

CURRICULUM VITAE



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Education

1. **Ph.D in Material Engineering**, 2017, Universiti Putra Malaysia, Malaysia 
2. **M.Sc. in Innovation and Engineering Design**, 2013, Universiti Putra Malaysia, Malaysia 
3. **B.Eng in Mechatronic Engineering (Industrial Automation)**, 2010, University of Applied Science Gelsenkirchen, Branch Bocholt, Germany 
4. **Studienkolleg in Engineering and Sciences**, 2005, University of Applied Science Dortmund, Germany 

Areas of Interest

1. Material, Agricultural and Food Waste Engineering
2. Geopolymer Binder / Coating / Film Composite (Foam)
3. Green and Bio-Composite Polymer
4. Optimization and Statistical Analysis - Response Surface Methodology (RSM) & Factorial Design
5. Product Packaging Material

Professional Qualification/ Membership/ Affiliation

- | | | |
|--|----------------|---|
| 1. Professional Member, Institute For Engineering Research and Publication (IFERJ) | 2020 – to date |  |
| 2. Professional Technologists, Malaysia Board of Technologist (MBOT) | 2020 – to date |  |
| 3. Ordinary Affiliate Member, Institute of Materials, Malaysia (IMM) | 2019 – to date |  |
| 4. Member, Malaysian Society of Agricultural Engineers (MSAE) | 2017 – to date |  |
| 5. Graduate Member, Board of Engineers Malaysia (BEM) | 2015 – to date |  |

Appointments	
Position	Duration
1. Research Associate (INTERIM), Laboratory of Biopolymer and Derivatives, Institute of Tropical Forestry and Forest Products (INTROP), Universiti Putra Malaysia	2021 – to date
2. Research Associate (INTERIM), Laboratory of Halal Science Research (LAPSAH), Halal Products Research Institute, Universiti Putra Malaysia	2019 – to date
3. Development Coordinator, Department of Process and Food Engineering, Faculty of Engineering, UPM	2019 – to date
4. Head of Laboratory, Food Processing Machine Design, Department of Process and Food Engineering, Faculty of Engineering, UPM	2018 – 2020
5. Senior Lecturer, Department of Process and Food Engineering, Faculty of Engineering, UPM	2017 – to date

Excellence		
Awards	Level	Year
1. Perkhidmatan Cemerlang	University	2018
2. Anugerah Perkhidmatan Cemerlang	University	2019
3. Perkhidmatan Cemerlang	University	2020
4. Perkhidmatan Cemerlang	University	2021

Publications	
Journals (30 recent journals)	
1. Nazri, F., Tawakkal, I.S.M.A., Basri, M.S.M. , Basha, R.K. and Othman, S.H., (2022). Characterization of active and pH-sensitive poly (lactic acid) (PLA)/nanofibrillated cellulose (NFC) films containing essential oils and anthocyanin for food packaging application. International Journal of Biological Macromolecules (JCR Q1 – Top 10%)	
2. Kamarudin, S.H., Rayung, M., Abu, F., Ahmad, S.B., Fadil, F., Karim, A.A., Norizan, M.N., Sarifuddin, N., Mat Desa, M.S.Z., Mohd Basri, M.S. and Samsudin, H. (2022), A Review on Antimicrobial Packaging from Biodegradable Polymer Composites. Polymers, 14(1), 174 (JCR Q1)	
3. Yusree, F.I.F.M., Peter, A.P., binti Zulkifli, N.A., Nor, M.Z.M., Basri, M.S.M. , Mokhtar, M.N., Awasthi, M.K. and Show, P.L. (2022), Towards green recovery of β -amylase from slurry of sweet potato (<i>Ipomoea batatas</i>) of VitAto variety via liquid biphasic system. Sustainable Chemistry and Pharmacy, 25, p.100579 (JCR Q2)	
4. Hamzah, M. H., Rahim, A. Z. M., Maringgal, B., Basri, M. S. M. , & Ibrahim, S. (2022). Optimization of silk fibroin coating during storage using response surface methodology and its effect on the physicochemical properties of <i>Solanum ferox</i> (S. ferox). Journal of Food Measurement and Characterization, 1-17 (JCR Q3)	

