

I. Tentative Program

		Date: April 26, 2024		Time: 8:00 - 16:30	
No.	Time	Main room 4 th Floor, A1 Building			
1	8:00 - 8:30	Registration			
2	8:30 - 8:35	MC Introduction			
3	8:35 - 8:40	Welcome Speech SETSM 2024			
4	8:40 - 8:45	Opening Speech SETSM 2024 from Rector of HaUI - Dr. Kieu Xuan Thuc			
5	08:45 - 9:10	Keynote Speaker #1 Prof. Le Anh Tuan, HUST, Vietnam: "Directions for sustainable development and green growth associated with transport sector towards Net-Zero in 2050 of Viet Nam"			
6	9:10 - 9:35	Keynote Speaker #2 Prof. Quang-Cherng Hsu, NKUST, Taiwan: "The trend from AOI to AI for smart manufacturing"			
7	9:35 - 10:00	Keynote Speaker #3 Prof. T. Muthuramalingam, ISTI, India: "Application of Flexible Printed Sensors for Automobile Cockpit Electronics Panel"			
8	10:00 - 10:20	Coffee break			
Technical Sessions #1					
9	10:20 - 12:00	Sustainable Design and Additive Manufacturing – 3D Printing (PB1;4) - Meeting Room, 4 th floor - A1 building. Session chair: Prof. Quang-Cherng Hsu, Prof. Van Thao Le	Mechatronics, automatic control, electronic communication robotics and digital twin - Conference Room 1, 4 th floor - A1 building. Session chair: Prof. T. Muthuramalingam Prof. Lê Anh Tuấn	Internal Combustion Engine Technology, Autonomous vehicles, connected vehicles, and Intelligent Transportation System – Room 603, 6 th floor A1 building. Session chair: Prof. Kirill Karpukhin, Prof. Tran Quang Vinh	Mechanics and Thermal Sciences – Room 1205, 12 th floor A1 building. Session chair: Prof. Te-hua Fang Prof. Phan Bui Khoi
10	12:00 - 13:30	Lunch			
Technical Sessions #2					
11	13:30 - 15:10	Smart Manufacturing, Lean Manufacturing 4.0, Rapid Manufacturing and Cloud Manufacturing – Meeting Room, 4 th floor - A1 building.	Green Energy, renewable energy and energy conservation; ICT - Information and Communications Technologies - Conference Room 1, 4 th floor - A1 building.	Automotive Engineering Technology; electric and hybrid vehicle technologies – Room 603, 6 th floor A1 building. Session chairs: Prof. Kirill Karpukhin, Prof. Chu Van Dat	Mechanics and Thermal Sciences – Room 1205, 12 th floor A1 building. Session chairs: Prof. Nguyen Dong Anh

		Session chairs: Prof. Khairul Salleh Basaruddin, Prof. Truong Hoanh Son	Session chairs: Prof. Tan Tran Duc, Prof. Phạm Hữu Tuyển		
12	15:10 - 15:25	Coffee break			
13	15:25 - 16:25	Technical Sessions #3 Poster Sessions			
		Sustainable Design and Additive Manufacturing – 3D Printing; Smart Manufacturing, Lean Manufacturing 4.0, Rapid Manufacturing and Cloud Manufacturing - 4 th floor - A1 building. Session chairs: Assoc.Prof. Hoang Tien Dzung, Dr. Trinh Van Long	Mechatronics, automatic control, electronic communication robotics and digital twin; Green Energy, renewable energy, and energy conservation; ICT - Information and Communications Technologies - 4 th floor - A1 building. Session chairs: Assoc.Prof. Nguyen Anh Tu, Dr. Nguyen Van Truong	Automotive Engineering Technology; electric and hybrid vehicle technologies; Internal Combustion Engine Technology, Autonomous vehicles, connected vehicles, and Intelligent Transportation System - 4 th floor - A1 building. Session chairs: Dr. Nguyen Anh Ngoc, Dr. Vu Hai Quan	Mechanics and Thermal Sciences - 4 th floor - A1 building. Session chairs: Assoc.Prof. Nguyen Tuan Linh, Dr. Pham Minh Hieu
14	16:25 - 16:30	Ending speech - from Rector of SMAE, HaUI - Assoc. Prof. Hoang Tien Dzung			

