

CURRICULUM VITAE



Assoc. Prof. Dr. Norhashila Hashim

CEng MIET

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Education

1. Ph.D. Biomechanical Engineering, 2013, Universiti Putra Malaysia.
2. M.S. Bioproduction Machinery, 2008, Universiti Putra Malaysia.
3. B. E. Agricultural & Biological, 2004, Universiti Putra Malaysia

Areas of Interest

1. Postharvest Engineering
2. Agricultural Process Engineering
3. Non-destructive Testing

Professional Qualification/ Membership/ Affiliation

1. Chartered Engineering (CEng), The Institution of Engineering and Technology (IET), UK
2. Member, The Institution of Engineering and Technology (IET), 2017 – Present
3. Member, Institute of Food Technologists (IFT), 2018 - Present
4. Member, Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES), 2016 - Present
5. Graduate Engineer, Board of Engineers Malaysia (BEM), 2015 – Present
6. Companion Member, Institution of Engineers Malaysia (IEM), 2015 – Present
7. Member, International Society for Horticultural Science (ISHS), 2015 - Present
8. Professional Member, Malaysian Society of Agricultural Engineers (MSAE), 2013 - Present
9. Member, American Society of Agricultural and Biological Engineers (ASABE), 2008 - Present
10. Member, UPM Academic Staff Association (PPAUPM), 2013 – Present
11. Member, Golden Key International Honor Society. Universiti Putra Malaysia Chapter, 2001 - Present

Appointments

Position	Duration
1. Head of Laboratory, Biomaterial Processing, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	1 st Sept 2016 – 31 st August 2019
2. Visiting Scientist, Department of Horticultural Engineering, Leibniz-Institute of Agricultural Engineering Potsdam-Bornim (ATB), Germany	1 st Feb 2017 – 30 th June 2017
3. Academic Coordinator I, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	19 th Mar 2016 – 18 th Mar 2018
4. Academic Coordinator I, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	18 th Mar 2014 – 17 th Mar 2016
5. Lecturer, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	14 th Feb 2013 – to date



6. Acting Coordinator of Industry & Community Relations, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM 1st Sept 2013 – 1st Jan 2014
7. Head of Laboratory, Biomaterial Processing, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM 1st Sept 2013 – 31st Aug 2016
8. Research Associate, Smart Farming Technology Research Centre (SFTRC), UPM 1st Jan 2013 – to date
9. Visiting Scientist, Department of Horticultural Engineering, Leibniz-Institute of Agricultural Engineering Potsdam-Bornim (ATB), Germany 1st Jul 2010 – 31st Oct 2010
10. Visiting Scientist, Department of Horticultural Engineering, Leibniz-Institute of Agricultural Engineering Potsdam-Bornim (ATB), Germany 1st Apr 2009 – 30th Sept 2009
11. Tutor, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM 9th Apr 2007– 13th Feb 2013
12. R&D Engineer, ISC Micro Precision Sdn. Bhd., Balakong, Selangor 1st Mar 2006 – 31st Mar 2007
13. Graduate Research Assistant, Fac. of Engineering, UPM Dec 2004 – Dec 2005

Publications

Journals

1. Onwude, D.I., **Hashim, N.**, Abdan, K., Janius, R. and Chen, G. 2018. Modelling the mid-infrared drying of sweet potato: kinetics, mass and heat transfer parameters, and energy consumption. *Journal of Heat and Mass Transfer*. Accepted (Q2, IF: 1.233)
2. **Hashim, N.**, Onwude, D.I., and Osman, M.S. 2018. Evaluation of chilling injury in mangoes using multispectral imaging. *Journal of Food Science*, 83(5): 1271-1279 (Q1, IF: 1.815)
3. Onwude, D.I., **Hashim, N.**, Abdan, K., Janius, R. and Chen, G. 2018. Investigating the influence of novel drying methods on sweet potato (*Ipomoea batatas* L.): Kinetics, energy consumption, color, and microstructure. *Journal of Food Process Engineering*, 41(4): <https://doi.org/10.1111/jfpe.12686> (Q2, IF: 1.370)
4. Onwude, D.I., **Hashim, N.**, Abdan, K., Janius, R. and Chen, G. 2018. Combination of computer vision and backscattering imaging for predicting the moisture content and colour changes of sweet potato (*Ipomoea batatas* L.) during drying. *Computers and Electronics in Agriculture*, 150: 178–187 (Q1, IF: 2.201)
5. Onwude, D.I., **Hashim, N.**, Abdan, K., Janius, R., Chen, G. and Kumar, C. 2018. Modelling of coupled heat and mass transfer for combined infrared and hot-air drying of sweet potato. *Journal of Food Engineering*, 228: 12-24 (Q1, IF: 3.099)
6. Onwude, D.I., **Hashim, N.**, Abdan, K., Janius, R. and Chen, G. 2018. The potential of computer vision, optical backscattering parameters and artificial neural network modelling in monitoring the shrinkage of sweet potato (*Ipomoea Batatas* L.) during drying. *Journal of the Science of Food and Agriculture*, 98: 1310-1324 (Q1, IF: 2.076)
7. **Hashim, N.**, Adebayo, S. E., Abdan, K. and Hanafi, M. 2018. Comparative study of transform-based image texture analysis for the evaluation of banana quality using an

