

CONFERENCE AGENDA

**The 8th International Conference on Engineering Research and Applications 2025
(ICERA 2025), December 1-2, 2025**

Time	Activities	Location
December 1st, 2025	Keynote Speaker Section (Online via Zoom Meeting)	Meeting room No.2 & Online via Zoom Meeting
13:30 - 13:40	Welcome Delegates	
13:40 - 17:00	Chairman: 1. Prof. Banh Tien Long, Vietnam Association of Science Editing (VASE), Vietnam 2. Prof. Vu Dinh Lam, Vietnam Academy of Science and Technology, Vietnam Keynote speakers: 1. Prof. Roger A. Sauer - Ruhr-University Bochum, Germany 2. Prof. Vu Dinh Lam, Vietnam Academy of Science and Technology, Vietnam 3. Prof. Yuri Shardt - Ilmenau University of Technology, Germany 4. Prof. Dr. T. Muthuramalingam - SRM Institute of Science and Technology, India 5. Prof. S.A. Sherif - University of Florida, USA	
December 2nd, 2025	Opening Conference and Oral Presentation	
07:00 - 07:45	Registration	Great Hall
07:45 - 08:00	Music	
08:00 - 08:05	Opening ceremony	
08:05 - 08:15	Opening Speech	
08:15 - 08:20	Taking souvenir photos	A9 Building
08:20 - 12:00	Oral presentation	A9 Building
12:00 - 13:30	Lunch time	Tuan Hang Restaurant
14:00, 02/12 – 04/12/2025	Conference tour (registered guests)	Sapa

Keynote Speaker and Oral Presentation Sections

Day 1: December 1st, 2025 - Keynote Speaker Section
Location: Meeting Room No.2 (Online via Zoom meeting)

		Track: Keynote Speaker Section Chairman: Prof. Dr. Banh Tien Long - Vietnam Association of Science Editing (VASE) Prof. Dr. Vu Dinh Lam - Vietnam Academy of Science and Technology Secretary: Assoc. Prof. Dr. Nguyen Thi Thanh Nga - TNUT				
No.	Paper code	Time	Speaker	Title	University	Email
1		13:40 - 14:20 (Vietnam time) 07:40 - 08:20 (Germany time)	Prof. Roger A. Sauer	Isogeometric Finite Elements: Motivation, Implementation and Applications	Ruhr-University Bochum, Germany	roger.sauer@rub.de
2		14:20 - 15:00 (Vietnam time)	Prof. Vu Dinh Lam	Overview of Wireless Power Transfer based on Metamaterials	Vietnam Academy of Science and Technology, Vietnam	lamvd@gust-edu.vast.vn
3		15:00 - 15:40 (Vietnam time) 09:00 - 09:40 (Germany time)	Prof. Yuri Shardt	Process Monitoring and Fault Detection with Engineering Applications	Ilmenau University of Technology, Germany	yuri.shardt@tu-ilmenau.de
4		15:40 - 16:20 (Vietnam time)	Prof. Dr. T. Muthuramalingam	Enhancement of EDM Process Mechanism Using Modified Iso Energy Pulse Generator	SRM Institute of Science and Technology, Chennai, Tamilnadu, India	muthurat@srmist.edu.in
5		16:20 - 17:00 (Vietnam time) 04:20 - 05:00 (USA time)	Prof. S.A. Sherif	Challenges and Potential in Liquid Hydrogen Storage in a Hydrogen Economy	University of Florida, USA	sasherif@ufl.edu

Day 2: December 2nd, 2025 - Oral Presentation Section
Location: A9 Building

Track 1a: ELECTRICAL AND ELECTRONIC ENGINEERING
Chairman: Prof. Dr. Nguyen Doan Phuoc - Hanoi University of Science and Technology
 Assoc. Prof. Dr. Nguyen Hoai Nam - Hanoi University of Science and Technology
Secretary: Dr. Do Duc Tuan - TNUT
Location: A9-101

No.	Code	Time	Authors	Title	Topics	Presenter	Email or phone number
1	6618	08:20 - 08:40	Dinh Tu Duong, Sy Phuong Ho, Van Chuong Le, Van Nam Dinh, Van Du Phan and Nguyen Tien Dung Cao	Development of a Vision-Based Mobile Robot for Real-Time Person Tracking Using YOLOv8n and Deep SORT	Automation, Robotics and Control, Robotics Systems	Dinh Tu Duong	duongdinhtu@vinhuni.edu.vn
2	2462	08:40 - 09:00	Giap Ha, Nam Nguyen and Phuoc Nguyen	Sliding Mode Control with Disturbance Observer for Mecanum Wheeled-Mobile Robot	Automation, Robotics and Control, Model based control methods & application	Nam Nguyen	nam.nguyenhoai@hust.edu.vn
3	4634	09:00 - 09:20	Van Chuong Le, Dinh Tu Duong, Van Nam Dinh, Sy Phuong Ho, Van Du Phan, Hung Cuong Ta, Doan Quy Thai, Van Vy Phan and Thai Son Dang	Adaptive Neural Network-Based Sliding Mode Control with External Disturbance Estimation for Robot Manipulators	Automation, Robotics and Control, Fuzzy and Neural Control	Van Chuong Le	chuonglv@vinhuni.edu.vn
4	8484	09:20 - 09:40	Ngoc-Anh Tran, Masterenko Dmitriy A, Trung-Hai Do, Minh-Duc Ngo and Thanh-Long Pham	Modeling geometric errors in computerized measuring microscopes using the differential geometry method	Metrology and Machine Tool Modeling	Ngoc-Anh Tran	tranngocanh-tdh@tnut.edu.vn
5	1429	09:40 - 10:00	Hieu Phan-Dinh, Lam Bui Thanh and Tien-Dat Hoang	Parameter Optimization of PID Controller Based on Hybrid HGAPSO Algorithm for Four-Wheeled Omnidirectional Mobile Robots	Mechatronics Applications	Hieu Phan-Dinh and Tien-Dat Hoang	phandinhhieu@hau.edu.com Hoangdat@hau.edu.vn
		10:00 - 10:20	Break coffee				

