

CURRICULUM VITAE



Associate Professor Dr. Samsuzana Abd Aziz

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Education

1. PhD. Agricultural Engineering, 2008, Iowa State University. USA
2. M.S. Agricultural Engineering, 2004, Iowa State University. USA
3. B. S. Electrical Engineering, 2002, Universiti Teknologi Malaysia.

Areas of Interest

1. Agricultural Informatics and Instrumentation, Precision Agriculture

Professional Qualification/ Membership/ Affiliation

1. Member of American Society of Agricultural and Biological Engineers (ASABE)
2. Member of Malaysian Society of Agricultural Engineers (MSAE)- Vice President (2011-2013), Executive Committee (2013-2014)
3. Member of Institute of Electrical and Electronics Engineers (IEEE) Society- Executive Committee for IEEE-YP (2010-2014)
4. Member of International Society of Horticulture Sciences (ISHS)
5. Graduate Member of The Institution of Engineers Malaysia (IEM)

Appointments

Position	Duration
1. Head, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	January, 2016 to May 2016
2. Head, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	January, 2013 to January 2016
3. Acting Head, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	October 2012 to December 2012
4. Research Coordinator, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	August 2009 to January 2013
5. Senior Lecturer, Department of Biological and Agricultural Engineering, Faculty of Engineering UPM	December 2008 to date
6. Teaching Assistant, Department of Agricultural and Biological Engineering, Iowa State University, USA	August 2007– December 2007
7. Research Assistant, Department of Agricultural and Biological Engineering, Iowa State University, USA	August 2005– November 2008

Teaching Courses					
Code		Credit Hour	No of Student	Teaching Assessment (out of 5)	Semester/ Academic year
1	ECC3002 Engineering Mathematics II	3	45	4.54	2/2008/2009
2	EAB4604 Variable Rate Technology	3	5	4.63	1/2009/2010
3	EAB3602 Instrumentation for Biological Systems	3	45	4.25	1/2009/2010
4	EAB3606 Automation in Agriculture	3	44	4.69	2/2009/2010
5	EAB4604 Variable Rate Technology	3	11	4.80	1/2010/2011
6	EAB3602 Instrumentation for Biological Systems	3	44	4.64	1/2010/2011
7	EAB3606 Automation in Agriculture	3	56	4.35	2/2010/2011
8	EAB3602 Instrumentation for Biological Systems	3	6	4.53	2/2010/2011
9	EAB3602 Instrumentation for Biological Systems	3	24	4.71	1/2011/2012
10	EAB4604 Variable Rate Technology	3	6	5.00	1/2011/2012
11	EAB3602 Instrumentation for Biological Systems	3	73	4.26	2/2011/2012
12	EAB3602 Instrumentation for Biological Systems	3	43	4.48	1/2012/2013
13	EAB3602 Instrumentation for Biological Systems	3	64	4.29	2/2012/2013
14	EAB 4408 Expert System	3	7	4.75	1/2013/2014
15	EAB3602 Instrumentation for Biological Systems	3	52	4.34	2/2013/2014
16	EAB3602 Instrumentation for Biological Systems	3	49	4.63	2/2014/2015
17	EAB3602 Instrumentation for Biological Systems	3	13	4.44	1/2015/2016
18	EAB3602 Instrumentation for Biological Systems	3	50	4.28	2/2015/2016
19	EAB3606 Automation in Agriculture	3	50	4.44	1/2016/2017
20	EAB3602 Instrumentation for Biological Systems	3	20	4.24	2/2016/2017
21	EAB3602 Instrumentation for Biological Systems	3	42	-	2/2017/2018

Publications

Journals (CIJ)

1. Y. H. Abdullah, T. S. Lee, **S. Abd Aziz**. Evaluation of Single Reservoir Performance for Flood Risk Reduction Using a Developed Simulation Model: Case Study of Makhoul Reservoir. *Pertanika JST* 26(2):571-584, 2018 (Scopus)
2. A. Y. Khaled, **S. Abd Aziz**, F. Z. Rokhani. N. U. Ibrahim. Interdigitated Electrode for Degradation Assessment of Palm Olein during Batch Deep Fat Frying. *Transaction of ASABE: 60(6)*, pp 15-24, 2018 (Q2)
3. A. Y. Khaled, **S. Abd Aziz**, S. K. Bejo, N. M. Nawawi, I. A. Seman. Spectral features selection and classification of oil palm leaves infected by Basal stem rot (BSR) disease using dielectric spectroscopy. *Computer and Electronics in Agriculture*: 144, pp 297-309, 2018. DOI: 10.1016/j.compag.2017.11.012 (Q1)
4. A. Y. Khaled, **S. Abd Aziz**, S. K. Bejo, N. M. Nawawi, I. A. Seman & D. I. Onwude. Early detection of diseases in plant tissue using spectroscopy – applications and limitations. *Applied Spectroscopy Reviews: 53(1)* pp 36-64, 2018. DOI:10.1080/05704928.2017.1352510 (Q1)
5. N. J. Lin, **S. Abd Aziz**, Huang, A. Wayayok, R. Kamal. Generation of Stochastic Precipitation Model for Tropical Climate. *Theoretical and Applied Climatology*: 1-21, 2017 (Q2)
6. N. J. Lin, **S. Abd Aziz**, Huang, A. Wayayok, R. Kamal. Stochastic modelling of seasonal and yearly rainfalls with low-frequency variability. *Stochastic Environmental Research and Risk Assessment*. 31(9) pp 2215-2233, 2017(Q1)
7. N. U. A. Ibrahim, **S. Abd Aziz**, N. Mat Nawawi. Novel Impedance Measurement Technique for Soluble Solid Content Determination of Banana. *Pertanika JST*: 25(2) 519-526, 2017. (Scopus)
8. N. U. A. Ibrahim, **S. Abd Aziz**, M. Zude, N. Hashim. Fluorescence spectroscopy analysis of palm olein in batch deep-fat frying. *International Food Research Journal*. Vol: 23: pp S45:S50, 2016. (Scopus)
9. Y. H. Abdullah, T. S. Lee, **S. Abd Aziz**. Enhanced genetic algorithm optimization model for a single reservoir operation based on hydropower generation: case study of Mosul reservoir, northern Iraq. *SpringerPlus*: 5(1): 1-21, 2016. (Q2)

