

CONFERENCE PROGRAMME

CONFERENCE DAY 1 : MONDAY – 21 OCTOBER 2019

VENUE : ADYA 1 & ADYA 2, ADYA HOTEL, LANGKAWI

TIME	EVENT
8.00 am – 8.45 am	Registration
9.00 am – 9.30 am	Arrival of distinguished guest Welcome Address by Chairman of Organizing Committee Opening speech and Ceremony
9.30 am – 10.00 am	Tea break
10.00 am – 10.40 am	Keynote Speaker I <i>Technological parameters effects on mechanical properties of biodegradable materials using FDM</i> Professor Dr. Dumitru Nedelcu "GHEORGHE ASACHI" TECHNICAL UNIVERSITY OF IASI, ROMANIA Chairperson: Prof. Ir. Dr. Mohd Khairul Anuar Mohd Ariffin
10.40 am – 11.20 am	Keynote Speaker II <i>Lightweight compact noise control engineering solutions using locally resonant metamaterials</i> Professor Dr. Wim Desmet KU LEUVEN, BELGIUM Chairperson: Dr. Zamir Aimaduddin Zulkefli
11.20 am – 12.00 pm	Keynote Speaker III <i>UMW Experiences in High Value Manufacturing</i> Mr. Mohd Hisham Ab Samad UMW MANUFACTURING & ENGINEERING SDN. BHD Chairperson: Dr. Mohd Roshdi Hassan
12.30 pm – 14.00 pm	Lunch Break
14.00 pm – 15.30 pm	Parallel Session I (A) & I (B) (Venue: Adya 3 & Adya 4)
15.30 pm – 15.45 pm	Tea Break
15.45 pm – 17.15 pm	Parallel Session I (A) & I (B) (Venue: Adya 3 & Adya 4)
20.00 pm – 23.00 pm	Conference Gala Dinner

CONFERENCE DAY 2 : TUESDAY – 22 OCTOBER 2019

VENUE : ADYA 1 & ADYA 2, ADYA HOTEL, LANGKAWI

TIME	EVENT
9.00 am – 9.40 am	Keynote Speaker IV Progress towards universal standardisation in Additive Manufacturing (AM): A review <i>Associate Professor Ir. Dr. B.T. Hang Tuah Baharudin</i> UNIVERSITI PUTRA MALAYSIA, MALAYSIA Chairperson: Assoc. Prof. Ir. Dr. Nuraini Abdul Aziz
9.45 am – 10.00 am	Tea break
10.00 am – 12.30 pm	Parallel Session II (A) & II (B) (Venue: Adya 3 & Adya 4)
12.30 pm – 14.00 pm	Lunch break
14.00 pm – 15.15 pm	Parallel Session II (A) & II (B) (Venue: Adya 3 & Adya 4)
15.15 pm – 15.30 pm	Tea Break and End Session

TECHNICAL VISIT : WEDNESDAY – 23 OCTOBER 2019

Time	Event
8.00 – 9.00 am	Registration in Hotel Lobby
9.00 am – 3.30 pm	Technical visit to Cable car and Makam Mahsuri