Track 1b: ELECTRICAL AND ELECTRONIC ENGINEERING
Chairman: Assoc. Prof. Pham Hong Phuc - Ha Noi University of Science and Technology
 Assoc. Prof. Nguyen Thi Thanh Huyen - University of Transport and Communications
Secretary: Dr. Do Duc Tuan - TNUT
Location: A9-101

No.	Code	Time	Authors	Title	Topics	Presenter	Email or phone number
1	2416	10:20 - 10:40	Ngoc Phuoc Le, Tu Duong, Quoc Dung Pham and Ho Phuong	Experiment and Inspection of Autonomous 3D SLAM on Mecanum Mobile Robot by Railing Area	Automation, Robotics and Control	Tu Duong	duongdinhtu@vinhuni.edu.vn
2	4290	10:40 - 11:00	Duy Thai Bui, Ngoc Minh Nguyen, Hong Phuc Pham and Tien Dzung Nguyen	A large amplification and self-locking microgripper based on electrostatic comb-drive actuators	Micro/nano fabrication and manufacturing technologie	Tien Dzung Nguyen	dungnguyentien@tnut.edu.vn
3	2924	11:00 - 11:20	Ho Sy Phuong, Duong Dinh Tu, Nguyen Thanh Tri, Le Van Chuong, Phan Van Du and Dinh Van Nam	Nonsingular Terminal Sliding Mode Control with High-Order Integral Differentiator for Trajectory Tracking of 4WD Nonholonomic Mobile Robots	Automation, Robotics and Control	Ho Sy Phuong	hophuong@vinhuni.edu.vn
4	2125	11:20 - 11:40	Thai Nguyen Hong and Ly Trinh	Trajectory tracking for the Mecanum Wheel Mobile Ro-bot by an optimal inverse controller	Automation, Robotics and Control	Ly Trinh	lyttk@epu.edu.vn
5	858	11:40 - 12:00	Thai Nguyen Hong, Phong Luu Thanh and Quan Nguyen Minh	Trajectory tracking by super-twisting sliding mode control and observation for a differential-drive mobile robot subject to uncertainties and external disturbances	Automation, Robotics and Control, Robotics Systems	Thai Nguyen Hong	nguyenhongthai.vn@gmail.com

12:00 - 13:30

Luch time

Track 1c: ELECTRICAL AND ELECTRONIC ENGINEERING**Chairman:** Assoc. Prof. Dr. Dang Quoc Vuong - Hanoi University of Science and Technology

Assoc. Prof. Dr. Pham Quoc Thai - The University of Danang - University of Science and Technology

Secretary: Dr. Do Duc Tuan - TNUT**Location:** A9-102

No.	Code	Time	Authors	Title	Topics	Presenter	Email or phone number
1	7279	08:20 - 08:40	Van Chuong Le, Sy Phuong Ho, Van Du Phan, Dinh Tu Duong, Thai Son Dang, The Anh Mai, Hung Cuong Ta, Van Vy Phan and Van Nam Dinh	Fractional Integral Terminal Sliding Mode Control Using Wavelet Neural Networks for Unmanned Surface Vessels under Environmental Uncertainties	Automation, Robotics and Control, Fuzzy and Neural Control	Van Chuong Le	chuonglv@vinhuni.edu.vn
2	3819	08:40 - 09:00	Thân Thị Thương, Võ Thu Hà and Nguyễn Thị Thành	Adaptive dynamic sliding mode control with fuzzy logic and neural network for mecanum wheels mobile robots	Automation, Robotics and Control	Thân Thị Thương	ttthuong.dien@uneti.edu.vn
3	8957	09:00 - 09:20	Ngoc Tam Lam, Quoc Thai Pham and Van Binh Phan	A Novel Adaptive Hybrid A* and Dynamic Risk-Aware Reinforcement Learning Approach for Dynamic Path Planning of Autonomous Dump Trucks in Mining Sites	Artificial Intelligence, Automation, Robotics and Control, Intelligent Transportation Systems	Ngoc Tam Lam	lamngoctam@duytan.edu.vn
4	1919	09:20 - 09:40	Shulepov Aleksey Vileninovich, Van-Chi Nguyen and Huu-Thang Nguyen	Fresnel Diffraction Metrology for Reflective-Mode Measurements Using Dynamic Multi-Threshold Scanning and Sectional Averaging	Sensors and Actuators	Huu-Thang Nguyen	nguyenhuuthang@tnut.edu.vn
5	8118	09:40 - 10:00	Huu-Thang Nguyen, Xuan-Thang Trinh, Van-Hung Nguyen, Long Pham Thanh and Thi-Thao Duong	Modeling and Characteristics Analysis of Spin-Valve GMR Element and Wheatstone Bridge Configurations	Sensors and Actuators	Xuan-Thang Trinh	xttrinh@utehy.edu.vn
		10:00 - 10:20	Break coffee				

Track 1d: ELECTRICAL AND ELECTRONIC ENGINEERING

Chairman: Dr. Ngo Minh Duc - Thai Nguyen University of Technology
Dr. Duong Quoc Hung - Thai Nguyen University of Technology

