

Dr. Januar Parlaungan Siregar



Senior Lecturer
Faculty of Mechanical Engineering,
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Academic Qualification

PhD (Mechanical Engineering), Universiti Putra Malaysia
M.Sc. (Mechanical Engineering), Universiti Putra Malaysia
B.Eng. (Mechanical Engineering), Universitas Trisakti, Indonesia

Working Experiences / Appointment

January 2013 to date	Senior Lecturer Faculty of Mechanical Engineering Universiti Malaysia Pahang
May 2007 - June 2009	Research Assistant Department of Mechanical and Manufacturing Faculty of Engineering Universiti Putra Malaysia

Research Interest

Natural Fibre Composites, Polymer Materials

Research Project / Grant

- RDU180397 (UMP Grant) 30 April 2018 – 29 April 2020
Dynamical behavior of fiber metal laminates by the free vibration method
RM33,100.00
Member
- RDU180035 (UMP Grant) 5 April 2018 – 4 April 2020
Influence of moisture absorption on mechanical properties of a woven Roselle composites for automotive application.
RM33,500.00.00
Project Leader
- RDU1703322 (UMP Grant) 5 October 2017 – 4 October 2019
Graphene dip coating of light alloys for automotive application.
RM30,000.00
Member
- RDU1703321 (UMP Grant) 5 October 2017 – 4 October 2019
Graphene Nano platelets for Epoxy Composites in Automotive Applications
RM21,000.00
Member
- RDU1703320 (UMP Grant) 5 October 2017 – 4 October 2019
Fatigue behavior of sugar palm fiber reinforced poly lactic acid composites for automotive application
RM21,500.00
Member

- RDU1703312 (UMP Grant) 20 September 2017 – 19 September 2019
Development of New Patch Shape for Bonded Patch Repair Method
RM20,000.00
Member
- PGRS170392 (UMP Grant) 1 March 2017 – 1 March 2020
Hybrid Woven Fabric Natural Fiber Reinforced Epoxy/Polyester Resin Composite
RM3,500.00
Project Leader
- RDU160139 (FRGS) 1 August 2016 – 31 July 2019
Tooth Bending Strength of Thin-rimmed Spur Gears with Variable Rim and Web Design
RM108,400.00
Member
- RDU1403155 (FRGS) 1 August 2016 – 31 July 2019
A study of progressive damage detection in thin-walled composite structures using an embedded Fiber Bragg Grating – Acoustic Emission hybrid system
RM94,400.00
Member
- RDU1603108 (UMP Grant) 25 June 2016 – 24 June 2018
Development of Fibre Metal Laminate Materials for Automotive Application
RM33,800.00
Member
- RDU1603106 (UMP Grant) 25 June 2016 – 24 June 2018
Design of Protective Headgear for Soccer Players through Experimental and Computational Analysis
RM23,300.00
Member
- RDU1603106 (UMP Grant) 25 June 2016 – 24 June 2018
Investigation of Microstructure Development and Corrosion Performance of Friction Stir Welded Light Alloys.
RM34,500.00
Member
- UIC150701 (Industrial Grant) 26 February 2015 – 25 March 2016
Synthesis of bioplastic using polypropylene and starch as filler.
RM139,920.00
Member
- GRS1503100 (PGRS) 25 August 2015 – 24 August 2017
The Study of Mechanical Properties of Pineapple Fibre to Reinforce Tapioca Based Bioplastic Resin Composite
RM2,400.00
Project Leader
- RDU150372 (UMP grant) 1 October 2015 – 30 September 2017
Develop Solid inhibitor for Hood Corrosion Protection in Automotive Application
RM30,500.00
Member
- RDU151312 (RACE grant) 1 January 2016 – 31 December 2018
Periodic Two-Dimensional Square honeycomb Structure from Biodegradable Composite: Finite Element Analysis and experimental Investigation
RM50,000.00
Member
- RDU140120 (FRGS) 1 July 2014 – 30 June 2016
Characterization of Biodegradable Composites based on Pineapple Leaf Fibre and Tapioca Bioplastic Resin
RM83,000.00
Project Leader