5. **Mohd Basri, M. S.**, Mustapha, F., Mazlan, N., & Ishak, M. R. (2021), Rice-Husk-Ash-Based Geopolymer Coating: Fire-Retardant, Optimize Composition, Microstructural, Thermal and Element Characteristics Analysis. *Polymers*, 13(21), 3747 (**JCR Q1**)
6. **Mohd Basri, M.S.**, Abdul Karim Shah, N.N., Sulaiman, A., Mohamed Amin Tawakkal, I.S., Mohd Nor, M.Z., Ariffin, S.H., Abdul Ghani, N.H. and Mohd Salleh, F.S. (2021), Progress in the Valorization of Fruit and Vegetable Wastes: Active Packaging, Biocomposites, By-Products, and Innovative Technologies Used for Bioactive Compound Extraction. *Polymers*, 13(20), 3503 (**JCR Q1**)
7. **Mohd Basri, M. S.**, Mustapha, F., Mazlan, N., & Ishak, M. R. (2021), Rice Husk Ash-Based Geopolymer Binder: Compressive Strength, Optimize Composition, FTIR Spectroscopy, Microstructural, and Potential as Fire-Retardant Material. *Polymers*, 13(24), 4373 (**JCR Q1**)
8. **Mohd Basri, M.S.**, Yek, T.H., A Talib, R., Mohamed Amin Tawakkal, I.S., Kamarudin, S.H., Mazlan, N., Maidin, N.A. and Ab Rahman, M.H. (2021), Rice Husk Ash/Silicone Rubber-Based Binary Blended Geopolymer Coating Composite: Fire Retardant, Moisture Absorption, Optimize Composition, and Microstructural Analysis. *Polymers*, 13(6), 985 (**JCR Q1**)
9. **Mohd Basri, M. S.**, Liew Min Ren, B., A Talib, R., Zakaria, R., & Kamarudin, S. H. (2021), Novel Mangosteen-Leaves-Based Marker Ink: Color Lightness, Viscosity, Optimized Composition, and Microstructural Analysis. *Polymers*, 13(10), 1581 (**JCR Q1**)
10. Yee, W.P., Nor, M.Z.M., **Basri, M.S.M.** and Roslan, J. (2021), Membrane-based clarification of banana juice: pre-treatment effect on the flux behaviour, fouling mechanism and juice quality attributes, *Food Research*, Suppl.1, 57-64 (**JCR Q4**)
11. **Basri, M. S. M.**, Nor, M. Z. M., Shamsudin, R., Tawakkal, I. S. M. A., Ghani, N. H. A., Kamarudin, K. M., & Mustafah, A. M. (2021), Effects of Different Fluting Medium Geometries on Von-Mises Stress and Deformation in Single Fluted Board: A Three-Dimensional Finite Element Analysis. *Advances in Agricultural and Food Research Journal*, 2(1) (**Scopus Index**)
12. Shan, H. H., Hasnan, N. Z. N., Yusoff, Y. M., Aziz, N. A., & **Basri, M. S. M.** (2021), Operational and Hygiene Problems Due to Poor Floor Drain Design and Installation in A Meat Processing. *Journal of Hygienic Engineering and Design* (**Scopus Index**)
13. **Mohd Basri, M. S.**, Mustapha, F., Mazlan, N., and Ishak, M. R. (2020), Optimization of Adhesion Strength and Microstructure Properties by Using Response Surface Methodology in Enhancing the Rice Husk Ash-Based Geopolymer Composite Coating, *Polymers*, 12(11), p.2709 (**JCR Q1**)
14. Marzuki, M.N.A., Tawakkal, I.S.M.A., **Basri, M.S.M.**, Othman, S.H., Kamarudin, S.H., Lee, C.H. and Khalina, A. (2020), The effect of jackfruit skin powder and fiber bleaching treatment in pla composites with incorporation of thymol. *Polymers*, 12(11), p.2622 (**JCR Q1**)
15. **Mohd Basri, M.S.**, Mohd Jais, N., Sulaiman, A., Mohd Nor, M.Z., Abdul Karim Shah, N.N. and Ariffin, S.H. (2020), Optimizing the processing factor and formulation of oat-based cookie dough for enhancement in stickiness and moisture content using response surface methodology and superimposition, *Processes*, 8(7), p.797 (**JCR Q2**)
16. **Mohd Salahuddin, M. B.**, Norkhairunnisa, M., Mustapha, F., Ishak, M. R. (2020), Optimization of rice husk ash-based geopolymers coating composite for enhancement in flexural properties and microstructure using response surface methodology, *Coatings*, 10(2), p.165 (**JCR Q2**)
17. Zainal A'Bidin, F., Shamsudin, R., **Mohd Basri, M.S.**, & Mohd Dom, Z. (2020). Mass Modelling and Effects of Fruit Position on Firmness and Adhesiveness of Banana Variety Nipah, *International Journal of Food Engineering*, 20190199 (**JCR Q4**)