PARALLEL SESSION I (A) – MATERIAL AND MECHANICAL

DATE : 21 OCTOBER 2019

DAY : MONDAY

TIME : 14.00 pm – 17.30 pm

VENUE : ADYA 3

SESSION CHAIR : DR. KHAIRIL ANAS MD REZALI / DR. AZIZAN AS'ARRY

Time	Paper ID	Title and Author
14.00 pm	18	The Effect of Triangular Cavities on the Hybrid Microchannel Heat Sink (MCHS) Performance <i>Wan Mohd. Arif Aziz Japar, Nor Azwadi Che Sidik, R. Saidur, Natrah Kamaruzaman, Yutaka Asako, Siti Nurul Akmal Yusof and Nura Mu'az Muhammad</i>
14.15 pm	49	Effect of Water Based Nanofluids on Laminar Convective Heat Transfer in Developing Region of a Rectangular Channel <i>Siti Ujila Masuri, Md. Insiat Rabby, L. Kaniappan and A.K.M Sadrul Islam</i>
14.30 pm	40	Efficiency of Cooling Techniques for Solar Photovoltaic Panels <i>Siti Ujila Masuri, M Avazpour, L. Kaniappan, Mohammad Effendy Yaacob and D. W. Jung</i>
14.45 pm	55	PID Control of Robotics Flexible Manipulator Using Gyroscopic Actuator <i>Abbas Moloodya, Azizan Bin As'arry, Tang Sai Hong and Raja Kamil</i>
15.00 pm	50	Effect of Crack Growth Rate on Rice Husk Composite for Different Stress Level <i>Sity Ainy Nor Mohamed, Edi Syams Zainudin Mohd Sapuan Salit, Mohd Azaman Md Deros and Ahmad Mubarak Tajul Arifin</i>
15.15 pm	69	Modal Analysis of Telescopic Rod <i>N. Rahmat, N. A. A. Jalil, Z. A. Zulkefli and R. M. K. R. Ahmad</i>
15.30 pm	53	Sintering Analysis for Sub Bituminous Coal Blend <i>Salmi Samsudin and Nuraini Abdul Aziz</i>
Tea Break (15.45 pm – 16.00 pm)		
16.00 pm	27	Synthesis of Cellulose Nanofibers from Jute Fiber via Chemomechanical Method <i>Siti Syazwani Nordin, Ervina Ezfan Mohd Noor, Kok C. K. and Nurhidayatullaili M. J.</i>
16.15 pm	67	Assessment on density distribution of green compacted bilayer iron powder through the metallographic preparation <i>Syamimi Mohd Yusoff, Suraya Mohd Tahir, Azmah Hanim Mohamed Airf, Eris Elliandi Supeni and Mohd Shamsul Anuar</i>
16.30 pm	35	Tensile Strength and Moisture Absorption of Sugar Palm-PVB Laminated Composites <i>N. S. Shamsudin, Zulkifl Leman, Mohd Sapuan Salit, T.T. Dele-Afolabi and Azmah Hanim Mohamed Arif</i>
16.45 pm	28	Quasi-static Compression Behaviour of Environmentally-Friendly Interlocking Core Structures Made of Flax/Polylactic Acid Composite <i>S. Alsubari, M.Y.M. Zuhri, S.M. Sapuan, M.R. Ishak and M.I.J. Ibrahim</i>
17.00 pm	48	Characterization of Microporous Activated Carbon Prepared from Coconut Shells using NaCl as Chemical Activation <i>Che Nor Aiza Jaafar, Ismail Zainol and Lai Jee Inn</i>
17.15 pm	72	An Experimental Study of Refrigeration System Performance Using Different Nanofluids <i>A. Aziz Hairuddin and Haikal Qusyairi Halim</i>