10. Putri, R.E., Yahya, A., Adam, N.M., **Abd Aziz, S.** Performance evaluation of yield monitoring system for rice combine harvester in Selangor, Malaysia. *International Journal on Advanced Science, Engineering and Information Technology*: 6 (1), pp. 35-39, 2016. (Scopus)
11. M.Yamin, W. I. Wan Ismail, M. S. Mohd Kassim, **S. Abd Aziz**, R. Shamshiri. VRT Liquid Fertilizer Applicator for Soil Nutrient Management. *Jurnal Teknologi* Special Issue on Solution for Sustainable Water and Environmental Management, 78(1-2): 73-78, 2016. (Scopus)
12. R. E. Putri, A. Yahya, N. M. Adam, **S. Abd Aziz**. Variability of Rice Yield With Respect To Crop Health. *Jurnal Teknologi* Special Issue on Solution for Sustainable Water and Environmental Management: 78(1-2): 79-85, 2016. (Scopus)
13. J. L. Ng, **S. Abd Aziz**, Y. F. Huang, A. Wayayok, M. K. Rowshon. Homogeneity Analysis of Rainfall in Kelantan, Malaysia. *Jurnal Teknologi* Special Issue on Solution for Sustainable Water and Environmental Management: 76(1-2): 1-6, 2015. (Scopus)
14. Y. H. Abdullah, K. A. AlMohseen, T. S. Lee, **S. Abd Aziz**. Modelling monthly operation policy for the Mosul dam, northern Iraq. *Int. J. of Hydrology Science and Technology*: 5(2): 179- 193, 2015. (Scopus)
15. R. E. Putri, A. Yahya, N. M. Adam, **S. Abd Aziz**. Correlation of Moisture Content to Selected Mechanical Properties of Rice Grain Sample. *International Journal on Advanced Science, Engineering and Information Technology*: 5(5): 264-268, 2015. (Scopus)
16. K. Hamdan, **S. Abd Aziz**, F. Z. Rokhani, A. Yahya and B. L. Steward. Detection of Sludge Contamination in Crude Palm Oil Using Dielectric Spectroscopy. *Transactions of ASABE*: 58(2): 227-232, 2015. (IF=0.974). Q3
17. A. Y. Khaled, **S. Abd Aziz**, F. Z. Rokhani. Capacitive Sensor Probe to Assess Frying Oil Quality. *Information Processing in Agriculture*: 2(2): 142-148, 2015. (DOAJ/ Google Scholar).
18. D. Jamaluddin, **S. Abd Aziz**, D. Ahmad, H. ZE. Jaafar. Impedance Analysis of Physiological Parameters of Labisia pumila Plant Water Status. *Information Processing in Agriculture*: 2(3-4): 161-168, 2015. (DOAJ/ Google Scholar).
19. M. M. Maina, M. S. M. Amin, M. K. Rowshon, W. Aimrun, **S. Abd Aziz** and M. Yazid. The Water Balance Model and Shallow Water Table Contribution in Irrigated Lowland Rice in Tanjung Karang Irrigation Scheme in Malaysia. *Philipp Agric Scientist*. 97(3): 68-72, 2014. (Agricultural Engineering Abstract)
20. A. Y. Khaled, **S. Abd Aziz**, F. Z. Rokhani. Development and Evaluation of an Impedance Spectroscopy Sensor to Assess Cooking Oil Quality. *International Journal of Environmental Science and Development* 5(3):299-302, 2014. (DOAJ/ Google Scholar).
21. D. Jamaluddin, **S. Abd Aziz**, N. A. Ibrahim. Dielectric Based Sensing for Banana Ripeness Assessment. *International Journal of Environmental Science and Development* 5(3):286-293, 2014. (DOAJ/ Google Scholar).
22. M. M. Maina, M. S. M. Amin, M. K. Rowshon, W. Aimrun, **S. Abd Aziz** and M. Yazid. Assessment of Crop Nutrients Content of Irrigation Water in Tanjung karang Rice Irrigation Scheme. *Journal of Food, Agriculture, and Environment* 12(2): 26-30, 2014. (SJR)
23. T. A. Ishola, A. Yahya, A. R. M. Shariff, **S. Abd Aziz**, A novel variable rate pneumatic fertilizer applicator. *Instrumentation Science and technology*: 42(4): 369-384, 2014. (Scopus)
24. C. H. Fizura, **S. Abd Aziz** and S. Hafizan. Effect of Diesel Contamination on Capacitance Values of Crude Palm Oil. *Journal of Engineering Science and Technology* 3(9):286-292, 2014. (Scopus)
25. R. E. Putri, A. Yahya, N. M. Adam, **S. Abd Aziz** and T. A. Ishola. Calibration and Accuracy Determination of a Microwave Type Sensor for Measuring Grain Flow. *Journal of Advanced Materials Research*, 931-932: 1592-1596, 2014. (Scopus).
26. M. M. Maina, M. S. M. Amin, M. K. Rowshon, M. Yazid, W. Aimrun, **S. Abd Aziz**. Effects of Crop Evapotranspiration Estimation Techniques and Weather Parameters on Rice Crop Water Requirement. *Australian Journal of Crop Science*. 8(4): 495-501, 2014. (Scopus)
27. T. A. Ishola, A. Yahya, A. R. M. Shariff, **S. Abd Aziz**. An RFID-Based Variable Rate Technology Fertilizer Applicator for Tree Crops. *Journal of Applied Sciences* 13(3):409-415, 2013. (Scopus)
28. T. A. Ishola, A. Yahya, A. R. M. Shariff, **S. Abd Aziz**. and C. S. Chuan. Effects of Operational Variables on Rotary Valve Metering System for a Variable Rate Technology Fertilizer Applicator for Oil Palm. *Journal of Applied Sciences* 13(3):479-484, 2013. (Scopus)