18. Omar, J.M., Nor M.Z.M., **Basri M.S.M.**, Che Pa N.F. (2020), Clarification of guava juice by an ultrafiltration process: analysis on the operating pressure, membrane fouling and juice qualities, Food Research, 85-92 (**JCR Q4**)
19. **Mohd Salahuddin, M.B.**, Noor Emilia Adila N.A., Intan Syafinaz M.A.T. (2020), Investigation on oil absorption and microstructural properties of polyethylene composites reinforced with post-agricultural waste fillers, In Advances in Material Sciences and Engineering, 343-352. Springer, Singapore (**Scopus Index**)
20. **Mohd Salahuddin, M.B.**, Mazlan N., Mustapha F., Ishak M.R., Saprudin A.A. (2020), Factorial design approach to investigate the effect of different factors on the fire resistance, compression and adhesion properties of geopolymers binder, Journal of Mechanical Engineering and Sciences, 14(3), pp.7191-7204 (**Scopus Index**)
21. **Mohd Salahuddin Mohd Basri**, Khairul Manami Kamarudin, Nurul Ain Maidin, Mohd Hidayat Ab Rahman (2020), Aerodynamic drag study of time-trial cycling helmets using CFD analysis, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 72(1), pp.21-31 (**Scopus Index**)
22. Maidin, N.A., Rahman, M.H.A., Ahmad, M.N., **Salahuddin, M.B.M.**, Mazlan, S.N.H., Wahid, M.K., Osman, M.H. and Jumaidin, R. (2020), Design for manufacturability (DFM) of 3D printed parts fabricated using open source 3D printer. International Journal of Integrated Engineering, 12(5), pp.203-209 (**Scopus Index**)
23. Nurul Ain Maidin, Umi Hayati Ahmad, Mohd Nazri Ahmad, Ridhwan Jumaidin, Mohd Hairizal Osman, Mohammad Khalid Wahid, **Mohd Salahuddin**, Mohd Hidayat Ab Rahman (2020), Design and development of ergonomic table and analyze using rula analysis, Malaysian Public Health Physicians' Association, 20(Special 1), 138-144 (**Scopus Index**)
24. **Mohd Salahuddin Mohd Basri**, Mohd Zuhair Mohd Nor, Rosnah Shamsudin, Intan Syafinaz Mohamed Amin Tawakkal, Nur Hamizah Abdul Ghani, Khairul Manami Kamarudin, Anas Mohd Mustafah (2020), Effects of Different Fluting Medium Geometries on Von Mises Stress and Deformation in Single Fluted Board: A Three-Dimensional Finite Element Analysis, Advances in Agricultural and Food Research Journal, *In press* (**CrossRef Index**)
25. **Mohd Salahuddin, M.B.**, Fatin Atikah A., Rosnah S., Mohd Zuhair M.N. (2019), Conceptual design and finite element analysis of a high inclusion dough shaping machine using solidworks, Materialwissenschaft und Werkstofftechnik, 50, 267-273 (**JCR Q4**)
26. **Mohd Salahuddin, M.B.**, Shamsudin, R., M.Z.M. Nor (2019), Mechanical analysis of a wedge device in sawing technology, Journal of Science and Technology, 27, 197-209 (**Scopus Index**)
27. Farahana Nabilah Z.A., Rosnah Shamsuddin, **Mohd Salahuddin Mohd Basri**, Zanariah Mohd Dom (2019), Physical and mechanical properties of unripe Nipah Banana Fruit (Musa Acuminata Balbisiana), Journal of Science and Technology, 27, 149-157 (**Scopus Index**)
28. Nasruddin, N.R.A., N. Mazlan, **M.S. Mohd Basri**, A.H. Mohamed Ariff, N.A. Mohd Nasir (2018), Thermogravimetric analysis on rice husk ashes-based geopolymers paste, IOP Conference Series: Materials Science and Engineering, vol.405, no.1, p. 012014. IOP Publishing (**Scopus Index**)
29. **Mohd Salahuddin Mohd Basri**, Norkhairunnisa Mazlan, Faizal Mustapha, Mohamad Ridzwan Ishak (2017), Correlation between compressive strength and fire resistant performance of rice husk ash-based geopolymers binder for panel application, MATEC Web of Conferences, EDP Sciences, 97, 01025 (**Scopus Index**)
30. **Mohd Salahuddin Mohd Basri**, Faizal Mustapha, Norkhairunnisa Mazlan, Mohamad Ridzwan Ishak (2016), Fire retardant performance of rice husk ash-based geopolymers coated mild steel – A factorial design and microstructure analysis, In Materials Science Forum, Trans Tech Publications, 841, 48-54 (**Scopus Index**)

31. **Mohd Salahuddin, M. B.**, Norkhairunnisa, M., Mustapha, F. (2015), A review on thermophysical evaluation of alkali-activated geopolymers, *Ceramics International*, 41, 4273-4281 (**JCR Q1**)
32. **Basri, M. S. M.**, Mazlan, N., Mustapha, F. (2015), Effects of stirring speed and time on water absorption performance of blank epoxy and silica aerogel reinforced epoxy nanocomposite, *ARPN Journal of Engineering and Applied Sciences*, 10, 9982-9991 (**Scopus Index**)

Proceedings (30 recent Proceedings)

