	MIMOS Bhd	115,200
9.	Network Automatic Meter	Significant Technology Sdn Bhd	5,000
10.	Study on the Readiness for Application of Sensor Technology	Ministry of Energy, Water and Communication	1, 375,600
11.	WSN development for Agriculture and Industry Application	Ministry of Energy, Water and Communication	1, 160,000
12.	NKEA E&E – Completion of a Technology POC to enable Commercialization of WSN	Economic Planning Unit, Malaysia	3, 470,000
13.	Establishment of Standard and Guidelines for WSN Implementation in Malaysia	Ministry of Information	460,400
14.	Internet of Things	Ministry of Information	340,000

Student Supervision

PhD (Main Supervisor)

No.	Name	Title	Status
1.	Mardeni Bin Roslee	Ground Penetrating Radar For Road Pavement Density	Graduated
2.	Ahmad Sabri Mousa Saqer	Efficient Signaling Schedule For Centralized And Distributed Scheduling Algorithms For Wimax	Graduated
3.	Mojtaba Mohammadpoor	Circular Synthetic Aperture Radar Systems For On-The-Ground Object Detection	Graduated
4.	Abbas Mehdizadeh	Multicast-Unicast Key Management And Data Delivery Method In Wireless Ipv6 Networks	Graduated
5.	Asem Ahmad Mohamad Salah	LTE-Based Passive Radar For Ground Target Detection And Tracking	Graduated
6.	Nor Hafizah Abdul Aziz	Passive Forward Scattering Radar	Ongoing
7.	Nur Luqman Salleh	Human Echolocation	Ongoing
8.	Ali Al Naab	Micro Doppler Analysis in Forward Scattering Radar	Ongoing
9.	Surajo Alhaji Musa	Satellite Based Passive Radar	Ongoing

MS with thesis (Main Supervisor)

No.	Name	Title	Status
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No.	Name	Title	Status
1.	Yoharaaj a/l Doraisingam	A study of Bandwidth Enhancement Technique in Microstrip Antenna for Wireless Applications	Graduated
2.	Mutaz Salah Mohamed Sadig	Speed Estimation In Forward Scattering Radar	Graduated
3.	Mohamed Khalafalla Hassan Mohamed	Ground Target Detection In Forward Scattering Radar Using Hilbert Transform And Wavelet Technique	Graduated
4.	Nor Khairiah Bt Ibrahim	Vehicle Classification Using Neural Network In Forward Scattering Radar	Graduated
5.	Saba Adabi	Analysis Of Ultrawideband Forward Scattering Radar Cross Section For Breast Cancer Detection	Graduated
6.	Asem Ahmad Mohamad Salah	Resource Allocation Algorithm For OFDMA Relay Networks With Fairness And QOS Guarantee	Graduated
7.	Aris Munawar	Foreign Object Debris Detection Based On Continuous Wave Forward Scattering Radar Doppler Effect	Graduated
8.	Octarina Nur Samijayini	Simulation Of Microwave Bistatic Radar For Breast Cancer Detection	Graduated
9.	Mohanad Dawood Hasan Aldabbagh	Optimized Differential Evolution Algorithm For Linear Frequency Modulation Radar Signal Denoising	Graduated
10.	Norazah Abdullah	Adaptive Modulation and Coding for 38GHz Rain Fade Counter Measure	Ongoing
11.	Nur Salimah Baharun	Early Stage Breast Cancer Detection using FSR	Ongoing
12.	Ahmad Najib Habeeb	Inductive Coupler for Powerline Communication	Ongoing
13.	Azizi Mohd Ali	Forward Scattering Radar	Ongoing