Secretary: Dr. Nguyen Tuan Linh - TNUT

Location: A9-102

No.	Code	Time	Authors	Title	Topics	Presenter	Email or phone number
1	7765	10:20 - 10:40	Trịnh Ngọc Hien, Dang Van Thanh, Nguyen Xuan Hoa, Nguyen Van Dang and Nguyen Quoc Dung	Electrochemical Exfoliation-Driven Graphene/ITO Sensors toward UA, DA, and AA Detection	Engineering Materials and Applications, Sensors and Actuators	Nguyen Quoc Dung	dungnq@tnue.edu.vn
2	552	10:40 - 11:00	Thu Ha Vo, Horst Puta, Thi Hoa Tran and Thanh Ha Vo	Hierarchical MPC- Based Energy Management for Electrical Car with Hybrid Energy Storage	Electrical Measurements, Energy Systems	Thanh Ha Vo	vothanhha.ktd@utc.edu.vn
3	877	11:00 - 11:20	Tuấn Lê Anh, Ý Đỗ Như and Linh Dương Mạnh	Parametric Analysis of the Impact of the Magnitude of the Starting Current on the Irreversible Demagnetization of the LSPMSM 2.2 kW	Automation, Robotics and Control	Linh Dương Mạnh	duongmanhlinhtn@tnut.edu.vn
4	4066	11:20 - 11:40	Ho Sy Phuong, Duong Dinh Tu and Nguyen Thanh Tri	Fault-Tolerant Trajectory Tracking Control for Nonholonomic Mobile Robots Using HOICD-SMC	Robotics Systems	Ho Sy Phuong	hophuong@vinhuni.edu.vn
5	9708	11:40 - 12:00	Minh Duc Ngo and Tien Phong Le	PERFORMANCE EVALUATION OF MAXIMUM POWER EXTRACTION FROM PHOTOVOLTAIC SYSTEMS UNDER CORROSION DEGRADATION	Energy Systems	Tien Phong Le	mrphonghtd1246@tnut.edu.vn
		12:00 - 13:30	Lunch time				

Track 1e: ELECTRICAL AND ELECTRONIC ENGINEERING

Chairman: Assoc. Prof. Dr. Trinh Luong Mien - University of Transport and Communications
Assoc. Prof. Dr. Nguyen Tuan Minh - Thai Nguyen University

Secretary:

Location: A9-103

No.	Code	Time	Authors	Title	Topics	Presenter	Email or phone number
1	4070	08:20 - 08:40	Son Bui, Dat Hoang and Lan Luong	An On-the-fly Threshold Learning for Deformable Part Model	Digital Signal Processing and Applications	Lan Luong	lanlhbk@hau.edu.vn
2	1861	08:40 - 09:00	Minh Nguyen, De Rosal Ignatius Moses Setiadi, Dung Nguyen, Long Dinh, Thang Vu, Keith Teague and Mui Nguyen	Integrated Approach for Vehicle Detection, Tracking, and Counting in Urban Traffic Videos Utilizing YOLOv11 and DeepSORT Algorithms	Artificial Intelligence, Intelligence Systems, Software Engineering	Minh Nguyen	nguyentuanminh@tnut.edu.vn
3	852	09:00 - 09:20	Do-Cong-Phap Nguyen, Nguyen-Xuan-Thao Mai, Van-Quang Nguyen, Thi-Tieu-Tien Nguyen and Thi-To-Tam Tran	WBCPD: A Large-Scale White Blood Cells and Platelets Detection Dataset and Comprehensive Benchmark of State-of-the-Art Models	Artificial Intelligence, Data Mining and Big Data	Do-Cong-Phap Nguyen	ndcphap@vku.udn.vn
4	8695	09:20 - 09:40	Dinh Tu Duong, Sy Phuong Ho, Van Nam Dinh and Van Vy Phan	Enhancing Product Quality Control through Stacked Ensemble Learning: A Case Study on Concrete Compressive Strength Prediction	Artificial Intelligence, Automation, Robotics and Control	Dinh Tu Duong	duongdinhthu@vinhuni.edu.vn
5	1492	09:40 - 10:00	Van-Viet Nguyen, Huu-Khanh Nguyen, Kim-Son Nguyen, Minh-Hue Luong Thi, The-Vinh Nguyen and Duc-Quang Vu	Multimodal Validation in UML Synthesis: A Dual-Case Study on Sequence and Class Diagram Generation Pipelines	Artificial Intelligence, Software Engineering	Van-Viet Nguyen	nvviet@ictu.edu.vn
		10:00 - 10:20	Break coffee				

Track 1f: ELECTRICAL AND ELECTRONIC ENGINEERING
Chairman: Assoc. Prof. Dr. Nguyen Duy Cuong - Thai Nguyen University of Technology
 Assoc. Prof. Dr. Ha Dac Binh - Duy Tan University
Secretary: Dr. Nguyen Thi Tuyet Hoa - TNUT
Location: A9-103

No.	Code	Time	Authors	Title	Topics	Presenter	Email or phone number
1	4476	10:20 - 10:40	I. Yu. Malevich, Pavel Zayats, Thuong Nguyen and Minh Nguyen	A Design of Balanced Adaptive Preselector for Receiving Path T/R Module VHF Digital AESA	Telecommunications Systems	Minh Nguyen	nguyentuanminh@tnut.edu.vn
2	4282	10:40 - 11:00	Anh-Tuan Tran, Van-Binh Phan, Ngoc-Dinh Le and Dac-Binh Ha	Integrated Radar Sensing, Backscatter Communication, and Mobile Edge Computing in VANETs	Internet of things and Smart Cities	Dac-Binh Ha	hadacbinh@duytan.edu.vn
3	2309	11:00 - 11:20	Lam Vu Thanh, Duong Hoang Ngoc, Huy Vu Van, Huan Do Xuan, Duc Luu Huyen, Tung Hoang Manh, Duc Nguyen Ngoc, Cuong Nguyen Duy, Dzung Nguyen Tien and Son Tran Que	MODELING AND CONTROL DESIGNING FOR NONIDEAL DC-DC CUK CONVERTER USING TYPE III COMPENSATOR	Power Electronics and Systems	Son Tran Que	tranqueson.ktdt@tnut.edu.vn
4	4116	11:20 - 11:40	Tien Dzung Nguyen, Ngoc Duc Nguyen and Duy Cuong Nguyen	Frequency-Domain Based Design and Modeling of a Cascaded-Loop Controller for a Non-Ideal Non-Inverting Buck-Boost DC-DC Converter	Power Electronics and Systems	Tien Dzung Nguyen	dungnguyentien@tnut.edu.vn
5	7664	11:40 - 12:00	Dinh Dat Vu, Tuan Khanh Do, Hong Dat Nguyen, Horst Puta and Tien Dzung Nguyen	Proposing a Physics-Informed Neural Network Model for Magnetic Force Estimation in Active Magnetic Bearings	Physics-Informed Neural Network (PINN) Artificial Neural Network (ANN)	Tien Dzung Nguyen	dungnguyentien@tnut.edu.vn
		12:00 - 13:30	Lunch time				