1. Christine Jamie Vincent Eddy, Rosnah Shamsudin, Azhari Samsu Baharuddin, Robiah Yunus, **Mohd Salahuddin Mohd Basri (2019)**, Finite Element Analysis of the Operating Disc in the Mesocarp and Nut Separator using Solidworks, *paper presented at the 7th International Symposium on Applied Engineering and Sciences (SAES2019)*, UPM, Selangor, Malaysia, 11-12 November 2019, 172
2. Aida Nabila Mohamad Ghazali, Rosnah Shamsudin, Azrina Azlan, **Mohd Salahuddin Mohd Basri (2019)**, Physical Properties of Three Different Grades of Dabai Fruit (*Canarium odontophyllum* Miq.), *paper presented at the 7th International Symposium on Applied Engineering and Sciences (SAES2019)*, UPM, Selangor, Malaysia, 11-12 November 2019, 173
3. Norkhairunnisa, M., Mohd Fauzi, M.N.A., **Mohd Salahuddin, M.B. (2019)**, Investigation on fire and thermal degradation properties of geopolymer composite for cabin aircraft application, *paper presented at the Case Study on Material Engineering and Applied Sciences: UPM and KU 2019*, Selangor, Malaysia, 135-151, eISBN No. 978-983-2408-68-0.
4. **Mohd Salahuddin Mohd Basri**, Faizal Mustapha, Norkhairunnisa Mazlan, Mohamad Ridzwan Ishak (2019), A novel fire retardant alkali-activated polymer coating composition based on rice husk ash, *paper presented at the Penang International Invention Innovation and Design 2019*, Penang, Malaysia, 27-28 March 2019, 598-602, ISBN No. 978-967-0841-53-3.
5. **Mohd Salahuddin Mohd Basri**, Mohd Zuhair Mohd Nor, Intan Syafinaz Mohamed Amin Tawakkal, Noor Zafira Noor Hasnan, Khairul Manami Kamarudin (2019), Biodegradable fruit waste-based polycaprolactone (pcl) plastic composite, *paper presented at the Penang International Invention Innovation and Design 2019*, Penang, Malaysia, 27-28 March 2019, 592-597, ISBN No. 978-967-0841-53-3.
6. Farahana Nabilah Z.A., Rosnah S., **Mohd Salahuddin M.B.**, Zanariah M.D. (2019), Some physical properties of mature green nipah and nangka banana fruit, *paper presented at the National Convention of Agricultural and Food Engineering 2019*, Putrajaya, Malaysia, 21 March 2019, 107-110, ISBN No. 978-967-16145-1-8.
7. Jais, N.M., **Mohd Salahuddin, M. B. (2019)**, Effect of oat to flour ratio on stickiness of the cookie dough, *paper presented at the National Convention of Agricultural and Food Engineering 2019*, Putrajaya, Malaysia, 21 March 2019, 107-110, ISBN No. 978-967-16145-1-8.
8. Muhamad Nurjafni, J., **Mohd Salahuddin, M. B. (2019)**, Misai kucing plotting arrangement under solar pv panel and harvester machine efficiency – a comparative study, *paper presented at the National Convention of Agricultural and Food Engineering 2019*, Putrajaya, Malaysia, 21 March 2019, 258-261, ISBN No. 978-967-16145-1-8.
9. **Mohd Salahuddin, M. B. (2018)**, Wedge, a new designed part integrated to a sawmill carriage for oil palm stems using polygon sawing pattern, *paper presented at the Malaysian Society of Agricultural Engineers (MSAE) Conference 2018*, Serdang, Malaysia, 7-8 February 2018, ISBN No. 97896716145-0-1.
10. **Mohd Salahuddin, M. B.**; Faizal, M.; Norkhairunnisa, M. (2014), A review on the insulation technology of liquefied natural gas (LNG) pipe insulation system. *The Postgraduate Symposium on Composites Science and Technology 2014 & 4th Postgraduate Seminar on Natural Fiber Composites 2014*, IOI Palm Garden Hotel, Putrajaya, 80-85

Patent/Copyright

1. **Mohd Salahuddin, M. B.**; Shamsudin, R.; Yaacob, M.E.; Jamaludin, M. N., "Harvesting Machine for Herbs and Tea Leaves," app. no. PI 2020003839, filing date. 24 July 2020.
2. Shamsudin, R.; **Mohd Salahuddin, M. B.**, "An Apparatus For Cutting and Peeling," app. no. PI 2019004357, filing date. 18 July 2019.
3. **Mohd Salahuddin, M. B.**; Mustapha, F.; Norkhairunnisa, M.; Ishak, M. R., "Fire Retardant Coating Composition," app. no. PI 2016701334, filing date. 12 April 2016.
4. **Mohd Salahuddin Mohd Basri**, Mohd Zuhair Mohd Nor, Intan Syafinaz Mohamed Amin Tawakkal, Noor Zafira Noor Hasnan, Khairul Manami Kamarudin, "Biodegradable Fruit Waste-Based Polycaprolactone (PCL) Plastic Composite", app. no. LY2019001670, notification no. CRLY00017559.
5. **Mohd Salahuddin Mohd Basri**, Mohd Zuhair Mohd Nor, Intan Syafinaz Mohamed Amin Tawakkal, Noor Zafira Noor Hasnan, Siti Hajar Ariffin, Mohd Roslan Rosnon, Muhammad Hazwan Hamzah, "Modul Makanan – Penerokaan Sains dan Matematik Menerusi Alam Berteraskan Makanan", app. no. LY2019005965, notification no. CRLY00020303.

