

CURRICULUM VITAE



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Web: <https://manufacturing.unimap.edu.my/>

AREAS OF INTEREST: Product Development, Pneumatic System Design, Machining & Manufacturing Technology.

EDUCATIONAL QUALIFICATION

1. Master of Engineering Mechanical (Advanced Manufacturing Technology), 2013, Universiti Teknologi Malaysia (UTM), Malaysia.
2. Bachelor (Hons) of Engineering (Manufacturing), 2008, University Malaysia Perlis (UniMAP), Malaysia.
3. Diploma mechanical Engineering, 2004, Politeknik Sultan Abdul Halim Mu'Adzam Shah (POLIMAS), Malaysia.
4. Sijil Pelajaran Malaysia (SPMV), 2000, Sekolah Menengah Teknik Kangar, Perlis, Malaysia.

PROFESSIONAL MEMBERSHIP

1. Professional Technologist, Malaysia Board of Technologist (MBOT), 28 Feb 2018.
2. Graduate Member, Board of Engineers Malaysia (BEM), 91804A, 20 May 2014.
3. Graduate Technologies, Malaysia Board of Technologist (MBOT), GT18020041, 27 Jan 2018.
4. Member, Technological Association of Malaysia, M 5213, 22 May 2011.
5. Member, Majlis Rekabentuk Malaysia (MRM), Member ,1-A-000315, 2016.

WORKING EXPERIENCE

| | |
|--------------------------|--|
| Post | <ol style="list-style-type: none"> 1. Lecturer, Feb 2013 – present, UniMAP. 2. Felo Slab, Sept 2011- Feb 2013, UniMAP. 3. Teaching Engineer, Oct. 2008 – Sept 2011, UniMAP. |
| Subject Conducted | <p>Undergraduate Programme</p> <ol style="list-style-type: none"> 1. EPT181 CAD/CAM, 2. EPT192 Product Innovation, 3. DPT335 Production Planning and Control, 4. PDT109 Workshop Practice, 5. PDT212 Geometric Dimensioning and Tolerancing, 6. PDT206 Jig and Fixtures Design, EPT152 Engineering Drawing, 7. EPT427 Pneumatic and Hydraulic System Design, 8. EPT 293 Engineering Product Design 1, 9. EPT445 Final Year Project 1, 10. EPT446 Final Year Project 2. |

RESEARCH GRANTS

| No | Project Title | Amount | Year | Source of Fund |
|--------------|---|------------------|-------------------------------|---|
| 1 | Design Improvement of Side Arm Rejected Due to Burning Process, (Co Researcher). | RM 10,000 | 2009 - 2010 | UniMAP (STG) 9001-00180 (Completed). |
| 2 | The Study and Design of Mobile Rice Milling Machine, (Co Researcher). | RM 8,000 | 2008 -2009 | UniMAP (STG) 9001-00112 (Completed). |
| 3 | Optimization of Cutting Parameter for Turning Operation On the Quality of Surface Roughness, (Researcher). | RM 5,000. | Jan 2013 - Jan 2014 | UniMAP (STG) 9001-00461 (Completed). |
| 4 | Automated Swallow Bird Feeding Machine, (Researcher). | RM 50,000 | Oct. 2015 - April 2016 | KPT (PPRN): 9002-00036 (Completed). |
| 5 | A Freeze And Chill Container Box That Is Attached To A Motorcycle For Faster Delivery Of Goods, (Co Researcher). | RM 38,700 | Dis 2015 - Mei 2016 | KPT (PPRN): 9002-00045 (Completed). |
| 6 | Autofeeder Machine For Large Scale Marin Fish Cage, (Researcher). | RM 31,000. | Jun 2016 - Dis 2016 | KPT (PPRN): 9002-00047 (Completed). |
| 7 | Sandal Machine: Gluing, Drying And Cutting, (Co Researcher). | RM 32,000 | July 2016 - Jan 2017 | KPT (PPRN): 9002-00050 (Completed). |
| 8 | Salted Eggs Coating Machine, (Co Researcher). | RM 34,600 | Aug 2016 - Feb 2017 | KPT (PPRN): 9002-00051 (Completed). |
| 9 | Performance Evaluation On Movement Of Pneumatic Artificial Muscle For Accurate Positioning, (Co Researcher). | RM 56,000 | Dis 2014- Dis 2016 | UniMAP (RAGS) 9018-00079) (Completed). |
| 10 | Design And Development Of Transplanter Machine For System Of Rise Intensification (Sri) Cultivation In Malaysia, (Co Researcher). | RM 20,000 | Dis 2016 – Dis 2017 | UniMAP (STG) (On-Going). |
| 11 | Improvements process of making bahulu (filling machine/ Mixer dough/ pump dough into filling machine. (Co Researcher). | RM 30 000 | March 2017 - March 2018 | Mcash (Completed). |
| 12 | Bahulu Filling Machine, (Co Researcher). | RM 45 800 | 1 apr 2018 - 1 Aug 2018 | KPT (PPRN): (On-Going). |
| TOTAL | | RM360,500 | | |