29. **S. Abd Aziz**, B. L. Steward A. Kaleita and M. Karkee. Assessing the Effect of DEM Uncertainty on Erosion Rate Estimation in Agricultural Field. *Transaction of ASABE Journal* 55(3): 785-798, 2012. (IF =1.03) Q3
30. **S. Abd Aziz**, B. L. Steward and M. Karkee. Using Spatial Uncertainty of Prior Measurements to Design Adaptive Sampling of Elevation Data. *Transaction of ASABE Journal* 53(2): 349-357, 2010 (IF =1.03, Received ASABE Honorable Mention Paper Award 2011). Q3
31. **S. Abd Aziz**, B. L. Steward, M. Karkee and L. Tang. Utilizing Repeated GPS Surveys from Field Operations for Development of Agricultural Field DEMs. *Transaction of ASABE Journal* 52(4):1057-1067, 2009. (Q3)
32. M. Karkee, B. L. Steward, L. Tang and **S. Abd Aziz**. Quantifying sub-pixel signature of paddy rice field using artificial neural network. *Computers and Electronics in Agriculture* 65: 65-76, 2009 (IF =1.85) Q1
33. M. Karkee, B. L. Steward and **S. Abd Aziz**. Improving quality of public domain digital elevation models through data fusion. *Biosystems Engineering* 101:293-305, 2008. (IF =1.35) Q2

Journals (Non-CIJ)

34. H. Imam, D. Ahmad, **S. Abd Aziz**. Anthropometric Parameters of Tractor Operators in Kano State, Nigeria. *Journal of Agricultural Engineering and Technology*: 23(1) Accepted 2016.
35. T. A. Ishola, A. Yahya; A. R. M. Shariff and **S. Abd Aziz**. A new concept of variable rate technology fertilizer applicator for oil palm. *International Journal of Agronomy and Plant Production* 2(5):181-186, 2011.
36. M. H. Ghassemi, A. Yahya and **S. Abd Aziz**. A track type oil palm fresh fruit bunch in-field transportation for low bearing capacity peat terrain. *Journal of Agricultural Machinery Science* 7(1):7-12, 2011.
37. S. E. Roodi, A. Yahya and **S. Abd Aziz**. A track type oil palm fresh fruit bunch in-field transportation for low bearing capacity peat terrain. *Journal of Agricultural Machinery Science* 7(2):185-190, 2011.
38. K. Hamdan, **S. Abd Aziz**, F. Z. Rokhani. The Effect of Temperature on Dielectric Properties of Crude Palm Oil at Radio Frequencies. *International Journal of Engineering and Technologies* 8(1):21-24, 2011.

Patent/Commercialization

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|--------------------------------------------------------------------------|------|---------------|---------|
| 1. A Device For Identifying Source Of Fat, A System And A Method Thereof | 2016 | PI 2015702503 | Pending |
|--------------------------------------------------------------------------|------|---------------|---------|

Books/ Chapter in book

1. Masyitah Amat Sairin , **Samsuzana Abd Aziz**, Nina Naquiah Ahmad Nizar, Nurul Adilah Abdul Latiff, Alyani Ismail, Dzulkifly Mat Hashim, Fakhru Zaman Rokhani. Lard Detection in Edible Oil Using Dielectric Spectroscopy. *Sensors for Everyday Life: Smart Sensors, Measurement and Instrumentation*, Springer International Publishing, 2017 Vol 23: 245-271
2. **S. Abd Aziz**. Digital Elevation Models (DEM) for Agricultural Application. Scholar's Press. 2014. Saarbrücken, Germany. ISBN:978-3-639-71089-2

