

**AUN/SEED-Net Joint Regional Conference in Transportation, Energy and Mechanical  
Manufacturing Engineering**

Hanoi University of Science and Technology, Hanoi, Vietnam, December 10th-12th, 2021

# PROGRAM

December 10<sup>th</sup> - 12<sup>th</sup> 2021

Venue: Hanoi University of Science and Technology, Hanoi, Vietnam

<b>December 10<sup>th</sup></b>		
<b>Time</b>		<b>Venue</b>
<b>08:30 - 08:90</b>	Registration	C2 Conference hall
<b>09:00 - 09:30</b>	HUST Welcome remark <b>Prof. Le Anh Tuan</b> - RCTEMME2021 Chairman Chairman of The HUST Council	
	AUN/SEED-Net Opening remark <b>Prof. Emeritus Dr. UEDA Tamon</b> - Chief Advisor and Acting Executive Director	
	<b>Mr. MUROOKA Naomichi</b> - JICA Vietnam Office, Senior Representative	
<b>09:30 - 09:40</b>	Photo session	
<b>09:40 - 10:30</b>	Keynote Lectures (20 min./lecture)	
<b>10:30 - 10:45</b>	Teabreak	
<b>10:45 - 11:50</b>	Keynote Lectures (20 min./lecture)	
<b>11:50 - 12:00</b>	AUN/SEED-Net session	
<b>12:00 - 13:30</b>	Lunch	
<b>Parallel Sessions</b>		
<b>13:30 - 15:30</b>	<b>S1a</b> - Mechanical Systems and Sustainable Manufacturing	Conference Room 1 (901-Ta Quang Buu Library)
	<b>S2a</b> - Automotive Engineering	Conference Room 2 (902-Ta Quang Buu Library)
	<b>S3</b> - Sustainable & Renewable Energy	Conference Room 3 (903-Ta Quang Buu Library)
	<b>S5a</b> - Robot and Intelligent Equipment	Conference Room 4 (701-Ta Quang Buu Library)

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	<b>S7a</b> - Advanced Materials	Conference Room 5 (702-Ta Quang Buu Library)
<b>15:30 - 15:45</b>	<b>COFFEE BREAK</b>	
<b>15:45 - 17:45</b>	<b>S1b</b> - Mechanical Systems and Sustainable Manufacturing	Conference Room 1 (901-Ta Quang Buu Library)
	<b>S2b</b> - Automotive Engineering	Conference Room 2 (902-Ta Quang Buu Library)
	<b>S4a</b> - Heat and Mass Transfer	Conference Room 3 (903-Ta Quang Buu Library)
	<b>S6</b> - Energy Efficiency	Conference Room 4 (701-Ta Quang Buu Library)
	<b>S7b</b> - Advanced Materials	Conference Room 5 (702-Ta Quang Buu Library)

<b>December 11<sup>th</sup></b>		
<b>Time</b>		<b>Venue</b>
<b>Parallel Sessions</b>		
<b>8:00 - 10:00</b>	<b>S1c</b> - Mechanical Systems and Sustainable Manufacturing	Conference Room 1 (901-Ta Quang Buu Library)
	<b>S2c</b> - Automotive Engineering	Conference Room 2 (902-Ta Quang Buu Library)
	<b>S4b</b> - Heat and Mass Transfer	Conference Room 3 (903-Ta Quang Buu Library)
	<b>S5b</b> - Robot and Intelligent Equipment	Conference Room 4 (701-Ta Quang Buu Library)
	<b>S8a</b> - Ultra-precision/Precision Engineering and Laser Technology	Conference Room 5 (702-Ta Quang Buu Library)
<b>10:00 - 10:15</b>	<b>Coffee Break</b>	

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<b>10:15 - 12:15</b>	<b>S1d</b> - Mechanical Systems and Sustainable Manufacturing	Conference Room 1 (901-Ta Quang Buu Library)
	<b>S9</b> - Fuel and Clean Combustion	Conference Room 2 (902-Ta Quang Buu Library)
	<b>S10a</b> - Experimental and Computational Fluid Dynamics	Conference Room 3 (903-Ta Quang Buu Library)
	<b>S5b</b> - Robot and Intelligent Equipment	Conference Room 4 (701-Ta Quang Buu Library)
	<b>S8b</b> - Ultra-precision/Precision Engineering and Laser Technology	Conference Room 5 (702-Ta Quang Buu Library)
<b>12:15 - 13:30</b>	<b>Lunch</b>	
<b>13:30 - 15:30</b>	<b>S10b</b> - Experimental and Computational Fluid Dynamics	Conference Room 3 (903-Ta Quang Buu Library)
	<b>S11a</b> - Digital Industrial Engineering	Conference Room 4 (701-Ta Quang Buu Library)
<b>15:30 - 15:45</b>	<b>COFFEE BREAK</b>	
<b>15:45 - 17:45</b>	<b>S10c</b> - Experimental and Computational Fluid Dynamics	Conference Room 3 (903-Ta Quang Buu Library)
	<b>S11b</b> - Digital Industrial Engineering	Conference Room 4 (701-Ta Quang Buu Library)

<b>December 12<sup>th</sup></b>		
<b>Time</b>	<b>Venue</b>	
<b>8:00 - 12:00</b>	<b>City tour</b>	(Canceled due to COVID-19)

