

TECHNICAL SESSIONS



**International Conference on Applications and Design
in Mechanical Engineering 2017 (ICADME 2017)**



21st August 2017, Sri Mas 1 (14:00-16:00)

Session A1: Applied Mechanics I

1400	A1-1	Design and Development of Injection Moulding Machine for Manufacturing Laboratory Rakhmad Arief Siregar, Shah Fenner Khan and Khairul Umurani.
1415	A1-2	Determination of Effective Elastic Properties of Metal Matrix Composite with Damage Particulates using Homogenization Method S.Z. Halim, K.S. Basaruddin, I. Ibrahim, M.S. Abdul Majid and M.J.M. Ridzuan
1430	A1-3	A Review on Mode-I Interlaminar Fracture Toughness of Fibre Reinforced Composites Nurdiyana Nasuha Shah Fenner Khan, Azwan Iskandar Azmi and Chye Lih Tan
1445	A1-4	Evaluation on the feasibility of using bamboo fillers in plastic gear manufacturing via the Taguchi optimization method Nik Mizamzul Mehat and Shahrul Kamaruddin
1500	A1-5	Effect of Nano-clay Fillers on Mechanical and Morphological Properties of Napier/Epoxy Composites K.H. Lim, M.S. Abdul Majid, Ridzuan M.J.M., K.S. Basaruddin and M. Afendi
1515	A1-6	Tensile Properties of Interwoven Hemp/PET (Polyethylene Terephthalate) Epoxy Hybrid Composites M.A. A. Ahmad, M.S. Abdul Majid, Ridzuan M.J.M., Ahmad Firdaus A.Z. and N.A.M. Amin
1530	A1-7	Characterisation of Static and Dynamic Responses of Natural Rubber Bio-Composites Shamsul Kamaruddin, Ai Bao Chai, Chuan Li Lim and Jee Hou Ho



21st August 2017, Sri Mas 2 (14:00-16:00)

Session A2: Thermofluid & Energy I

1400	A2-1	Analysis of Airbox Performance Improvement for Modenas Model by Geometrical Analysis Mohamad Syafiq Abdul Khadir, Shahriman Abu Bakar and Mohd Sani Mohamad Hashim
1415	A2-2	Effect of Various Bending Angles on a Passive Light Pipe for Eco-Daylighting Systems Yi Fei Ng, Mohd Sani Mohamad Hashim, Muhammad Amin Zulkifli Din, Nur Saifullah Kamaruddin, Mohd Hafif Basha, Nasrul Amri Mohd Amin and Md Tasyrif Abdul Rahman
1430	A2-3	Buoyancy Induced Couette-Poiseuille Flow in a Vertical Microchannel Narahari Marneni
1445	A2-4	The Effect of fusel oil-diesel blending fuel on exhaust emissions of single cylinder compression ignition engine Omar Awad, Rizalman Mamat and Wh Azmi
1500	A2-5	Dual direction blower system powered by solar energy to reduce car cabin temperature in open parking condition N S Hamdan, M F M Radzi, A A M Damanhuri and S N Mokhtar
1515	A2-6	Co-pyrolysis of rice straw and polyethylene terephthalate (PET) using fixed bed drop type pyrolyzer Nurul Izzatie Ishak, Mohd Hafif Basha, Yoshimitsu Uemura, Mohd Sani Mohamad Hashim, Nasrul Amri Mohd Amin and Mohd Fazli Hamid
1530	A2-7	Preliminary study of TEC application in cooling system Aqilah Che Sulaiman, Nasrul Amri Mohd Amin, Mohd Saifizi Saidon and Mohd Shukry Abdul Majid
1545	A2-8	Numerical study of double-diffusive convection in a vertical annular enclosure with a baffle Pushpa B V, Prasanna B M R, Younghae Do and Sankar M



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Session A3: Applied Mechanics II