II. Technical Sessions

<p>Technical Sessions #1 Oral Sessions</p>	<p>Sustainable Design and Additive Manufacturing – 3D Printing (PB1;4) - Meeting Room, 4th floor - A1 building. Session chair: Prof. Khairul Salleh Basaruddin, Prof. Quang-Cherng Hsu</p>	<p>Mechatronics, automatic control, electronic communication robotics and digital twin - Conference Room 1, 4th floor - A1 building. Session chair: Prof. T. Muthuramalingam, Prof. Lê Anh Tuấn</p>	<p>Internal Combustion Engine Technology, Autonomous vehicles, connected vehicles, and Intelligent Transportation System – Room 603, 6th floor A1 building. Session chair: Prof. Kirill Karpukhin, Prof. Tran Quang Vinh</p>	<p>Mechanics and Thermal Sciences – Room 1205, 12th floor A1 building. Session chair: Prof. Te-hua Fang, Prof. Phan Bui Khoi</p>
<p>10:20-10:40</p>	<p>ID44: A DNS simulation of the low-Reynold flow through an elliptical cylinder using the Lattice Boltzmann method</p>	<p>153: Shortest Path Planning for Rectangular Holonomic Omnidirectional Mobile Robot Using Improved PRM Algorithm</p>	<p>66: The Study of Methods for Measuring and Controlling Oxygen Storage Capacity</p>	<p>58: Application of finite element method to analyze deformation and stress of the clutch structure</p>
<p>10:40-11:00</p>	<p>154: Formulation of Silicone Paste Extrusion-Based For 3D Printing Technology</p>	<p>35: Non-Singular Terminal Sliding Mode Control of the steering wheels of 4WD4WS</p>	<p>38: Application of CVCC model in researching mixture formation and fuel combustion process</p>	<p>79: Simulate And Optimize The Front Bumper System Of The Vehicle With Ls-Dyna Software</p>
<p>11:00-11:20</p>	<p>ID120: A design review for generating tooth profile of non-circular gear pair</p>	<p>151: Multi-services Digital Twin for Modular Production System based on ISO 23247 and Webserver</p>	<p>104: A systematic approach to modeling Crankshaft and Camshaft signal for the Electronic Control System of The Hyundai D4EA Engine</p>	<p>89: Mechanical properties of dual-phase eutectic high-entropy alloys under nano-cutting.</p>
<p>11:20-11:40</p>	<p>96: Optimizing technological parameters to improve the accuracy of 3D LCD printed products</p>	<p>106: Vision-based automatic hand measurement system for ring selection</p>	<p>69: Automotive Aerodynamics Analysis: An Implementation of Openfoam Software</p>	<p>94: Development of Finite Element Tool for the Modeling of Apparent Mechanical Properties of Composites with Random Inclusion Distribution</p>
<p>11:40-12:00</p>	<p>41: Topology optimization for resin 3D printed products to prevent weak connections</p>	<p>93: An Efficient Filter for Topology Optimization of Isotropic Elastic Materials in the Two-Dimensional Design Domain</p>	<p>22: Study of the rational combination of energy sources installed on a vehicle with a combined power sources to balance power, reduce fuel and hydrocarbon gas consumption</p>	<p>20: Modulating optoelectronics properties of Janus SiSSe monolayer by mechanical strain</p>

			when operating an internal combustion engine on various types of fuel	
Technical Sessions #2 Oral Sessions	Smart Manufacturing, Lean Manufacturing 4.0, Rapid Manufacturing and Cloud Manufacturing - Meeting Room, 4 th floor - A1 building. Session chairs: Prof. Muhammad Juhairi Aziz Safar, Prof. Truong Hoanh Son	Green Energy, renewable energy and energy conservation; ICT - Information and Communications Technologies - Conference Room 1, 4 th floor - A1 building. Session chairs: Prof. Tan Tran Duc, Prof. Phạm Hữu Tuyển	Automotive Engineering Technology; electric and hybrid vehicle technologies – Room 603, 6 th floor A1 building. Session chairs: Prof. Aleksandr Kudrin, Prof. Chu Van Dat	Mechanics and Thermal Sciences – Room 1205, 12 th floor A1 building. Session chairs: Prof. Nguyen Dong Anh
13:30-13:50	28: Optimizing power consumption and humidity of sliced avocado using a heat pump dryer	211: Which strategies should vietnam's garment industry approach leading to sustainable development	82: Simulation of urea injection in a closed-loop control using Proteus software	32: SIMULATE AIRBAG FOLDING USING ANSYS LS DYNA SOFTWARE
13:50-14:10	85: Investigation of Axis Errors of Grinding Tool in Screw Rotor Grinding Process	74: Simulation of the operating process of a spark ignition engine powered by carbon-free fuel	47: Development of the concept of digital twin of temperature control system of electric vehicles category L	80: Performance Analysis of Discharge Copper Coated Machining of Aluminum Ti-6Al-4V Tool Alloy
14:10-14:30	88: Triboelectric nanogenerator for the emerging technologies and smart manufacturing	60: 3D avatar interactive system on Hologram fan projector using motion recognition control by Mediapipe holistic	99: Develop agents for Autonomous vehicles using Reinforcement learning	43: Electromechanical properties of GaN monolayer
14:50-15:10	102: The temperature, strain, and strain rate dependent flow stress of 10B33 boron steel using the modified Johnson-Cook model	27: A novel approach of mining high utility itemsets	139: Unveiling the Thermal Fingerprint of Magnetorheological Brakes: A Simulation Approach	40: Free vibration analysis on inner/outer ring-stiffened combined shells made by functionally graded material
14:10-14:30	57: Studying the effect of cutting tool tilt angle on surface quality when machining on a 4-axis Turn-Mil machine	25: Analyzing Frontal Car Collisions Through Simulation Utilizing HyperWorks Software	8: Design of Adaptive Fuzzy-PID for Adaptive Cruise Control of Electric Vehicle using DC Motor: Theory and Experiment	29: A Study Using Advanced Simulation Techniques and Statistical Analysis for Enhanced Precision of Cylinder Cup in

