

PROGRAM THE 6TH INTERNATIONAL CONFERENCE ON ENGINEERING MECHANICS AND AUTOMATION (ICEMA6) November 13-14, 2021			
Afternoon November 13, 2021			
14:00-17:00	System Testing (authors can log in to have a trial before the official presentation on the conference date)		
Morning November 14, 2021			
08:00-08:10	Opening Ceremony		
	Opening Speech of Prof. Nguyen Viet Ha, Rector of University of Engineering and Technology, Vietnam National University, Hanoi, Vietnam		
	Welcome speech of the Director of the Institute of Mechanics		
	Welcome message by Director of the Asia Research Center, Vietnam National University, Hanoi		
	Plenary Session		
	Chairmen. Prof. Chu Duc Trinh and Prof. Nguyen Tien Khiem		
08:10-08:30	Nguyen Dong Anh, Nguyen Ngoc Linh, Nguyen Nhu Hieu, Dang Van Hieu. Some Dual Techniques in the study of Nonlinear Dynamic Systems (Invited Speaker)		
08:30-08:50	Nguyen Dinh Duc, Viet-Hung Truong. Prediction Of Steel Structures’ Responses Using Machine Learning: Prospects And Challenges (Invited Speaker)		
	FLUID MECHANICS	MECHATRONICS AND AUTOMATION	SOLID MECHANICS
	Chairmen. Assoc. Prof. Dang The Ba and Assoc. Prof. Nguyen The Duc	Chairmen. Assoc. Prof. Pham Manh Thang and Dr. Do Tran Thang	Chairmen. Prof. Nguyen Dong Anh and Assoc. Prof. Nguyen Viet Khoa
	Scientific Secretary: MSc. Do Huy Diep	Scientific Secretary: MSc. Hoang Van Manh	Scientific Secretary: Dr. Bui Hong Son
09h00-09h20	Thu Ha Tran, Hong Son Hoang, Hong Phong Nguyen. A sensitivity method studying regional response to external sources of pollution and its application to 1D water pollution problem	Cuong Nguyen Nhu, Luan Le Van, Lam Bao Dang, Van Thanh Dau, Tung Thanh Bui, Trinh Chu Duc. 3D Printed Micro nozzle-based Mixer with Integrated Capacitive Sensor toward High Precision Mixing Applications	Nguyen Dang Bich, Nguyen Hoang Tung, Le Xuan Tung. Research for static stability of the conical shells including foundation effects
09h20-09h40	Nguyen Tuan Anh, Nguyen Chinh Kien, Duong Thi Thanh Huong. Evaluation of salinity intrusion on Kone – Ha Thanh river system	Quang Manh Doan, Van Duy Nguyen, Cong Hieu Le, Ngoc Khang Nguyen, Tran Hiep Dinh . A Post-processing Approach Using Clustering for Vision-based Crack Detection Algorithms	N. D. Anh, Nguyen Ngoc Linh, Nguyen Van Manh, Anh Tay Nguyen. Nonlinear vibration in Dufing system subjected to narrow-bad colored noise excitation
09h40-10h00	Huy Diep Do, The Ba Dang. Study on the influence of period and wave amplitude on the output power of linear generator by numerical methods	Tran Van Viet, Do Tran Thang, Nguyen Van Khuong. A proposed design of vacuum gripper system integration for one specific robotic arm	Nguyen Dong Anh, Manukid Parnichkun, Phan Thi Tra My, Nguyen Cao Thang, Le Thi Hong Gam, Pham Ngoc Chung, Nguyen Nhu Hieu . Force Control of an Upper Limb Exoskeleton for Perceiving Reality and Supporting Human Movement Using Feed-forward Model
10h00-10h10	Session break		
	Chairmen: Assoc. Prof. Dang The Ba and Assoc. Prof. Tran Thu Ha	Chairmen. Assoc. Prof. Pham Manh Thang and Dr. Do Tran Thang	Chairmen: Prof. Nguyen Dinh Duc and Prof. Nguyen Tien Khiem