Track 2a: **AUTOMOTIVE ENGINEERING**
Chairman: Dr. Trinh Minh Hoang - Hanoi University of Science and Technology
Dr. Nguyen Anh Ngoc - Hanoi University of Industry
Secretary: Msc. Do Van Quan - TNUT
Location: A9 - 104

No.	Code	Time	Authors	Title	Topics	Presenter	Email/ phone number
1	5890	08:20 - 08:40	Anhnguyet Ngo, Rezwan Hossain and Huyentrang Ngo	PID Controller for IWM-EV Active Suspension System	Vibration, Noise and Harshness	Anhnguyet Ngo	ngoanhnguyet04@gmail.com
2	1143	08:40 - 09:00	Thang Nguyen Tuan and Kien Nguyen Trung	Investigation and Optimization of Bus Body Structure to Enhance Occupant Protection during Rollover Accidents in Accordance with ECE R66 - A Case Study in Vietnam	Automotive Dynamics, Vibration, Noise and Harshness	Kien Nguyen Trung	kien.nguyentrung@phenikaa-uni.edu.vn
3	7404	09:00 - 09:20	Linh Doan Van and Kien Nguyen Trung	Numerical Study on Crashworthiness Performance of Dual-Cabin Vehicles in Vietnam Under ECE R29	Automotive Dynamics, Vibration, Noise and Harshness	Kien Nguyen Trung	kien.nguyentrung@phenikaa-uni.edu.vn
4	1878	09:20 - 09:40	Cuong Bui Van, Xiaofeng Yang and Changning Liu	Structural Design and Parameter Optimization of the Inertial Suspension System for Hub Motor Driven Vehicles	Vibration, Noise and Harshness	Cuong Bui Van	buivancuong1301@gmail.com
5	4118	09:40 - 10:00	Vanliem Nguyen	A new design of seat suspension using NSS-RS for improving the driver's ride comfort	Dynamics, Vibration and Control, Vibration, Noise and Harshness	Vanliem Nguyen	xuanliem712@tnut.edu.vn
		10:00 - 10:20	Break coffee				

Track 2b: AUTOMOTIVE ENGINEERING**Chairman:** Assoc. Prof. Dr. Le Van Quynh - Thai Nguyen University of Technology

Dr. Nguyen Thanh Quang - Hanoi University of Industry

Secretary: Msc. Nguyen Thanh Cong - TNUT**Location:** A9 - 104

No.	Code	Time	Authors	Title	Topics	Presenter	Email/ phone number
1	3339	10:20 - 10:40	The Minh Huong and Le Van Quynh	Numerical Evaluation of Suspension Parameter Effects on Ride Comfort of Electric Vehicles	Vibration, Noise and Harshness	The Minh Huong	lequynh@tnut.edu.vn
2	8138	10:40 - 11:00	Tran The Tran and Le Van Quynh	Improved Ride Comfort in Electric Vehicles: A Comparative Study of Air and Traditional Suspensions	Vibration, Noise and Harshness	Tran The Tran	lequynh@tnut.edu.vn
3	4720	11:00 - 11:20	Hoang Anh Tan and Le Van Quynh	Analysis of a Passenger Car Equipped with an Inertial Track Hydraulic Engine Mounts	Vibration, Noise and Harshness	Hoang Anh Tan	lequynh@tnut.edu.vn
4	5597	11:20 - 11:40	Nguyen Thanh Quang	Analysis of tire-road surface interaction	Automotive Dynamics	Quang Nguyễn Thanh	quangamk@gmail.com
5	5440	11:40 - 12:00	Vu Thi Hien and Le Van Quynh	Ride Comfort Evaluation of Seat Suspension Systems for Mining Dump Trucks	Automotive	Vu Thi Hien	lequynh@tnut.edu.vn
		12:00 - 13:30	Lunch time				

Track 2c: AUTOMOTIVE ENGINEERING

Chairman: Assoc. Prof. Dr. Dam Hoang Phuc - Hanoi University of Science and Technology
Dr. Tran Quang Huy - Nguyen Tat Thanh University, Ho Chi Minh City
Dr. Pham Van Thoan - Phenikha University