- optical backscattering system. *Postharvest Biology and Technology*, 135: 38-50 (Q1, IF: 2.618)
8. Mohd Ali, Janius, R.B., Mat Nawi, N. and **Hashim, N.** 2018. Prediction of total soluble solids and pH in banana using near infrared spectroscopy. *Journal of Engineering Science and Technology*, 13 (1): 254-264 (Indexed by Scopus)
 9. Mohd Ali, M., **Hashim, N.**, Bejo, S.K., Shamsudin, R. 2017. Determination of the Difference on Color Changes of Watermelons by Laser Light Backscattering Imaging. *Journal of Food Science and Technology*. *Journal of Food Science and Technology*, 54 (11): 3650-3657 (Q3, IF: 1.262)
 10. Mohd Ali, M., **Hashim, N.**, Bejo, S.K., Shamsudin, R. 2017. Rapid and Nondestructive Techniques for Internal and External Quality Evaluation of Watermelons: A Review. *Scientia Horticulturae*, 225: 689-699. (Q1, IF: 1.624)
 11. Onwude, D.I., **Hashim, N.**, Abdan, K., Janius, R., Chen, G. and Oladejo, A.O. 2017. Non-thermal hybrid drying of fruits and vegetables: A review of current technologies. *Innovative Food Science and Emerging Technologies*, 43: 223-238. (Q1, IF: 2.573)
 12. Mohd Ali, M., **Hashim, N.**, Bejo, S.K., Shamsudin, R. 2017. Optical parameters in food and agricultural processing. *International Food Research Journal*, 24(3): 908-914. (Indexed by Scopus)
 13. Mohd Ali, M., **Hashim, N.**, Bejo, S.K., Shamsudin, R. 2017. Laser-induced Backscattering Imaging for Classification of Seeded and Seedless Watermelons. *Computers and Electronics in Agriculture*, 140: 311-316. (Q1, IF: 2.201)
 14. Adebayo, S.E., **Hashim, N.**, Abdan, K., Hanafi, M., Regen, C., Hass, R. and Zude-Sasse, M. 2017. Using absorption and reduced scattering coefficients for non-destructive analyses of fruit flesh firmness and soluble solids content in pear (*Pyrus communis* 'Conference') - an update when using diffusion theory. *Postharvest Biology and Technology*, 130: 56-63. (Q1, IF: 2.618)
 15. Onwude, D. I., **Hashim, N.**, Janius, R. B., Nawi, N. M. and Abdan, K. 2017. Color change kinetics and total carotenoid content of pumpkin as affected by drying temperature. *Italian Journal of Food Science*, 29: 1-18. (Q4, IF: 0.504)
 16. **Hashim, N.**, Janius, R.B., Osman, A., and Othman, J. 2017. Variability and predictability of Malaysian export-grade starfruit properties. *Journal of Engineering Science and Technology*, 12 (2): 458-468. (Indexed by Scopus)
 17. Mohd Ali, M. **Hashim, N.**, Bejo, S.K., and Shamsudin, R. 2017. Quality Evaluation of Watermelon using Laser-induced Backscattering Imaging during Storage. *Postharvest Biology and Technology*, 123: 51-59. (Q1, IF: 2.618)
 18. Adebayo, S. E., **Hashim, N.**, Abdan, K., Hanafi, M., and Zude, M. 2017. Banana Quality Attribute Prediction and Ripeness Classification using Support Vector Machine. *International Journal of Food Engineering*, 3(1): 42-47
 19. Zulkifli, A., **Hashim, N.**, Abdan, K. and Hanafi, M. 2016. Evaluation of physicochemical properties of *Musa Acuminata* cv. Berangan at different ripening stages. *International Food Research Journal*, 23 (Suppl), S97-S100 (Indexed by Scopus)
 20. Onwude, D. I., **Hashim, N.**, Janius, R. B., Nawi, N. M. and Abdan, K. 2016. Modelling the convective drying process of pumpkin (*Cucurbita moschata*) using an artificial neural network. *International Food Research Journal*, 23 (Suppl), S237-S243 (Indexed by Scopus)