- RDU140307 (UMP grant), 5 Mac 2014 – 4 Mac 2016
Compatibilizing Effect of Maleic Anhydride on The Mechanical Properties of Mengkuang Leaves Fibre Reinforced Polyethylene Composites
RM 15,800.00
Project Leader
- RDU1403112 (UMP grant) 25 October 2014 – 24 October 2016
ZrO₂ Sol-Gel Coating for the Corrosion Protection of Aluminum.
RM30,000.00
Member
- RDU1403109 (UMP grant) 25 October 2014 – 24 October 2016
Development of Periodic Two-Dimensional Honeycomb Structures for Sandwich Panels
RM37,000.00
Member
- RDU140110 (FRGS) 1 July 2014 – 30 June 2016
Pack Cementation Coating to Improve Corrosion Resistance of High Chromium Steels for Boiler Application
RM118,000.00
Member
- RDU140116 (FRGS) 1 July 2014 – 30 June 2017
Multiaxial Modelling of Lightweight Sandwich Structures based on Corrugated-cores for Aerospace Applications
RM124,000.00
Member
- RDU130138 (FRGS), 1 December 2013 – 30 November 2016
Study of Thermo-mechanical Properties of Sugar Palm Fibre Reinforced Polyurethane Thermoplastic Composites for Use as Exterior Material in Automotive Industry
RM 71,500.00
Member
- RDU140502 (Science Fund grant) 2 June 2014 – 1 June 2016
Development An Olympic Scale of Recurve Bow and Archery for Local Junior Athletes Under 15 and 17 (U-15 and U-17)
RM92,050.00
Member
- RDU130342 (UMP grant), 15 June 2013 – 14 June 2015
Development of Novel Green Hybrid Thermoplastic Composites
RM 22,800.00
Member

Teaching Experience

February 2013 Till date Universiti Malaysia Pahang

Semester 2 2017/2018

BMM2582 Strength of Materials 2

BMM2583 Strength of Materials 2

BHA2123 Mechanics of Materials

Semester 1 2017/2018

BMM1523 Engineering Materials

BMM2521 Engineering Mechanics Lab 1

BMM2582 Strength of Materials 2

Semester 2 2016/2017

BMM1533 Strength of Materials 1

BMM2582 Strength of Materials 2

Semester 1 2016/2017

BMM2521 Engineering Mechanics Laboratory 2

BMM2582 Strength of Materials 2
BMM1523 Engineering Materials

Semester 2 2015/2016

BMM1821 Mechanical Laboratory 2
BMM2521 Engineering Mechanics Laboratory 2
BMM2582 Strength of Materials 2
MME6144 Advanced Material

Semester 1 2015/2016

BMM1523 Engineering Materials
BMM2582 Strength of Materials 2
BMM2521 Engineering Mechanics Laboratory 2
MME6144 Advanced Material

Semester 2 2014/2015

BMM1533 Strength of Materials 1
BMM2582 Strength of Materials 2
BMM2511 Engineering Mechanics Laboratory 2

Semester 1 2014/2015

BMM1523 Engineering Materials
BMM2521 Engineering Mechanics Laboratory 2
BMM2582 Strength of Materials 2

Semester 2 2013/2014

BMM1523 Engineering Materials
BMM2582 Strength of Materials 2
BMM2521 Engineering Mechanics Laboratory 2
MKM1223 Advanced Material Processing

Semester 1 2013/2014

BMM1523 Engineering Materials
BMM1532 Statics
BMM2521 Engineering Mechanics Laboratory 2

Semester 2 2012/2013

BMM1523 Engineering Materials
BMM1511 Engineering Mechanics Laboratory 1

Post Graduate Supervision

1. Jamiluddin Bin Jaafar (PhD student), Development of pineapple leaf fibre reinforced tapioca resin biopolymer composites (On-going), Main Supervisor.
2. Mohammad Hazim Bin Mohamad Hamdan. Natural woven fabric reinforced epoxy and polyester composites (On-going), Main Supervisor
3. Davindra Brabu A/L Mathivanan (Master Student), The study of mechanical properties of pineapple leaf fibre to reinforce tapioca bioplastic based resin composite (On-going), Main Supervisor.
4. Audrey Woon Su Fern, Influence of moisture absorption on mechanical properties of a woven Buri palm composite used for automotive boot panel application (On-going), Main Supervisor
5. Wafiuddin Bin Mohamad Ghazali (Master Student). Fundamental study of wear behavior in polymer gear (On-going), Co supervisor.
6. Ahmad Fahmy Bin Jusoh (Master Student), Characterization of novel polymer sandwich structure based on corrugated-core (On-going), Co Supervisor
7. Muhamad Imran Bin Mohamad Sariaji (Master Student by course work), Vibrational and mechanical properties of hybrid natural fiber reinforced polyester composites, On-going, Main Supervisor.
8. Akmar Hisyam Bin Sirat (Master Student by course work) Effect of layers on ramie woven reinforced epoxy composites., Completed January 2017, Main Supervisor.
9. Hafizan Bin Hassan (Master Student by course work), Effect of alkaline treatment on mechanical properties of ramie woven fiber reinforced polyester composites, Completed January 2017, Main Supervisor
10. Lingenthiran A/L Samyilingam (Master Student), Physical, mechanical and surface morphology study on reinforced kenaf fibre with thermoplastic elastomer. (Completed 2017), Co Supervisor
11. Farah Ayuni Binti Fauzi (Master Student), Development An Olympic Scale of Recurve Bow and Archery for Local Junior Athletes Under 15 and 17 (U-15 and U-17) (Completed December 2017), Co Supervisor
12. Nor Akmal Binti Halim (Master Student by Course), The performance of mengkuang fibre polyethylene

composites, Completed January 2015, Main Supervisor.