Reports/ Articles

1. MyTreeVolution, a programme which plants 550 trees of Karas species. UPM News, March 2018.
2. International Thought For Food Challenge: 5 Agricultural and Biosystems Engineering students joined the international Thought for Food Challenge, by Khairulazman. UPM News, April 2017.
3. **S. Abd Aziz**. III International Conference on Agricultural and Food Engineering. *Chronica Horticulturae*, December 2016 56(4): In Press.
4. **S. Abd Aziz**. Engineering Modern Agriculture. *Career, Sunday Star* March 27, 2016.
5. **S. Abd Aziz**. Agricultural and Biosystems Engineering Discipline in Malaysia. *Jurutera, the Monthly Bulletin of The Institution of Engineers Malaysia*, 2014(12):14-15.
6. Farming by the Numbers. Precision agriculture brings computing's accuracy to the ancient art of cultivation, by Ariel Bleicher, *IEEE Spectrum*, 30 May, 2013
7. **S. Abd Aziz** and H. Che Man. Strengthening Employability Skills Program and IEM's Agricultural and Food Engineering Technical Division Membership Drive. *Jurutera, the Monthly Bulletin of The Institution of Engineers Malaysia*, 2013(1):39-40.
8. **S. Abd Aziz** and A. Yahya. Engineering a Career in Agriculture and Food. *Jurutera, the Monthly Bulletin of The Institution of Engineers Malaysia*, 2011(12): 32-33.
9. B. L. Steward, L. Tang, **S. Abd Aziz**, J. A. Bosserd, M. Karkee, and L. Knot. Using Topographic Information for Improved Vehicle Navigation Control. Final Report to John Deere Agricultural Management Solutions. 111 pp. July 2007.

Conference Proceedings

1. R Shamshiri, MR Mahadi, D Ahmad, SK Bejo, **S. A. Aziz**, WIW Ismail. Controller Design for an Osprey Drone to Support Precision Agriculture Research in Oil Palm Plantations, 2017 ASABE Annual International Meeting.
2. J. L. Ng, **S. Abd Aziz**, Y.F.Huang, A.Wayayok and M.K.Rowshon. Analysis of annual maximum rainfall in Kelantan, Malaysia. *Acta Horticulturae*: January 2017 (Scopus)
3. T. Grob, N. Hashim, S. KhairunnizaBejo, **S. A. Aziz** and M. Zude-Sasse. Determination of maturity stages of oil palm fresh fruit bunches using multispectral imaging method. *Acta Horticulturae*: January 2017 (Scopus)
4. D. Jamaludin, **S.Abd Aziz**, D. Ahmad and H.Z.E. Jaafar. Evaluation of total flavonoid content of *Labisiapumila* leaves based on impedance measurements. *Acta Horticulturae*: January 2017 (Scopus)
5. N.U.A.Ibrahim, **S. Abd Aziz** and N. Hashim. Oil quality monitoring during deep fat frying using Raman spectroscopy. *Acta Horticulturae*: January 2017 (Scopus)
6. F. Mohamad, M.A. Sairin, N.N.A. Nizar, **S. Abd Aziz**, D. M. Hashim, S. Misbahulmunir, F. Z. Rokhani. Investigation on interdigitated electrode design for impedance spectroscopy technique targeting lard detection application. 9th International Conference on Sensing Technology, ICST 2015; Auckland; New Zealand; 8 December 2015 Article number 7438494, Pages 739-744 (Scopus)
7. M. A. Sairin, N. N Nizar, **S. Abd Aziz**, D.M. Hashim, F. Z. Rokhani. Potential of dielectric spectroscopy measurement for lard detection. 9th International Conference on Sensing Technology, ICST 2015; Auckland; New Zealand; 8 December 2015. Article number 7438491, Pages 722-727 (Scopus)
8. L. Sivaraj, N. A. M. Yunus, M. N. Mohtar, **S. Abd Aziz**, Z. Z. Abidin, M. I. Saripan, F. Z. Rokhani, Portable biosensor for chronic malaria detection. 17th International Symposium on Quality Electronic Design, ISQED 2016; Santa Clara; United States; 15 March 2016 Article number 7479208, Pages 248-251, 25 May 2016 (Scopus)
9. D. Jamaluddin, D. Ahmad, **S. Abd Aziz**, H. ZE. Jaafar. Non-Destructive Measurement of Leaf Water Potential Using Impedance Spectroscopy. Proceeding of 7th International Conference on Sustainable Agriculture for Food, Energy and Industry in Regional and Global Context 25-27 August 2015.
10. A. Y. Khaled, **S. Abd Aziz**, F. Z. Rokhani, W. I. W. Ismail. Capacitive Sensing System for Frying Oil Assessment during Heating. Proceedings of 2015 IEEE International Conference on Circuit and System, Langkawi Malaysia 2-4 September 2015. Article number 7394081, Pages 137-141 (Scopus)
11. N. U. A. Ibrahim, S. Abd Aziz, N. Hashim, M. Zude. Analysis of Palm Oil Deterioration in Batch Deep-fat Frying Using Fluorescence Spectroscopy. Proceeding of 7th International Conference on Sustainable Agriculture for Food, Energy and Industry in Regional and Global Context 25-27 August 2015, Kuala Lumpur.
12. Y. H. Al-Aqeeli, **S. Abd Aziz**, B. Yusuf, A. Wayayok. Evaluation of Makhoul Reservoir in Reducing Flood Risk in Baghdad City. Proceedings of PAWEES-INWEPF Joint International Conference 19-21 August 2015, Kuala Lumpur.
13. M.N.A. Uda, C.M. Hasfalina, **S. Abd Aziz**, S. Faridah, I. Zamri, B. Siti Noraini, W. Nur Sabrina, U. Hashim Comparison Study of Two Different Isolation and Purification Method for Rice Tungro Bacilliform Virus (RTBV). *Agriculture and Agricultural Science Procedia*, Volume 2, 2014, Pages 107-112D.
14. D Jamaludin, **S. Abd Aziz** and. Ahmad. Application of Impedance Spectroscopy Sensing for Leaf Water Status. Proceedings of International Conference of Agricultural Engineering. 6-10 July 2014, Zurich, Switzerland.
15. A. Y. Khaled and **S. Abd Aziz**. Impedance Sensor Probe for Degradation Assessment of Cooking Oil. Proceedings of International Conference of Agricultural Engineering. 6-10 July 2014, Zurich, Switzerland.
16. D. Jamaludin, **S. Abd Aziz**, D. Ahmad, H. Jaafar. Impedance Characteristics of Labisa pumila Plant Water Stress. Proceedings of National Conference on Agricultural and Food Mechanization. 20-22 May 2014, Kota Kinabalu, Sabah.
17. M. M. Sairin, S. Mahmood, N. N. Ahmad Nizar, **S. Abd Aziz**, D. Mat Hashim and F. Z. Rokhani. Potential of Dielectric Spectroscopy Measurement for Lard Detection. Proceedings of IEEE Region 10 Technical Symposium. 14-16 April 2014, Kuala Lumpur. (Scopus)
18. F. Mohamad, S. Mahmood, N. N. Ahmad Nizar, **S. Abd Aziz**, D. Mat Hashim and F. Z. Rokhani. Investigation on Interdigitated Electrode Design for Impedance Spectroscopy Technique Targeting Lard Detection Application. Proceedings of IEEE Region 10 Technical Symposium. 14-16 April 2014, Kuala Lumpur. (Scopus)