21. Ibrahim, N.U.A., Abd Aziz, S., Zude, M. and **Hashim, N.** 2016. Fluorescence spectroscopy for analysing deterioration of palm olein in batch deep-fat frying, *International Food Research Journal* 23 (*Suppl*), S45-S50 (Indexed by Scopus)
22. Adebayo, S. E., **Hashim, N.**, Abdan, K. and Hanafi, M. 2016. Prediction of quality attributes and ripeness classification of bananas using optical properties. *Scientia Horticulturae*, 212:171-182 (Q1, IF: 1.538)
23. Onwude, D. I., **Hashim, N.** and Chen, G. 2016. Recent advances of novel thermal combined hot air drying of agricultural crops. *Trends in Food Science & Technology*, 57: 132-145 (Q1, IF: 5.150)
24. Salih, R.F., Abdan, K., Wayayok, A., **Hashim, N.** and Rahman, K.A. 2016. Improve quality and quantity of plant products by applying potassium nutrient (A Critical Review). *Journal of Zankoy Sulaimani*, 18(2): 197-208. (Crossref)
25. Teoh, L.S., Lasekan, O., Mohd Adzahan, N. and **Hashim, N.** 2016. The effect of ultraviolet treatment on enzymatic activity and total phenolic content of minimally processed potato slices. *Journal of Food Science and Technology*, 53(7): 3035-3042 (Q2, IF: 1.241)
26. Teoh, L.S., Lasekan, O., Mohd Adzahan, N. and **Hashim, N.** 2016. The effect of combinations of UV-C exposure with ascorbate and calcium chloride dips on the enzymatic activities and total phenolic content of minimally processed yam slices. *Postharvest Biology and Technology*, 120: 138-144.(Q1, IF: 2.618)
27. Onwude, D. I., **Hashim, N.**, Janius, R. B., Nawi, N. M. and Abdan, K. 2016. Modelling effective moisture diffusivity of pumpkin (*Cucurbita moschata*) slices under convective hot air drying condition. *International Journal of Food Engineering*, 12(5): 481-489 (Q4, IF: 0.712)
28. Onwude, D. I., Abdulstter, R. Gomes, C. and **Hashim, N.** 2016. Mechanisation of large-scale agricultural fields in developing countries - A Review. *Journal of the Science of Food and Agriculture*, 96: 3969–3976 (Q1, IF: 2.076)
29. Onwude, D. I., **Hashim, N.**, Janius, R. B., Nawi, N. M. and Abdan, K. 2016. Evaluation of a suitable thin layer model for drying of pumpkin under forced air convection. *International Food Research Journal*, 23(3): 1173-1181 (Indexed by Scopus)
30. Onwude, D. I., **Hashim, N.**, Janius, R. B., Nawi, N. M. and Abdan, K. 2016. Modeling the Thin-Layer Drying of Fruits and Vegetables - A Review. *Comprehensive Reviews in Food Science and Food Safety*, 15: 599-618 (Q1, IF: 4.903)
31. Adebayo, S. E., **Hashim, N.**, Abdan, K. and Hanafi, M. 2016. Application and potential of backscattering imaging techniques in agricultural and food processing- A review. *Journal of Food Engineering*, 169: 155-164 (Q1, IF: 3.199)
32. **Hashim, N.**, Janius, R. and Zude, M. 2015. Effect of Water Content on Backscattering Parameters. *Australian Journal of Basic and Applied Sciences*, 9(7): 265-268 (Indexed by Thomson Reuters)
33. **Hashim, N.**, Daniel, O. and Rahaman, E. 2014. A Preliminary Study: Kinetic Model of Drying Process of Pumpkins (*Cucurbita Moschata*) in a Convective Hot Air Dryer. *Agriculture and Agricultural Science Procedia*, 2: 345-352 (Open Access)
34. Salih, R.F., Abdan, K., Wayayok, A. and **Hashim, N.** 2014. Effect of Potassium, Boron and Zinc on Nitrogen Content in Bast and Core Fibres for Two Kenaf Varieties (*Hibiscus cannabinus* L.). *International Journal of Development Research*, 4 (12): 2581-2586 (Open Access)