Degree / Final Year Supervision

1. Syed Amir Idris Bin Syed Zulkafli, Effect of Fibre Loading on The Tensile Properties of Natural Fibre Reinforced Composites (Completed June 2014)
2. Davidrabrabu A/L Mathivanan, Effect of Fibre Loading on The Flexural Properties of Natural Fibre Reinforced Composites (Completed June 2014)
3. Muhamad Hamimi Bin Abdullah, Effect of Fibre Length on The Tensile Properties of Natural Fibre Reinforced Composites (Completed June 2014)
4. Nur Liyana Binti Mansor, Tensile Properties of Short Mengkuang Fibre Reinforced Epoxy Composites (Completed June 2014)
5. Muhamad Ikram Bin Jasandi, Effect of water absorption on tensile properties of pineapple leaf fibre reinforced tapioca bioplastic resin composites. (Completed July 2015).
6. Mohamad Zikri Bin Mohamad Kamaruddin, Effect of water absorption on flexural properties of pineapple leaf fibre reinforced tapioca bioplastic resin composites. (Completed July 2015)
7. Norfazilah Binti Abdul Halim, Tensile properties of pineapple leaf fibre reinforced tapioca bioplastic resin composites. (Completed July 2015).
8. Nor Azliana Binti Abdul Ghani, Impact properties of pineapple leaf fibre reinforced tapioca bioplastic resin composites. (Completed July 2015)
9. Ridwan Bin Mohd Isa, Flexural properties of pineapple leaf fibre reinforced tapioca bioplastic resin composites. (Completed July 2015)
10. Choo Chee Jie, Effects of compatibilizing agent on impact properties of pineapple leaf fibre reinforced polylactic acid composites. (Completed July 2016).
11. Seow Kok Foo, Effects of compatibilizing agent on tensile properties of pineapple leaf fibre reinforced polylactic acid composites. (Completed July 2016).
12. Mohamad Farhan Bin Draffar, Effect of compatibilizing agent on flexural properties of pineapple leaf fibre reinforced polylactic acid composites. (Completed July 2016).
13. Mohd Salihin Bin Zakaria, The effect of compatibilizing agent on water absorption behaviour and flexural properties of pineapple leaf fibre reinforced polylactic acid composites. (Completed July 2016).
14. Nor Hasni Binti Othman, The effect of compatibilizing agent on water absorption behaviour and tensile properties of pineapple leaf fibre reinforced polylactic acid composites. (Completed July 2016).
15. Fong Wei Jun, Mechanical performance of woven jute and roselle hybrid composites (Completed July 2017).
16. Phan Choon Kit, New design concept for communication device: Push To Talk (PTT) (Completed July 2017).
17. Ooi Xian Yih, Analysis of the Mechanical Properties of Jute and Ramie Fiber Reinforced Polyester Hybrid Composite (Completed July 2017).
18. Tung Hao Kean, Effect of alkaline treatment on mechanical properties of jute/ramie fibre reinforced polyester hybrid composites (Completed July 2017).
19. Chong Jung Yin, Vibration analysis of hybrid roselle/jute woven reinforced unsaturated polyester composites. (Completed July 2018).
20. Han Hao Ting, Vibration analysis of hybrid ramie/jute woven reinforced unsaturated polyester composites. (Completed July 2018).
21. Ng Yiet Hao, Water absorption behaviour of hybrid roselle/jute woven reinforced unsaturated polyester composites. (Completed July 2018).
22. Hew Wei Zhuang, Water absorption behaviour of hybrid rramie/jute woven reinforced unsaturated polyester composites. (Completed July 2018).

Diploma / Final Year Supervision

1. Daren Chong Jun Chao, Impact Properties of Pineapple Leaf Fibre Reinforced Polyester composites (completed July 2016)
2. Muhammad Alhaziq Bin Shaari, Effect on flexural properties of hybrid natural jute woven fiber reinforced polyester composites.