AWARDS/RECOGNITION

| No | Name of awards | Title | Award Authority | Award Type | Year |
|----|------------------|---|---|---------------|------|
| 11 | Gold Medal | Triple Row SRI Weeder Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 1 | Best of the best | Automated Swallow Bird Feeding Machine | Ekspo Rekacipta dan pameran Penyelidikan UniMAP. | University | 2015 |
| 2 | Special Award | StanceWheel | 27th International Invention, Innovation and Technology Exhibition, ITEX. | International | 2016 |
| 3 | Grand Award | Chili Seed Separator Machine | Malaysia Technology Expo, MTE. | National | 2011 |
| 4 | Best Invention | New Discovery Method of Manufacturing Catheters | 21 st International Invention, Innovation and Technology Exhibition, ITEX. | International | 2010 |
| 5 | Gold Medal | Wheelchair Dentistry | International Invention Fair (SIIF) KOREA. | International | 2017 |
| 6 | Gold Medal | A Freeze and Chill Container Box That Is Attached To A Motorcycle For Faster Delivery Of Goods | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2016 |
| 7 | Gold Medal | StanceWheel | 27th International Invention, Innovation and Technology Exhibition, ITEX. | International | 2016 |
| 8 | Gold Medal | Automated Swallow Bird Feeding Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 9 | Gold Medal | StanceWheel | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 10 | Gold Medal | Salted Egg Processing Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 11 | Gold Medal | Triple Row SRI Weeder Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 12 | Gold Medal | A New Washing Process Which Combines Deflection and Abrasion Action Due to The Hydrodynamic and Impact Water Jet Working Liquid | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2013 |
| 13 | Gold Medal | Kapok Seed Separating Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2010 |

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|----|--------------|--|---|---------------|------|
| 14 | Gold Medal | Dried Chili Seed Separator Machine | 21st International Invention, Innovation and Technology Exhibition, ITEX. | International | 2010 |
| 15 | Gold Medal | New Discovery Method of Manufacturing Catheters | 21st International Invention, Innovation and Technology Exhibition, ITEX. | International | 2010 |
| 16 | Gold Medal | Roselle Seed Capsule Cutting Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2010 |
| 17 | SILVER Medal | Swiftlet's Fountain Feeding Machine | Malaysia Technology Expo (MTE) | International | 2017 |
| 18 | SILVER Medal | Onion Peeler | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 19 | SILVER Medal | De-Husking Machine and De-Shelling Coconut machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 20 | SILVER Medal | Cockle Washing Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2015 |
| 21 | SILVER Medal | Automatic Cloth Folding & ironing Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2013 |
| 22 | SILVER Medal | Kapok Seed Separating Machine | 22nd International Invention, Innovation and Technology Exhibition, ITEX. | International | 2011 |
| 23 | SILVER Medal | Smart Qiblat | 22nd International Invention, Innovation and Technology Exhibition, ITEX. | International | 2011 |
| 24 | SILVER Medal | Rosella Seed Capsule Cutting Machine | 22nd International Invention, Innovation and Technology Exhibition, ITEX. | International | 2011 |
| 25 | SILVER Medal | New Discovery Design of Side Arm for Catheters Manufacturing Process | Seoul International Invention Fair (SIFF) | International | 2011 |
| 26 | SILVER Medal | New Discovery Method of Manufacturing Catheter | Invention, Innovation & Design (IID) , UiTM Kedah. | National | 2010 |
| 27 | SILVER Medal | Portable Paddy De-Husking Machine | Malaysia Technology Expo (MTE) | National | 2010 |