35. Salih, R.F., Abdan, K., Wayayok, A., Abdul Rahim, A. and **Hashim, N.** 2014. Response of Nitrogen Content for Some Varieties of Kenaf Fiber (*Hibiscus cannabinus* L.) by Applying Different Levels of Potassium, Boron and Zinc. *Agriculture and Agricultural Science Procedia*, 2: 375-380 (Open Access)
36. **Hashim, N.**, Janius, R.B., Abdul Rahman, R., Osman, A., Shitan, M. and Zude, M. 2014. Changes of Backscattering Parameters during Chilling Injury in Bananas. *Journal of Engineering Science and Technology*, 9 (3): 314-325. (Indexed by Scopus)
37. **Hashim, N.**, Pflanz, M., Regen, C., Janius, R.B. Abdul Rahman, R., Osman, A., Shitan, M. and Zude, M. 2013. An approach for monitoring the chilling injury appearance in bananas by means of backscattering imaging. *Journal of Food Engineering* 116: 28–36 (Q1, IF: 3.199)
38. **Hashim, N.**, Janius, R.B., Abdul Rahman, R., Osman, A., Shitan, M. and Zude, M. 2013. Application of computer vision in the detection of chilling injury in bananas. *Pertanika Journal of Science and Technology* 21(1): 111-118 (Indexed by Scopus)
39. **Hashim, N.**, Janius, R.B., Baranyai, L., Abdul Rahman, R., Osman, A. and Zude, M. 2012. Kinetic model for colour changes in bananas during the appearance of chilling injury symptoms. *Food and Bioprocess Technology* 5: 2952–2963. (Q1, IF: 2.574)

Book Chapters

1. Onwude D.I., Chen Guangnan, **Norhashila Hashim**, Chandima Gomes, Esdaile Jeff R., Alfadhl Y. Khaled, Alonge A.F., Ikrang Elijah (2018). Mechanisation of agricultural production in developing countries. In: *Advances in Agricultural Machinery and Technologies*. CRC Press, Taylor & Francis

Conference Proceedings

1. Onwude, D. I., **Hashim, N.** and Dana, A. 2018. Predicting the quality of pumpkin (*Cucurbita moschata*) during drying using combined computer vision and backscattering and imaging technique. Paper presented at the National Conference on Agricultural and Food Mechanization (NCAFM) 2018, Kuching, Sarawak, 17 - 19 April 2018.
2. **Hashim, N.**, Adebayo, S.E. and Abdan, K. Laser-based imaging for fruit quality detection. Paper presented at the Forum Pertanian IPIMA 2017, UPM, 6-9 November 2017.
3. Onwude, D. I., **Hashim, N.**, Abdan, K., Janius, R., Che Adan, S.N., and Jalaluddin, A. Application of RGB imaging in monitoring quality changes of sweet potatoes during drying. Paper presented at the 23rd Computer Image Analysis Workshop, Potsdam, 27th April 2017.
4. Mohd Ali, M., **Hashim, N.**, Bejo, S.K. and Shamsudin, R. Effects of Postharvest Storage on the Physicochemical Properties of Seeded and Seedless Watermelon. ISSN 0947-7314. Paper presented at the 10th International FRUTIC Symposium 2017, Berlin, 7th February 2017.
5. **Hashim, N.**, Onwude, D.I., Roslan, H.R. Influence of Hydrocooling Treatments on Quality and Shelf Life of Chokanan Mango. Paper presented at the 9th International Conference on Plant Protection in The Tropics (9th ICPPT), Kuching, Sarawak, 3-5 August, 2016.
6. Zulkifli, N., **Hashim, N.**, Abdan, K. and Hanafi, M. The potential of backscattering imaging in evaluating the ripening stages of bananas. Paper presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.
7. Adebayo, S. E., **Hashim, N.**, Abdan, K. and Hanafi, M. and Zude, M. Prediction of banana quality attributes and ripeness classification using artificial neural network. Paper

presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.