## **Parallel Sessions**

<b>S1(a,b,c,d)</b>	Mechanical Systems and Sustainable Manufacturing	<i>Pages 5,6,7,8</i>
<b>S2(a,b,c)</b>	Automotive Engineering	<i>Pages 9,10,11</i>
<b>S3</b>	Sustainable & Renewable	<i>Page 12</i>
<b>S4(a,b)</b>	Heat and Mass Transfer	<i>Page 13,14</i>
<b>S5(a,b)</b>	Robot and Intelligent Equipment	<i>Pages 15,16</i>
<b>S6</b>	Energy Efficiency	<i>Page 17</i>
<b>S7(a,b)</b>	Advanced Materials	<i>Pages 18,19</i>
<b>S8(a,b)</b>	Ultra-precision/Precision Engineering and Laser Technology	<i>Pages 20,21</i>
<b>S9</b>	Fuel and Clean Combustion	<i>Page 22</i>
<b>S10(a,b,c)</b>	Experimental and Computational Fluid Dynamics	<i>Pages 23,24,25</i>
<b>S11(a,b)</b>	Digital Industrial Engineering	<i>Pages 26,27</i>

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<b>S1a - MECHANICAL SYSTEMS AND SUSTAINABLE MANUFACTURING</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 1 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 1</a>)</b>
<b>13:30 – 15:30</b>	<b>Chair: Prof. Hiromi ISOBE</b>
<b>13:30 – 13:45</b>	Investigation of Protrusion Height and Wall Thickness Distribution of Tube Hydrostatic Forming Y-Shaped Joint <b>Vu Duc Quang, Dinh Van Duy, Nguyen Dac Trung, Tran Anh Quan, Le Trung Kien</b>
<b>13:45 – 14:00</b>	Effect of Clamping Distances on Residual Stress in Butt Welded Joint of Stainless-Steel Plates <b>Nguyen Tien Duong</b>
<b>14:00 – 14:15</b>	Experimental design and manufacture a pair of the internal non-circular gears with an improved cycloid profile <b>Nguyen Hong Thai, Phung Van Thom, Nguyen Thanh Trung</b>
<b>14:15 – 14:30</b>	Research on the characteristics of tooth shape and size of the oval gear drive with an involute profile <b>Nguyen Hong Thai, Phung Van Thom</b>
<b>14:30 – 14:45</b>	An Optimization of Minimum Quantity Lubrication System Parameters for Decreasing Average Roughness and Air Pollution <b>Trung-Thanh Nguyen, Truong-An Nguyen, Quang-Hung Trinh, Long-Hai Pham, Xuan-Hung Le, Nhu-Ha Than, Xuan-Ba Le</b>
<b>14:45 – 15:00</b>	Investigation of Flow Theory for Polymer Melt in a Single Screw Extruder for 3D Printing Filament <b>Chinh Truong Van, Nien Thi Nguyen, Trieu Khoa Nguyen</b>
<b>15:00 – 15:15</b>	A Study on Selecting Cutting Regime to Attain Suitable Roughness and Dimensional Precision in Both When Drilling Tempered Steel 20XHM <b>Bui Ngoc Tuyen, Phan Thanh Ha</b>
<b>15:15 – 15:30</b>	Study on influence of workpiece rotation speed, radial feed rate and grinding wheel speed on surface roughness when grinding Archimedean steel 38CrMo screw shafts <b>Tran Dinh Hieu, Tran Ve Quoc, Do Dinh Luong, Trung-Kien Le</b>
<b>15:30 - 15:45</b>	<b>Coffee Break</b>

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<b>S1b - MECHANICAL SYSTEMS AND SUSTAINABLE MANUFACTURING</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 1 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 1</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Assoc. Prof. Nguyen Thi Hong Minh</b>
<b>15:45 - 16:00</b>	Detection fault symptoms of rolling bearing based on enhancing collected transient vibration signals  <b>Nguyen Trong Du, Nguyen Phong Dien, Nguyen Huu Cuong</b>
<b>16:00 - 16:15</b>	A Method for Cooling Bearings of Motorized Spindles  <b>Xuan Quang Ngo, Hoang Long Phan, Van Tu Duong, Huy Hung Nguyen, Tan Tien Nguyen</b>
<b>16:15 - 16:30</b>	Fiber laser cleaning to remove paint on the surface of mechanical parts  <b>Toan Thang Vu, Thanh Dong Nguyen, Thanh Tung Vu, Cong Tuan Truong, Xuan Hieu Dong</b>
<b>16:30 - 16:45</b>	Experimental study on the relationship between cutting tool life and cutting vibration in the case of grinding wheel fabricated in Vietnam  <b>Nguyen Thi Phuong Giang</b>
<b>16:45 - 17:00</b>	Research on the friction effect on product quality in sheet hydroforming  <b>Thu Nguyen Thi, Trung Nguyen Dac, Trung-Kien Le, Nam Dao Ngoc Minh</b>
<b>17:00 - 17:15</b>	Study Optimization of Process Parameters in Overmolding of Multi Plastic Materials  <b>Truong Duc Phuc and Nguyen Anh Dung</b>
<b>17:15 - 17:30</b>	Adaptive observation controller for an uncertain hysteresis system with input constraint  <b>Phuc Than Huynh</b>
<b>17:30 - 17:45</b>	LQR control design in vibration control of a benchmark building structure subjected to seismic load  <b>Thi-Thoa Mac, Hai-Le Bui</b>