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|----|--------------|--|---|---------------|------|
| 28 | SILVER Medal | Chili Seed Separator Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2010 |
| 29 | SILVER Medal | Smart Qiblat | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2010 |
| 30 | SILVER Medal | Design Improvement of Side Arm Rejected Due to Burning Process | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2009 |
| 31 | SILVER Medal | Portable Paddy De-Husking Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2009 |
| 32 | SILVER Medal | Satey Grill | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2009 |
| 33 | BRONZE Medal | Patient Lifter | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2016 |
| 34 | BRONZE Medal | Coconut De-Husking and De-shelling Machine | BioMalaysia Conference & Exhibition, Malaysia | National | 2014 |
| 35 | BRONZE Medal | Shrimp Paste Extruding Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2011 |
| 36 | BRONZE Medal | Dried Chili Seeds Separating Machine | INOVA , 36th International Invention Show, Zagreb, Croatia. | International | 2011 |
| 37 | BRONZE Medal | Portable Paddy De-Husking Machine | Malaysia Technology Expo (MTE) | National | 2010 |
| 38 | BRONZE Medal | Satey Grill | Invention, Innovation & Design (IID), UiTM Kedah. | National | 2010 |
| 39 | BRONZE Medal | Peanut Skin Separator Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2010 |
| 40 | BRONZE Medal | Portable Rice Polishing Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2010 |
| 41 | BRONZE Medal | Portable Rice Cleaner Machine | Ekspo Rekacipta dan Pameran Penyelidikan UniMAP | University | 2009 |

INTELLECTUAL PROPERTY

1. New Malaysian Patent Application, A De-Seeding Apparatus, Patent application no: P1 2011700184.
2. Copyright UK, Automated Swiftlets Fountain Feeding Machine, Registration Number: 284710972.

PUBLICATION

Publications (Scopus Indexed)

1. Mohd Zakimi Zakaria, Hishamuddin Jamaluddin, Robiah Ahmad, Azmi Harun, **Radhwan Hussin**, Ahmad Nabil Mohd Khalil, Muhammad Khairy Md Naim, Ahmad Faizal Annuar: Perturbation Parameters Tuning of Multi-Objective Optimization Differential Evolution and Its Application to Dynamic System Modeling, Jurnal teknologi, 2015.
2. **H. Radhwan**, A. N. M. Khalil, M. F. M. A. Hamzas: Minimization on Warpage Defect in Injection Molding Part of ABS (Acrylonitrile Butadiene Styrene) Material by Using Design of Experiment (DOE). International Review of Mechanical Engineering.
3. N. M. Khalil, **H. Radhwan**, A. I. Azmi, H. M. Salleh: Comparison of Machinability Study of Palm Oil-Based Wax/ Polymer/ Palm Oil Fiber Blends. International Review of Mechanical Engineering.
4. M A Fairuz, M R M Hafiezal, **R Hussin**, S A Adam, A F Aiman: Performance Study of WEDMed on Inconel 718 by Using Response Surface Methodology. International Review of Mechanical Engineering.
5. **R.hussin**, R.Mohd Saad, M.R.M.Hafiezal, M.A.Fairuz: Optimization of the Plastic Injection Molding Parameters for Sport Equipment by Using Design of Experiment. International Review of Mechanical Engineering,2013.
6. **Radhwan Hussin**, Rozaimi Mohd Saad, Razaidi Hussin, Mohd Syedi, Imran Mohd Dawi: An Optimization of Plastic Injection Molding Parameters Using Taguchi Optimization Method.
7. F. Annuar, M. S. Abdul Manan, **H. Radhwan**, A. N. M. Khalil, M. Z. Zakaria, H. Azmi: Study of Stress Intensity Factors of Primary Crack with Influence of Kerf as Replacement for Subsequent Crack in Multiple Edge Crack Study. World Virtual Conference on Applied sciences and Engineering Applications, Johor Baharu, Malaysia; 06/2015
8. H. Azmi, A. B. Sanuddin, M. Z. Zakimi, M. S. Jamali, **H. Radhwan**, A. N. M. Khalil, N. A. Akmal, A. F. Annuar: Design and Development of a Coconut De-Husking Machine (Machine Component Design. World virtual conference On applied sciences and engineering application, Johor Baharu, Malaysia. 06/2015
9. A.N.M.khalil, **H.Radwan**, F.Annuar, H.Azmi, M.Z.Zakaria: Study of Machining Characteristics of LLPDE/Palmac Palm Oil-Based Wax Blend for Prototype Applications. World virtual conference On applied sciences and engineering application, Johor baharu, Malaysia. 06/2015
10. **H Radhwan**, M T Mustafa, A F Annuar, H Azmi, M Z Zakaria, A N M Khalil: An Optimization of Shrinkage in Injection Molding Parts by Using Taguchi Method. World virtual conference On applied sciences and engineering application. 06/2015