8. Bachik, N. A., **Hashim, N.**, Wayayok, A., Che Man, H. and Saipin, S. The determination of nitrogen value at various reading points on rice leaf using RGB imaging. Paper presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.
9. Mohd Ali, M., **Hashim, N.**, Bejo, S.K., Shamsudin, R. and Wan Sembak, W. N. F. H. RGB imaging system for monitoring quality changes of seedless watermelon during storage. Paper presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.
10. Onwude, D. I., **Hashim, N.** and Solehin, K.M. Optical method for the detection of moisture content of pumpkin during drying. Paper presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.
11. Groß, T., **Hashim, N.**, Khairunniza-Bejo, S., Aziz, S. Abd and Zude-Sasse, M. Determination of maturity stages of oil palm fresh fruit bunches using multispectral imaging method. Paper presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.
12. Ibrahim, N.U.A., Abd Aziz, S. and **Hashim, N.** Oil quality monitoring during deep fat frying using Raman spectroscopy. Paper presented at the 3rd International Conference on Agricultural and Food Engineering (CAFEi2016), Seri Pacific Hotel, Kuala Lumpur, Malaysia, 23-25 August 2016.
13. Adebayo, S. E., **Hashim, N.**, Abdan, K. and Hanafi, M. The Development and Potential of Laser-Induced Light Backscattering Imaging (LLBI) for Detection of Fruit Quality. ISBN 978-986-5654-04-7. Paper presented at The 2nd International Conference on Life Science and Biological Engineering (ILSBE2015), Tokyo, 2-4 December, 2015.
14. Onwude, I.D., **Hashim, N.**, Janius, R.B. and Mat Nawati, M. Computer Simulation of Convective Hot Air Drying Kinetics of Pumpkin (*Cucurbita Moschata*). ISBN 978-967-11279-2-6. Paper presented at The 8th Asia-Pacific Drying Conference (ADC 2015), Kuala Lumpur, Malaysia, 10-12 August 2015
15. **Hashim, N.**, Bachik N. A. and Wan Ahmad W. M. A. Effect of Corn Stem as a Soil Conditioner on a Sandy Loam Soil. Paper Presented at the National Conference On Agricultural and Food Mechanization (NCAFM), Kota Kinabalu, Sabah, 20 - 22 May 2014.
16. Adebayo, S. E., **Hashim, N.** and Zude, M. Effect of fruit maturity on backscattering parameters. ISBN 978-967-11279-0-2. Paper presented at The 3rd International Symposium on Processing of Foods, Vegetables and Fruits (ISPFVF 2014), Kuala Lumpur Teaching Centre (KLTC) of University of Nottingham Malaysia Campus. 11-13 August 2014.
17. **Hashim, N.**, Janius, R.B., Abdul Rahman, R., Osman, A., Shitan, M. and Zude, M. Evaluation of Chilling Injury in Bananas Using Backscattered Laser Imaging. e-ISBN 978-967-960-322-4. Paper presented at International Conference on Agricultural and Food Engineering for Life (CAFEi2012), 26-28 November 2012.
18. **Hashim, N.**, Pflanz, M., Regen, C., Janius, R.B., Abdul Rahman, R. Osman, A., Shitan, M. and Zude, M. An Approach of Laser-induced Backscattering Imaging for Detecting Chilling Injury in Bananas. Paper presented at the International Conference of Agricultural Engineering, Valencia, Spain. 8-12 July, 2012.
19. **Hashim, N.**, Janius, R.B., Baranyai, L., Pflanz, M., Regen, C. and Zude, M. Application of RGB and Backscattering Imaging to Detect Chilling Injury Symptoms in Banana. Paper



presented at the meeting of the 2nd International Workshop on Image Analysis in Agriculture, Budapest, Hungary. 26-27 August, 2010.