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<b>S1c - MECHANICAL SYSTEMS AND SUSTAINABLE MANUFACTURING</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 1 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 1</a>)</b>
<b>08:00 - 10:00</b>	<b>Chair: Assoc. Prof. Bui Tuan Anh</b>
<b>08:00 - 08:15</b>	Detecting Crack on a Beam Subjected to Impact Load <b>Fergyanto E. Gunawan, Tran Huu Nhan, Sutikno, Insannul Kamil</b>
<b>08:15 - 08:30</b>	Thermal Analysis by Finite Element Model for Powder Screw Extruder for 3D Printing Method. <b>Quang Duy Do, Hung Quang Tran, Thien Bat Le, Lan Xuan Phung, Kien Trung Nguyen</b>
<b>08:30 - 08:45</b>	The effect of printing parameters on the characteristics of PCL scaffold in tissue engineering application <b>Tuan Quang Ta, Trung Kien Nguyen, Son Hoanh Truong, Lan Xuan Phung</b>
<b>08:45 - 09:00</b>	Investigation and Optimization of Surface Roughness and Material Removal Rate in Face Finishing Milling of Ti-6Al-4V under MQL Condition <b>Van-Canh Nguyen, Tien-Dung Hoang, Van-Hung Pham, Thuy-Duong Nguyen</b>
<b>09:00 - 09:15</b>	Evaluating the influence of cutting mode and workpiece parameters on surface roughness when external cylindrical grinding 65Mn steel <b>Tuan-Linh Nguyen</b>
<b>09:15 - 09:30</b>	A method of determination of the remaining geometrical accuracy of lathe machine based on the wear of slideway <b>Hung Pham Va, Canh Nguyen Van, Duong Nguyen Thuy</b>
<b>09:30 - 09:45</b>	Determining the Residual Stress of K Welded Pipe Joint by Hole Drilling Method <b>Nguyen Hong Thanh, Nguyen Tien Duong</b>
<b>09:45 - 10:00</b>	The Effect of Microstructure and Nano Additive Lubrication on the Specific Grinding Energy and Surface Roughness in Ti-6Al-4V Grinding <b>Hung Phi-Trong, Trung Nguyen-Kien, Chung Luong-Hai, Son Truong-Hoanh</b>
<b>10:00 - 10:15</b>	<b>COFFEE BREAK</b>

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<b>S1d - MECHANICAL SYSTEMS AND SUSTAINABLE MANUFACTURING</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 1 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 1</a>)</b>
<b>10:15 - 12:15</b>	<b>Chair: Assoc. Prof. Vu Le Huy</b>
<b>10:15 - 10:30</b>	Design and Construction for Computational Models of Ultrasonic Transducers <b>Anh-Duy Truong &amp; Van-Son Dinh, Van-Sang Pham, Manh-Tuan Ha</b>
<b>10:30 - 10:45</b>	An Experimental Study on Stick-Slip Characteristics of Pneumatic Cylinders <b>Ngoc Hai Nguyen, Trong Hoa Pham, Xuan Bo Tran</b>
<b>10:45 - 11:00</b>	An Experimental Study on Position Control of Pneumatic Cylinder Using Programmable Logic Controller and Pneumatic Proportional Valves <b>Duc Thinh Pham, Dinh Son Tran, Xuan Bo Tran</b>
<b>11:00 - 11:15</b>	Structural durability analysis of offshore wind turbine tower with monopile foundation according to ICE 61400 standards <b>Vu Dinh Quy , Le Thi Tuyet Nhung, Nguyen Viet Hoang</b>
<b>11:15 - 11:30</b>	Evaluation of tensile and fatigue strength of ANSI 304 steel pipe welds <b>Xuan Chung Nguyen, Tuan-Linh Nguyen</b>
<b>11:30 - 11:45</b>	A study on influence of MQL parameters on cutting heat generated during machining based on numerical simulation <b>Van-Hung Pham, Thi-Thu-Ha Nguyen, Van-Huy Nguyen, Trung-Kien Quach, Trong-Nghia Nghiem, and Tuan-Anh Bui</b>
<b>11:45 - 12:00</b>	A numerical simulation and design of an inspection system to evaluate the quality of home appliance products <b>Trong-Thanh Nguyen, Hoang-Vuong Pham, Xuan-Nam Tran, Phu-Minh Pham, and Tuan-Anh Bui</b>
<b>12:00 - 12:15</b>	Research on new modeling of winding process for controlling yarn package pressure on grooved drum <b>Tran Duc Trung, Dao Anh Tuan, Chu Dieu Huong</b>

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<b>S2a - AUTOMOTIVE ENGINEERING</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 2 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 2</a>)</b>
<b>13:30 - 15:30</b>	<b>Chair: Prof. Toshio Ito</b>
<b>13:30 - 13:45</b>	Vulnerable Road Users Overtaking Path Planning on Urban Road considering Individual Driving Styles <b>Manh Dung Vu, Hirofumi Aoki, Dong Haitao, Sueharu Nagiri, Thanh Tung Nguyen, Anh Son Le, Tatsuya Suzuki</b>
<b>13:45 - 14:00</b>	Research of Calculation and Testing assessment of Impact resistance of Automobile alloy wheel rims used in Vietnam <b>Thanh Cong Nguyen</b>
<b>14:00 - 14:15</b>	Optimizing the Parameter of the LQR Controller for Active Suspension System <b>Thi Thu Huong Tran, Tuan Anh Nguyen, Thang Binh Hoang, Duc Ngoc Nguyen, Ngoc Duyen Dang</b>
<b>14:15 - 14:30</b>	An Overview of Pedestrian Detection based on LiDAR for Advanced Driving Assistance System <b>Cao Vu Kieu, Ngoc Ninh Pham, Anh Tuan Le, Anh Son Le, Xuan Nang Ho</b>
<b>14:30 - 14:45</b>	Control of Semi-active Suspension System Using Kalman Observer <b>Nguyen Trung Kien, Dam Hoang Phuc, Lai Nang Vu, Vu Hai Thuong</b>
<b>14:45 - 15:00</b>	Design and Simulation of Magnetorheological Brake Supporting Downhill Van Truck <b>Quang-Tuan Hoang, Huu-Dieu Bui, Thanh-Tung Tran</b>
<b>15:30 - 15:45</b>	<b>COFFEE BREAK</b>

