

5TH INTERNATIONAL CONFERENCE ON AUTOMOTIVE INNOVATION AND GREEN ENERGY VEHICLE

AiGEV

2 0 2 2

5th December 2022

Holiday Villa Beach Resort & Spa Langkawi

**Towards Sustainability,
Green and Innovative
Automotive Engineering**

ITINERARY



<https://aigev.ump.edu.my>

ORGANIZED BY:

**PUSAT
KEJURUTERAAN
AUTOMOTIF**

PROGRAM OVERVIEW

5 December 2022 (Monday)
Holiday Villa Beach Resort & Spa, Langkawi

TIME	EVENT	VENUE
8.00am - 12.00pm	Onsite Registration Presenter / Participant	Grand Ballroom, Ground Floor, Holiday Villa Beach Resort & Spa
8.30am	VIPs arrival	
9.00am	Opening Ceremony <ul style="list-style-type: none"> • Doa Recitation • Welcome Speech by Chairman • Official AiGEV2022's Montage 	
9.30am	Keynote Speaker #1	
10.10am	Morning Break	
10.30am	Keynote Speaker #2	
11.10am	Best Paper Award & Closing Ceremony	
11.30am	Presentation Parallel Session #1	
12.30pm	Lunch Break	Coffee House, Holiday Villa Beach Resort & Spa
2.00pm	Presentation Parallel Session #2	Room 1, 2 & 3, Ground Floor Holiday Villa Beach Resort & Spa
3.30pm	Afternoon Break	Grand Ballroom, Ground Floor, Holiday Villa Beach Resort & Spa
4.00pm	Presentation Parallel Session #3	Room 1, 2 & 3, Ground Floor Holiday Villa Beach Resort & Spa
8.00pm	Appreciation Dinner	Poolside, Aseania Resort

Parallel Session 1

Date : 5 December 2022
Time : 11:30 am – 12:30 pm
Venue : Room 1, Ground Floor
Holiday Villa Beach Resort & Spa, Langkawi
Category : Renewable and Green Engineering
Chairperson : Assoc. Prof. Dr. Abdul Adam bin Abdullah

NO	ID	TITLE
1	P6	Effects of Hybrid Additive of Ethanol-Butanol and Magnetite nanoparticle on Emission and Performance of Diesel Engine fuelled with Diesel-biodiesel Blends
2	P17	Monitoring Laser Cleaning Process Using Acoustic Signal
3	P45	Comparative Study Performance and Emission of Various Commercial Biodiesels Operating in Single Cylinder CI Diesel Engine
4	P56	A systematic review on bio-based phase change materials (BPCMs)
5	P74	The Interception of Wind Turbine Lightning Receptor Type and Radius to Electrical Field

Parallel Session 1

Date : 5 December 2022
 Time : 11.30 am – 1.00 pm
 Venue : Room 2, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Artificial Intelligence and Nano Engineering
 Chairperson : Assoc. Prof. Dr. Mohd Mawardi bin Saari

NO	ID	TITLE
1	P1	Deep Learning-based Driving Cycle Development for Kinta District
2	P9	Adaptation and Validity of the Multidimensional Driving Styles Inventory for the Malaysian Drivers
3	P26	A Trade-off Criterion for bi-objective Problem in Solving Hybrid Flow Shop Scheduling with Energy-Efficient (EE-HFS) Using Multi Objective Dragonfly Algorithm (MODA)
4	P60	Synthesis of CNT Cotton/ZnO Nanocomposite using Waste Cooking Oil as the Bio-templating Agent
5	P61	The Effect of Sintering Temperature and Composition on the Strength of Hydroxyapatite/Montmorillonite Nanocomposite
6	P67	Comparitive Peformance Evaluation of PID and Fuzzy PID Controller using Genetic Algorithm for A Robotic Manipulator System
7	P73	A Device-to-Device (D2D) Communication between Mobile Robots using Wireless Communication Protocol in Dynamic Environments
8	P84	Eco Design Tool for Material and Joining Selection of Automotive Component Using Genetic Algorithm