PARALLEL SESSION I (B) – INDUSTRIAL AND MANUFACTURING

DATE : 21 OCTOBER 2019

DAY : MONDAY

TIME : 14.00 pm – 17.30 pm

VENUE : ADYA 4

SESSION CHAIR : IR. RAZALI SAMIN / A.P. DR. SITI AZFANIZAM AHMAD

Time	Paper ID	Title and Author
14.00 pm	66	Flow Induced Vibration in Square Cylinder of Various Angle of Attack <i>Nur Amira Balqis Mohd Zainuri, Lee Kee Quen, Hooi-Siang Kang, Lit Ken Tan and Nor'Azizi bin Othman</i>
14.15 pm	14	Artificial Intelligence: A Medium for successful testing of network performance for Downlink Long Term Evolution <i>Maharazu Mamman</i>
14.30 pm	46	Thermal defects of casting process <i>Shamsuddin Sulaiman, Mohammad Alhajji, Faieza Abd. Aziz, Che Noraiza Jaafar and Mohamad Sayuti</i>
14.45 pm	13	Development of A Semi-Active Suspension Control for A FSAE Quarter Car Using Magneto-Rheological Fluid (MRF) <i>Hesham Ahmed Abdul Mutaleb Abas, Azizan As'arry, Mohd Nizar Bin Mohd Naim, Abdul Aziz Hairuddin and Mohd Khair Hassan</i>
15.00 pm	61	Critical Success Factors of Lean Six Sigma and Operational Performance: A Case of Malaysian Manufacturing Company <i>Rusalbiah Che Mamat, Muhamad Khalil Omar, Shukriah Abdullah and Nurul Shafika Kamil</i>
15.15 pm	62	Interaction of Augmented Reality Systems and Virtual Reality System as an Interactive Teaching, Learning and Training Method <i>Rohidatun M.W, Faieza Abdul Aziz, Mohammed Bennamoun, Nor Hayati Saad, Dzullijah Ibrahim and SM Firdaus S.A.N</i>
15.30 pm	7	3D printed object strength to weight ratio analysis for M3 liquid material <i>Mohd Khairol Anuar Mohd Ariffin, Mohammadreza Lalegani Dezaki, Diniesh Appalanaidoo Zaliha Wahid and Abdullahi Musse Rage</i>
Tea Break (15.45 pm – 16.00 pm)		
16.00 pm	12	Investigation of The Thinning Rate During Heat-Assisted Incremental Sheet Forming of The Lightweight Material <i>Qasim Azpen, B.T. Hang Tuah Baharudin, Samsuddin Sulaiman, and Mohd Faizal Mustapha</i>
16.15 pm	23	Technological parameters effects on physico-mechanical properties of biodegradable materials 3D printing <i>Constantin Carausu, Dumitru Nedelcu, Simona-Nicoleta Mazurchevici, Ciprian Dumitru Ciofu, Andrei-Danut Mazurchevici and Popa Ramona</i>
16.30 pm	68	Mechanical Testing of Sugar Palm Fibre Reinforced Sugar Palm Biopolymer Composites: A Comprehensive Review <i>S.M. Sapuan, R.A. Ilyas, A. Nazrin, R. Syafiq and M.S.N. Atikah</i>
16.45 pm	65	Fire Simulation Prediction In A Traditional Libya House Using Fire Dynamic Simulator (FDS) <i>M. Mkharem, Eris Elliandi Supeni and Nor Mariah Adam</i>
17.00 pm	42	Analysis and Modelling of Surface Roughness based on Cutting Parameters using RSM Methods <i>I.H. Abdullah, Razali Samin, N. Azman, Tang Sai Hong, Mohd Khairol Anuar Mohd Ariffin and M.S. Ismail</i>
17.15 pm	45	Market analysis of the potential application of a modified die and tool set for material testing in the industry <i>Nur Sara Syuhada Baharudin, Suraya Mohd Tahir, Mohd Shamsul Anuar and Syamimi Mohd Yusoff</i>