1615	A3-1	Effect of glass fibre loading and moisture absorption on the tensile properties of hybrid Napier/glass reinforced epoxy composites Zikri M.Z., Ridzuan M.J.M., M.S. Abdul Majid, M. Afendi and K.S. Basaruddin
1630	A3-2	Energy release rate analysis on the interface cracks of enamel-cement-bracket fracture using virtual crack closure technique Syafiq Farhan Shamsuri, Ruslizam Daud, Mohd Afendi, Khairul Salleh Basaruddin, Ahmad Burhanuddin and Rozita Hassan
1645	A3-3	Effect of elevated temperatures on flexural strength of hybrid Napier/glass reinforced epoxy composites W.M.A. W. Ramli, Ridzuan M.J.M., M.S. Abdul Majid, M.N. Rahman Y. and Azduwin K.
1700	A3-4	Effect of Physical Properties of Natural Fibre on the Acoustic Absorption Coefficient Nur Hafizah Zunaidi, Wei Hong Tan, Muhd Shukry Abdul Majid and Eng Aik Lim
1715	A3-5	Fatigue Life Investigation of UIC 54 Rail Profile for High Speed Rail Gurubaran Panerselvan, M. Afendi, Nur Fareisha Mohd Azmi, Hafirman Idrus and M.S. Abdul Majid
1730	A3-6	Study of the effect of surface treatment of kenaf fiber on chemical structure and water absorption of kenaf filled unsaturated polyester composite Ilyas A. S. Salem, Rozyanty Rahman, Bashir. O. Betar, Tijjani Adam and Mohammed Mohammed
1745	A3-7	Study of the effect of surface treatment of kenaf fiber on mechanical properties of kenaf filled unsaturated polyester composite Ilyas A. S. Salem, Rozyanty Rahman, Bashir. O. Betar, Tijjani Adam and Mohammed Mohammed

- 1800 A3-8 **Analysis of a Front Suspension System for UniART FSAE Car Using FEA**
Mohammad Nur Aiman Zaidie, Mohd Sani Mohamad Hashim, Md Tasyrif Bin Abdul Rahman, Mohd Hafif Basha, Ishak Ibrahim, Nur Saifullah Kamarrudin and Shahrinan Abu Bakar



21st August 2017, Sri Mas 2 (16:15-18:15)

Session A4: Design & Manufacturing I

1615	A4-1	Numerical Solution of Two-phase Slug Flow with Liquid Carryover in Different Diameter Ratio T-junction William Pao, Lian-Tat Hon, Ahmed Saieed and Sam Ban
1630	A4-2	Effects of machining conditions on the specific cutting energy of carbon fibre reinforced polymer composites Azwan Azmi, Ahmad Zulfa Syahmi Ahmad Norlil, Mohd Naquib Nakiyudin, Tan Chye Lih, Ahmad Fairuz Mansor and Ahmad Nabil Mohd Khalil
1645	A4-3	Numerical investigation on effect of aortic root geometry on flow induced structural stresses developed in a bileaflet mechanical heart valve S S Abbas, M S Nasif, M A M Said and S K Kadhim
1700	A4-4	Investigating the effects of PDC cutters geometry on ROP using the Taguchi technique Amirul Alif Jamaludin, Nik Mizamzul Mehat and Shahrul Kamaruddin
1715	A4-5	Optimization of Cam Performance Curve Using B-Spline Curve Mohamad Syafiq Abdul Khadir, Shahrman Abu Bakar and Mohd Sani Mohamad Hashim
1730	A4-6	Functional design of heat exchanging for pneumatic vehicles Zhi-Gang Xu, Deyu Yang and Wei-Dong Shen
1745	A4-7	Key issues in theoretical and functional pneumatic design Zhi-Gang Xu, De-Yu Yang and Wei-Min Liu
1800	A4-8	Functional-to-form mapping for assembly design automation Zhi-Gang Xu, Wei-Min Liu and Tao-Tao Liu



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Session A5: Applied Mechanics III