19. M. M. Mohd, M. A. Mohd Soom, M. R. Kamal, A. Wayayok, **S. Abd Aziz** and M. Yazid. Application of Web Geospatial Decision Support System for Tanjung Karang Rice Precision Irrigation Water Management. International Conference on Agriculture, Food and Environmental Engineering, 15-16 Jan. 2014, Kuala Lumpur
20. C. H. Fizura, **S. Abd Aziz** and S. Hafizan. Relationship between Capacitance Values and Diesel Contamination Levels in Crude Palm Oil. International Conference on Agricultural and Food Engineering for Life, 26-28 Nov. 2012, Putrajaya.
21. T. A. Ishola, A. Yahya, A. R. Mohamed Shariff and **S. Abd Aziz**. Variable Rate Technology Fertilizer Applicator for Oil Palm Plantation. International Conference on Agricultural and Food Engineering for Life, 26-28 Nov. 2012, Putrajaya.
22. A. Yahya, O. Y. Ju, M. Mohd Isa and **S. Abd Aziz**. Portable Wireless Yield Monitoring System for Rice Combine. International Conference on Agricultural and Food Engineering for Life, 26-28 Nov. 2012, Putrajaya.
23. T. A. Ishola, A. Yahya, A. R. Mohamed Shariff and **S. Abd Aziz**. Hybrid Variable-Rate Fertilizer Application System for Oil Palm Plantation. 5th National Seminar on Palm Mechanization, 23-24 Oct. 2012, Selangor.
24. T. A. Ishola, A. yahya, A. R. M. Shariff, **S. Abd Aziz**. An RFID-Based Variable Rate Technology Fertilizer Applicator for Plantation Tree Crops. Proceedings of the 11th International Conference in Precision Agriculture 2012, Indiana, USA
25. S. E. Roodi, A. Yahya and **S. Abd Aziz**. Field Performance of a Single Chassis Integrated Machine System in Planting Oil Palm Seedlings. Proceedings of 11th International Congress on Mechanization and Energy in Agriculture 2011, Istanbul, Turkey.
26. K. Hamdan, **S. Abd Aziz**, T. Poh Ying, H. Chow Hui. Dielectric Spectroscopy for Crude Palm Oil (CPO) Monitoring. AKEPTs 1st Annual Young Researchers International Conference and Exhibition on 19th & 20th December 2011 at PWTC Kuala Lumpur.
27. K. Hamdan, **S. Abd Aziz**, H. Chow Hui. Custom Built Portable Sensing System for Crude Palm Oil (CPO) Contamination Detection. 3rd Regional Symposium on Engineering and Technology on 21th & 23th November 2011 at Kuching, Sarawak.
28. K. Hamdan, **S. Abd Aziz**, F. Z. Rokhani. The Effect Of Temperature On Dielectric Properties of Crude Palm Oil. Congress of Natural Resources and Green Technology, World Engineering Congress, Kuching, Sarawak, ISBN 978-983-43571-8-4, pp. 200-204, 2010.
29. **S. Abd Aziz**. Accuracy and Uncertainty Assessment of Field DEMs for Agricultural Applications. Invited Speaker, Proceeding of 6th MRSS International Remote Sensing & GIS Conference and Exhibition, PWTC, KL, pp. 35, 2010.
30. K. Hamdan, **S. Abd Aziz**, F. Z. Rokhani, A. Yahya. Dielectric Properties of Crude palm Oil Using Open-ended Coaxial Probe Technique. IEEE Gold Affinity Colloquium, UPM Serdang, 2010 (Scopus)
31. A. A. Forooshani, F.Z. Rokhani, K. Samsudin, **S. Abd Aziz**. A process variation aware system-level framework to model on-chip communication system in support of fault tolerant analysis. Proceedings of IEEE Student Conference on Research and Development, Art. no. 5443278, pp. 97-100, 2009. (Scopus)
32. **S. Abd Aziz**, B. L. Steward and M. Karkee. Targeted Sampling of Elevation Data Based on Spatial Uncertainty of Prior Measurements. *ASABE Paper* No. 084826. St. Joseph, Mich.: ASABE. 2008 (Scopus)
32. **S. Abd Aziz** and Brian L. Steward. Development of Agricultural Field DEM Using Repeated Measurements from Field Operations: Effects of Sampling Intensity and Pattern. *ASAE Paper* No. 071089. St. Joseph, Mich.: ASAE. 2007. (Scopus)
33. M. Karkee, B. L. Steward and **S. Abd Aziz**. Distributed Virtual Reality Simulation Assisted Controller Design for Off Road Vehicle and Implement Tracking. *ASAE Paper* No. 073006. St. Joseph, Mich.: ASAE. 2007. (Scopus)
34. **S. A. Aziz**, B. L. Steward, and S. J. Birrell. Dielectric spectroscopy of hydraulic fluid for contamination detection. In *Proceedings of ISFP2007: 5th International Symposium on Fluid Power Transmission and Control*, Beidaihe, China, June 6-8. 2007.
35. **S. Abd Aziz**, B. L. Steward, L. Tang, M. Karkee. Multiple GPS Measurements for Digital Elevation Model. Proceedings of Computers in Agriculture, *ASAE Paper* No: 701P0606. St. Joseph, Mich.: ASAE. 2006. (Scopus)
36. **S. Abd Aziz**, B. L. Steward, L. Tang, and M. Karkee. Multiple GPS measurements for digital elevation model. Proceedings of the 8th Int'l. Conf. on Precision Agriculture, eds. R. H. Rust and W. E. Larson, Madison WI: ASA- CSSA-SSSA. 2006.