List of Publications

2018

1. Jamiluddin Jaafar, **Januar Parlaungan Siregar**, Ahmed Nurye Oumer, Mohammad Hazim Mohd. Hamdan, Tezara Cionita, and Mohd. Sapuan Salit. Experimental Investigation on Performance of Short Pineapple Leaf Fiber Reinforced Tapioca Biopolymer Composites, *BioResources*, 13(3): 6341-6355. (IF: 1.202).
2. Jamiluddin Jaafar, **Januar Parlaungan Siregar**, Mohd Bijarimi Mat Piah, **Tezara Cionita**, Sharmiza

Adnan, Teuku Rihayat. Influence of selected treatment on tensile properties of short pineapple leaf fiber reinforced tapioca resin biopolymer composites, *Journal of Polymers and the Environment*, DOI: 10.1007/s10924-018-1296-2, Accepted. (IF: 1.971).

3. M.H.M. Hamdan, **J.P. Siregar**, D. Bachtiar, M.R.M. Rejab, J. Jamaluddin, C. Tezara. Effect of Maleated Anhydride on Mechanical Properties of Rice Husk Filler Reinforced PLA Matrix Polymer Composite, *International Journal of Precision Engineering and Manufacturing-Green Technology*, Accepted. (Impact Factor: 3.774).
4. Januar Parlaungan Siregar, Jamiluddin Jaafar, *Tezara Cionita*, Choo Chee Jie, Dandi Bachtiar, Mohd Ruzaimi Mat Rejab, and Yuli Panca Asmara. The Effect of Maleic Anhydride Polyethylene on Mechanical Properties of Pineapple Leaf Fibre Reinforced Polylactic Acid Composites, *International Journal of Precision Engineering and Manufacturing-Green Technology*, Accepted. (IF: 3.774).
5. A.A. Mohammed, D. Bachtiar, M.R.M. Rejab, X.X. Jiang, F.O. Abas, R.U. Abass, S.F. Hasany, **J.P. Siregar**,. Effects of KMnO₄ Treatment on the Flexural, Impact, and Thermal Properties of Sugar Palm Fiber-Reinforced Thermoplastic Polyurethane Composites, *JOM*, 1-5. (Impact Factor: 2.17).
6. E. Vorathin, Z.M. Hafizi, S.A.C. Ghani, **J.P. Siregar**, K.S. Lim. FBGs Real-Time Impact Damage Monitoring System of GFRP Beam Based on CC-LSL Algorithm, *International Journal of Structural Stability and Dynamics*. Vol. 18(5) 1850075. (Impact Factor: 1.96).
7. N. A. Halim, **J. P. Siregar**, D. Mathivanan, D. Bachtiar, Z. Ghazali, M.R.M. Rejab, C. Tezara. The performance of mengkuang leaf fiber reinforced low density polyethylene composites, *Journal of Mechanical Engineering and Sciences*, Vol. 12(2), 3645-3655. (Scopus Indexed).
8. A.A. Mohammed, D. Bachtiar, M.R.M. Rejab, **J.P. Siregar**. Effect of microwave treatment on tensile properties of sugar palm fibre reinforced thermoplastic polyurethane composites. *Defence Technology*. Article in Press. (Scopus Indexed).
9. M. Quanjin, M.R.M. Rejab, I.M. Sahat, M. Amiruddin, D. Bachtiar, **J.P. Siregar**, M.I. Ibrahim. Design of portable 3-axis filament winding machine with inexpensive control system. *Jouranl of Mechanical Engineering and Sciences*, Vol. 12(1), 3479-3493. (Scopus Indexed).
10. M.N.M. Merzuki, M.R.M. Rejab, N.K. Romli, D. Bachtiar, **J.P. Siregar**, M.F. Rani, S.M. Salleh. Finite Element Simulation of Aluminium/GFRP Fibre Metal Laminate under Tensile Loading. *IOP Conference Series: Materials Sience and Engineering*, Vo; 318 (1), 012072. (Scopus Indexed).
11. N.K., Romli, M.R.M. Rejab, D. Bachtiar, **J.P. Siregar**, M.F. Rani, S.M. Salleh, M.N.M. Merzuki. Failure Behaviour of Aluminium/CFRP Laminates with Varying Fibre Orientation in Quasi-static Indentation Test. *IOP Conference Series: Materials Science and Engineering*, Vol; 319(1), 012029. (Scopus Indexed).