Research Grants

No	Project Title	Role	Amount (RM)	Year	Source of Fund
1.	Release kinetics profile and shelf life mechanism of active biopolymer-based films containing essential oil nanoparticles for food packaging	Member	RM105,400	2020-2023	Fundamental Research Grant Scheme (FRGS) (<i>On-Going</i>)
2.	Modelling and Optimization of Coffee Brewing Process	Member	RM56,100	2020-2023	Geran Putra IPM (<i>On-Going</i>)
3.	Effect of Different Blanching Treatment on the Physico-chemical, Mechanical and Functional Properties of Dabai Fruit (<i>Canarium Odontophyllum</i> Miq.) from Different Varieties	Member	RM90,200	2019-2021	Fundamental Research Grant Scheme (FRGS) (<i>On-Going</i>)
4.	Elucidation of Porous Geopolymer based Seawater/Zeolite: Correlation Between Water Transport and Sorptivity with Porosity	Member	RM129,000	2019-2022	Fundamental Research Grant Scheme (FRGS) (<i>On-Going</i>)
5.	Development of Clustured Misai Kucing Plots in Solar PV Farms for Natural Cooling Mechanisms	Member	RM2,900,000	2018-2019	Ministry of Energy, Green Technology & Water (KeTTHA) (<i>On-Going</i>)
6.	Design and Development of an Oat Based Cookies Shaping	Leader	RM60,000	2017-2019	Geran Putra IPM (<i>Completed</i>)

Machine for Small and Medium Industry

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| 7. | Investigation of mechanical, physical and thermal properties of geopolymer binder based on rice husk ash (RHA) for suitable coating and panel applications using statistical analysis approach | Leader | RM20,000 | 2015-2016 | Geran Putra IPS
(Completed) |
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Awards/Recognition					
No.	Name of awards	Title	Award Authority	Award Type	Year

INTERNATIONAL

- | | | | | | |
|----|--|--|---|---------------|------|
| 1. | Gold Medal – ITEX 2022 | New Harvesting Machine for Agrivoltaic Herbal Crops Based on Reel-Wheel Rotating Mechanism | The International Invention, Innovation and Technology Exhibition (ITEX) | International | 2022 |
| 2. | Gold Medal – ITEX 2021 | GeoCoat – A Novel Fire Retardant Coating Based on Agricultural Waste | The International Invention, Innovation and Technology Exhibition (ITEX) | International | 2021 |
| 3. | MTE 2021 - MTUN TVET International Innovation Awards (Special Award) | New Harvesting Machine for Agrivoltaic Herbal Crops Based on Reel-Wheel Rotating Mechanism | Malaysia Technical University Network (MTUN) & Malaysia Technology Expo (MTE) | International | 2021 |
| 4. | Gold Medal – International Putra Innocreative Poster Competition | Innovative Learning Approach: Experiencing Agricultural and Food Machinery Through Low-Cost Model Construction | Universiti Putra Malaysia (UPM) | International | 2020 |
| 5. | Silver Medal – The 6th Southeast Asian Agricultural Engineering Student Chapter Annual Regional Convention 2020 (ARC 2020) | Physical Properties of Different Grades of Dabai Fruit (Canarium Odontophyllum Miq) | Malaysian Society of Agricultural and Food Engineers (MSAE) | International | 2020 |

6.	Silver Medal – The 6th Southeast Asian Agricultural Engineering Student Chapter Annual Regional Convention 2020 (ARC 2020)	Innovative Learning Approach: Realizing Agricultural and Food Machinery Through Model Construction	Malaysian Society of Agricultural and Food Engineers (MSAE)	International	2020
7.	Best Presenter Award – The 4 th International Symposium on Fluid Mechanics and Thermal Sciences 2019 (IS-FMTS 2019)	Aerodynamic Drag Study of Time-Trial Cycling Helmets Using CFD Analysis	Akademia Baru Publishing (M) Sdn Bhd	International	2019
8.	Gold Medal – The 18th International Expo on Inventions and Innovations (MTE 2019)	Junior Stem Chef: A Teaching Innovation Module to Enhance Stem Learning Process Among Murid Orang Asli	Malaysian Association of Research Scientists (MARS)	International	2019
9.	3 rd Price Poster Presentation – 2nd International Food Research Conference 2019 (IFRC 2019)	Characterisation and Antimicrobial Activity of Jackfruit Peel-Based Films Incorporated with Thymol	Universiti Putra Malaysia (UPM)	International	2019
10.	Bronze Medal – Penang International Invention Innovation and Design (PIID) 2019	Biodegradable Fruit Waste-Based Polycaprolactone (PCL) Plastic Composite	UiTM Cawangan Pulau Pinang	International	2019
11.	Bronze Medal – Penang International Invention Innovation and Design (PIID) 2019	A Novel Fire Retardant Alkali-Activated Polymer Coating Composition Based on Rice Husk Ash	UiTM Cawangan Pulau Pinang	International	2019
12.	Best Paper – CAFEi 2018	Mechanical Analysis of a Wedge Device in Sawing Technology	Department of Process and Food Engineering & Department of Biological and Agricultural Engineering, UPM	International	2018
13.	Diamond Award (<i>highest award</i>)	Fire Retardant Coating Composition	MNNF Network & MNNF Publisher	International	2016