	Scientific Secretary: MS. Do Huy Diep	Scientific Secretary: MSc. Hoang Van Manh	Scientific Secretary: ME. Pham Dinh Nguyen
10h10-10h30	Tran Thi Thanh Huyen, Nguyen Chinh Kien. Application of GIS tool and hydrologic modelling for flow simulation of Cau river basin	Chi Tran Nhu, Phu Nguyen Dang, Van Nguyen Thi Thanh, Ha Tran Thi Thuy, Van Dau Thanh, Tung Bui Thanh. Fabrication and Investigation of Flexible Strain Sensor for Sign Language Recognition System	Pham Dinh Nguyen, George Papazafeiropoulos, Quang-Viet Vu, Nguyen Dinh Duc . Optimum buckling analysis of laminated composite plates reinforced by multiple stiffeners
10h30-10h50	Tam Hoang Van, Anh Dinh Le. Effect of the Mesh Types on the Prediction of Flow Aerodynamic around Airfoil	Hanh Nguyen Thi Hong, Hung Truong Xuan, Phuong Phung Kim. Multi Mobile Robot System Application on Transportation in the Warehouse: an Introduction	Doan Hong Duc, Do Van Thom, Phung Van Minh, Nguyen Dinh Duc. Finite element modeling for free vibration behaviors of piezoelectric cracked nanoplates with flexoelectric effects
10h50-11h10	Nguyen Hoang Quan, Tran Dang Huy, Duong Viet Dung. Determination of Aerodynamic Coefficients of Drone Propeller by 3D Scanning Technology and Blade Element Momentum Method	Van-Tinh Nguyen. Adjusting Material Amount of Proportional Technique for Bilinear Topology Optimization	Mai Van Trung, Vu Dinh Giang, Nguyen Dinh Duc, Vu Thi Thuy Anh. Simulation of crack propagation in FG-GPLRC structures and its application in dataset generation

11h10-11h30	Nguyen Van Duc, Dang Tha Ba, Do Huy Diep . Motion analysis of wave energy conversion dual buoys using ANSYS-AQWA	Cong-Hoang Quach, Truong-Son Nguyen, Minh-Trung Vu and Minh-Trien Pham. Design and implement a UAV for low-altitude data collection in precision agriculture	Ngo Dinh Dat, Nguyen Dinh Duc, Vu Dinh Giang, Vu Thi Thuy Anh. Investigation of a sandwich plate with two MEE face sheets and FGM core layer from the nonlinear dynamic buckling point of view
11h30-11h50		Nguyen Quang Hoang, Than Van Ngoc. Design of PD Controller for Flexible Manipulators by Particle Swarm Optimization	Le Thi Ha. Free vibration of multi-span bi-directional functionally graded beams
11h50-13h00	<b>Lunch break</b>		
	<b>MECHATRONICS AND AUTOMATION</b>	<b>MECHATRONICS AND AUTOMATION</b>	<b>SOLID MECHANICS</b>
	<i>Chairmen. Dr. Do Tran Thang and Dr. Vu Bao Lam</i>	<i>Chairmen. Assoc. Prof. Pham Manh Thang and Dr. Tran Anh Quan</i>	<i>Chairmen: Assoc. Prof. Nguyen Manh Cuong and Dr Nguyen Truong Giang</i>
	<i>Scientific Secretary: Dr. Dinh Tran Hiep</i>	<i>Scientific Secretary: MSc. Hoang Van Manh</i>	<i>Scientific Secretary: MS Dao Thi Bóch Thao</i>
13h00-13h20	Duong Vu, Anh Hoang Vo, Trung Duy Dao, Quy Thu Le. Solution for robot cleaning the photovoltaic panels in Vietnam	Duc-Anh Dao, Truong-Son Nguyen, Cong-Hoang Quach and Minh-Trien Pham. Design of UAV system and workflow for weed image segmentation by using deep learning in Precision Agriculture	Khoa Viet Nguyen, Thao Thi Bich Dao, Long Do Vu, Quang Van Nguyen. Exact receptance function of the axially load cracked beam carrying concentrated mass