Secretary: Msc. Le Xuan Long - TNUT

Location: A9 - 105

No.	Code	Time	Authors	Title	Topics	Presenter	Email/ phone number
1	2103	08:20 - 08:40	Tung Le Van, Huy Dang Ngoc and An La Thanh	Comparison of Charging Quality for Electric Vehicle Systems Using Interleaved Boost AC/DC/DC PFC Rectifier Versus Conventional Boost PFC Under Grid Voltage Sag Conditions	Modeling and Simulations, Power Electronics and Systems	Tung Le Van	levantungdktd@gmail.com
2	1317	08:40 - 09:00	Thanh Nguyen Nhu and Vinh Nguyen Duy	Effect of Swirl and Compression Ratios on Motorcycle Engine Performance, Emissions, and Fuel Efficiency: A Simulation Study	Automotive Dynamics	Thanh Nguyen Nhu	thanh.nguyennhu@phenikaa-uni.edu.vn
3	7597	09:00 - 09:20	Van Nhanh Nguyen, Thang Le, Quang Huy Tran and Cheolkeun Ha	Development of a Fault Diagnosis Procedure for Automotive Air Conditioning Systems Using Endoscopic Imaging and Deep Learning	Automotive Dynamics, Automotive Engines	Quang Huy Tran	tghuy@ntt.edu.vn
4	6104	09:20 - 09:40	Dmitry Yakunov, Denis Endachev, Kirill Karpukhin, Alexandra Sertsova and Sergei Krasilnikov	Experimental evaluation of the efficiency of functional material containing microencapsulated perfluoro(2-methyl-3-pentanone) to ensure fire safety of lithium-ion batteries of electric vehicle	Automotive Dynamics, Automotive Engines	Dmitry Yakunov	dmitry.yakunov@nami.ru
5	4423	09:40 - 10:00	Hue Tai Minh Le, Trong Dat Tran, Hoang Phuc Dam, Van Nghia Le and Quoc Trieu Nguyen	Energy Consumption Assessment of Electric Vehicle Transition in Hanoi using Simcenter AMESim	Electric and Hybrid Vehicles	Trong Dat Tran	dat.trantrong@hust.edu.vn
		10:00 - 10:20	Break coffee				

6	9085	10:20 - 10:40	Long-Vu Hoang, Trung-Hieu Le, Quoc-Viet Do and Thanh-Tung Nguyen	Lane Keeping Assistance for Self-driving Vehicle	Automotive Dynamics, Electric and Hybrid Vehicles	Thanh-Tung Nguyen	tung.nguyenthanh@hust.edu.vn
7	9647	10:40 - 11:00	Trong Dat Tran, Trung Dung Dao, Hoang Phuc Dam, Ngoc Khanh Duong and Van Nghia Le	Fuzzy-Controlled Semi-Active Suspension with Bouc–Wen MR Damper	Automotive Dynamics	Van Nghia Le	nghia.levan@hust.edu.vn

Track 3a: MECHANICAL ENGINEERING
Chairman: Prof. Gunasilan Manar - National Defense University Malaysia
 Assoc. Prof. Dr. Ngo Nhu Khoa - Thai Nguyen University of Technology
Secretary: Msc. Nguyen Thi Bich Ngoc - TNUT
Location: A9 - 201

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	6194	08:20 - 08:40	The Hung Dinh, Hoang Linh Nguyen, Thang To Toan and Do Van Truong	Strain-Engineered ZnS Monolayer: A Promising Photocatalyst for Efficient Solar-to-Hydrogen Conversion	Mechanical Behavior of Materials, Mechanics of Advanced Materials, Software Engineering	The Hung Dinh	hung.dinhthe@phenikaa-uni.edu.vn
2	9965	08:40 - 09:00	Gunasilan Manar and Patrice Longere	Fracture analysis of aluminium alloy under dynamic shear compression loading	Engineering Materials and Applications, Mechanical Behavior of Materials	Gunasilan Manar	gunasilan@upnm.edu.my
3	2052	09:00 - 09:20	Khoa Ngo Nhu and Ngoc Nguyen	A 2D Finite Element-Based Inverse Design Approach for Langevin-Type Ultrasonic Transducers	Dynamics, Vibration and Control, Engineering Materials and Applications, Non-traditional Machining Processes	Ngoc Nguyen	bichngoc281190@gmail.com
4	8601	09:20 - 09:40	Khai Hoan Tran, Duy Hung Mac and Nhu Khoa Ngo	Machine Learning-Assisted Mechanical Characterization of Cementitious Composites with Recycled Lime-Mortar Aggregates	Engineering Materials and Applications, Mechanical Behavior of Materials	Khai Hoan Tran	trankhaihoan@tnut.edu.vn
5	7726	09:40 - 10:00	Ngo Thi Thu Huyen, Nguyen The Thinh and Duong The Hung	A new model for exploring the behavior of certain one-degree-of-freedom systems with nonlinear stiffness, Part 1: Utilizing the HAM method	Applied Mechanics, Dynamics, Vibration and Control, Vibration, Noise and Harshness	Duong The Hung	hungtd@tnut.edu.vn
		10:00 - 10:20	Break coffee				

Track 3b: MECHANICAL ENGINEERING

Chairman: Assoc. Prof. Dr. Le Thu Quy - National Research Institute of Mechanical Engineering (Pi đã mời)
Assoc. Prof. Le Manh Tu - Phenikaa University (Nga đã liên hệ) - Oki

Secretary: Dr. Bui Thanh Hien - TNUT

Location: A9 - 201

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	3490	10:20 - 10:40	Tran Huu Danh, Hoang Xuan Tu, Dinh Van Thanh and Bui Thanh Hien	A Decomposition-Based Evolutionary Approach for Dual-Objective Optimization of Two-Stage Helical Gearboxes	Machine And Machinery Design	Bui Thanh Hien	buithanhvienkc@tnut.edu.vn
2	863	10:40 - 11:00	Dinh Van Thanh, Nguyen Manh Cuong, Do Thi Tam and Hoang Xuan Tu	Prediction and Minimization of Electrode Wear in Powder-Mixed EDM Using Stepwise RSM Approach	Machining Processes, Non-traditional Machining Processes	Hoang Xuan Tu	hxt_dhktcn@tnut.edu.vn
5	3692	11:00 - 11:20	Nguyen Huu Tu, Nguyen Van Thanh, Pham Le Ben, Vu Quoc Hien and Nguyen Van Trang	The mechanical properties of two-dimensional materials 1T-NiX ₂ : An atomistic study	Mechanics of Advanced Materials, Micromechanics and Nanomechanics	Nguyen Van Trang	nvtrang@tnut.edu.vn
4	9596	11:20 - 11:40	Van Thanh Dinh, Manh Cuong Nguyen, Xuan Tu Hoang and Van Tung Nguyen	Simultaneous Optimization and Decision Support in PMEDM of 90CrSi Steel Using GPR-Assisted NSGA-II and AHP	Machining Processes	Van Tung Nguyen	mr.nguyentung85@tnut.edu.vn
5	7455	11:40 - 12:00	Thi Thuy Hang Nguyen, Thi Thu Hoan Nguyen, Thi Kim Ngan Nguyen, Xuan Duong Cao, Thuy Giang Pham, Van Truong Nguyen and Minh Tan Pham	Comparative Study of Nickel Foam and Carbon Paper Substrates on the Electrochemical Performance of CoFe ₂ O ₄ Electrodes	Applied Surface Engineering, Energy Systems, Engineering Materials and Applications	Van-Truong Nguyen	vtnguyen@tnut.edu.vn
		12:00 - 13:30	Lunch time				

