

**DATE: 5 DECEMBER 2023**

<b>KEYNOTE SPEAKERS (Venue: MARCO POLO 1 &amp; 2)</b>		
Time	Presentation ID	Presentation Detail
09:05 AM	Keynote – 1	<b>Recent Advancement in Additive Manufacturing/3D Printing Technologies</b> <i>Associate Professor Ir Ts. Dr. Mohd Rizal Alkahari</i> <i>(Universiti Teknikal Malaysia Melaka)</i>
09:35 AM	Keynote – 2	<b>From Powder to Solid: Unveiling the Future of Additive Manufacturing Through Selective Laser Melting</b> <i>Dr Izhar Aziz</i> <i>(3D Gens SDN BHD)</i>

**TIME: 11:00 AM – 12:30 PM**

THEME: Material Science & Powder Metallurgy: (Processing Technologies of Powder & Particulate Materials), (Modelling and Simulation of Powder & Particulate Materials Processes)

VENUE: MARCO POLO 1

Time	Presentation ID	Presentation Detail
11:00 AM	Invited Speaker - 044	<b>Comparative Study of Particle Size and Shape Effects on Powder Packing Densities</b> <i>Mohd Rhafiq Mazlan, <u>Nashrah Hani Jamadon</u>, Abu Bakar Sulong, Farazila Yusof</i> <i>(Universiti Kebangsaan Malaysia)</i>
11:15 AM	051	<b>Microhardness Evaluation of Preheated Steel G550 through Microwave Hybrid Heating</b> <i>Shamini Janasekaran, <u>Walisjiang.Tayier</u>, Mohamed Nabil Awad</i> <i>(SEGi University)</i>
11:30 AM	019	<b>Investigation of Powder Injection Moulding, Debinding and Sintering of Cu Al Mn using Peg, Pmma and Sa as Binder</b> <i>Nur Aisyah Miza Ahmad Tamizi, Abu Bakar Sulong, Muhammad Mohamed Amin, Mohd Ikram Ramli</i> <i>(Universiti Kebangsaan Malaysia)</i>
11:45 AM	061	<b>Modelling and Simulation of Stainless Steel 316L Powder Pressing with Consideration of Residual Stresses</b> <i>Akmal Hafiz, Nor Hafiez Mohamad Nor, S. Shawal</i> <i>(Universiti Teknologi MARA)</i>
12:00 PM	011	<b>Fabrication of Bi-Material Bi-Modal SS 17-4PH/SS 316L Micro-Parts by Two-Component Bi-Modal Micro-Powder Injection Molding</b> <i>Al Basir, Norhamidi Muhamad, Abu Bakar Sulong</i> <i>(Universiti Kebangsaan Malaysia)</i>
12:15 PM	043	<b>Flowability and Moldability of Zirconia Micro-Part via Micro-Powder Injection Molding</b> <i>Muhammad Mohamed Amin, Norhamidi Muhamad, Abu Bakar Sulong, Al Basir, Nur Aisyah Miza Ahmad Tamizi</i> <i>(Universiti Kebangsaan Malaysia)</i>

THEME: Mechanical & Manufacturing Engineering: (Additive Manufacturing Processes), (Machining Technology)