2017

1. D. B. Mathivanan, **J. P. Siregar**, M. R. Mat Rejab, D. Bachtiar, Y. P. Asmara, T. Cionita. The Mechanical Properties of Alkaline Treated Pineapple Leaf Fibre to Reinforce Tapioca Based Bioplastic Resin Composite, *Materials Science Forum*, Vol. 882, 66-70. (Scopus indexed).
2. Farah Ayuni Fauzi, Zahari Taha, Zakri Ghazalli, **Januar Parlaungan Siregar**, Zulkifli Ahmad, Kumaran Kadirgama, Nasrul Hadi Johari, Danial Mohamed. Analysis of an Olympic Scale of a Recurve Bow Riser on the Basis of Malaysian Under 15 and Under 17 Archers, *Advances in Human Factors in Sports and Outdoor Recreation*, *Springer International Publishing*, 131-140. (Scopus indexed).
3. M. Quanjin, M.R.M. Rejab, M.S. Idris, D. Bachtiar, **J.P. Siregar**, M.N. Harith, Design and optimize of 3-axis filament winding machine, *IOP Conference Series: Materials Science and Engineering* 257 (1), (2017), 012039. (Scopus indexed)
4. Y.P. Asmara, Athirah, **J.P. Siregar**, T. Kurniawan, and D. Bachtiar, Application of response surface methodology method in designing corrosion inhibitor, *IOP Conference Series: Materials Science and Engineering*, 257(1), (2017), 012090. (Scopus indexed)
5. Y.P. Asmara, V. Suraj, **J.P. Siregar**, T. Kurniawan, D. Bachtiar, and N.M.Z.N. Mohamed, Development of green vapour corrosion inhibitor, *IOP Conference Series: Materials Science and Engineering*, 257(1), (2017), 012089. (Scopus indexed)
6. N.K. Romli, M.R.M. Rejab, D. Bachtiar, **J.P. Siregar**, M.R. Rani, W.S.W. Harun, S.M. Salleh, and M.N.M. Merzuki, The behavior of Aluminium Carbon/Epoxy fibre metal laminate under quasi-static loading, *IOP Conference Series: Materials Science and Engineering*, 257(1), (2017), 012046. (Scopus indexed)
7. M.H.M. Hamdan, **J.P. Siregar**, D. Bachtiar, M.R.M. Rejab, M. Samykan, E.H. Agung, C. Tezara and J. Jaafar, Effect of alkaline treatment on mechanical properties of woven ramie reinforced thermoset composite, *IOP Conference Series: Materials Science and Engineering*, 257(1), (2017), 012044. (Scopus indexed)
8. Z. Ansari, M.R.M. Rejab, **D. Bachtiar** and **J.P. Siregar**, Crushing response of green square honeycomb structure from sugar palm & PLA, *Material Science Forum*, 909, (2017), 122-126 (Scopus indexed)
9. E. Vorathin, Z.M Hafizi, S.A.C. Ghani, J.P. Siregar, K.S. Lim, FBGs Real-Time Impact Damage Monitoring System of GFRP Beam Based on CC-LSL Algorithm, *International Journal of Structural Stability and Dynamics*. (Scopus indexed)
10. A.G.N. Sofiah, J. Kananathan, M. Samykan, S. Ulakhanatan, N.A.C. Lah, W.S.W. Harun, K. Shudakar, K. Kadirgama, W.K. Ngui, **J.P. Siregar**, Electrochemical deposited nickel nanowires: Influence of deposition bath temperature on the morphology and physical properties, *IOP Conference Series:*

Materials Science and Engineering, 257(1),012032. (Scopus indexed).

11. J. Kananathan, A.G.N. Sofiah, M. Samykano, S. Ulakhanatan, N.A.C. Lah, W.S.W. Harun, K. Shudakar, K. Kadirgama, W.K. Ngui, **J.P. Siregar**, Influence of boric acid (H₃BO₃) concentration on the physical properties of electrochemical deposited nickel (Ni) nanowires, *IOP Conference Series: Materials Science and Engineering*, 257(1),012033. (Scopus indexed).