Track 3c: MECHANICAL ENGINEERING

Chairman: Assoc. Prof. Dr. Nguyen Van Du - Thai Nguyen University of Technology
Assoc. Prof. Dr. Duong Pham Tuong Minh - Thai Nguyen University of Technology

Secretary: Msc. Ngo Quoc Huy - TNUT

Location: A9 - 202

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	9617	08:20 - 08:40	Nam Quang Huy Nguyen and Kieu Hiep Le	Deep learning model for freezing process based on CFD simulation data	Computational Heat and Mass Transfer	Kieu Hiep Le	hiep.lekieu@hust.edu.vn
2	3264	08:40 - 09:00	Quoc-Huong Cao and Ngoc-An Tran	A Novel Passive Aerodynamic Configuration to Improve Flutter Stability of Long-Span Bridges	Dynamics, Vibration and Control	Ngoc-An Tran	antn.ctt@vimaru.edu.vn
3	5002	09:00 - 09:20	Toan Tran Quoc, Hao Pham Van, Thanh Dang Van, Nhi Le Lan Yen and Binh Nguyen Thanh	Study on the fabrication of two-dimensional WO ₃ materials via sonication-assisted liquid-phase exfoliation for removal of methylene blue in water	Engineering Materials and Applications	Toan Tran Quoc	toantq@tnue.edu.vn
4	9898	09:20 - 09:40	Thanh Dinh Van, Quy Le Thu, Pi Vu Ngoc and Thao Tran Thi Phuong	Multi-Objective Optimization of Ultrasonic Vibration-Assisted EDM on 90CrSi Tool Steel Using NSGA-II and EAMR	Machining Processes	Thao Tran Thi Phuong	tranphuongthao@tnut.edu.vn
5	3472	09:40 - 10:00	Toan Thang To, Hoang Linh Nguyen, The Hung Dinh and Van Truong Do	DFT Investigations of CaS Monolayer as a Promising Material for Optical Applications	Applied Mechanics, Engineering Materials and Applications, Mechanical Behavior of Material	Van Truong Do	truong.dovan@hust.edu.vn
		10:00 - 10:20	Break coffee				

Track 3d: MECHANICAL ENGINEERING**Chairman:** Assoc. Prof. Than Van The - Hung Yen University of Technology Education
Dr. Vu Thi Lien - Phenikaa University**Secretary:** Msc. Tran Thi Phuong Thao - TNUT**Location:** A9 - 202

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	7805	10:20 - 10:40	Vu Thi Thuy, Dang Van Thanh, Nguyen Thi Hai, Nguyen Thi Luyen, Minh Trang Hoang and Nguyen Thi Khanh Van	Fabrication of anatase nanoporous films by glow discharge plasma electrolysis for removal of methylene blue in water	Engineering Materials and Applications	Nguyen Thi Khanh Van	vanntk@tnus.edu.vn
2	2169	10:40 - 11:00	Thi Lien Vu, Van Hoang Dao and Van Kien Dau	Grey Relational Analysis for the Optimization of Fresnel Lens Injection Molding - A Simulation Study	Machining Processes	Thi Lien Vu	lien.vuthi@phenikaa-uni.edu.vn
3	5549	11:00 - 11:20	Thi Lien Vu, Van Hoang Dao and Trong Minh Quan Nguyen	Effect of Runner System Design on Tooth Profile De-formation in Injection Molding Simulation of Plastic Gears	Machining Processes	Thi Lien Vu	lien.vuthi@phenikaa-uni.edu.vn
4	3960	11:20 - 11:40	Huy Tran Quang, Tu Hoang Xuan and Thao Tran	Predictive Modeling of Smart Mechanical Technology Adoption: An Integrated PLS-SEM and ANN Approach	Advanced Manufacturing and Automation	Huy Quang Tran	tranphuongthao@tnut.edu.vn
5	4203	11:40 - 12:00	Hanh T. My Vu, Van Trang Nguyen and Manh Cuong Nguyen	Exploring Behavioral Drivers of Smart Tech Adoption Among Future Engineers: A PLS-SEM and ANN Analysis	Advanced Manufacturing and Automation	Hanh T. My Vu	nmcuong@tnut.edu.vn
12:00 - 13:30		Lunch time					

Track 3e: MECHANICAL ENGINEERING
Chairman: Assoc. Prof. Dr. Vu Duong - Duy Tan University
 Assoc. Prof. Le Xuan Hung - Thai Nguyen Univrstity of Technology
 Prof. Vu Ngoc Pi - Thai Nguyen Univrstity of Technology
Secretary: Dr. Hoang Xuan Tu - TNUT
Location: A9 - 203