VENUE: MARCO POLO 2

Time	Presentation ID	Presentation Detail
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11:00 AM	Invited Speaker - 005	<b>Investigation of Surface Roughness of PLA Carbon Fibre Printed using Fused Deposition Modelling</b> <i>Nor Aiman Sukindar, Muhammad Asyraf Bin Murad, Ahmad Shah Hizam Md Yasir, Sharifah Imihezri Syed Shaharuddin, Shafie Kamaruddin, Yang Chuan Choong, Muhammad Mukhtar Noor Awalludin, <u>Mohamad Nor Hafiz Jamil</u>, Mohamad Talhah Al Hafiz, Erry Yulian Triblas Adesta (Universiti Teknologi Brunei, Brunei)</i>
11:15 AM	013	<b>Development and Analysis of an Optimized Heat Source Model for Directed Energy Deposition using Numerical Simulation</b> <i>Noridzwan Nordin, Hui Leng Choo, Pei Xuan Ku, Amares Singh, Yupiter HP Manurung, Muhd Faiz Mat, Norasiah Muhammad, Mohammad Kamil Sued (Taylor's University)</i>
11:30 AM	024	<b>Effect of Scanning Speed Towards Selective Laser Melted 316 Tensile Properties</b> <i>Mohammad Azlan Aripin, Zainuddin Sajuri, Nashrah Hani Jamadon, Intan Fadhlina Mohamed, Syarif Junaidi, Mohd Rhafiq Mazlan, Ahmad Muhammad Aziz (Universiti Kebangsaan Malaysia)</i>
11:45 AM	038	<b>Build Orientation on Hardness of Ti6Al4V Printed By LPBF</b> <i>Farhana Mohd Foudzi, Lai Yu Hung, <u>Fathin Iliana Jamhari</u>, Minhalina Ahmad Buhairi, Abu Bakar Sulong, Nabilah Afiqah Mohd Radzuan, Norhamidi Muhamad (Universiti Kebangsaan Malaysia)</i>
12:00 PM	007	<b>The Investigation of Material Removal Rate on Electrical Discharge Machining of Titanium Alloys (Ti-6Al-4V) at Different Peak Current and Pulse Duration by using RBD Palm Oil as Dielectrics Fluids</b> <i><u>Aman Supawi</u>, Said Ahmad, Norfazillah Talib, Erween Abd Rahim, Lee Woon Kiow, Nurul Farahin Mohd Joharudin (University of Tun Hussein Onn)</i>
12:15 PM	045	<b>Wettability Analysis on 3D Printed Polymer Membrane with Recycled Powder</b> <i><u>Nurul Afiqah Binti Arbain</u>, Nurul Hilwa Binti Mohd Zini, Fadhilah Binti Shikh Anuar, Mohd Fadzli Bin Abdollah (Universiti Teknikal Malaysia Melaka)</i>

**TIME: 02:00 PM – 03:45 PM**

THEME: Material Science & Powder Metallurgy: (Ceramics and Hard Materials).

Mechanical & Manufacturing Engineering: (Metals, Alloy Design & Foundry Technology)

VENUE: MARCO POLO 1

Time	Presentation ID	Presentation Detail
02:00 PM	Invited Speaker - 057	<b>Synthesis and Characterization of RuO<sub>2</sub> Nanoparticles via Sol Gel Method</b> <i><u>Muneer M. Ba-Abbad</u>, Abdelbaki Benamor<sup>a</sup> (Qatar University, Qatar)</i>
02:15 PM	015	<b>Effect of Veneering Technique on Shear Strength of Zirconia/Veneer Porcelain: A Finite Element Analysis Study</b> <i><u>Nurul Hannani Abdul Hadi</u>, Nashrah Hani Jamadon, Meor Iqram Meor Ahmad, Muhammad Sufiyan Amril, Hsu Zenn Yew, Nurul Shayhiera Aminuddin (Universiti Kebangsaan Malaysia)</i>
02:30 PM	034	<b>The Effect of PBAT/ Oil Palm Frond Composite with Palm Stearin as Compatibilizer</b> <i>Muhammad Danish Zuhairi Azrin, Ameer Azali Bin Mohamed Ali, Nurazrini Ramli, Suhaiza Hanim, Suffiyana Akhbar, Istikamah Subuki</i>