0830	A5-1	<p>Water absorption behaviour of hybrid interwoven cellulosic fibre composites</p> <p>Maslinda A.B., M.S. Abdul Majid, Ridzuan M.J.M and Syayuthi A.R.A.</p>
0845	A5-2	<p>Effect of Graphite Loading on the Electrical and Mechanical Properties of Poly (Vinyl Chloride)Poly (Ethylene Oxide) Polymer Films</p> <p>Siti Hajar Mohd Din, Supri A. Ghani and Mohammed Izzuddeen Mohd Yazid</p>
0900	A5-3	<p>Impact responses, compressive and burst tests of glass reinforced epoxy (GRE) composite pipes</p> <p>Abrar F.S.B., M.S. Abdul Majid, Ridzuan M.J.M. and Syayuthi A. R.A.</p>
0915	A5-4	<p>Prediction on fracture risk of femur with Osteogenesis Imperfecta using finite element models: Preliminary Study</p> <p>S B C Wanna, K S Basaruddin, M H Mat Som, M S Mohamad Hashim, R Daud and M S Abdul Majid</p>
0930	A5-5	<p>Utilization of Polyaniline (PAni) as Conductive Filler on Poly (Ethylene Oxide) / Poly (Vinyl Chloride) Films: Effects of Naphthalene as Surface Modifier on Electrical Conductivity</p> <p>Mohammed Izzuddeen Mohd Yazid, Supri A Ghani, Tan Soo Jin, Azlin Fazlina Osman and Siti Hajar Mohd Din</p>
0945	A5-6	<p>The Weathering Effect in Natural Environment on Kenaf Bast and Unsaturated Polyester Composite</p> <p>Mohammed Mohammed, Rozyanty Rahman, Bashir. O. Betar, Tijjani Adam, Azlin Fazlina Osman, Ilyas A. S. Salem, Omar Dahham and Marwa Al-Samarrai</p>
1000	A5-7	<p>Effluence of Weathering on Thermal Properties of Kenaf Bast /Glass Fiber Polymer Composite</p> <p>Mohammed Mohammed, Rozyanty Rahman, Bashir. O. Betar, Tijjani Adam, Azlin Fazlina Osman, Ilyas A. S. Salem, Omar Dahham and Marwa Al-Samarrai</p>



22nd August 2017, Sri Mas 2 (08:30-10:30)

Session A6: Design & Manufacturing II

0830	A6-1	<p>Investigation on the effects of processing parameters on shrinkage behaviour and tensile properties of injection moulded plastic gear via the Taguchi method</p> <p>Nik Mizamzul Mehat, Syahir Mohd Kassim and Shahrul Kamaruddin</p>
0845	A6-2	<p>Design and Analysis of Hydraulic Ram Water Pumping System</p> <p>Noor Syahirah Mohd Hussin, Salem Awadh Nasser Gamil, Nasrul Amri Mohd Amin, Muhammad Juhairi Aziz Safar, Mohd Shukry Abdul Majid and Nashrul Fazli Mohd Nasir</p>
0900	A6-3	<p>Numerical investigation on the effect of balcony open and solid upstand on smoke contamination in atrium balconies</p> <p>M A Mutafi, M S Nasif, W Pao and F B Ismail</p>
0915	A6-4	<p>Finite Element Modelling of Plantar Fascia Response during Running on Different Surface Types</p> <p>A.H. Abd Razak, K.S. Basaruddin, A.F. Salleh, W.M.R. Rusli, M.S. Mohamad Hashim and R. Daud</p>
0930	A6-5	<p>Design of refrigeration system using refrigerant R134a for macro compartment</p> <p>Muhammad Faiz Hilmi Rani, Zuradzman Razlan, Shahrman Abu Bakar, Chan Kah Yong, Azizi Harun, Mohd Sani, Mohd Khairul Faizi, Ishak Ibrahim, Nur Saifullah Kamarrudin, Mohd Asrul Md Saad, Zunaidi Ibrahim, Wan Khairunizam and Hazry Desa</p>
0945	A6-6	<p>Influence of Processing Methods on Flexural Strength in Interwoven Hemp/ PET Reinforced POM Hybrid Composite.</p> <p>Tai Yee Chen, Shah Fenner Khan and Wei Hong Tan</p>
1000	A6-7	<p>Finite Element Analysis of 2-Station Hip Simulator</p> <p>Muhammad Ikram Md Fazli, Azli Yahya, Ardiyanshah Shahrom, Sophan Wahyudi Nawawi, Muhammad Rezza Zainudin and Muhammad Syazani Nazarudin</p>
1015	A6-8	<p>Numerical Investigations of Internal Stresses on Carbon Steel Based on Ultrasonic LCR Waves</p> <p>Ramesh Ramasamy, Zainah Ibrahim and Hwa Kian Chai</p>



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Session A7: Applied Mechanics IV