14.	Bronze Award for Best Paper – MIGS 2015	Fire Retardant Performance of Rice Husk Ash-Based Geopolymer Coating Mild Steel - A Factorial Design and Microstructure Analysis	Konsorsium Riset Geopolimer Indonesia & Malaysian Geopolymer Society	International	2015
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NATIONAL

1.	Consolation Prize – Pertandingan Inovasi Teknologi Pertanian dan Makanan Mampan	New Harvesting Machine for Agrivoltaic Herbal Crops Based on Reel-Wheel Rotating Mechanism	Malaysian Society of Agricultural and Food Engineers (MSAE)	National	2021
2.	Best Paper – MSAE Webinar Conference 2020	Effect of Different Fluting Medium Geometries on Von-Mises Stress and Deformation in Single Fluted Board: A Three Dimension Finite Element Analysis	Malaysian Society of Agricultural and Food Engineers (MSAE)	National	2020
3.	Gold Medal – Pertandingan Rekapipta Inovasi Nasional – Kejuruteraan dan Alam Bina 2019 (PRIN-KAB 2019)	Lab Work Video (LWV): A Tool for Course Assessment and Teaching Aid in Undergraduate Program	Jabatan Pelajaran Negeri Selangor & Bahagian Pendidikan Teknik Latihan dan Vokasional (BPLTV)	National	2019
4.	Gold Medal – Pertandingan Rekapipta Inovasi Nasional – Kejuruteraan dan Alam Bina 2019 (PRIN-KAB 2019)	Cilik Stem Chef: Inovasi Modul Pengajaran untuk Meningkatkan Proses Pembelajaran Stem Dikalangan Murid Orang Asli dan Bandar	Jabatan Pelajaran Negeri Selangor & Bahagian Pendidikan Teknik Latihan dan Vokasional (BPLTV)	National	2019
5.	Bronze Medal – Eduinnovation 2018	Word Gamification – A Hybrid Digital/Physical Activities	UKM	National	2018
6.	Silver Medal – GISC and ISTEMO 2018	Utilize Fruit Waste for Greener Future	MOE, UPMSTEM, MRSM and STEM Teachers Association of Malaysia	National	2018

7.	Gold Medal and Most Creative Project Award – Global I-Lead Stem Camp 1 Malaysia	New Alternative as biodegradable Fillers Reinforced Low Density Polyethylene Composite for Numerous Application	UPM & SBPI Selandar	National	2017
8.	Bronze Medal	Wedge, A New Designed Part Integrated to A Sawmill Carriage for Oil Palm Stems Using Polygon Sawing Machine	Malcourse	National	2017
9.	UPM Representative	Reduce The Heat, Save The Earth	Three Minutes Thesis, Kementerian Pendidikan Malaysia (KPM)	National	2015

UNIVERSITI & FACULTY

1.	Gold Medal – Student's Final Year Project	Optimization of Rice Husk Ash-Based Geopolymer Coating for Enhancement in Color Intensity, Thermal and Microstructural Properties	Faculty of Engineering, UPM	Faculty	2021
2.	Gold Medal – Student's Final Year Project	Development and Optimization of Eco-Friendly Marker Ink using Mangosteen Leaves	Faculty of Engineering, UPM	Faculty	2020
3.	Silver Medal – Student's Final Year Project	Utilization of Rice Husk Ash and Silicone Rubber in the Production of Moisture-Fire Retardant Geopolymer Composite Coating using Response Surface Methodology	Faculty of Engineering, UPM	Faculty	2020
4.	Best Project – Student's Final Year Project	Design, Fabrication and Performance Evaluation of A New Harvesting Machine for Medicinal Herbal Plant (Misai Kucing) under Photovoltaic Solar Penal	Faculty of Engineering, UPM	Faculty	2019
5.	Silver Medal – Student's Final Year Project	Effects of Oats and Flour Composition on the Stickiness and Moisture Content of Cookies Dough and Their Performance Evaluation on the Cookies Shaping Machine	Faculty of Engineering, UPM	Faculty	2019

6.	Best Project – Student's Final Year Project	Design and Analysis of an Oat-Based Cookies Machine	Faculty of Engineering, UPM	Faculty	2018
7.	Silver Medal – Student's Final Year Project	Effects of Different Fillers on Oil Absorption and Flexural Properties of Filler-Based Polyethylene Composite	Faculty of Engineering, UPM	Faculty	2018
8.	Putra Innocreative Awards – Best Innocreative in Transformative Teaching (participant)	Effect of SCL-based teaching tools and various type of group works on the student's overall performance based on the cognitive, psychomotor and affective domain	UPM	University	2018
9.	Putra Innocreative Awards – Best Innocreative in Immersive Learning Experience (participant)	Integrated SCL-based teaching tools and various type of class activities as new way of blended learning experience	UPM	University	2018
10.	2 nd Runner up	Fire, Not A Question Of How, But The Question Of When	Three Minutes Thesis, UPM	University	2016
11.	Winner	Falsafah Sains Daripada Perspektif Islam	Perpustakaan Sultan Abdul Samad & MPP, UPM	University	2016
12.	2 nd Runner up	Rice Husk Insulation, Save Energy, Save Money	Three Minutes Thesis, UPM	Faculty	2016
13.	Winner	Rice Husk Ash Based Geopolymer Coating (GeoCo)	Three Minutes Thesis, UPM	Faculty	2014