PARALLEL SESSION II (A) – MATERIAL AND MECHANICAL

DATE : 22 OCTOBER 2019

DAY : TUESDAY

TIME : 10.00 am – 15.30 pm

VENUE : ADYA 3

SESSION CHAIR : DR. MUHAMMAD AZIM AZIZI / DR. MOHD ZUHRI MOHAMED YUSOFF

Time	Paper ID	Title and Author
10.00 am	1	Effects of Negative Stiffness Honeycombs to Non-Pneumatic Tyre <i>Nuraini Abdul Aziz and Shahril Sulaiman</i>
10.15 am	10	Vibration transmitted to the hand when drilling hard composite material <i>Sulaf Saad, Azizan As'arry, Khairil Anas Md Rezali and Abang Mohamad Aizuddin Abang Mohamad Mohtar</i>
10.30 am	30	A Review on Seat Transmissibility: Factors affecting dynamic stiffness and apparent mass under vertical vibration <i>Azmi Mohammad, Khairil Anas Md Rezali and Azizan As'arry</i>
10.45 am	32	Stabilised Design of the Zero-Emission and Energy Efficient Electric Unicycle Using Arduino System <i>Muhammad Azim Azizi, Rafiuddin Ashaari, Azizan As'arry, and Mohd Ridhwan Hafiz</i>
11.00 am	9	Peridynamic Method and Finite Element Method Comparison for Tensile Elongation and Fracture Simulations for PMMA <i>Muhammad Azim Azizi and Mohd Faiz Mohd Ridhuan</i>
11.15 am	73	Virtual Reality Application Improves Architecture Design <i>M. Selvaraju, Faieza Abdul Aziz, Siti Azfanizam Ahmad and Mohammed Bennamoun</i>
11.30 am	51	Influence of Water Absorption on The Mechanical Properties Of Millet Husk Fiber (MHF) Filled Poly Lactic Acid (PLA) Composites <i>Hammajam, A.A and Nur Ismarrubie Zahari</i>
11.45 am	76	Factor Affecting the Quality of Technical and Vocational Education and Training (TVET) in Manpower Department Technical Institution (MDTI) <i>Rezawati Ismail, Che Nor Aiza Jaafar, Azizan As'arry, T.T. Dele-Afolabi and Ismail Zainol</i>
12.00 pm	77	Nanocellulose Based Functional Materials for Packaging Application <i>R.A. Ilyas, S.M. Sapuan, A. Nazrin, R. Syafiq, M.S.N. Atikah and R. Ibrahim</i>
12.15 pm	78	Water Barrier Properties of Nanocellulose/ Starch reinforced Poly (Butylene Succinate) (PBS) Bionanocomposites: A review <i>A. Nazrin, S.M. Sapuan, R.A. Ilyas and R. Syafiq</i>
Lunch Break (12.30 pm – 14.00 pm)		
INDUSTRIAL AND MANUFACTURING		
14.00 pm	47	Modified Failure Mode and Effect Analysis to Mitigate Sustainable Related Risk in Palm Oil Supply Chain <i>Adhe Rizky Anugerah, Siti Azfanizam Ahmad, Razali Samin, Zaiton Samdin, and Norfaryanti Kamaruddin</i>
14.15 pm	57	Improving Quality Management Methods in Manufacturing SMEs: A Conceptual Framework <i>Rami Ba Raidah, Shamsuddin Sulaiman, Mohd Khairol Anuar Ariffin and Eris Elliandi Supeni</i>
14.30 pm	59	Risk Analysis and Control in Epoxy Moulding Compound Manufacturing using a Process Failure Mode and Effect Analysis Method <i>Razali Samin, Noorazlan Muhammad, Zulkiflle Leman and Siti Azfanizam Ahmad</i>
14.45 pm	63	Production Waste Improvement of Die Attach Area in A Semiconductor Industry <i>S.N. Noor Wafa, Nuraini Abdul Aziz, Azmah Hanim Mohamed Arif, and T.T. Dele-Afolabi</i>
15.00 pm	64	Implementation of Industry 4.0 In Malaysian Paddy Rice Farming <i>Mohd Roshdi Hassan and Amir Torkamani</i>
15.15 pm	39	Application of Taguchi Method to Optimize the Compression Moulding Parameters of Rubber Keypad <i>Z. Ya, Z. Leman, T.T. Dele-Afolabi and M.A. Azmah Hanim</i>
Tea Break and End Session		