37. **S. Abd Aziz**, B. L. Steward, S. J. Birrell, T. C. Kaspar, D. S. Shrestha. Ultrasonic Sensing for Corn Plant Canopy Characterization. *ASAE Paper* No: 04112. St. Joseph, Mich.: ASAE. 2004. (Scopus)
38. F. Z. Rokhani, Y.C. Yeow, **S.A. Aziz**, Z.M. Yusof, "Point-to-Point Protocol (PPP) Implementation using AVR micro controller", Proc. 2nd World Engineering Congress: Information and Communication Technology (ICT), Kuching, 2002.

Research Grants				
No	Title	Role (Main/Co-researcher)	Sponsor /Grant & Amount (RM)	Period (year)
1.	Development of Energy-efficient, Long-range Communication System for Environmental Monitoring using Low Power Wide Area Networks for Internet of Things.	Co-Researcher	MTFSB RM 119,000	2018-2019
2.	Impedance Spectroscopy for Basal Stem rot Disease Analysis in Oil Palm	Main	Putra IPS Grant RM20,000	2016-2018
3.	Comprehensive Crop Information for Advance Oil Palm Basal Stem Rot (BSR) Management	Main	Putra IPB Grant RM288,800	2015-2017
4.	Interdigitated Electrode (IDE) Impedance Sensing For Frying Oil Quality Assessment	Main	Putra Grant RM15,000	2014-2016
5.	Spectral Permittivity Characterization Targeting Fatty Acid Methyl Ester Composition for Lard Detection in Edible Oils	Co-Researcher	FRGS RM153,400	2014-2016
6.	Rice Yield Prediction Based on Soil Fertility And Crop Health	Co-Researcher	FRGS RM78,000	2014-2016
7.	Immunosensor Development for Tungro Disease Detection in Paddy Plantation	Co-Researcher	Putra Grant RM167500	2014-2015
8.	Dielectric spectroscopy measurement of <i>Labisia pumila</i> (Kacip Fatimah) water content and phytochemical content	Main	FRGS RM20,500	2013-2015
9.	Dielectric spectroscopy measurement of <i>Labisia pumila</i> (Kacip Fatimah) water content and phytochemical content	Main	Putra grant RM15,000	2014
10.	Development and Evaluation of a Prototype Sensor for In Situ Assessment of Cooking Oil Quality	Main	PRGS RM50,000	2012-2014
11.	Dielectric Spectroscopy characterization of Oil Content and Bunch Components in Oil Palm Bunch Analysis	Main	ScienceFund RM140,000	2012-2014
12.	Research and Academic Collaboration at Center For Precision and Automated Agricultural Systems, Washington State University, USA	Main	RU Networking Grant RM11,470	2012
13.	Uncertainty Assessment of Topographic Factor in Soil Loss Prediction	Main	FRGS RM50,000	2011-2013