Parallel Session 1

Date : 5 December 2022
 Time : 11.30 pm – 1:00 pm
 Venue : Room 3, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Material Science and Engineering
 Chairperson : Prof. Ir. Ts. Dr. Kumaran A/L Kadirgama

NO	ID	TITLE
1	P57	Microhardness Study on Autogenous Lap Joint Between Ti6Al4V and Inconel 600 Using Low Power Fiber Laser
2	P8	Detailed Examination on the Enhancement of Heat Release Rate in Inversed-delta-injected Diesel Spray Flame
3	P14	The Effects of Different Cooling Rate Conditions on the Thermal Profile and Microstructure of Al-Si Alloy with Magnesium Addition
4	P15	Driving Behavior in Malaysia's Highlands for Biodiesel Utilization
5	P19	Mechanical Behavior of 3D-Printed Rice Husk Reinforced Recycled High Density Polyethylene Composite
6	P37	Semisolid Metal Processing Parameters and Metallurgical Properties: An Overview
7	P43	Effect Of Surface Topography Of 8090 Al-Li Alloy During Abrasive Waterjet Peening Process

Parallel Session 2

Date : 5 December 2022
 Time : 2:00 pm – 3:30 pm
 Venue : Room 1, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Automotive and Mechanical Engineering
 Chairperson : Assoc. Prof. Dr. Abdul Adam bin Abdullah

NO	ID	TITLE
1	P12	Validation Of Malaysian Driving Style Self-Assessment With Observational Road Study
2	P13	Motion Sickness Susceptibility Among Malaysians When Travelling in A Moving Vehicle
3	P23	Rollover Investigation of Two-Axle Heavy Vehicle Based on Load Transfer Ratio with Vehicle and Road Condition: A Simulation Approach
4	P36	The Development of a Driving Simulator for Driver's Response During Obstacle Avoidance Task
5	P44	Elucidation of exhaust manifold's divergence characteristics and the peak brake torque of 115cc SI engine through Taguchi's method
6	P49	Linear passenger car model for fuel consumption prediction in localized application
7	P58	Power and Forming Force Relation on a Solenoid Actuated Micro-Forming Machine

Parallel Session 2

Date : 5 December 2022
 Time : 2.00 pm – 3:30 pm
 Venue : Room 2, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Manufacturing and Industrial Engineering
 Chairperson : Assoc. Prof. Ir. Ts. Dr. Devarajan A/L Ramasamy

NO	ID	TITLE
1	P5	Vacuum Pressure Comparison of Cupping Therapy Device using Multiple Cups for Cupping Therapy Improvements
2	P7	Influence of multi pass friction stir welding on temperature profile during welding of AA6061-T6 to mild steel joints
3	P18	Novel Pre-Treatment For Lignocellulosic Biomass Delignification Using Alkaline-Assisted Ohmic Heating
4	P28	A Bezier Curve Optimization Method Based on Segmentation Factor (t) for Path Planning in Autonomous Navigation
5	P30	Laser Texturing of Glass Surface for Modified Hydrophilicity
6	P46	Multi-Objectives Process Optimization in End Milling Process of Aluminium Alloy 6061-T6 using Genetic Algorithm

Parallel Session 2

Date : 5 December 2022
 Time : 2:00 pm – 3:30 pm
 Venue : Room 3, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Material Science and Engineering
 Chairperson : Prof. Ir. Ts. Dr. Kumaran A/L Kadirgama