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	4007	08:20 - 08:40	Van Thanh Dinh, Thu Quy Le, Ngoc Pi Vu and Van Tung Nguyen	Application of Stepwise Quadratic Regression for Predicting Surface Roughness in PMEDM with SiC Powder	Machining Processes	Van Tung Nguyen	mr.nguyentung85@tnut.edu.vn
2	8470	08:40 - 09:00	Dinh Van Thanh, Tran Ngoc Giang, Bui Thanh Hien and Nguyen Van Trang	Multi-Objective Optimization of a Two-Stage Helical Gearbox with Split Output Stage Using NSGA-II and SAW: Minimizing Volume and Maximizing Efficiency	Machine And Machinery Design	Nguyen Van Trang	nvtrang@tnut.edu.vn
3	4594	09:00 - 09:20	Danh Tran Huu, Trang Nguyen Van, Thanh Dinh Van and Minh Nguyen Khac	Multi-Criteria Design of Dual-Gear First-Stage Helical Gearboxes via MOEA/D-DE: Volume and Efficiency Objectives	Advanced Manufacturing and Automation	Minh Nguyen Khac	khacminhcdl@tnut.edu.vn
4	7599	09:20 - 09:40	Vu Duc Binh, Muthuramalingam Thangaraj, Dinh Van Thanh, Le Xuan Hung, Vu Ngoc Pi and Hoang Xuan Tu	MOEA/D-DE Based Multi-Objective Optimization of Two-Stage Helical Gearboxes: Minimizing Cross-Sectional Area and Maximizing Efficiency	Machine And Machinery Design, Metrology and Machine Tool Modeling	Hoang Xuan Tu	hxt_dhkten@tnut.edu.vn
5	8257	09:40 - 10:00	Toan Hoang Anh, Got Hoang Van, Vinh Do The, Pi Vu Ngoc and Thanh Dinh Van	Enhanced MRR in Hard Milling Using CuO Nano-Lubricants: Experimental and RSM-Based Modeling Study	Machining Processes	Toan Hoang Anh	hoanganhtoan@tnut.edu.vn

10:00 - 10:20

Break coffee

Track 3f: MECHANICAL ENGINEERING

Chairman: Assoc. Prof. Dr. Nguyen Huu Quang - University of Economics - Technology for Industries
Assoc. Prof. Dr. Hoang Tien Dat - Ha Noi University of Industry

Dr. Nguyen Anh Tuan - University of Economics - Technology for Industries

Secretary: Msc. Le Thi Phuong Thao - TNUT

Location: A9 - 203

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	4930	10:20 - 10:40	Thanh Dat Phan, Nguyen Anh Vu Le, Thi-Nguyen Nguyen and Van Tran Hoang Viet	Influence of Hybrid Nano-Coolant Parameters on Surface Finish in Milling of Hardened SKD61 Steel	Machining Processes	Thanh Dat Phan	leophanvn@tnut.edu.vn
2	2502	10:40 - 11:00	Van Thanh Dinh, Thu Quy Le, Ngoc Pi Vu and Thanh Cuong Pham	Single-Objective Optimization of Surface Roughness in Ultrasonic Vibration-Assisted Milling of 90CrSi Steel Using GPR and RSM Models	Machining Processes, Non-traditional Machining Processes	Thanh Cuong Pham	phamcuong@tnut.edu.vn
3	1314	11:00 - 11:20	Huu Danh Tran, Cong Danh Nguyen, Thangaraj Muthuramalingam, Tat Loi Mai, Van Thanh Dinh, Ngoc Pi Vu and Manh Cuong	Parameter Influence and RSM-based Optimization of Material Removal Rate for Hardox 500 under UV-EDM	Advanced Manufacturing and Automation, Machining Processes	Nguyen Manh Cuong	nmcuong@tnut.edu.vn
4	9126	11:20 - 11:40	Tat-Tai Truong, Quang-Cherng Hsu and Anh-Tuan Dang	The Influence of Physical Factors on Image Quality in Non-Contact Measurement Applications	Advanced Manufacturing and Automation, Mechatronics Applications	Anh-Tuan Dang	anhtuanck@tnut.edu.vn
5	8041	11:40 - 12:00	Thanh Dinh Van, Tuyen Vu Trung, Dung Nguyen Thi Quoc and Thao Le Thi Phuong	Multi-Objective Optimization of Graphite-Electrode EDM Using NSGA-II and AHP: A Trade-Off Among Surface Roughness, Material Removal Rate and Electrode Wear	Advanced Manufacturing and Automation, Non-traditional Machining Processes	Thao Le Thi Phuong	lethao828@tnut.edu.vn
6	593	12:00 - 12:20	Van Thanh Dinh, Thi Phuong Thao Le, Ngoc Thieu Nguyen and Xuan Tu Hoang	Design Optimization of a Two-Stage Helical Gearbox: Minimizing Base Area and Maximizing Efficiency via NSGA-II and MAUT-Entropy Integration	Machine And Machinery Design, Metrology and Machine Tool Modeling	Xuan Tu Hoang	hxt_dhktcn@tnut.edu.vn

12:00 - 13:30

Lunch time

Track 3g: MECHANICAL ENGINEERING
Chairman: Assoc. Prof. Dr. Nguyễn Thị Thanh Nga - Thai Nguyen University of Technology
 Assoc. Prof. Dr. Le Hoang Anh - Vinh Long University of Technology and Education
Secretary: Dr. Nguyen Manh Cuong - TNUT
Location: A9 - 204