14.	Dielectric sensing for Crude Palm Oil Main Contamination Detection	RUGS	2009-2011
		RM160,000	
15.	Rice Yield Prediction Model For Variable Rate Management Using Neural Network	RUGS	2009-2011
		RM193,000	

Awards/Recognition

No	Name of awards	Title	Award Authority	Award Type	Year
1.	Fellow	CEO@ Faculty Program 2.0	Ministry of Higher Education, Malaysia	National	2018
2.	Silver Medal	Frying Oil Quality Sensor	Advanced Innovation and Engineering Exhibition 2017, UMP	National	2017
3.	Service Award	Excellent Service Award	Universiti Putra Malaysia (UPM)	National	2016
4.	Teaching Award	Certificate of Excellent in Teaching	Faculty of Engineering, UPM	University	2016
5.	Silver Medal	Development of NPK Determination Procedure and Addition of 8 Data Bit Data Acquisition System to Digital Soil Test Kit	Invention, Research and Innovation Exhibition, Universiti Putra Malaysia (UPM)	National	2016
6.	3 rd Place	Pertandingan Pertanian Bandaran antara PTJ	UPM	University	2016
7.	ISHS Medal	Convener for CAFEi2016	International Society for Horticulture Science	International	2016
8.	Professional Award	Young Female Leader Professional Development Award	IEEE CASS Malaysian Chapter (WiCAS)	International	2015
9.	Bio-Innovation Award	Lard Detection Based on Impedance Spectroscopy	Malaysian Association of Research Scientist	National	2015
10.	Gold and Best Award (Agricultural, Environmental and Renewable Energy)	Banana Ripeness Detector	EYReC Recognised As Malaysia Invention & Design Society (MINDS) at International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2014



11.	Gold Medal	Cooking Oil Quality Detector	EYReC Recognised As Malaysia Invention & Design Society (MINDS) at International Engineering Invention and Innovation Exhibition (i-ENVEX)	International	2014
12.	Service Award	Certificate of Excellent Service	University Putra Malaysia (UPM)	University	2013
13.	Gold Medal	Dielectric Based Measurements of Agricultural materials	EYReC recognised as Malaysia Invention & Design Society (MINDS) at International Engineering Invention and Innovation Exhibition (i-ENVEX).	International	2013
14.	Silver Medal	Development of Cooking Oil Quality Sensor	EYReC recognised as Malaysia Invention & Design Society (MINDS) at International Engineering Invention and Innovation Exhibition (i-ENVEX).	International	2013
15.	Best Paper Award	Variable Rate Technology Fertilizer Applicator for Oil Palm Plantation	Malaysian Society of Agricultural Engineers (MSAE) at International Conference of Agricultural and Food Engineering For Life 2012	International	2012
16.	Silver Medal	Smart Sampling Design of Agricultural Field Measurements Using Spatial Analysis	Invention, Research and Innovation Exhibition, UPM Serdang, Malaysia, 2012.	National	2012
17.	Honorable Mention Paper Award	Smart Sampling Design of Agricultural Field Measurements Using Spatial Analysis	Trans. of ASABE Journal, American Society of Agricultural and Biological Engineering (ASABE)	International	2011
18.	Teaching Awards	Excellent Teaching Award	Faculty of Engineering, UPM	University	2009, 2010, 2011
19.	Service Award	Excellent Service Award	University Putra Malaysia (UPM)	University	2010, 2011
20.	Academic Awards	Graduate Student Fellowship	Harold and Katherine Guy Graduate Fellowship, ISU, USA	International	2006
21.	Academic Awards	P.E.O International Peace scholarship	International Chapter P.E.O Sisterhood, Iowa, USA	International	2005

Professional Services

Editorial Board/ Committee

1.	Committee Member	Development Agricultural Mechanization Masters' Program, Department of Biological and Agricultural Engineering, UPM	2017
2.	Editor/Convener	Acta Horticulture for International Conference on Agricultural and Food Engineering. August 2016	2016
3.	International Program Committee	AgriControl2016: The 5th IFAC Conference on Sensing, Control and Automation Technologies for Agriculture', Seattle, WA, USA from 14 - 17th August, 2016	2016
4.	Guest Editor	Pertanika Journal of Science and Technology, Special Issue for International Conference on Agricultural and Food Engineering For Life. July 2015	2015
5.	Committee member	Expert in capacity research and mechanization & automation requirements for technology research & development committees (JKPPT), Ministry of Agriculture	2015
6.	Chairperson	International Conference on Agricultural and Food Engineering (CAFEi2016) UPM	2015-2016
7.	Editorial Board	Journal of Information Processing in Agriculture (Elsevier)	2014
8.	Chairperson	International Workshop on Smart Farming XI: Delivering Appropriate Precision Technologies and Management Practices in Agriculture	2014
9.	Guest Editorial Board	Pertanika Journal of Science and Technology, Vol. 20 (2) July 2012. Selected Articles from the World Engineering Congress 2010: Natural Resources and Green Technology	2012