				Sheet Metal Deep Drawing Processes
Technical Sessions #3 Poster Sessions	Sustainable Design and Additive Manufacturing – 3D Printing; Smart Manufacturing, Lean Manufacturing 4.0, Rapid Manufacturing and Cloud Manufacturing - 4 th floor - A1 building. Session chairs: Assoc.Prof. Hoang Tien Dzung, Dr. Trinh Van Long	Mechatronics, automatic control, electronic communication robotics and digital twin; Green Energy, renewable energy, and energy conservation; ICT - Information and Communications Technologies - 4 th floor - A1 building. Session chairs: Assoc.Prof. Nguyen Anh Tu, Dr. Nguyen Van Truong	Automotive Engineering Technology; electric and hybrid vehicle technologies; Internal Combustion Engine Technology, Autonomous vehicles, connected vehicles, and Intelligent Transportation System - 4 th floor - A1 building. Session chairs: Dr. Nguyen Anh Ngoc, Dr. Vu Hai Quan	Mechanics and Thermal Sciences - 4 th floor - A1 building. Session chairs: Assoc.Prof. Nguyen Tuan Linh, Dr. Pham Minh Hieu
15:25 - 16:25	83: Sustainable Dry Machining of Aluminum Alloy A7075: Utilizing Coral Reefs Optimization and Heatmap Analysis for Impact Assessment and Optimization of Cutting Parameters	118: Preparation of Yttria-Stabilized Zirconia (YSZ) Nano-Scale Powder by Sol-Gel Method Apply for Preparing Electrolyte of Solid Oxide Fuel Cell	30: Modeling and simulation of automotive dynamics with the effect of lateral forces	135: Static Analysis of artificial bone pin made by using nanocomposite
	78: Effects of heat accumulation on the part quality and methods for reducing heat accumulation in wire arc additive manufacturing: a review	156: Deep Learning Approach for Detecting and Evaluating Orange on Mobile Device	36: Testing of Thermal Management System Intended for Automotive Traction Electric Drives by Means of X-in-the-Loop Technology Featuring VPN-Connected Remote Facility	45: Macroscopic elastic moduli of the random circle-inclusion model with spring-layer imperfect interfaces
	116: Enhanced Multi-Objective Optimization in Turning SUS 430C Steel: Integrating Response Surface Methodology with Desirability Function Analysis	11: Novel thermoelectric generator design for recovering waste heat	48: Fuel deposits and methods for their control	51: Improve flutter stability for streamlined sections by arranging eccentric masse
	72: Achieving FIT Manufacturing through the Lens of Industry 5.0: A Lean Perspective	109: Fuzzy Nonlinear Computed Torque Controller for Robot with Fault	50: Development and Verification of a Mathematical Model of Fuel Consumption Estimation Suitable for	90: A Review of Inverse Methods for Claw-Type Rotor Design

			Research of Algorithms of Energy-efficient Control on Digital Roads	
	117: A honey dehydrator working at atmospheric pressure using a heat pump dryer incorporated with a falling film evaporator	98: A Novel Hierarchical Sliding Mode Controller for Articulated Heavy Vehicles	54: An approach to the development of a methodology for energy-efficient control of cargo vehicles	105: Research to Evaluate the Effectiveness of a Dehumidifier Integrated Air Conditioner in Tropical Monsoon Climate
	100: The mechanical properties of continuous carbon fibers based polylactic acid (PLA) resin 3D printing materials for different infill patterns	145: Sliding mode control using genetic algorithm for twin rotor MIMO system	114: An Investigation of High Injection Pressures on Palm-Biodiesel Combustion Characteristics Using a Constant Volume Combustion Chamber	111: Research on crane beam calculation methods to reduce simulation computation time
	46: Analysis, simulation of the Welding system in industrial production using Tecnomatix Plant Simulation software	42: A numerical study on the thermo-electrohydrodynamic performance of ECF micro-pumps	250: Comparison of two methods: RAM and AROMAN	121: Static bending analysis of bi-directional functionally graded porous microshell
	76: Evaluating the Impact of Cutting Speed and Feed Rate on Surface Roughness Utilizing a Four-Insert Carbide Face Milling Cutter on CNC Machines		254: Experimental system setup to investigate the motorcycle performance at various operating conditions	
	112: Digital Transformation Database for Material Inventory Management in Garment Industry		53: Study on aerodynamic noise characteristics of quadcopter UAV considering the influence of separation distances between rotor tips and rotational speeds	