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<b>S2b - AUTOMOTIVE ENGINEERING</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 2 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 2</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Assoc. Prof. Duong Ngoc Khanh</b>
<b>15:45 - 16:00</b>	An experimental study to evaluate the performance of hydrostatic power split transmission for small agricultural tractor  <b>Minh-Hoang Trinh, Duy-Suy Pham</b>
<b>16:00 - 16:15</b>	Study on Bus Instability in Crosswind Conditions using Dynamic Model  <b>Tien-Quyet Do, Minh-Hoang Trinh, Trong-Hoan Nguyen</b>
<b>16:15 - 16:30</b>	A durability test of motorcycle engine fueled with ethanol-gasoline blends  <b>Nguyen Duc Khanh, Nguyen The Truc, Nguyen Duy Tien, Nguyen The Luong, Pham Huu Tuyen</b>
<b>16:30 - 16:45</b>	Study on effects of road conditions on the lateral instability of tractor semitrailer vehicle while turning maneuver  <b>TA Tuan Hung, VO Van Huong, DUONG Ngoc Khanh</b>
<b>16:45 - 17:00</b>	Analysis Hatchback Vehicle Structure In Car-to-Car Frontal Impact Using Finite Element Model  <b>Nguyen Phu Thuong Luu, Nguyen Thanh Don, Ly Hung Anh</b>
<b>17:00 - 17:15</b>	Vehicle crash analysis and airbag simulation in HyperWorks  <b>Trong-Dat Hoang, Thanh-Tung Tran</b>

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<b>S2c - AUTOMOTIVE ENGINEERING</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 2 (901-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 2</a>)</b>
<b>08:00 - 10:00</b>	<b>Chair: Prof. Hirofumi Aoki</b>
<b>08:00 - 08:15</b>	A Study on Vibration and Noise of Manual Transmission by Using Simulation <b>Nguyen Phu Thuong Luu, Ly Hung Anh</b>
<b>08:15 - 08:30</b>	Verification of Dummy Head Impact on Experimental and Simulation <b>Tien-Phu Nguyen, Thanh-Tung Tran</b>
<b>08:30 - 08:45</b>	Dynamics simulation and fatigue endurance analysis for small truck <b>Minh-Tien Nguyen, Thanh-Tung Tran</b>
<b>08:45 - 09:00</b>	Head Injury Criterion of Vietnamese Pedestrian Struck by a Sedan <b>Hung Anh Ly, Phu Thuong Luu Nguyen</b>
<b>09:00 - 09:15</b>	Optimization algorithm in adjust PID parameters for linear electromagnet motor application on Automotive Suspension System <b>Ba-Hung Vu, Ngoc-Khanh Duong, Thanh-Tung Tran</b>
<b>09:15 - 09:30</b>	A Study on Anti-Pedal Error System in Car Based on Hydraulic Approach <b>Sy-Le Ho, Xuan-Giao Nguyen, Van-Hop Pham, Tien-Bang Nguyen, Van-Thuan Truong</b>

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<b>S3 - SUSTAINABLE &amp; RENEWABLE ENERGY</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 3 (903-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 3</a>)</b>
<b>13:30 - 15:30</b>	<b>Chair: Assoc. Prof. Pham Hoang Luong</b>
<b>13:30 - 13:45</b>	Method to Improve the Power Coefficient of Vertical Axis Wind Turbines <b>Nguyen The Bao, Ngo Van Minh, Ngo Gia Huy</b>
<b>13:45 - 14:00</b>	An Overview on the Viability of Hydrous Bioethanol as Gasoline Fuel Blend in the Philippines <b>Nathaniel Ericson R. Mateo, Roque A. Ulep, Marilou P. Lucas, Shirley C. Agrupis, Janssen Sagadraca, Christopher Baga</b>
<b>14:00 - 14:15</b>	Modeling and Control of a 4 MW Wind Turbine with Hydrostatic Transmission <b>Xuan Bo Tran, Ngoc Son Vu, Trong Hoa Pham, The Mich Nguyen</b>
<b>14:15 - 14:30</b>	Economic Analysis of a Grid-Connected Rooftop PV System for a Factory in Phnom Penh <b>Vannak Vai, Samphors Eng, Chhith Chhlonh, Hideaki Ohgaki</b>
<b>14:30 - 14:45</b>	Dynamic Phasor Model of Grid-Connected Photovoltaic System in MATLAB/Simulink Considering Low Voltage Ride Through Characteristics for Voltage Stability Analysis of Power System <b>Dinh Tien Luan, Nguyen Hoang Viet*, Hoang Quoc Viet, Truong Ngoc Minh</b>
<b>14:45 - 15:00</b>	Simulation study on the effect of biodiesel ratio derived from waste cooking oil on performance and emissions of single cylinder diesel engine <b>Nguyen Tuan Nghia, Trinh Dac Phong, Nguyen Xuan Khoa</b>
<b>15:00 - 15:15</b>	Theoretical and Experimental Study of the Effective Operation Mode of Absorption Refrigeration Chiller for Ice Production <b>Nghia Hieu Nguyen, Hiep Chi Le, Quoc An Hoang</b>
<b>COFFEE BREAK</b>	