Speaker/ Chairman/ Panelist

1.	Invited Presenter	Consortium Unified Curriculum System (UCS) Among Sister Universities And University Of Tsukuba In Bioresources Engineering, University of Tsukuba	2017
2.	Speaker/Forum Panelist	Engineering a Successful Career for Women: Making a Difference of the Future, 2017 IEEE CASS Outreach, Women in Circuits and Systems (WiCAS)	2017
3.	Judge	Innovation Competition, MARA College Banting	2016
4.	Technical Session Chair	7 th Conference on Sustainable Agriculture for Food, Energy and Industry in Regional and Global Context	2015
5.	Invited Speaker	9th International Conference on Computer and Computing Technologies in Agriculture (CCTA2015) and Information Processing in Agriculture(IPA) in Beijing, 27-30 Sept. 2015	2015
6.	Selected Participant	International Commission of Agricultural and Biosystems Engineering (CIGR) Next Leader Event, Germany, Nov. 2015	2015
7.	Guest Speaker	10 th International Workshop on Nondestructive Quality Evaluation on Agricultural, Livestock and Fishery Products, Taipei, Taiwan	2014
8.	Invited Speaker	Workshop on Smart Farming XI: Delivering Appropriate Precision Technologies and Management Practices in Agriculture	2014
9.	Interviewer	Applications for Tenaga Akademik Muda at Department of Biological and Agricultural Engineering	2014
10.	Invited Presentation	MOU meeting and collaboration at Lovely Professional University, Phagwara, Punjab, India	2013



11.	Invited Presentation	Agricultural Engineering Research and Development at Department of Biological and Agricultural Engineering, Universiti Putra Malaysia at Center of Precision and Automated And Automated Agricultural Systems, USA	2012
12.	Participant	Half Day Forum on The Code of Ethics for Engineers in Teaching Profession, IEM	2012
13.	Interviewer	Application for Students' Industrial Training at Washington State University	2012
14.	Panelist	Kursus Persediaan Pengajian Siswazah (KPPS) Pegawai Akademik UPM	2011
15.	Instructor	Agricultural Machinery Maintenance Training with JWF Resources	2011
16.	Presenter	Research Program at Department of Biological and Agricultural Engineering, Research Collaboration Meeting with Sime Darby Research Sdn Bhd	2011
17.	Session Chair	Regional Symposium on Engineering & Technology	2011
18.	Invited Speaker	Accuracy and Uncertainty Assessment of Field DEMs for Agricultural Applications. Invited Speaker, MRSS International Remote Sensing & GIS Conference and Exhibition, PWTC, KL.	2010
19.	Session Chair	6th MRSS International Remote Sensing & GIS Conference and Exhibition, Kuala Lumpur 2010	2010

Manuscript Reviewer for

1. Computer and Electronics in Agriculture
2. Food Research
3. IEEE Sensors Journal
4. Intelligent Automation & Soft Computing Journal
5. Plant Disease
6. 5th IFAC Conference on Sensing, Control and Automation in Agriculture
7. Biosystems Engineering
8. International Journal of Food Properties
9. 11th Asian Conference on Chemical Sensors
10. 7th Conference on Sustainable Agriculture for Food, Energy and Industry in Regional and Global Context
11. PAWEES-INWEPF Joint International Conference 19-21 August 2015
12. Transaction of ASABE
13. International Conference on Agricultural and Food Engineering
14. Walailak Journal of Science and Technology
15. International Conference on Agricultural, Food and Biological Engineering
16. Journal of Engineering and Technology Reviewer
17. International Conference on Biomedical Engineering
18. Regional Symposium of Engineering and Technology
19. IEM Journal
20. International Conference on Engineering and Technology Education
21. Conference on Natural Resources and Green Technology
22. IEEE Student Conference on Research and Development
23. Transaction of ASAE

Student Supervision

Main Supervisor (PhD students)

No.	Name	Title	Status
1.	Yousif Hashim Abdullah	Optimization of Operations of Reservoir Systems for Hydropower Generation in Tigris River Basin, Iraq	Graduated
2.	Ng Jing Lin	Stochastic Weather Generator for Rainfall and Its Spatial Temporal Variation Analysis for Tropical Climate	Graduated
3.	Al-Fadhli Yahya Khaled Al-Khaled	Impedance Spectroscopy Analysis of Oil Palm Trees Infected by Ganoderma	On-Going
4.	Nurul Atikah Ibrahim	Farm monitoring using Mobile App and Cloud Computing	On-Going

Main Supervisor (MSc Students)

No.	Name	Title	Status
1.	Khairunnisa Hamdan	Multifrequency Dielectric Sensing For Crude Palm Oil Contamination Detection	Graduated
2.	Nur Fizura bt Chin@Hashim	Frequency Variation in Non-Destructive Measurement of Impedance of Oil Palm Fruits for Moisture and Oil Content Determination	Graduated
3.	Al-Fadhli Yahya Khaled Al-Khaled	Interdigitated Electrode Sensor for Frying Oil Degradation Assessment During Heating	Graduated
4.	Nurul Atikah Ibrahim	Impedance and Fluorescence Spectroscopy Techniques for Frying Oil Analysis	Graduated
5.	Munirah Hayati Hamidon	Development of Vertical Farming System for Urban Agriculture Initiative	Ongoing