2016

1. Ausama Al-sarraf Mohammed, Dandi Bachtiar, **Januar Parlaungan Siregar**, Mohd Ruzaimi Bin Mat Rejab, Syed Farhan Hasany. Physicochemical Study of Eco-Friendly Sugar Palm Fiber Thermoplastic Polyurethane Composites, *BioResources*, Vol 11 (4), 9438-9454. (IF= 1.334)
2. Mohammed AA, Dandi Bachtiar, **JP Siregar**, Rejab MRM. Effect of sodium hydroxide on the tensile properties of sugar palm fibre reinforced thermoplastic polyurethane composites, *Journal of Mechanical Engineering and Sciences (JMES)*, Vol 10 (1), 1765-1777. (Scopus indexed).
3. J. Jamiluddin, **J. P. Siregar**, A. Sulaiman, K. A. A. Jalal, C. Tezara. Study on properties of tapioca resin polymer, *International Journal of Automotive and Mechanical Engineering (IJAME)*, Vol. 13 (1), 3178-3189. (Scopus indexed).
4. Wafiuddin Md Ghazali, Daing Mohamad Nafiz Daing Idris, Azizul Helmi Sofian, **Januar Parlaungan Siregar** and Ismail Ali Abdul Aziz. A review on failure characteristics of polymer gear, *MATEC Web of Conferences* 90, 01029 (Scopus indexed).
5. Fauzi, F.A., Ghazali, A., **Siregar, J.P.**, Tezara, C. Investigation of thermal behavior for natural fibres reinforced epoxy using thermogravimetric and differential scanning calorimetric analysis, *MATEC Web of Conferences* 78, 01042. (Scopus indexed).
6. NZM Zaid, MRM Rejab, AF Jusoh, D Bachtiar, **JP Siregar**. Effect of varying geometrical parameters of trapezoidal corrugated-core sandwich structure, *MATEC Web of Conferences* 90, 01018. (Scopus indexed).
7. Sani, M.S.M., Abdullah, N.A.Z., Zahari, S.N., **Siregar, J.P.**, Rahman, M.M. Finite element model updating of natural fibre reinforced composite structure in structural dynamics, *MATEC Web of Conferences* 83, 03007. (Scopus indexed).
8. Zaid, N.Z.M., Rejab, M.R.M., Jusoh, A.F., Bachtiar, D., **Siregar, J.P.**, Dian Ping, Z. Fracture behaviours in compression-loaded triangular corrugated core sandwich panels, *MATEC Web of Conferences* 78, 01041. (Scopus indexed).
9. Jusoh, A.F., Rejab, M.R.M., **Siregar, J.P.**, Bachtiar, D. Natural Fiber Reinforced Composites: A review on potential for corrugated core of sandwich structures, *MATEC Web of Conferences* 74, 00033. (Scopus indexed).
10. Mathivanan, D., Norfazilah, H., **Siregar, J.P.**, Rejab, M.R.M., Bachtiar, D., Cionita, T. The study of mechanical properties of pineapple leaf fibre reinforced tapioca based bioplastic resin composite, *MATEC Web of Conferences* 74, 00016. (Scopus indexed).
11. Tezara, C., **Siregar, J.P.**, Lim, H.Y., Fauzi, F.A., Yazdi, M.H., Moey, L.K., Lim, J.W. Factors that affect the mechanical properties of kenaf fiber reinforced polymer: A review, *Journal of Mechanical Engineering and Sciences*, Volume 10 (2), 2159-2175. (Scopus indexed).
12. Yuli Panca Asmara, **Januar Parlaungan Siregar**, C Tezara, Wan Nurlisa, J Jamiluddin. Long term corrosion experiment of steel rebar in fly ash-based geopolymer concrete in NaCl solution. *International Journal of Corrosion*. 2016, Hindawi Publishing Corporation.
13. YP Asmara, **JP Siregar**, C Tezara, CT Ann. Improving efficiency of aluminium sacrificial anode using Cold work process, *IOP Conference Series: Materials Science and Engineering*, 114, 0122045. (Scopus indexed).
14. M.R.M. Rejab, N.Z.M. Zaid, **J.P. Siregar** and D. Bachtiar, Scaling effects for compression loaded of corrugated-core sandwich panels, *Advanced Materials Research*, 1133(2016), 241-245. (Scopus indexed)

2015

1. Zohari, M.H., Yusof, M.F., **Siregar, J.P.**, Sing, L.K. The applications of FBG sensor for realtime strain mapping of thin composite plate under point loading, *Journal of Electrical Systems*, Issue Specialissue 3, 164-170. (Scopus indexed).
2. Y.P Asmara, **J.P Siregar**, L.H. Shah and C, Tezara. Experimental Investigations on Corrosion Model of Welded 6061 Aluminium Exposed in NaCl Solution, *International Journal of Automotive and Mechanical (IJAME)*, 11(2015), 2600 – 2607. (Scopus indexed).
3. D. Mathivanan, **J.P. Siregar**, D. Bachtiar, M.R.M. Rejab and T. Cionita, Effect of fibre loading on the flexural properties of natural fibre reinforced polymer composites, *Applied Mechanics and Materials*, 695(2015), 85-88.
4. D. Bachtiar, **J.P. Siregar**, A.S. Sulaiman and M.R.M. Rejab, Tensile properties of hybrid sugar palm/kenaf fibre reinforced polypropylene composites, *Applied Mechanics and Materials*, 695(2015), 155-158.
5. **J.P. Siregar**, T. Cionita, D. Bachtiar and M.R.M. Rejab, Tensile properties of pineapple leaf fibre reinforced unsaturated polyester composites, *Applied Mechanics and Materials*, 695(2015), 159-162.