1045	A7-1	<p>Failure prediction of $\pm 55^\circ$ glass/epoxy composite pipes using system identification modelling</p> <p>Ang Jia Yi, M.S. Abdul Majid, A. Mohd Nor, Ridzuan M.J.M. and S. Yaacob</p>
1100	A7-2	<p>Tensile properties of compressed moulded Napier/glass fibre reinforced epoxy composites</p> <p>Fatinah T.S., M.S. Abdul Majid, Ridzuan M.J.M., Ahmad Firdaus A.Z. and N.A.M. Amin</p>
1115	A7-3	<p>Stress Analysis of Implant-Bone Fixation at Different Fracture Angle</p> <p>Izzawati Basrom, Ruslizam Daud, Mohd Afendi, Mohd Shukry Abdul Majid, Mohd Yazid Bajuri and Noor Alia Mohd Zain</p>
1130	A7-4	<p>Vibration Analysis on Compact Car Shock Absorber</p> <p>Wei Hong Tan, Jun Xiong Cheah, Eng Aik Lim, Hun Guan Chua and Chu Yee Khor</p>
1145	A7-5	<p>The Effect on Poly (Ethylene Oxide) / Poly (Vinyl Chloride) / Polyaniline (PAni) Films by Ethylene Dimethacrylate as Surface Modifier: Electrical Conductivity and Characterization</p> <p>Mohammed Izzuddeen Mohd Yazid, Supri A Ghani, Azlin Fazlina Osman, Siti Hajar Mohd Din and Tan Soo Jin</p>
1200	A7-6	<p>Biodegradation of PLA- Pennisetum purpureum based biocomposite scaffold</p> <p>Revati R., M.S. Abdul Majid, Mohd Ridzuan Mohd Jamir, Normahira M, Nashrul Fazli Mohd Nasir and Cheng Ee Meng</p>
1215	A7-7	<p>A Review: Characteristics of Noise Absorption Material</p> <p>Amares Singh, Endra Sujatmika, Tan Wei Hong and Rajkumar Durairaj</p>



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Session A8: Thermofluid & Energy II

1045	A8-1	Simulation Study of Water Cooled Photovoltaic Panel Using ANSYS Syafiqah Z., N.A.M. Amin, Irwan Y.M., M.S.A. Majid and N.A. Aziz
1100	A8-2	Experimental investigation on AC unit integrated with sensible heat storage (SHS) Nursyazwani Abdul Aziz, Nasrul Amri Mohd Amin, Mohd Shukry Abdul Majid, Azman Hussin and Syafiqah Zhubir
1115	A8-3	Natural convection in an inclined parallelogrammic porous enclosure under the effect of magnetic field Sankar M, Jagadeesha R D, Prasanna B M R and Younghae Do
1130	A8-4	A Study of Energy Consumption in Turning Process using Lubrication of Nanoparticles Enhanced Coconut Oil (NECO) Ahmad Fairuz Mansor, Muhammad Syamil Zakaria, Dr Azwan Iskandar Azmi, Ahmad Nabil Khalil and Nur Atikah Musa
1145	A8-5	Study of Intake Manifold for Universiti Malaysia Perlis Automotive Racing Team Formula Student Race Car Aminurasyid Norizan, Md Tasyrif Abdul Rahman, Nasrul Amri Mohd Amin, Muhammad Haniff Naquiuddin Ismail, Azarul Fahmin Abdul Hamid, Hafif Basha and Ahmad Syayuthi Abdul Rahman
1200	A8-6	CONNECTED CAR: ENGINES DIAGNOSTIC VIA INTERNET OF THINGS (IOT) Azarul Fahmin Bin Ab Hamid, Md Tasyrif, S F Khan, Dr. Muhajir Bin Ab Rahim, Norasmadi Bin Abdul Rahim, MH Basha, Muhammad Hanif Naquiuddin, Aminurasyid Bin Norizan, Mohd Sani Bin Mohamad Hashim and Ahmad Syayuthi Bin Abdul Rahman
1215	A8-7	Efficient methodology of route selection for driving cycle development Abdul Rahim Mahayadin, Shahrman Abu Bakar, Mohd Sani Mohamad Hashim, Zuradzman Mohamad Razlan, Mohd Khairul Faizi Abd Rahman, Azizi Harun, Nur Saifullah Kamarrudin, Ishak Ibrahim, Mohd Asrul Md Saad and Muhammad Faiz Hilmi Rani.