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	224	08:20 - 08:40	Van-Trang Nguyen, Quang Huy Ta and Thi Thanh Nga Nguyen	Calculation of Kinematic Dimensions for Four-bar Mechanisms Using the CDEJ Algorithm	Machine And Machinery Design	Quang Huy Ta	nguyennga@tnut.edu.vn
2	1928	08:40 - 09:00	Cabarrubias Nirinder Khangura, Tuan-Anh Le Cong, Minh Dung Phuong and Thi Thanh Nga Nguyen	Design and Calculation of a Two-Finger Parallel Gripper	Machine And Machinery Design	Cabarrubias Nirinder Khangura	nguyennga@tnut.edu.vn
3	4916	09:00 - 09:20	Vu Duc Binh, Vu Ngoc Pi, Dinh Van Thanh and Nguyen Manh Cuong	Efficiency–Length Trade-Off in Two-Stage Helical Gearbox Design: A Hybrid NSGA-II and Entropy–TOPSIS Approach	Machine And Machinery Design	Nguyen Manh Cuong	nmcuong@tnut.edu.vn
4	2271	09:20 - 09:40	Thanh Dinh Van, Binh Vu Duc, Manh Cuong Nguyen, Hue Tran Thi and Tham Hoang Thi	Efficiency–Volume Trade-Off in Two-Stage Helical Gearbox Design: A Hybrid NSGA-II and MOORA Approach	Machine And Machinery Design	Nguyen Manh Cuong	hoangtham@tnut.edu.vn
5	5660	09:40 - 10:00	Thanh Dinh Van, Duong Vu, Trang Nguyen Van and Anh Hoang Minh	Hybrid NSGA-II–MAIRCA–Entropy Method for Multi Objective Optimization of a Two-Stage Helical Gearbox: Balancing Efficiency and Cross-Sectional Area	Machine And Machinery Design	Anh Hoang Minh	hoangminhanh@tnut.edu.vn
		10:00 - 10:20					

6	4751	10:20 - 10:40	Quy Le Thu, Thanh Dinh Van, Pi Vu Ngoc and Thao Tran	Comparative Analysis of RSM and GPR for Predicting Axial Electrode Wear in Ultrasonic-Assisted EDM	Machine And Machinery Design	Thao Tran	tranphuongthao@tnut.edu.vn
7	1286	10:40 - 11:00	Thanh Dinh Van, Binh Vu Duc, Hien Bui Thanh, Tam Do Thi and Giang Tran Ngoc	Dual-Stage Helical Gearbox Design with Split First Stage: A Multi-Criteria Optimization Using NSGA-II and Entropy-Aided WASPAS	Machine And Machinery Design	Giang Tran Ngoc	tranngocgiang@tnut.edu.vn
8	3996	11:00 - 11:20	Toan Hoang Anh, Thanh Dinh Van, Got Hoang Van, Vinh Do The and Pi Vu Ngoc	Statistical Modeling and Optimization of Surface Roughness in Nano-MQL Milling of Hardened 90CrSi Cylindrical Surfaces	Machining Processes	Toan Hoang Anh	hoanganhtoan@tnut.edu.vn

12:00 - 13:30

Lunch time

Track 3h: MECHANICAL ENGINEERING

Chairman Assoc. Prof. Dr. Le Hong Ky - Vinh Long University of Technology and Education
Assoc. Prof. Ha Minh Hung - National Research Institute of Mechanical Engineering

Secretary Dr. Do Thi Tam - TNUT

Location A9 - 205

No.	Paper Code	Time	Authors	Title	Topics	Presenter	Email
1	5370	08:20 - 08:40	Binh Vu Duc, Pi Vu Ngoc, Thanh Dinh Van, Hung Le Xuan and Thao Tran Thi Phuong	Multi-Objective Optimization of Two-Stage Helical Gearbox Design Using MOEA/D-DE With Objectives of Compactness and Efficiency	Machine And Machinery Design	Thao Tran Thi Phuong	tranphuongthao@tnut.edu.vn
2	5351	08:40 - 09:00	Danh Tran Huu, Phuong Thao Le Thi, Thanh Dinh Van and Tung Luu Anh	A Hybrid Evolutionary-MCDM Approach for Multi-Objective Optimization of Split-Output Gearbox Design	Machine And Machinery Design	Tung Luu Anh	luuanhtung@tnut.edu.vn
3	832	09:00 - 09:20	Hung Ha Minh and Quan Nguyen Hoang	Research on the Effect of Laser-TIG Welding Parameters on Tensile Strength of Copper Alloy–Carbon Steel–Copper Alloy Trimetal Composites Joints	Advanced Manufacturing and Automation, Materials Manufacturing and Processing	Quan Nguyen Hoang	nhquan@vnu.edu.vn
4	5703	09:20 - 09:40	Thanh Dinh Van, Binh Vu Duc, Hien Bui Thanh, Tam Do Thi and Giang Tran Ngoc	Design Optimization of Compact and High-Efficiency Dual-Gear Helical Gearboxes Using MOEA/D-DE	Machine And Machinery Design	Giang Tran Ngoc	tranngocgiang@tnut.edu.vn
5	4033	09:40 - 10:00	Dinh Van Thanh, Hoang Xuan Tu, Le Thi Phuong Thao and Bui Thanh Hien	Multi-Objective Optimization of Split-Stage Two-Stage Helical Gearboxes Using MOEA/D-DE: Minimizing Cross-Sectional Area and Maximizing Efficiency	Machine And Machinery Design	Bui Thanh Hien	buithanhvienkc@tnut.edu.vn
		10:00 - 10:20					

6	604	10:20 - 10:40	Van-Thanh Dinh, Muthuramalingam Thangaraj, Thanh Hien Bui, Ngoc Pi Vu and Thi-Tam Do	Multi-Objective Optimization of Dual- Gear First-Stage Helical Gearboxes Using MOEA/D-DE: Minimizing Footprint, Maximizing Efficiency	Machine And Machinery Design	Do Thi Tam	dothitam@tnut.edu. vn
7	3735	10:40 - 11:00	Nguyen Dang Viet and Dang Tuan	Development and Control of Polar structure 3D Printer for Viscous Clay Materials	Advanced Manufacturing and Automation, Machining Processes, Mechatronics Applications	Dang Tuan	anhtuanck@tnut.edu.vn
		12:00 - 13:30	Lunch time				