NO	ID	TITLE
1	P47	Corrosion Current Density Prediction Of 3C Steel Under Different Seawater Environment Via Artificial Neural Network
2	P59	Hard Materials Characteristics for the Application of Micro-forming
3	P65	Investigating the Chemical and Thermal Stability of Multi-Walled Carbon Nanotubes (MWCNTs) Enhanced Salt Hydrate Phase Change Materials
4	P70	Correlation of Fibre Contents Towards Manufacturing Defects and Water Absorption of <i>Arenga Pinnata</i> Fibre Reinforced Hybrid Composites for Green Boat Construction
5	P79	Detection of Vertical and Horizontal Crack in Steel Structure Using a Circular Eddy Current Testing Probe
6	P82	Dynamic Behaviour Estimation of Laser Stitch Welded Structure
7	P89	"Effect of Tire Pyrolysis Oil, Crude Palm Biodiesel and Engine Speed on Engine Performance"
8	P91	Reliability of Response-Controlled Stepped Sine Testing for Experimental Detection of Nonlinear Structure

Parallel Session 3

Date : 5 December 2022
 Time : 4.00 pm – 5.30 pm
 Venue : Room 1, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Automotive and Mechanical Engineering
 Chairperson : Assoc. Prof. Dr. Abdul Adam bin Abdullah

NO	ID	TITLE
1	P76	Simulation and modelling of spray characteristics, spray penetration length and injection pressure of biodiesel
2	P78	Effect of Ambient Density and High Injection Pressure on the Flow Characteristics of Biodiesel Spray
3	P80	“Role of Human Factor for the Implementation of the “Vision Zero” Concept in Railway Transport: An Overview”
4	P83	Investigation of Force and Reaction Time on Car Pedals During Natural Driving
5	P85	"The Prediction of Graphene Nanoplatelets Addition Effects on Diesel Engine Emissions"
6	P88	Influences of Ambient Temperature, Injection Characterirics and Spray Characteristics on Ignition Delay and Combustion Process of Palm Oil and Waste Cooking Oil
7	P90	Using MQTT Protocol for Controlling Manual Transmission Car on a Chassis Dynamometer

Parallel Session 3

Date : 5 December 2022
 Time : 4:00 pm – 5:30 pm
 Venue : Room 2, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Manufacturing and Industrial Engineering
 Chairperson : Assoc. Prof. Ir. Ts. Dr. Devarajan A/L Ramasamy

NO	ID	TITLE
1	P48	Cutting Force Simulation for Machining of Precision Vacuum Component
2	P50	Mathematical Simulation for Automotive Supplier Warehouse Redesign Problem
3	P63	Mitigation Measures for Delay in Dam's Project - A Case Study in Pakistan
4	P64	Analysis of Major Causative Factors of Cost Overrun in Projects of Pakistan
5	P72	Six Sigma Methodology for Dog Bone Product of Plastic Injection Moulding Process Improvement
6	P81	Model Updating of a Bolted Mating Area Using Thin Layer Element Parameters
7	P86	The Effect of Railways Speed on The Rail Track Structure Strain Behaviour using Fibre Optical Sensor

Parallel Session 3

Date : 5 December 2022
 Time : 4.00 pm – 5.30 pm
 Venue : Room 3, Ground Floor
 Holiday Villa Beach Resort & Spa, Langkawi
 Category : Electric Vehicle and Power Engineering
 Chairperson : Assoc. Prof. Dr. Mohd Mawardi bin Saari

NO	ID	TITLE
1	P10	Effects of Ride Comfort on Different Non-Driving Related Activities in Fully Automated Driving Experience
2	P11	Proof of Concept for Visual Modality Prototype in Mitigating Motion Sickness in Automated Vehicle
3	P20	Comparative Study of Heavy Truck Electric Conversion Technology by Mean of Model Based System Analysis
4	P27	A Data-driven MnHR-NEPID Control for Container Gantry Crane System based on Adaptive Safe Experimentation Dynamics
5	P66	Design of NPID Controller for Nonlinear Trajectory Tracking of Robotic 3D-Printer System Manipulator
6	P71	Coordinated Electric Vehicle Scheduling Using Time-of-Use Scheme and Priority Charging
7	P77	Hybrid Sliding Mode Control Application in Mathematical Model of Electronics Throttle Valve
8	P87	Design of UWB Antipodal Vivaldi Antenna with Rectangular Corrugated Edges for Through Wall Imaging (TWI) Applications