Intellectual Properties		
No	Year	Title
1.	2016	Hashim, N. , Zulkifli, N., and Onwude, D.I. BSI Sorter Software (Filing no: 201612270510)
2.	2015	Hashim, N. Onwude, D.I and Abdan, K. Drying Monitoring Software in Matlab (LabuSimSoft) (Filing no: 20151217)
3.	2015	Hashim, N. Onwude, D.I and Abdan, K. Drying Monitoring Software in JAVA (LabuSimSoft) (Filing no: 20151217)

Research Grants				
No	Project Title	Amount (RM)	Year	Source of Fund
1.	Kelulut honey as edible coating for quality preservation and shelf life extension of Carica Papaya L.	25,000	2018-2020	Putra Grant, IPS (Universiti Putra Malaysia)
2.	Integrated hot air dryer with infrared heating and monitoring system for agricultural materials	99,400	2017-2019	Putra Grant, Berimpak Tinggi (Universiti Putra Malaysia)
3.	Journal Publication Incentive	8,763	2018	RMC, UPM
4.	Laser-based imaging method for monitoring pumpkins quality during drying process	15,000	2016-2018	Putra Grant, IPS (Universiti Putra Malaysia)
5.	Development of a finite element method (FEM) model for the drying process of sweet potatoe in an integrated hot air and infrared dryer	15,000	2016-2018	Putra Grant, IPS (Universiti Putra Malaysia)
6.	Novel methods for detection of tungro virus (<i>nephotettix wiescens</i>) in rice transmitted by green leaf hopper (<i>nephotettix malayamus</i>)	300,000	2015-2017	Putra Grant, IPB (Universiti Putra Malaysia)
7.	Characterization of optical parameters of laser induced backscattering imaging and its interaction with seeded and seedless properties in watermelon	83,200	2015-2017	FRGS (Ministry of Higher Education)
8.	An approach of backscattering imaging for detecting maturity level of bananas	165,510	2014-2016	eSCIENCE (Ministry of Science Technology & Innovation)

9. Kinetic model of drying process of pumpkins (*Cucurbita moschata*) in a convective hot air dryer 50,000 2014-2015 Putra Grant, IPM (Universiti Putra Malaysia)

Awards/Recognition					
No	Name of Awards	Title	Award Authority	Award Type	Year
1.	Special Award 2017	Special Award (Category: Senior Lecturer)	Faculty of Engineering, UPM	University	2018
2.	Excellent Award in Teaching 2017	Excellent Award in Teaching	Faculty of Engineering, UPM	University	2018
3.	Best Project: Student's Final Year Project	Laser-based imaging for fruit quality detection	Faculty of Engineering, UPM	University	2017
4.	Recipient of Journal Publication Incentive 2016	Journal Publication Incentive 2016	Universiti Putra Malaysia (UPM)	University	2017
5.	Service Award	Excellent Service Award	Universiti Putra Malaysia (UPM)	University	2012; 2013; 2014; 2015; 2016
6.	Special Award 2016	Special Award (Category: Senior Lecturer)	Faculty of Engineering, UPM	University	2017
7.	Excellent Award in Teaching 2016	Excellent Award in Teaching	Faculty of Engineering, UPM	University	2017
8.	Bronze: Invention, Research and Innovation Exhibition (PRPI) 2016	Smart Dryer For Agricultural Materials	Universiti Putra Malaysia (UPM)	University	2016
9.	Best Project: Student's Final Year Project	Backscattering imaging system for monitoring moisture content in pumpkins during drying process	Faculty of Engineering, UPM	University	2016
10.	Academic Award	Best Student in Academic	Faculty of Engineering, UPM	University	2004