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<b>S4a - HEAT AND MASS TRANSFER</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 3 (903-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 3</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Dr. Trinh Quoc Dung. Co-Chair: Dr. Le Duc Dung</b>
<b>15:45 - 16:00</b>	Thermal Fluid Flow Transport Characteristics in Pipe Flow Using Graphene Nanofluid <b>Shuichi Torii, Aima Shibata, Koutaro Fujimoto</b>
<b>16:00 - 16:15</b>	Evaluation of factors influencing the freezing time of the Pangasius fillets <b>Do Huu Hoang, Hoang Thi Nam Huong</b>
<b>16:15 - 16:30</b>	Effect of different heat recovery tube structure on the exhaust heat utilizing ability in internal combustion engine <b>Khong Vu Quang, Le Manh Toi, Le Dang Duy, Vu Minh Dien, Nguyen Duy Tien, Nguyen The Truc</b>
<b>16:30 - 16:45</b>	Study on Phase Change Heat Transfer with Visualized Loop-Heat-Pipe Evaporator <b>Masahito Nishikawara, Shohei Tomita, Hiroshi Yokoyama, Hideki Yanada</b>
<b>16:45 - 17:00</b>	One-dimensional and Entropy Generation Analyses of a Solar Chimney <b>Cao Trung Hau, Doan Thi Hong Hai, Nguyen Van Hap, Nguyen Minh Phu</b>
<b>17:00 - 17:15</b>	Numerical optimization of the process conditions to improve the warpage inside the product and reduce the cooling time in the injection molding product <b>Tran-Phu Nguyen, Tuan-Anh Bui</b>
<b>17:15 - 17:30</b>	Effect of Geometric Parameters of Heat Sink on Thermal Dissipation for Active Antenna Unit <b>Van-Tinh Nguyen, Chi-Cong Nguyen</b>
<b>17:30 - 17:45</b>	Experimental Study Of Infrared-Assisted Heat Pump Drying Of Lime Slices <b>Nguyen Minh Ha, Ha Anh Tung</b>

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<b>S4b - HEAT AND MASS TRANSFER</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 3 (903-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 3</a>)</b>
<b>08:00 - 10:00</b>	<b>Chair: Prof. Kyoshi Saito</b>
<b>08:00 - 08:15</b>	Subcooled flow boiling and its application in designing LNG vaporizers <b>Tuan Le, Kieu Hiep Le</b>
<b>08:15 - 08:30</b>	Modelling for Sliced Avocado Drying in Modified Air <b>Thi Thu Hang Tran</b>
<b>08:30 - 08:45</b>	Experimental Study on Sliced Avocados Drying in Modified Air <b>Van Thuan Nguyen, Thi Thu Hang Tran, Viet Dung Nguyen, Hong Nam Nguyen</b>
<b>08:45 - 09:00</b>	A Study on Forced-Air Thermal Dissipation in Lithium-Ion Batteries using Numerical Method <b>Khai H. Nguyen, Tung X. Vu, Le Thi Thai, Van-Sang Pham</b>
<b>09:00 - 09:15</b>	Appraisal Burning Characteristic and Analysis Effect of Cavity in Scramjet Combustion Chamber <b>Van-Minh LE, Cong-Truong DINH*, Quoc-Khanh PHAM, Duc-Huy TA, Quang-Sang VO, Hong-Quan LUU*, The-Mich NGUYEN and Anh-Tuan NGUYEN</b>
<b>09:15 - 09:30</b>	Effect of Turning Vanes on Heat Exchange Characteristics of Cooling Channel in Turbine Blade <b>Tien-Dung NGUYEN, Hai-Quang DO, Cong-Hung HOANG, Minh-Hieu NGUYEN, Mai-Anh Thi BUI, Cong-Truong DINH* and Hong-Quan LUU</b>
<b>09:30 - 09:45</b>	Experimental Two-phase Flow Boiling Heat Transfer Coefficient and pressure drop of refrigerant in a horizontal Micro-fin Tube <b>Nguyen, Viet Dung; Trinh, Quoc Dung; Vu, Tuan Anh; Nguyen, Ba Chien; Oh, Jong-Taek</b>
<b>09:45 - 10:00</b>	Effect of the Pressure Ratio on the Heat Transfer Phenomena of the Evaporator in CO <sub>2</sub> Air Conditioning System <b>Thanhtrung Dang, Tronghieu Nguyen</b>

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<b>S5a - ROBOT AND INTELLIGENT EQUIPMENT</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 4 (701-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 4</a>)</b>
<b>13:30 - 15:30</b>	<b>Chair: Assoc. Prof. Dinh Thi Thanh Huyen</b>
<b>13:30 - 13:45</b>	Development of Grading System based on Machine Learning for Dragon Fruit <b>Nguyen Minh Trieu, Nguyen Truong Thinh</b>
<b>13:45 - 14:00</b>	Automated Driving Personal Mobility Vehicle Field User Acceptance: A Qualitative Study Based on Field Operational Test <b>Toshio Ito, Muhammad Zulfaqar bin Azmi</b>
<b>14:00 - 14:15</b>	Human-robot Interaction System using Vietnamese <b>Nguyen Khac Toan, Le Duc Thuan, Le Bao Long and Nguyen Truong Thinh</b>
<b>14:15 - 14:30</b>	Using Artificial Neural Network to Grade Internal Quality of Coconuts Based on Density <b>Nguyen Tran Trung Hieu, Nguyen Minh Trieu, Nguyen Truong Thinh</b>
<b>14:30 - 14:45</b>	Inverse kinematics analysis of 7 DOF Collaborative Robot by using Coordinate and Velocity projection methods <b>Thai Phuong Thao, Nguyen Quang Hoang</b>
<b>14:45 - 15:00</b>	Mapping and Path Planning for The Differential Drive Wheeled Mobile Robot in Unknown Indoor Environments Using The Rapidly Exploring Random Tree Method <b>Ngoc-Tien Tran, Tien-Dung Ngo, Dinh-Khoi Nguyen, Phung Xuan Son, Nguyen Hong Thai</b>
<b>15:00 - 15:15</b>	A Thoroughly Approach: Pulley Kinematic, Actuator Dynamic And Stiffness on Cable Suspended Parallel Robots <b>Le Duc Duy, Nguyen Truong Thinh</b>
<b>15:15 - 15:30</b>	An Efficient Pantograph Dynamic Mechanism for Massage Robot Arm Acting Therapy on Human Back <b>Nguyen Dao Xuan Hai, Nguyen Truong Thinh</b>