		<i>(Universiti Teknologi MARA)</i>
02:45 PM	027	<b>The Effect of Surface Treatment on Microstructure Interface of Zirconia Dentine with Different Particle Size</b> <i>Nurul Shayhiera Aminuddin, Nashrah Hani Jamadon, Hsu Zenn Yew, Nurul Hannani Abdul Hadi, Muhammad Sufiyan Amril</i> <i>(Universiti Kebangsaan Malaysia)</i>
03:00 PM	026	<b>Sheet Metal Forming Analysis of Aluminium Alloy AA6061 using Altair INSPIRE Numerical Simulation</b> <i>Izdihar Tharazi, Nurul Hayati Abdul Halim, Yupiter HP Manurung, Farrahshaida Mohd Salleh, Amirul Syazani Sabtu, Muhammad Ilham Khalit and Zulaika Zulkifli</i> <i>(Universiti Teknologi MARA)</i>
03:15 PM	008	<b>Microstructural and Properties of Magnesium Alloy AZ61 Process by High Pressure Sliding</b> <i>Zainuddin Sajuri, Intan Fadhlina Mohamed, Koh Hooi Hooi</i> <i>(Universiti Kebangsaan Malaysia)</i>
03:30 PM	021	<b>The Effect of the High-Pressure Torsion Process and the Post-Treatment Process on Aluminium Alloy 5052</b> <i>Ahmad Muhammad Aziz, Intan Fadhlina Mohamed, Mohd Zaidi Omar, Zainuddin Sajuri, Norinsan Kamil Othman, Mohammad Azlan Aripin</i> <i>(Universiti Kebangsaan Malaysia)</i>
03:45 PM	012	<b>A Review of Cu-Al-Ni Shape Memory Alloys: Effective Parameters and Recent Advances</b> <i>Kambiz Rashidi, Abu Bakar Sulong, Norhamidi Muhamad, Farhana Mohd Foudzi, Al Basir</i> <i>(Universiti Kebangsaan Malaysia)</i>

THEME: Mechanical and Manufacturing Engineering: (Additive Manufacturing Processes), (Design Manufacturing)  
VENUE: MARCO POLO 2

Time	Presentation ID	Presentation Detail
02:00 PM	Invited Speaker - 039	<b>Multi-Material Additive Manufacturing: Exploring Compatibility and Characteristics of SS316L and SS17-4PH</b> <i>Farhana Mohd Foudzi, Chia Chun Chuan, Minhalina Ahmad Buhairi, Fathin Iliana Jamhari, Abu Bakar Sulong, Nabilah Afiqah Mohd Radzuan, Norhamidi Muhamad, Nasrah Hani Jamadon, Kim Seah Tan</i> <i>(Universiti Kebangsaan Malaysia)</i>
02:15 PM	063	<b>Density and Surface Roughness Comparison of SLM Stainless Steel 316 with Standard Conventional Material</b> <i>Asa Fansuri Abu Samah, Rafidah Hasan, Zurina Shamsudin</i> <i>(Universiti Teknikal Malaysia Melaka)</i>
02:30 PM	053	<b>Influence of Various Silica Compositions after Filtering on the Physical Properties of Water Filters Manufactured through Cold Isostatic Pressing Technique</b> <i>Muhammad Firdaus Muslem, Sufizar Ahmad, Muhammad Syahmie Sufi Abdul Shukor, Fazimah Mat Noor, Hamimah Abd. Rahman, Shahrudin Mahzan, Mohd. Azham Azmi, Azzura Ismail</i> <i>(Universiti Tun Hussein Onn Malaysia)</i>
02:45 PM	062	<b>On Mechanical Performance of 3-D Printed Wood Mimic Materials</b> <i>Zaliha Wahid, Nabilah Afiqah Mohd Radzuan, Nurhasyimah Abd Aziz, Afifah Zakyyah Juri, Abu Bakar Sulong</i> <i>(Universiti Kebangsaan Malaysia)</i>
03:00 PM	067	<b>Optimizing Plastic Injection Processes: Factors Designed by Design Expert V13 and Simulation with MOULDEX3D</b> <i>Noriah Yusoff, Zuraidah Salleh, Ahmad Hussein Abdul Hamid, Nurul Hayati Abdul Halim, Mohamad Amirul Muhammad, Suhaila Hashim, Rohayu Haron Narashid, Noor Farahana Abdul Rahman</i>