Professional Services/Consultation				
No.	Role	Title	Year	

JURY

1.	Jury	7 th Southeast Asian Agricultural Engineering Student Chapter Annual Regional Convention 2021 (ARC2021)	2021
2.	Jury	Research & Innovation Technology Competition 2021 (RITEC 2021)	2021
3.	Jury	International Conference on Sugar Palm and Allied Fibre Polymer Composites 2021 (SAPC 2021)	2021
4.	Jury	Virtual Innovation Competition 2021 (VIC21)	2021

5.	Jury	International Invention & Innovative Competition (InIIC Series 1/2021)	2021
6.	Jury	National Agricultural and Food Engineering Convention (NAFEC) 2021	2021
7.	Jury	Final Year Project & Postgraduate: Research & Innovation Poster Competition (RIPC Series 2/2021)	2021
8.	Jury	Thesis in 5 Minutes (T5M Series 2/2021)	2021
9.	Jury	Three Minute Thesis Faculty Level 2021	2021
10.	Jury	3 Minutes Thesis Competition 2020 (Faculty Level)	2020
11.	Jury	5th Southeast Asian Agricultural Engineering Student Chapter Annual Regional Convention 2019	2019
12.	Jury	3 Minutes Thesis Competition 2019 (Faculty Level)	2019
13.	Jury	International Invention & Innovation Competition (InIIC Series 2/2019)	2019
14.	Jury	Materials Lecture Competition 2019 (UPM Level)	2019
15.	Jury	4 th International Conference on Agricultural and Food Engineering (CAFEi2018)	2018
16.	Jury	3-Minute Thesis (Faculty of Medicine and Health Science)	2018
17.	Jury	3-Minute Thesis (Faculty of Engineering)	2018

REVIEWER

1.	Reviewer	Sustainability	2022
2.	Reviewer	Crystals	2022
3.	Reviewer	Biomass Conversion and Biorefinery	2022
4.	Reviewer	Current Journal of Applied Science and Technology	2021
5.	Reviewer	Cosmetics	2021
6.	Reviewer	Sustainability	2021
7.	Reviewer	Asian Journal of Applied Chemistry Research	2021
8.	Reviewer	Journal of Experimental Agriculture International	2021
9.	Reviewer	10 th Global Conference on Materials Science and Engineering	2021
10.	Reviewer	Konferen Webinar MSAE 2020	2020

11.	Reviewer	1 st international Conference on Biomass Utilization and Sustainability Energy 2020	2020
12.	Journal Reviewer	IOP Conference Series: Materials Science and Engineering	2018
13.	Journal Reviewer	Journal of Science and Technology (PERTANIKA)	2018
14.	Technical Reviewer	4 th International Conference on Agricultural and Food Engineering (CAFEi2018) Proceeding	2018

PANEL, SPEAKER, MODERATOR, FACILITATOR, COMMITTEE MEMBER

1.	Academic Panel	KPM JINM Sharing Session	2021
2.	Committee Member (Registration and E-Cert)	Asia Packaging Network (APN) International Packaging Symposium 2021	2021
3.	Committee Member (Chairman)	Materials Lecture Competition Committee for the 2020 - 2022 Council Session	2021
4.	Committee Member	Institute of Materials, Malaysia	2020-2022
5.	Committee Member (Secretary II)	5th International Conference on Agricultural and Food Engineering	2020-2021
6.	Committee Member (Registration)	MSAE Conference 2020	2019-2020
7.	Interview Panel	Program Student Assessment Centre (SAC) bagi Program Pelajar Cemerlang (PPC) Tajaan Jabatan Perkhidmatan Awam (JPA) Tahun 2019	2019
8.	Speaker	3 Minutes Thesis Sharing Session	2019
9.	Committee Member (Secretary I)	Materials Lecture Competition 2019 (MLC2019)	2019
10.	Committee Member (Secretary I)	Konvensyen Kebangsaan Kejuruteraan Pertanian dan Makanan 2019	2018-2019
11.	Committee Member (Scientific)	4 th International Conference on Agricultural and Food Engineering (CAFEi2018)	2018
12.	Committee Member (Secretary I)	Materials Lecture Competition 2018 (MLC2018)	2018
13.	Committee Member (Secretary I)	MSAE Conference 2018	2018
14.	Committee Member (Logistic & Technical)	4 th International Conference on Agricultural and Food Engineering (CAFEi2018)	2018
15.	Session Chair	4 th International Conference on Mechanical, Manufacturing and Plant Engineering (ICMMPE2018)	2018
16.	Speaker	Food: Art, Science and Technology Conference	2018