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<b>S5b - ROBOT AND INTELLIGENT EQUIPMENT</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 4 (701-Ta Quang Buu Library -<a href="#">TEAMS Meeting Room 4</a>)</b>
<b>08:00 - 10:30</b>	<b>Chair: Dr. Do Tho Truong</b>
<b>08:00 - 08:15</b>	Simplified trajectory-tracking method for an under-actuated USV <b>Xuan-Dung Nguyen, Trung-Kien Vo, Manh-Tuan Ha</b>
<b>08:15 - 08:30</b>	A Case study on Humanoid Robot Using Robotics Software in E-learning <b>Duc-An Pham, Huy-Anh Bui, Xuan-Thuan Nguyen, Thi-Thoa Mac, Hong-Hai Hoang</b>
<b>08:30 - 08:45</b>	Patent Map for Forecasting Technology Trends and Policymaking Case Study: IoT in Agriculture <b>Pha N. PHAM, Trong-Hieu NGUYEN</b>
<b>08:45 - 09:00</b>	Robust control of quadcopter in case of releasing liquid and encountering uncertainties <b>Nguyen Son Hoang, Manh-Tuan Ha</b>
<b>09:00 - 09:15</b>	Innovative temperature measurement procedure for FLIR LEPTON 3.5 thermal camera <b>Nguyen Thanh Hung, Tran Bao Long, Hoang Thanh Tung, Hoang Hong Hai</b>
<b>09:15 - 09:30</b>	Application of geometry theory in vehicle steering angle estimation <b>Hong Hai Hoang, Duc Toan Le , Dung Tien Nguyen, Tuong Linh Nha, Huu Long Nguyen</b>
<b>09:30 - 09:45</b>	Surrounding Environment Detection of an Intelligent Wheelchair using Improved Convolutional Neural Networks <b>Hai-Le Bui, Tuan Truong Cong, Pham Anh Quan, Thi Thoa Mac</b>
<b>09:45 - 10:00</b>	Parameter Auto-tuning for improving scale factor and washout effect of Classical Motion Cueing Algorithm with Cylindrical Coordinates <b>Duc An Pham, Quang Nguyen Huu</b>
<b>10:00 - 10:15</b>	Design of Agriculture Robot for Tomato Plants in Green House <b>Thi Thoa Mac, Van Thu Hoang, Hai-Le Bui, Tai Nguyen Sy, Hong Hai Hoang</b>
<b>10:15 - 10:30</b>	Automated Driving Personal Mobility Vehicle Field User Acceptance: A Qualitative Study Based on Field Operational Test <b>Toshio Ito, Muhammad Zulfaqar bin Azmi</b>

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<b>S6 - ENERGY EFFICIENCY</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 4 (701-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 4</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Assoc. Prof. Dang Thanh Trung</b>
<b>15:45 - 16:00</b>	Effect of baffle spacing with sequential difference to the Shell and Tube heat exchanger performance  <b>Asybel Bonar, Ari Darmawan Pasek</b>
<b>16:00 - 16:15</b>	Application of the novel neural network controller in the hydro turbine-governor system  <b>Nguyen Dac Nam, Nguyen Hong Quang</b>
<b>16:15 - 16:30</b>	Design of Power System Stabilizers based on the Model of Single Machine Infinite Bus Power System  <b>Hong Quang Nguyen, Dac Nam Nguyen</b>
<b>16:30 - 16:45</b>	Electric Load Disaggregation using Non-Intrusive Load Monitoring Algorithm for Home Energy Management: Case-study for an apartment in Hanoi  <b>Hoang-Anh DANG, Van-Dung Dao</b>
<b>16:45 - 17:00</b>	Experimental Investigation of Performance of Cellulose Cooling Pad  <b>Nguyen Viet Dung, Nguyen Tien Hung, Nguyen Ba Chien, Nguyen Dinh Vinh</b>
<b>17:00 - 17:15</b>	Designation and Simulation of Dehumidification Integrated Air Conditioning  <b>Ngo Minh Đuc, Ta Van Chuong</b>
<b>17:15 - 17:30</b>	Experimental investigation of energy efficient room air conditioners for the ministores  <b>Nguyen Viet Dzung, Cung Duc Huy, Nguyen Ba Chien, Ho Huu Phung, Vu Tuan Anh, Trinh Quoc Dung</b>