		<i>(Universiti Teknologi MARA)</i>
03:15 PM	068	<b>Temperature Measurement of Ballistic Evaluation Motor using Type K Thermocouple</b> <i>Zuraidah Salleh, Ahmad Hussein Abdul Hamid, Lailatul Atila Alias, Muhammad Zakwan Azizi, Mohamad Amirul Muhammad, Nor Afizah Salleh</i> <i>(Universiti Teknologi MARA)</i>
03:30 PM	020	<b>Fracture Analysis of Austenitic Stainless Steel Finishing Reheater Tube in Power Industry Boiler</b> <i>Saidatul Akmal Biyamin, Anis Muneerah Shaiful Bahari, Ng Guat Peng, Norlia Berahim, Nursyahirah Sahran, Mazmi Yahya, Saiful Adilin Shokri, Robiah Ghazali</i> <i>(TNB Research)</i>
03:45 PM	049	<b>Amplitude and Hits Acoustic Emission Data Parameters of Concrete on the Cyclic Load Test Method</b> <i>Faisal Sheikh Khalid, Zahir Zaki, Syafiqah Ayob, Nickholas Anting Anak Guntor, Alvin John Lim Siang, Mohd Irwan Juki</i> <i>(Universiti Tun Hussein Onn Malaysia)</i>

DATE: 6 DECEMBER 2023

KEYNOTE SPEAKERS (Venue: MARCO POLO 1 & 2)		
Time	Presentation ID	Presentation Detail
09:00 AM	Keynote – 3	<b>Fabrication of Ti-Nb Alloy with Beta Phase by Metal Injection Moulding using Metal Elemental Mixture</b> <i>Professor Ir. Ts. Dr. Zuhailawati Hussain</i> (Universiti Sains Malaysia)
09:30 AM	Keynote – 4	<b>Advancements in Friction Stir Welding Techniques for Similar and Dissimilar Alloys: A Comprehensive Analysis</b> <i>Professor Dr. Zainuddin Sajuri</i> (Universiti Kebangsaan Malaysia)

TIME: 10:45 AM – 11:45 PM

THEME: Materials Science & Powder Metallurgy: (Composite – PMC, CMC, MMC)

VENUE: MARCO POLO 1

Time	Presentation ID	Presentation Detail
10:45 AM	Invited Speaker - 010	<b>Rheology Properties in Polyamide Reinforced Carbon Fibre Composite</b> <i>Nurul Syazwani Sahari, Nisa Naima Khalid, Nabilah Afiqah Mohd Radzuan, Abu Bakar Sulong</i> (Universiti Kebangsaan Malaysia)
11:00 AM	028	<b>A Framework for Prioritizing the Performance Criteria of Natural Fibre Composite Materials: Incorporation of CRITIC METHOD-TOPSIS (Technique for Order Preference by Similarity to Ideal Solution)</b> <i>Mohd Hidayat Ab Rahman, Jamaluddin Mahmud, Siti Mariam Abdul Rahman, Ridhwan Jumaidin</i> (Universiti Teknologi MARA)
11:15 AM	029	<b>Characterization of Bio Retting Kenaf Bast Fibre</b> <i>Zalina Ya, Abu Bakar Sulong, Nabilah Afiqah Mohd Radzuan</i> (Universiti Kebangsaan Malaysia)
11:30 AM	035	<b>Development of Deep Vein Thrombosis (DVT) Detecting System Prototype using the techniques of Reflectance Photoplethysmography</b> <i>Yap Joun Loung, Permesh Lal Jethi</i> (University of Wollongong Malaysia)

THEME: Materials Science & Powder Metallurgy: (Composite – PMC, CMC, MMC)

VENUE: MARCO POLO 2

Time	Presentation ID	Presentation Detail
10:45 AM	Invited Speaker - 054	<b>Influence of Hydroxyapatite Particle Size on the Flowability PLA/HA Filament</b> <i>Nur Munirah Mustaza, Farrahshaida Mohd Salleh, Syahmin Ilyana Rahmat</i> (Universiti Teknologi MARA)
11:00 AM	050	<b>Nanoparticle Size Effects on Zirconia Dental Restorations: Mechanical Properties and Material Characterization</b> <i>Asiah Shamsudin, Muhammad Sufiyan Amril, Nurul Shayhiera Aminuddin, Nashrah Hani Jamadon, Andanastuti Muchtar, Nurul Hannani Abdul Hadi</i> (Universiti Kebangsaan Malaysia)