PARALLEL SESSION II (B) – INDUSTRIAL AND MANUFACTURING

DATE : 22 OCTOBER 2019
DAY : TUESDAY
TIME : 10.00 am – 15.15 pm
VENUE : ADYA 4

SESSION CHAIR : DR. ERIS ELIANDDY SUPENI / A.P. DR. ABDUL AZIZ HAIRUDDIN

Time	Paper ID	Title and Author
10.00 am	2	Semiconductor's Burn-in Testing Improvement by Using Six Sigma <i>Norzima Zulkifli and Haresh Kumar Shanmugam</i>
10.15 am	3	Triz Tools Implementation Managing Defects in Coal Fired Power Plant <i>Nuraini Abdul Aziz and Vickneswaran Mariappan</i>
10.30 am	4	Developing the Safety Management Implementation Framework at Saudi Arabian Construction Sites <i>Bahaa Eddin Bassam Alshibli, Norzima Zulkifli and Faieza Abdul Aziz</i>
10.45 am	75	Augmented Reality Model Development for Engineering Subject using Smart Devices <i>Faieza Abdul Aziz, Azreen Zuriathy Abdul Halim, Siti Azfanizam Ahmad, Abdul Aziz Hairuddin, Hafiz Rashidi Ramli and Mohammed Bennamoun</i>
11.00 am	74	Development of Real Time Temperature Monitoring System for Vacuum Sealing Process in Wafer Fabrication <i>Mohd Faizal Adris, Faieza Abdul Aziz, B.T. Hang Tuah Baharudin and Mohammed Bennamoun</i>
11.15 am	19	Immersive Virtual Reality Development for Automobile Engine Assembly <i>Lai Lai Win, Faieza Abd. Aziz, Abdul Aziz Hairuddin Lili Nurliyana Abdullah, Hwa Yap, Hideo Saito and Norhisham Seyajah</i>
11.30 am	20	Augmented Reality: Capabilities and Challenges in Machining Industry Aligned with Industry 4.0 <i>Nadia Hanim Abdul Rani, Faieza Abdul Aziz, Siti Azfanizam Ahmad; Abdul Aziz Hairuddin, Abdul Rahman Hemdi and Mohammed Bennamoun</i>
11.45 am	21	Modelling of Engine Components for Immersive Virtual Reality Application <i>Lai Lai Win, Faieza Abd. Aziz, Abdul Aziz Hairuddin Lili Nurliyana Abdullah, Hwa Yap, Hideo Saito and Norhisham Seyajah</i>
12.00 pm	25	The Potential Profitability of Feed-In Tariff (FIT) for Solar Photovoltaic (PV) System for Malaysian Households <i>Azzam M.K. Ababneh, Zamir Zulkefli and Shamsuddin Sulaiman</i>
12.15 pm	79	Water Barrier Properties of Anti-Microbial Agent Reinforced Starch Nanocomposites: A Review <i>Syafiq, R., Ilyas, R.A. and Mohd Sapuan Salit</i>
Lunch Break (12.30 pm – 14.00 pm)		
14.00 pm	31	TRIZ Application: An Innovative Approach in Redesigning an Ergonomics Car Interior for Limbs Disabled <i>Salami Bahariah Suliano, Siti Azfanizam Ahmad, Azizan As'array and Faieza Abd. Aziz</i>
14.15 pm	36	Implementing Lean Manufacturing Drivers and Barriers with a Focus on Small-Medium Sized Enterprises <i>Roziyanna Ahmad and Faieza Abdul Aziz</i>
14.30 pm	37	Downtime Reduction Strategies for Wafer Fabrication Tools in The Semiconductor Industry <i>K.Inthiran, Napsiah Ismail and B.T Hang Tuah Baharudin</i>
14.45 pm	38	The Effectiveness of Taguchi-Based Six Sigma Method on Variation Reduction In A Green Construction Material Production Process <i>Mehdi Ketabforoush, Napsiah Ismail, and Nuraini Abdul Aziz</i>
15.00 pm	71	Critical Success Factors of Lean Six Sigma Implementation in Malaysian Manufacturing SMEs <i>Rami Ba Raidah, S. Sulaiman, M.K.A. Arrifin, E.E. Supeni</i>
Tea Break and End Session		