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<b>S7a – ADVANCED MATERIALS</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 5 (702-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 5</a>)</b>
<b>13:30 – 15:30</b>	<b>Chair: Prof. Le Minh Quy</b>
<b>13:30 – 13:45</b>	Experimental design and manufacture a pair of the internal non-circular gears with an improved cycloid profile <b>Nguyen Hong Thai, Phung Van Thom, Nguyen Thanh Trung</b>
<b>13:45 – 14:00</b>	Study on the process and formation of fiber structure during forming of an automobile joint part in closed-die forging <b>Quang-Thang Nguyen, Viet-Tien Luu, Trung-Kien Le</b>
<b>14:00 – 14:15</b>	Vibration analysis of thick rotating laminated composite conical shells by the dynamic stiffness matrix method <b>Manh Cuong Nguyen, Nam Le Thi Bich</b>
<b>14:15 – 14:30</b>	Vibroacoustic Behavior Of Double-Composite Plate Filled With Porous Materials <b>Tran Ich Thinh, Pham Ngoc Thanh</b>
<b>14:30 – 14:45</b>	Geometrically nonlinear behavior of functionally graded beam and frame structures under mechanical loading <b>Bui Thi Thu Hoai, Tran Thi Thu Huong, Nguyen Dinh Kien</b>
<b>14:45 – 15:00</b>	Stability And Viscosity of Mono and Hybrid Nanolubricant <b>M A Saufi , Y A A Ibrahim Ahmad , Hussin Mamat</b>
<b>15:00 – 15:15</b>	Research gap-size effect of A Multi-Pole Bi-Layer Magnetorheological Brake <b>Thanh-Tung Tran, Tien-Hoang Nguyen, Quang-Tuan Hoang</b>
<b>15:30 - 15:45</b>	<b>COFFEE BREAK</b>

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<b>S7b – ADVANCED MATERIALS</b>	
<b>December 10<sup>th</sup></b>	<b>Conference Room 5 (702-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 5</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Prof. Dao Viet Dzung</b>
<b>15:45 - 16:00</b>	Elastic Mechanical Properties of Transition Metal Dichalcogenides Monolayer Using Atomic Finite Element Method  <b>Danh-Truong Nguyen</b>
<b>16:00 - 16:15</b>	Electromechanical Actuators based on monolayer borophene with $\beta_{12}$ and $\chi_3$ structures  <b>Nguyen Duy Van, Vuong Van Thanh, Nguyen Tuan Hung, Do Van Truong</b>
<b>16:15 - 16:30</b>	Photoconversion of Carbon Dioxide to Methanol using Nitrogen, Bismuth Co-doped Carbon Quantum Dots/Titanium Dioxide  <b>Khee Chung Hui, Muhammad Izzat Muizzuddin Mazlan, Nonni Soraya Sambudi</b>
<b>16:30 - 16:45</b>	Numerical simulation of thermal stress and creep fatigue crack growth analysis for thick-walled tubes of header  <b>Hong Bo Dinh, Kee Bong Yoon</b>
<b>16:45 - 17:00</b>	Development of vibration absorber system using tunable stiffness material  <b>Duc Long Nguyen</b>
<b>17:00 - 17:15</b>	The process of custom designing replacement cranial bone patches in human body  <b>Cuc Nguyen Thi Kim, Hoang Hong Hai, Cao Xuan Binh, and Vu Tien Dung</b>
<b>17:15 - 17:30</b>	Photocatalytic activity of Tungsten-Loaded Titanium Dioxide Photocatalysts against Dyes and Bacteria in Water system  <b>Saepurahman , Muhammad Eka Prastya, Mohd Azmuddin Abdullah, Keiichi N. Ishihara, Tjandrawati Mozef</b>
<b>17:30 - 17:45</b>	Free vibration analysis on stepped composite cylindrical shells reinforced by inner/outer ring stiffeners  <b>Nguyen Quoc Hung, Nguyen Manh Cuong, Ta Van Cuong</b>

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<b>S8a - ULTRA PRECISION/PRECISION ENGINEERING AND LASER TECHNOLOGY</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 5 (702-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 5</a>)</b>
<b>08:00 - 10:00</b>	<b>Chair: Prof. Tatsutoshi Shioda</b>
<b>08:00 - 08:15</b>	Development of a Software for Laser-Based Micromachining of Piezoceramic Microactuators  <b>Ha Xuan Nguyen , Hung Anh Nguyen</b>
<b>08:15 - 08:30</b>	Oscillation measurement of the magnetic compass needle employing deep learning technique  <b>Thanh-Hung Nguyen, Minh-Chien Nguyen</b>
<b>08:30 - 08:45</b>	Apply image processing techniques into the process of reading and calibrating Levelling staffs  <b>Vu Khanh Phan, Vu Tien Dung, Ta Van Doanh, Nguyen Thi Kim Cuc</b>
<b>08:45 - 09:00</b>	Research on the effect of the grating profile on the profilometry resolution of the 2D single-shot comb-based interferometer  <b>Dinh Thai Bao, Keishi Chiba, Truong Cong Tuan, Tatsutoshi Shioda</b>
<b>09:00 - 09:15</b>	Investigating the Effect of Pulsed Fiber Laser Parameters on the Roughness of Heat-Resistant Parts in Cleaning Processes  <b>Toan Thang Vu, Thanh Dong Nguyen, Thanh Tung Vu, Hong Hai Hoang</b>
<b>09:15 - 09:30</b>	Periodic nonlinearity of frequency-modulating homodyne interferometer using fitting least-squares circle  <b>Nguyen Thanh Dong, Vu Toan Thang, Nguyen Thi Phuong Mai, Vu Thanh Tung</b>
<b>09:30 - 09:45</b>	Evaluation Of Cutting Edge In Suitable Ultrasonic Vibration-Assisted Drilling  <b>Naofumi Tsuji, Akira Sakurada , Kazuto Miyawaki , and Hiromi Isobe</b>
<b>10:00 - 10:15</b>	<b>COFFEE BREAK</b>