6. M.R.M. Rejab, W.A.W. Hassan, **J.P. Siregar** and D. Bachtiar, Specific properties of novel two-dimensional square honeycomb composites structures, *Applied Mechanics and Materials*, 695(2015), 694-698,
7. YP Asmara, **J.P. Siregar**, T Cionita, J Alias. Electrochemical Behaviour of High Stress Steel (AISI 4340) in CO₂ Environments with the Presence of H₂ Gas, *Applied Mechanics and Materials*, 695(2015), 98-101. (Scopus indexed).

2014

1. T Cionita, J Jalaludin, NM Adam, **JP Siregar**. Assessment of Children's Health and Indoor Air Contaminants of Day Care Centre in Industrial Area, *Iranian Journal of Public Health*, 43 (3), 81-88, 2014, (Impact factor= 0.576).
2. T Cionita, NM Adam, J Jalaludin, M Mansor, **J.P Siregar**. Measurement of Indoor Air Quality Parameters in Daycare Centres in Kuala Lumpur Malaysia, *Applied Mechanics and Materials* 564 (2014), 245-249, (Scopus indexed).
3. C. Tezara, N.M Adam, J. Juliana, and M. Mariani and **J.P. Siregar**. 2014. Monitoring of The Indoor Air Quality Parameters in The Day-care Centres in Tropical Country. *International Journal of Mechanical Engineering (IJME)*, 3, no.1: pp 47-52.

2013

1. M.R. Ishak, S.M. Sapuan, Z. Leman, M.Z.A. Rahman, U.M.K. Anwar and **J.P. Siregar**, Sugar Palm (*Arenga pinnata*): Its Fibres, Polymers and Composites, *Carbohydrate Polymers*, 91, no. 2, pp 699-710, 2013 (Elsevier) (Impact factor = 3.62).

2012

1. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, Effects of alkali treatments on the tensile properties of pineapple leaf fibre reinforced high impact polystyrene composites, *Pertanika Journal of Science & Technology*, 20, no. 2, pp. 409-414, 2012 (Scopus).

2011

1. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, Thermogravimetric analysis (TGA) and differential calometric (DSC) analysis of pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, *Pertanika Journal of Science and Technology*, 19, no. 1, pp. 161-170, 2011 (Scopus).
2. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D. K. Zaman, The effect of electron beam irradiation on the mechanical properties of pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites. *Institute of Physics (IOP) Conference Series: Materials Science and Engineering*, 11, no. 1, 11 012014, 2010 (Indexed in Chemical Abstract).

2010

1. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, The effect of alkali treatment on the mechanical properties of short pineapple leaf fibre reinforced high impact polystyrene composites, *Journal of Food, Agriculture and Environment*, 8, no. 2, pp. 1103-1108, 2010 (Impact factor = 0.282).

2009

1. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, Physical properties of short pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, *Advanced Composite Letters*, 18, no. 1, pp. 25-29, 2009 (Adcotec Ltd., London) (Impact factor = 0.27).
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Papers in Proceedings

2013

1. C. Tezara, N.M. Adam, J. Juliana and M. Mariani and **J.P. Siregar**. 2013. Measurement of Indoor Air Quality Parameters in the Daycare Centres in Kuala Lumpur Malaysia. *International Conference on Advance Mechanical and Manufacturing Engineering (ICAM2E)*, 25-28th November 2013, Kuala Lumpur, Malaysia.

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2010

1. **J.P. Siregar**, E.H Agung, S.M Sapuan and T. Cionita, Tensile properties of pineapple leaf fibre reinforced high impact polystyrene composites, *Proceedings of the 1st International Conference on Materials Engineering (ICME) & the 3rd AUN/SEED-Net Regional Conference on Materials (RCM)*, Jogjakarta, Indonesia 1-4 February 2010, pp 225-226, ISBN 978-979-97986-5-7.
2. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, Effect of compatibilising agent on tensile properties of short pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, *Proceedings of the 2nd Postgraduate Seminar on Natural Fibre Composites*, Serdang, Malaysia, 18-19 February 2010, pp 115-122, ISBN 978-983-2408-04-8.
3. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, Mechanical properties of alkali treated short pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, *Proceedings of the 2nd International Conference on Engineering and ICT*, Melaka, Malaysia, 18-20 February 2010, pp 756-759, ISBN 979-983-2948-73-5.