13h20-13h40	Cuong Hung Tran, Ngoc Linh Nguyen. Analysis and design of a photovoltaic water pumping system	Duc Tien Nguyen, Thanh Tung Bui, Van Nguyen Thi Thanh. Design, Simulation, Fabircation and Characterization of a Pneumatic Soft Gripper	Cong Vinh Pham, Manh Cuong Nguyen, Tuan Hai Nguyen. Vibration analysis of FGM ring-stiffened conical shells by Continuous Element Method
13h40-14h00	Tran Vu Minh . Model Predictive Control for Piezoelectric Actuated System with Hysteresis	Tran Thanh Tung. Development of a gripper for a fruit harvesting machine	Tuan Hai Nguyen, Manh Cuong Nguyen, Quoc Hung Nguyen. Parameters analysis on the vibration of composite ring-stiffened cylindrical shells in interaction with elastic foundation
14h00-14h20	Cong Hieu Le, Tran Hiep Dinh. Fitting Models to Crack Coordinate Data Using Change Detection	Hang Tran Thanh, Duong Nguyen Dinh, Vinh Nguyen Phuc, Hoang Tong Tran, An Nguyen Ngoc, Loc Do Quang. Development of a Low-delivery-rate Syringe Infusion Pump towards Remote Monitoring of Biomedical Applications using Accessible IoT Technology	Pham Ngoc Chung, Nguyen Nhu Hieu. Hopf bifurcation of a mass-spring system with LuGre friction model
14h20-14h40	Nguyen Van Khang, Dinh Cong Dat, Nguyen Van Quyen. Dynamic stability control and calculating inverse dynamics of a single-link flexible manipulator	Van-Tinh Nguyen, Kim-Thuan Nguyen, Ngoc-Kien Nguyen. A Study of Wall Cleaning Robot with Zigzag Motion Trajectory	Hoang Ngoc Quy, Nguyen Truong Giang . Simulation superelastic behavior of shape memory alloy and applications reduce oscillations
14h40-14h50	<b>Session break</b>		
		<i>Chairmen. Assoc. Prof. Pham Manh Thang and Dr. Tran Anh Quan</i>	<i>Chairmen: Assoc. Prof. Nguyen Manh Cuong and Dr Nguyen Truong Giang</i>
		<i>Scientific Secretary: MSc. Hoang Van Manh</i>	<i>Scientific Secretary: MS Dao Thi Bóch Thao</i>
14h50-15h10		Linh Phuong Ta, Hung Xuan Truong, Duong Nam Bui, Huy Xuan Le, Phuong Viet Vu, Minh Duc Nguyen . Research and Fabrication of a Carbon Fiber Parabolic Reflector Antenna for Satellite Ground Station at S-band	Dinh Van Duy, Vu Duc Quang, Nguyen Dac Trung . Influence of Technological Parameters on the Quality of Hydroforming Product from Tube Billet
15h10-15h30		Hiep Dam Dinh, Huy Khuat Duy, Linh Nguyen Ngoc. Design and Integrate Control System for 3R2S2S typed Delta Robot	Van-Tinh Nguyen. Effect of Structure Properties on Biped Locomotion
15h30-15h50		Pham Manh Thang, Bui Thanh Lam, Hoang Van Manh, Ngo Anh Tuan, Dang Anh Viet, Kim, Jong-Wook. Fruit Picking Robotic Arm for Agricultural Applications	Xuan-Quang Ma, Van-Tinh Nguyen. Self-Supervised Depth Estimation with Vision Transformer
15h50-16h10		Bui Thanh Lam, Hoang Van Manh, Pham Manh Thang, Ngo Anh Tuan, Dang Anh Viet, Pham Manh Tuan. Image processing algorithms for an agricultural harvesting robot in natural lighting conditions	
16h10-16h30		Cuong Nguyen Nhu, Hang Nguyen Thu, Thao Pham Ngoc. Improvement in Mixing Efficiency of Passive Micromixer with Integrated Grooves	
16h30	<b>Closing Session</b>		