STUDENT SUPERVISION

DEGREE – Project Final year student Manufacturing Engineering and Product Design Engineering

Year 2013/2014 (Completed)

1. Nor Nafishah Bt. Shamsudin 101050848, 2014, “Minimization of warpage and Shrinkage in injection-molding parts using Design of Experiment, Supervisor”.

Year 2014/2015 (Completed)

1. Soraya Hanum binti Rosli 111051803, 2015, “ An optimization cutting parameters for surface roughness in turning operation of aluminum work piece”, Supervisor.
2. Nurul Nadia Binti Kumasi 111051551, 2015. “Design and analysis of jigs and fixtures for manufacturing process”, Supervisor.
3. Norazwin binti Mohamad Jalani 111051243, 2015, “ Optimization parameters to reduce the warpage defect of plastic injection molding process for a thin-shell part using DOE”, Supervisor.

Year 2015/2016 (Completed)

1. Mohd Arif Bin Hassan 121050945, 2016, "Design and analysis of automated swallow bird feeding machine", Supervisor.
2. Nur Atiqah Binti Mohamd Nor 121121692, 2016, "design process with focus on design for easy assembly: a case study for automated swallow bird feeding machine Supervisor.
3. Naim Bin Abd Halim 121122767, 2016, " Optimization parameter effects on the strength of the three-dimensional printing (3d printing) fused deposition modeling (fdm) process", Supervisor.
4. Norazlin Bte Saari 121121581, 2016, " Optimization parameter effects on the quality surface finish of the three-dimensional printing (3d printing) fused deposition modeling (fdm) process, Supervisor.
5. Muhammad Aliff Bin Roslan 121122733, 2016, " An ergonomic case study: reducing potential hazards affecting car mechanic in automotive garage", Supervisor.
6. MohdAizad Bin Shafiai 131051066, 2016, " Design and analysis of onion peeler machine", Supervisor.
7. Kok Yen Yen 121120603, 2016, " Design and analysis of garlic peeler machine", Supervisor.
8. Shuliana Binti Ghazali 131052481, 2016, "Double sided assembly line balancing problem by using ranked positional weight method: an automotive industrial case study, Supervisor.
9. Aishatul Fadhilah Binti Ramzi 131050128, 2016, " Double sided assembly line balancing problem by using COMSOAL: an automotive industrial case study", Supervisor.

Year 2016/2017 (Completed)

1. NurSyafiqah Binti Shamsuddin 131122077, "Design and development a harvesting mechanism of swiftlet's bird nest", Supervisor,
2. Umi Najida Binti Mohd Al-Hadi 141050852, " Balancing Single Model Two-Sided Assembly Line by Using Conventional Method", Supervisor.
3. Nurul Azmera Binti Tasmiruddin 141050833, " Balancing Single Model One-Sided Assembly Line by Using Conventional Method", Supervisor.
4. NurHazirah Binti Jalil 13112993, " Design and Analysis Auto Feeder Machine for Large Scalemarine Fish Cages, Co Supervisor.

Year 2017/2018 (Completed)

1. Safi Syakirah Binti Mohamad 141121605, "Optimization Parameter Effects On the Quality Surface Finish of the Three-Dimensional Printing (3D Printing) Fused Deposition Modelling (FDM) using RSM", Supervisor.
2. Mohd Hanif Bin Zulkifli 151050843, " Redesign of Bahulu Production Layout to improve efficiency of process flow", Supervisor.
3. Haniff Nadhirah Binti Yusoff 141050771, " Fabrication and DFMA Analysis of Swiftlets Nest Harvesting Tool", Supervisor.

Student Attachment – Industrial Training

1. Suhelmi Bin Sawal, Diploma Kemahiran Malaysia (Tahap 4), Institut Kemahiran Belia Negara Chembong, Julai – September 2014.
2. Muhammad Adzim Bin Ahmad, Diploma Teknologi Mekatronik, Pusat Latihan Teknologi Tinggi (ADTEC), Julai – Desember 2016.
3. Mohd Afi Aiman Bin Karim, Diploma Kejuruteraan Mekanikal, Politeknik Tengku Syed Sirajuddin, Jun – November 2016.