Professional Services/Consultation			
No	Role	Title	Year
1.	Guest Editor	Pertanika Journal of Science and Technology, Special Issue for the 4 th International Conference on Agricultural and Food Engineering For Life (CAFEi2018)	2018
2.	Journal Reviewer	Drying Technology ((Manuscript ID: LDRT-2018-0203)	2018
3.	Journal Reviewer	Drying Technology (Manuscript ID: LDRT-2018-0054.R2)	2018
4.	Committee Member	Penilaian Anugerah Khas Pensyarah Tahun 2017 Kategori Pengajaran dan Pembelajaran bagi Program Inovasi dan Apresiasi	2018
5.	Technical paper reviewer	The 4th International Conference on Agricultural and Food Engineering (CAFEi2018) (Manuscript ID: CAFEi2018: 184-173; CAFEi2018: 115-105; CAFEi2018: 108-172)	2018
6.	Scientific Board Committee	FRUTIC Symposium 2019, Hong Kong	2018-2019
7.	Journal Reviewer	Innovative Food Science and Emerging Technologies (Manuscript ID: IFSET_2018_448)	2018
8.	Journal Reviewer	International Food Research Journal (Manuscript ID: IFRJ18163)	2018
9.	Journal Reviewer	Biosystems Engineering (Manuscript ID: YBENG_2017_998)	2018
10.	Journal Reviewer	Optics and Laser Technology (Manuscript ID: JOLT_2017_1668; JOLT_2017_1668_R1)	2018
11.	Journal Reviewer	Phytomedicine (Manuscript ID: PHYMED-D-18-00298)	2018
12.	Technical Committee	6 th International Conference on Food and Agricultural Sciences (ICFAS2018)	2018
13.	Scientific Board Committee	FRUTIC Symposium 2018, Berlin	2017-2018
14.	Committee Member	Engineering Accreditation Council (EAC) at Departmental Level	2017-2018
15.	Mentor	Kursus Asas Pengajaran, UPM	2017
16.	Journal Reviewer	Trends in Food Science and Technology	2017
17.	Journal Reviewer	Journal of Food Chemistry	2017
18.	Journal Reviewer	International Food Research Journal	2017
19.	Journal Reviewer	Journal of Engineering Science & Technology	2017
20.	Academic Advisory Panel	Diploma of Vocational Program, Malaysia – Diploma of Agro Mechanisation Technology	2017-2018
21.	Deputy Director, Scientific Committee	The 4 th International Conference on Agricultural and Food Engineering (CAFEi2018)	2017-2018

22.	Honorary organizing committee	Global Food Processing and Technology Summit 2017 (GFPTS'17)	2017
23.	Secretariat	Paddy Cultivation Technology Course	2016
24.	Committee Member	Talk on Role of Professional Engineer and Membership Registration for Undergraduates	2016
25.	Committee Member	Engineering Accreditation Council (EAC) at Departmental Level	2016
26.	Committee Member	Promotional Program Plan for B.Eng (Agricultural and Biosystems)	2016
27.	Judge	2nd Agricultural Engineering Student Chapter Annual Regional Convention 2016	2016
28.	Technical Session - Chairperson	The 3 rd International Conference on Agricultural and Food Engineering (CAFE/2016) (Bioprocess and Environment)	2016
29.	Secretary I	The 3 rd International Conference on Agricultural and Food Engineering (CAFE/2016)	2015-2016
30.	Judge	The 3 rd International Conference on Agricultural and Food Engineering (CAFE/2016) (Oral and poster presentations)	2016
31.	Technical Reviewer	The 3 rd International Conference on Agricultural and Food Engineering (CAFE/2016) Proceeding ISBN No: 978-967-960-401-6	2016
32.	Technical Reviewer	The 3 rd International Conference on Agricultural and Food Engineering (CAFE/2016) – Acta Horticulturae	2016
33.	Journal Reviewer	International Food Research Journal	2016
34.	Facilitator	Hands-on PutraBlast Workshop	2016
35.	Secretariat	National Convention of Agricultural Engineers	2016
36.	Advisor of In-bound Mobility Program	Beuth University of Applied Science Berlin	2016
37.	Secretariat	Professional Engineer Course	2015
38.	Committee Member of MSc Program Revision	Emergency, Response and Planning	2015-2016
39.	Director of Publicity and Promotion Committee	The 7 th International Conference on Sustainable Agriculture for Food, Energy And Industry (ICSAFEI2015)	2015
40.	Session Chairperson	The 7 th International Conference on Sustainable Agriculture for Food, Energy And Industry (ICSAFEI2015)	2015
41.	Journal Reviewer	Chemical Engineering Communications	2015