11:15 AM	009	<b>Predicting Embedded Crack Growth Behaviour using S-version Finite Element Method of AISi10Mg Material</b> <i>Sze Pei Tan, Stephanie George, Mohd Shamil Shaari, Akiyuki Takahashi, Mohd Akramin Mohd Romlay</i> (Universiti Malaysia Pahang)
11:30 AM	040	<b>Responses Pre-Crystallized Lithium Silicate Glass-Ceramics to Conventional and Ultrasonic Diamond Milling</b> <i>Afifah Zakiyyah Juri, Renan Belli, Ulrich Lohbauer, Heike Ebendorff-Heidepriem, Ling Yin</i> (Universiti Kebangsaan Malaysia)

**TIME: 02:00 PM – 04:00 PM**

THEME: Materials Science & Powder Metallurgy: (Composite – PMC, CMC, MMC), (Sustainability & Green Manufacturing)

VENUE: MARCO POLO 1

Time	Presentation ID	Presentation Detail
02:00 PM	Invited Speaker - 047	<b>Investigation of Polylactide-Nanoclay (PLA/ MMT) Surface Modification on Non-Isothermal Crystallisation Green Nanocomposites</b> <i>Sharvien Rajamanikam, Nishata Royan Rajendran Royan, Mohd Hafizuddin Bin Ab Ghani</i> (University of Wollongong Malaysia)
02:15 PM	046	<b>Recent Trends in Hybrid Kenaf/Glass Fibres Reinforced Polymer Composites for Structural Applications</b> <i>Muhammad Asyraf Muhammad Rizal, Shukur Abu Hassan, Mohd Yazid Yahya, Ahmad Ilyas Rushdan, Zatil Hazrati Kamaruddin, Mohd Azlin Mohd Nor, Desmond Daniel Chin Vui Sheng</i> (Universiti Teknologi Malaysia)
02:30 PM	037	<b>Effect of Strain Rate on Flexural Behavior of Unidirectional CFRP Composites: Experimental Investigation and Finite Element Analysis</b> <i>Rishendra Rarochanan Suresh Khanna, Zainon Sharmila Binti Shamsuddin, Nishata Royan Rajendran Royan</i> (University of Wollongong Malaysia)
02:45 PM	059	<b>Mechanical Properties and Thermal Stability of PLA/Wollastonite Composite Filaments for 3D Printing in Implant Applications</b> <i>Daniel Lem Jie Choong, Teng Jie Jun, Amaresh Malakar Choudhury, Mohd Ikram Ramli, Nishata Royan Rajendran Royan</i> (University of Wollongong Malaysia)
03:00 PM	065	<b>Effect of Electrode on Tribological Behaviour of Ni-GO Nanocomposite Coating</b> <i>Noor Syhadah Yussoff, Nik Roselina Nik Roseley, Nor Hayati Saad<sup>a</sup></i> (Universiti Teknologi MARA)
03:15 PM	066	<b>Effect of Carbon Type and Composition on the Properties of Carbon-Copper Composite for Pantograph Slide in Railway Application</b> <i>Fazira Suriani Mohamed Fadzil, Koay Mei Hye, Mohd. Asri Selamat, Eliasidi Abu Othman, Ahmad Aswad Mahaidin</i> (SIRIM and Universiti Teknologi MARA)
03:30 PM	014	<b>Controlling Corrosion Rate of Biodiesel Fuelled Engine via Cyclic Regeneration of Weak Base within Diesel Engine Oil</b> <i>Shahab Imran, Nurin Wahidah Zulkifli, Abul Kalam, Ashraf Yusoff<sup>a</sup></i> (University of Malaya)
03:45 PM	030	<b>Effect of Different Silica Composition for Water Filter Produced by Slip Casting Method</b>