22nd August 2017, Sri Mas 1 (14:00-16:00)

Session A9: Applied Mechanics V

1400	A9-1	<p>Effect of stress ratios on the fatigue behaviour of glass/epoxy composite</p> <p>Syayuthi A.R.A., M.S. Abdul Majid, Mohd Ridzuan Mohd Jamir and K.S. Basaruddin</p>
1415	A9-2	<p>Effective Elastic Constants of Corrugated Core Sandwich Plate Microstructure Considering Imperfection in Adhesive Bonding</p> <p>M F Hazman, K S Basaruddin, N S Kamarrudin, M S Abdul Majid and M Afendi.</p>
1430	A9-3	<p>Homogenized Properties of Porous Microstructure: Effect of Void Shape and Arrangement</p> <p>M Thomas, K S Basaruddin, M J A Safar, S F K Mohamad Khan and I Ibrahim.</p>
1445	A9-4	<p>The Effect of Alkaline Treatments Soaking Time on Oil Palm Empty Fruit Bunch (OPEFB) Fibre Structure</p> <p>Faizi M.K., Mohd Shukry Abdul Majid, Shahrman A.B., Z.A. Ahmad, Shamsul B.M.T. and Y.G. Ng.</p>
1500	A9-5	<p>Vibration Power Flow Method as an Additional Method to the Transmissibility Method in Quantifying the Effectiveness of Elastomeric Mount</p> <p>Mohd Noor Arib Md Rejab, Shazmin Aniza Abdul Shukor, Mohd Sofian Mohammad Rosbi, Jawaid I. Inayat-Hussain, Nazirah Ahmad and Asyraf Ismail.</p>
1515	A9-6	<p>Influence of ceramic dental crown coating substrate thickness ratio on strain energy release rate</p> <p>Khalilah Khasnulhadi, Ruslizam Daud, Fauziah Mat, Khairul Salleh Basaruddin, Mohd Hafis Sulaiman and Siti Noor Fazliah Mohd Noor</p>
1530	A9-7	<p>The effects of different rice husk loading and size on the properties of standard malaysian rubber/ rice husk compounds</p> <p>Omar Dahham, Nik Noriman Zulkepli, Rosniza Hamzah, Mohammed Mohammed, Tijjani Adam, Marwa Al-Samarrai and Abdulkader Alakrach</p>

- 1545 A9-8 **Effect of Oxidation Agent on Wood Biomass in Ethylene Vinyl Acetate Conductive Polymer: Tensile Properties, Tensile Fracture Surface and Electrical Properties**
Mohd Hanif Mohd Pital, Supri A. Ghani, Rozyanty Rahman and Tan Soo Jin



22nd August 2017, Sri Mas 2 (14:00-16:00)

Session A10: Design & Manufacturing III

1400	A10-1	Assembly Line Balancing with Resource Constraints using New Rank-Based Crossovers Nur Hairunnisa Kamarudin and Mohd Fadzil Faisae Ab Rashid
1415	A10-2	Design of Biped Hip Simulator Using SolidWorks Muhammad Rezza Zainudin, Azli Yahya, Muhammad Ikram Md Fazli, Ardiyansyah Syahrom, Fauzan Khairi Che Harun and Muhammad Syazani Nazarudin
1430	A10-3	Mechanical properties of friction stir welded butt joint of steel/aluminium alloys: effect of tool geometry W.M. Syafiq, M. Afendi, R. Daud, M.N. Mazlee, M.S. Abdul Majid and Y.S. Lee
1445	A10-4	Evaluation of RBD Palm Stearin as Alternative Lubricant for Cold Forward Extrusion Process Nurul Farhanah Azman, Syahrullail Samion and Ahmad Ajruddin Mahzun
1500	A10-5	Fabrication of Mandible Fracture Plate by Indirect Additive Manufacturing Muhammad Aizat Yazid and Shah Fenner Khan
1515	A10-6	Development of Matlab Simulink model for dynamics analysis of passive suspension system for lightweight vehicle Jamali Md Sah, Khairul Azwan Ismail, Zahari Taha and Muhammad Aiman Mohd Fozi.
1545	A10-7	Fabrication and Electrical characterization of planner si-nanogap Tijjani Adam and Th. S. Dhahi