2009

1. S.M. Sapuan and **J.P. Siregar**, Effect of compatibilising agent on tensile and flexural properties of short pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, *International Conference on Green Technology 2009*, Bandar Lampung, Indonesia, 15-17 April 2009 (Keynote Address).
2. S.M. Sapuan and **J.P. Siregar**, Mechanical properties of pineapple leaf fibre reinforced high impact polystyrene composites, *Paper presented at Seminar Pembentangan Kertas Kerja: Pembentangan 1*, Faculty of Engineering, UPM, Serdang, 23 April 2009.
3. **J.P. Siregar**, S.M. Sapuan, M.Z.A. Rahman and H.M.D.K. Zaman, Thermogravimetric analysis (TGA) of pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, *Proceedings of The 9th National Symposium on Polymeric Materials*, Putrajaya 2009, Residence Hotel, Putrajaya, 14-16 December 2009 (CD ROM Proceedings, ISBN 978-967-960-255-5).

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2. S.M. Sapuan and **J.P. Siregar**, Mechanical properties of pineapple leaf fibre reinforced high impact polystyrene composites, *Proceedings of The 20th Australian Conference on the Mechanics of Structure and Materials*, Toowoomba, Queensland, Australia, 2-5 December 2008, pp. 295-299.

List of Books

Chapter in Book

2018

1. MHM Hamdan, JP Siregar, D Bachtiar, MRM Rejab, T Cionita. Mechanical Properties of Mengkuang Leave Fiber Reinforced Low Density Polyethylene Composites, Natural Fibre Reinforced Vinyl Ester and Vinyl Polymer Composites, 181-196. Woodhead Publishing. (Scopus Indexed).

2011

1. S.M. Sapuan, A.R. Mohamed, **J.P. Siregar** and M.R. Ishak, Chapter 12: Pineapple leaf fibre reinforced polymer composites, in S. Kalia, B.S. Kaith and I. Kaur (eds.), *Cellulose Fibres, Bio, and Nano Composites*, Springer, Germany, pp. 325-343, 2011, ISBN 978-3-642-17369-1.

2009

1. **J.P Siregar** and S.M. Sapuan, Chapter 6: Mechanical properties of short pineapple leaf fibre (PALF) reinforced high impact polystyrene (HIPS) composites, in *Research on Natural Fibre Reinforced Polymer Composites*, (Editor: S.M. Sapuan), UPM Press, Serdang, Selangor, Malaysia, 2009, pp. 127-141, ISBN 978-967-344-002-3.

Awards / Research / Achievements

2018

- Anugerah Perkhidmatan Cemerlang 2017

2016

- Creation, Innovation, Technology & Research Exposition, **CITREX**, UMP, Pahang, "Hybrid Biocomposites Material", Bronze Medal.
- Creation, Innovation, Technology & Research Exposition, **CITREX**, UMP, Pahang, "Low Temperature Preservation Through Novel Material at No Electricity", Gold Medal.
- Creation, Innovation, Technology & Research Exposition, **CITREX**, UMP, Pahang, "Innovative Portable Water Filtration System", Bronze Medal.

2015

- Creation, Innovation, Technology & Research Exposition, **CITREX**, UMP, Pahang, "High Tensile Composite Material From Cigarette Butts, Bronze Medal
- International Engineering Invention Innovation Exhibition, **i-ENVEX**, UNIMAP, Perlis, "Innovative Temporary Flood Control Barrier, Silver Medal.
- 26th International Invention, Innovation & Technology Exhibition **ITEX** 2015, Kuala Lumpur, "Development of Bioplastic Using Polypropylene and Starch", Silver Medal.
- Advanced Innovation & Engineering Exhibition, **AINEX**, Kuantan, Pahang, " Smart Structure With FBG Sensor System, Gold Medal
- Advanced Innovation & Engineering Exhibition, **AINEX**, Kuantan, Pahang, Gold Medal

List of Course / Conference Attended

2013

1. Teaching and Learning Colloquium 2013, Universiti Malaysia Pahang, Malaysia, 14 February 2013.
2. Short Course on Fracture and Damage Mechanics of Materials (by Professor Mohd Nasir Tamin), Faculty of Mechanical Engineering, UMP Pekan, 3rd - 5th June 2013.
3. Seminar on Electron Microscope, Central Laboratory Universiti Malaysia Pahang, 15th May 2013.

2006

1. 1st Conference on Biocomposite Products, Nikko Hotel, Kuala Lumpur, Malaysia 5 September 2006.
2. 8th Pacific RIM Bio-Based Composites Symposium, The Legend Hotel, Kuala Lumpur, Malaysia, 20-23 November, 2006.