		<i>Syahmie Sufi Abdul Shukor, Sufizar Ahmad, Hamimah Abd. Rahman, Shahrudin Mahzan, Mohd. Azham Azmi, Azzura Ismail (Universiti Tun Hussein Onn Malaysia)</i>
04:00 PM	055	<b>Design and Development of Intermaxillary Dental Screw via Metal Injection Molding</b> <i>Faiz Ahmad, Chowdhury Ahmed Shahed, Nur Syafiqah Mohamed Hussain, S Ali, Ngeow Wei Cheong, Daniel Lim (Universiti Teknologi PETRONAS)</i>

THEME: Production Planning and Quality Control: (Design Manufacturing), (Machining Technology), (Welding & Joining Technology)

VENUE: MARCO POLO 2

Time	Presentation ID	Presentation Detail
02:00 PM	Invited Speaker - 070	<b>Plasma Arc Additive Manufacturing</b> <i>Thar Albarody (Universiti Teknologi PETRONAS)</i>
02:15 PM	016	<b>Gamification Approach for Interactive Learning of Lean Manufacturing Activities</b> <i>Noor Azlina Mohd Salleh, Azianti Ismail, Sharipah Ruzaina Syed Aris, Megat Iskandar Shah Megat Shahrul Anuar, Ahmad Naqib Akmal Bin Abdul Manan (Universiti Teknologi MARA)</i>
02:30 PM	033	<b>Continual Improvement (CI) Lean Culture in Malaysia Manufacturing &amp; Engineering (M&amp;E) Companies</b> <i>Rasidah Abu, Nurul Hayati Abdul Halim, Falah Abu, Noor Azlina Mohd.Salleh (Universiti Teknologi MARA)</i>
02:45 PM	022	<b>Effect of Welding Parameters on Lap Shear Force of Similar and Dissimilar Friction Stir Spot Welded Aluminium Alloys</b> <i>Ahmed Esmael Mohan, Zainuddin Sajuri, Amir Hossein Baghdadi, Nashrah Hani Jamadon (Universiti Kebangsaan Malaysia)</i>
03:00 PM	041	<b>Performance Analysis on the Safety and Automation System of a Modified Cutting Machine: Repurposing Initiatives</b> <i>Siti Mariam Binti Abdul Rahman, Muhammad Syahiran Mohamad Tajolli, Anis Syahirah Binti Syaiful Azuan, Irmie Azlin Zakaria, Ahsana Aqilah Ahmad<sup>a</sup> (Universiti Teknologi MARA)</i>
03:15 PM	042	<b>Effect of the Heat Generation on the Surface Roughness During the Turning Process</b> <i>Nur Hidayah Mansor (Universiti Sains Malaysia)</i>
03:30 PM	048	<b>Development of IoT Kaizen System for Smart Lean Raw Material Inventory Management: A Case Study at an SME Factory in Malaysia</b> <i>Elvianney Michael, Mohd Hazri Mohd Rusli, Suzilawati.M-Kayat, Mohamad Khairi Hassan (Universiti Teknologi MARA)</i>
03:45 PM	017	<b>Mesh Independence Study on Computational Fluid Dynamics for Cryo-CO<sub>2</sub> Cooling Strategy</b> <i>Nur Fatini Mohamad Fauzee, Nurul Hayati Abdul Halim, Zainoor Hailmee Solihin, Musfirah Abdul Hadi, Nor Hayati Saad, Juri Saedon, Ahsana Aqilah Ahmad, Zulaika Zulkifli (Universiti Teknologi MARA)</i>
04:00 PM	052	<b>Optimisation of SPIF Process Parameters on the Surface Roughness of Dissimilar Material Friction Stir-Welded Blanks using the Taguchi Method</b>

		<i>Kamarul Al-Hafiz Abdul Razak, Ahmad Baharuddin Abdullah, Norzalilah Mohammad Nor (Universiti Sains Malaysia)</i>
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