17.	Moderator	Food: Art, Science and Technology Conference	2018
18.	Facilitator	Program Pengukuhan STEM (Kejuruteraan) Murid Sekolah Orang Asli (STEM-MOA)	2018
19.	Facilitator	Global I-Lead Stem Camp 1Malaysia 2018	2018
20.	Facilitator	Program Pembudayaan Kemahiran Berfikir Aras Tinggi Sains dan Matematik 2018	2018
21.	Facilitator	Karnival Kecemerlangan STAR 2018	2018
22.	Committee Member	Program Pameran Hari Peladang, Penternak Dan Nelayan 2017	2017
23.	Facilitator	Global I-Lead Stem Camp 1Malaysia 2017	2017

Student Supervision

PhD

No.	Name	Title	Status
1.	Raza Ali (GS50205) Co-Supervisor	Design of Turmeric Processing Unit to Preserve Curcumin	On Going
2.	Mohd Khairul Hafiz bin Muda (GS45892) Co-Supervisor	Fire Retardant Material Based on Rice Husk Ash for Real Engineering Applications	On Going
3.	Tay Chai Hua (GS54939) Co-Supervisor	Development of Nanoporous Pipe for Oil Palm Irrigation System	On Going
4.	Farhana Azmira binti Asmadi (GS54939) Co-Supervisor	Characterization of Active Bio-Polymer Composite Films Incorporated With Essential Oils Nanoparticles for Food Packaging	On Going

MS with thesis

No.	Name	Title	Status
1.	Farahana Nabilah binti Zainal A'bidin (GS50319) Co-Supervisor	Development and Performance Evaluation of a Banana Peeling Machine for Use in Small Scale Industry	On Going
2.	Aida Nabila binti Mohamad Ghazali (GS52938) Co-Supervisor	Design and Develop the Separation Process of Dabai Fruit	On Going

Bachelor (Final Year Project) - Main Supervisor

No.	Name	Title	Status
1.	Nur Aini Sofia Binti Hashim Tee (198442)	Optimization of Durian Husk Fiber/Rice Husk Ash-Based Geopolymer Composite Foam for Enhancement in Compressive Strength and Total Porosity using Response Surface Methodology	On Going
2.	Hanis Nabilah Binti Mohd Yusmizar (198329)	Statistical Modelling and Optimization of the Compressive Strength and Total Porosity of Rice Husk Ash-Based Geopolymer Foam Incorporating Cellulose Isolated from Durian Husk Using Response Surface Methodology	On Going
3.	Nurul Husna Binti Mohd Azib (192569)	Optimizing the Processing Factors and Formulation of Porous Rice Husk Ash-Based Geopolymer Foam for Enhancement in Thermal Conductivity, Flexural Properties and Microstructure	Completed (2021)
4.	Nurul Najwa Bt Ahmad Nizam (191915)	Optimization of Rice Husk Ash-Based Geopolymer Coating for Enhancement in Color Intensity, Thermal and Microstructural Properties	Completed (2021)
5.	Tee Hui Yek (188060)	Utilization of Rice Husk Ash and Silicone Rubber in the Production of Water-Fire-Resistant Geopolymer Coating Composite using Response Surface Methodology	Completed (2020)
6.	Brenda Liew Min Ren (187150)	Development and Optimization of Plant-Based Marker Ink Using Mangosteen Leaves	Completed (2020)
7.	Nurain binti Mohd Jais (1812189)	Performance Evaluation of Cookies Shaping Machine Based on Different Properties of the Cookie Dough	Completed (2019)
8.	Muhamad Nurjafni bin Jamaludin (181808)	Design, Fabrication and Performance Evaluation of a New Harvesting Machine for Medicinal Herbal Plant (Misai Kucing) Under Photovoltaic Solar Panel	Completed (2019)
9.	Noor Emilia Adila binti Noor Arzahan (180117)	Effects of Different Fillers on Oil Absorption and Flexural Properties of Filler-Based Polyethylene Composite	Completed (2018)
10.	Fatin Atikah binti Abdullah (178438)	Design and Analysis of an Oat-Based Cookies Machine	Completed (2018)

Teaching Experience	
Year	Course Code/Name
1. Second Semester 2021/2022	EPF4808: Processing Machinery System and Automation (3+0)
2. First Semester 2021/2022	EPF4807: Processing Machinery Elements Design (3+0)
3. Second Semester 2020/2021	EPF4808: Processing Machinery System and Automation (3+0)
4. First Semester 2020/2021	EPF4807: Processing Machinery Elements Design (3+0)
5. Second Semester 2019/2020	EPF4808: Processing Machinery System and Automation (3+0)
6. First Semester 2019/2020	EPF4807: Processing Machinery Elements Design (3+0)
7. Second Semester 2018/2019	ECC3002: Engineering Mathematics II (3+0) ECC3012: Engineering Mathematics II (3+0) EPF3106: Food Process Engineering Laboratory III (0+1)
8. First Semester 2018/2019	ECC3001: Engineering Mathematics 1 (3+0) EPF3105: Food Process Engineering Laboratory II (0+1)
9. Second Semester 2017/2018	EMM3518: Computer Aided Engineering Design (1+2)
10. First Semester 2017/2018	EPF4801: Process Equipment Design (3+0)