EXPERIENCE ADMINISTRATION

1. **Gold Medal Triple Row SRI Weeder Machine** Ekspo Rekacipta dan University 2015
1. **Cooperative Board Members**, Koperasi UniMAP Perlis (kounimap) Berhad, Sept 2017 – present
2. **Audit Committee Member**, Alumni UniMAP, 2016 – present.
3. **Intellectual Property Technical Committee members**, UniMAP, Universiti Malaysia Perlis (UniMAP), Okt 2016 – present
4. **Assistant Principal** Kolej Kediaman Tunku Abdul Rahman, Universiti Malaysia Perlis (UniMAP), April 2014 To Nov 2017.
5. **Project Leader** Design for Sustainable Research Group (DEFOS), Universiti Malaysia Perlis (UniMAP), Nov 2015 - I Dis 2016.
6. **Project Manager** School of Manufacturing Racing TEAM (SMaRT), Universiti Malaysia Perlis (UniMAP), Dis 2013 To Nov 2015.
7. **Vice Chairman** of UniMAP Cafeteria. Kolej kediaman Universiti Malaysia Perlis (UniMAP), 2015 & 2016.
8. **Event manager** Product design expo 1, School of Manufacturing Engineering, Universiti Malaysia Perlis (UniMAP) 2015 & 2016.
9. **Coordinator Final Year Project 1 & 2**, School of Manufacturing Engineering, Universiti Malaysia Perlis (UniMAP), Sept 2015 - Jun, 2016 (2 semester).
10. **Committee members**, Asia Pasific Symposium on Advancements in Ergonomics and Safety (ERGOSYM 2015) & (ERGOSYM 2011).
11. **Promotion Committee Members**, Universiti Malaysia Perlis (UniMAP).2009 & 2010.
12. **Promotion and Corporate Committee Members**, School of Manufacturing Engineering,Universiti Malaysia Perlis (UniMAP).2009, 2010 & 2011

CONSULTATION SERVICES & COMERCIALIZATION

| NO | COMPANY | ISSUE |
|----|--|--|
| 1 | Siding Klasik Enterprise No12, Jalan Dato Haji Wan Ahmad, Kampung Padang Siding, Pauh, 02600 Arau,Perlis. | Improvements process of making bahulu Fabricate machine filling, Mixer Dough and pump dough. (Mac 2017- Present) |
| 2 | Julang Jaya Resources Sdn.Bhd Lot P1-5, Plaza Dwi Tasek, Jalan 5/105 Bandar Sri Permaisuri,56000 Kuala Lumpur. | Development Patient Lifter. (Mei 2016 – present) |
| 3 | Bahagian Perkhidmatan Pusat Pergigian Negeri Perlis, Tingkat 2, Kompleks JKN Perlis, Jalan Utan Aji, 01000 Kangar Perlis. | Stance Wheel Technical Expertise (testing, design improvement and product development. (Jan 2016 – Dis 2016) |
| 4 | Layang-Layang Maju Enterprise. Kampung Belukar,02600 Arau, Perlis. | Development Automated Swiftlets Feeding machine. (Oct. 2015- April 2016) |
| 5 | Sekolah Menengah Agama Al-Madrasah Al Alawiyah Ad Dinah. 02600 Arau, Perlis, Malaysia | -Mentor 'KELAB INOVASI DAN ROBOTIK'. -Panel of innovation competition (2016 & 2017) |
| 6 | Global Livestock Services sdn bhd. Level 23-1, Premier Suite One Mont Kiara, No,1, Jalan Kiara Mont Kiara,50480 KL. | Development A freeze and chill container box that is attached to a motorcycle for faster delivery of goods(Dis 2015- Mei 2016) |
| 7 | Sentuhan Budi Trading No. 82-B, Kampung Chemumar Tengah, Perlis, 02700 Simpang Ampat, Malaysia | Development of machine process for Gluing, Drying and Cutting. (July 2016 –Jan 2017) |

- 8 **AS Baiduri Enterprise** Development autofeeder machine for large
A02-B, Jalan Baiduri 5/2, Taman Teluk Baiduri, scale Marin fish cage.
0800 Sungai Petani, Kedah Darul Aman. (Jun 2016 - Dis 2016)