42.	Technical Reviewer	The 7 th International Conference on Sustainable Agriculture for Food, Energy And Industry (ICSAFEI2015) Proceeding	2015
43.	Editorial Boards	PAWEESINWEPF Joint International Conference 2015 Book	2015
44.	Technical Reviewer	PAWEESINWEPF Joint International Conference 2015 Proceeding	2015
45.	Facilitator	PutraBlast Workshop	2015
46.	Executive Committee	Malaysian Society of Agricultural Engineers (MSAE)	2015-2017
47.	Journal reviewer	Information Processing in Agriculture	2015
48.	Research Associate	Smart Farming Technology Lab, UPM	2014 to date
49.	Journal Reviewer	Agriculture and Agricultural Science Procedia (ELSEVIER)	2014
50.	Technical Reviewer	Second International Conference on Agricultural and Food Engineering (CAFE/2014) Proceeding	2014
51.	Advisor of In-bound Mobility Program	Beuth University of Applied Science Berlin	2014
52.	Executive Committee	Malaysian Society of Agricultural Engineers (MSAE)	2013-2015
53.	Secretariat	Two-Day Course on "Precision in Crop Farming: Concept and Application"	2014
54.	Secretary	SMART Farming XI	2014
55.	Reviewer	Journal of Food Control, Vol 42	2014
56.	Director of Promotion and Webportal Committee	Second International Conference on Agricultural and Food Engineering (CAFE/2014)	2013-2014
57.	Journal Reviewer	Computers and Electronics in Agriculture	2013
58.	Technical Papers Reviewer	Technology Bulletin, MARDI	2013
59.	Committee Member	Employability Skills	2013
60.	Committee Member	Training on Agricultural Machinery Management (Royal Court, Oman)	2013
61.	Committee Member of Promotion and Registration	International Conference on Agricultural and Food Engineering for Life (CAFE/2012)	2012

Student Supervision			
No	Name	Title	Status

PhD (Main Supervisor)

1	Segun Emmanuel Adebayo	Computational intelligence techniques for backscattering imaging system in the evaluation of climacteric fruit quality	Graduated
2	Onwude Daniel Iroemeha C.	Integrated Hot Air Dryer, Ultraviolet and Infrared Heating, and Thermographic Monitoring Drying System for Agricultural Materials	On-going
3	Bernard Maringgal	An approach of Kelulut (Trigina Spp.) honey for quality preservation and shelf life extension of Carica papaya L.	On-going
4	Nurazwin Zulkifli	A 3-D simulation of impact toward zero post-harvest losses for optimum postharvest handling of papayas	On-going

Master (Main Supervisor)

1	Nurazwin Zulkifli	An Approach of Backscattering Imaging for Detecting Maturity Level of Bananas	Graduated
2	Onwude Daniel Iroemeha C.	Kinetic Model of Drying Process Of Pumpkin (<i>Cucurbita Moschata</i>) In A Convective Hot Air Dryer	Graduated
3	Nur Azizah Bachik	Determination of nitrogen in rice leaf using backscattering imaging	Graduated
4	Maimunah Mohd Ali	Characterization of optical parameters of laser induced backscattering imaging and its interaction with seeded and seedless properties in watermelon	Graduated

Teaching Experience

Year	Course Code/Name
Second Semester 2017/2018	EAB3212: Agricultural Process Engineering
First Semester 2017/2018	EMM3518: Computer Aided Engineering Drawing EAB4202: Bioprocess Engineering Operation

First Semester 2016/2017	EAB3008: Computer Aided Engineering Drafting
Second Semester 2015/2016	EAB3204: Agricultural Process Engineering
First Semester 2015/2016	EAB3008: Computer Aided Engineering Drafting
Second Semester 2014/2015	EAB3204: Agricultural Process Engineering
First Semester 2014/2015	EAB3204: Agricultural Process Engineering
Second Semester 2013/2014	EAB3008: Computer Aided Engineering Drafting
First Semester 2013/2014	EAB3008: Computer Aided Engineering Drafting EAB3204: Agricultural Process Engineering EAB3004: Engineering Properties of Agricultural Materials EAB3002: Computer Aided Engineering Drafting
Second semester 2012/2013	EAB3008: Computer Aided Engineering Drafting
First semester 2012/2013	EAB3204: Agricultural Process Engineering (Lab demonstrator) ECC3003: Mathematic Engineering III (Tutor) ECV3205: Structural Design I (Tutor)
Second Semester 2007/2008	ECC3004: Engineering Statistic (Tutor) KBP4008: Unit of Biomaterial Processing Operation (Lab demonstrator)
First Semester 2007/2008	KBP3002: Computer Aided Engineering Drafting (Lab Demonstrator)
First Semester 2005/2006	KBP3002: Computer Aided Engineering Drafting (Lab Demonstrator)
Second Semester 2004/2005	ECC3002: Mathematic Engineering II (Tutor).