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<b>S8b - ULTRA PRECISION/PRECISION ENGINEERING AND LASER TECHNOLOGY</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 5 (702-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 5</a>)</b>
<b>10:15 - 12:15</b>	<b>Chair: Assoc. Prof. Nguyen Thi Phuong Mai</b>
<b>10:15 - 10:30</b>	A Computational Method of Air-Electric Equivalent in Air Spindle <b>Truong Minh Duc, Ta Thi Thuy Huong, Nguyen Thanh Trung, Vu Toan Thang</b>
<b>10:30 - 10:45</b>	Research and Design of Compact Equipment using Phase_shifting Deflectometry Apply in Optical Surface Measurement <b>Nguyen Thi Kim Cuc, Vu Danh Tien, Cao Xuan Binh and Vu Tien Dung</b>
<b>10:45 - 11:00</b>	High-Speed Focus Detection System Using Diffractive Beam Sampler and Position-Sensitive Detector <b>Xuan Dat Tran, Xuan Binh Cao, Le Phuong Hoang</b>
<b>11:00 - 11:15</b>	Improved Hydrographic Surveying Accuracy With The Use of GPS/IMU and Single Beam Echo Sounder <b>Ngoc-Quynh Nguyen , Dinh-Hoang Van , Manh-Tuan Ha</b>
<b>11:15 - 11:30</b>	Studies on Real-Time Z-Scanning of Multiple-Pulse Laser Ablation of Metal Applied in Roll Printed Electronics <b>Xuan Binh Cao, Tien Dung Vu, Thi Kim Cuc Nguyen, Toan Thang Vu</b>
<b>11:30 - 11:45</b>	Sub-nanometer displacement measurement using heterodyne interferometer and down-beat frequency technique <b>Nguyen Thanh Dong, Nguyen The Tai, Do Viet Hoang, Nguyen Thi Phuong Mai, Vu Thanh Tung, Vu Toan Thang</b>

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<b>S9 - FUEL AND CLEAN COMBUSTION</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 2 (902-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 2</a>)</b>
<b>10:15 - 12:30</b>	<b>Chair: Assoc. Prof. Tran Thanh Son</b>
<b>10:15 - 10:30</b>	A Study on the Effect of Squish Area on Engine Performance of Single Cylinder Natural Gas Converted Engine  <b>Van Tien Nguyen, Tran Dang Quoc</b>
<b>10:30 - 10:45</b>	A simulation method to estimate the effects of internal exhaust residual gas recirculation on NOx emission of spark ignition engine  <b>Nguyen Tien Han, Nguyen Xuan Khoa</b>
<b>10:45 - 11:00</b>	A Study on the Effect of Compression Ratio and Bowl-In-Piston Geometry on Knock Limit in Port Injection Natural Gas Converted Engine  <b>Sy Vong Le, Ho Huu Chan, Tran Dang Quoc</b>
<b>11:00 - 11:15</b>	Influence of Bowl-in-Piston Geometry on Combustion Duration of Port Injection Natural Gas Converted Engine  <b>Tran Dang Quoc , Le Van Cong , Chan Woo Park , Dhinesh Balasubramanian</b>
<b>11:15 - 11:30</b>	A study on performance and emission characteristics of direct injection natural gas engine  <b>Vu Minh Hieu, Ho Huu Chan, Van Cong Le, Chan Woo Park, Tran Dang Quoc</b>
<b>11:30 - 11:45</b>	The Effect of Biodiesel-Ethanol-Diesel Blends on Performance and Emissions of a Diesel Engine  <b>Nhinh Nguyen Van, Tuan Pham Minh, Tuyen Pham Huu</b>
<b>11:45 - 12:00</b>	The pollutant reduction potential of old generation diesel engine retrofitting after-treatment system  <b>Tuan Pham Minh, Dung Nguyen Manh, Vinh Tran Quang, Nguyen The Luong, Truc Nguyen The, Nguyen Duy Tien, Khanh Nguyen Duc</b>
<b>12:00 - 12:15</b>	An Approach To Biomass Selection Based On Thermal Properties For Co-Firing Technology  <b>Tien Quang Nguyen</b>
<b>12:15 - 12:30</b>	Thermal efficiency and exhaust emission of an SI engine using hydrogen enriched gas from exhaust gas fuel reforming based on Ni-Cu/Al <sub>2</sub> O <sub>3</sub> Catalysts  <b>Nguyen The Luong, Tran Van Hoang, Pham Minh Tuan, Le Anh Tuan</b>

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<b>S10a - EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 3 (903-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 3</a>)</b>
<b>10:15 - 12:15</b>	<b>Chair: Dr. Dinh Cong Truong</b>
<b>10:15 - 10:30</b>	Numerical Analysis of EHD Pumps with Electrodes on the Wall of a Flow Path <b>Hideki Yanada , Kento Kimura , Hiroshi Yokoyama , Masahito Nishikawara</b>
<b>10:30 - 10:45</b>	Numerical Simulation for Control of Acoustic Oscillatory Flow in a Curved Duct by a Plasma Actuator <b>Katsuaki Yoza , Hiroshi Yokoyama, Masahito Nishikawara, Hideki Yanada</b>
<b>10:45 - 11:00</b>	Development of a CFD tool based on snappyHexMesh/OpenFOAM for the axial fan performance <b>Van Long Le, Lu Tien Truong and Khanh Hieu Ngo</b>
<b>11:00 - 11:15</b>	Estimation of Hull Resistance acting on a Pontoon in full scale by using CFD <b>Ngo Van He, Hoang Cong Liem, Ngo Van Hien</b>
<b>11:15 - 11:30</b>	Effect of the Elliptical Shape on the Performance of the Modified Savonius Wind Turbine <b>Minh Banh Duc , Anh Le Dinh</b>
<b>11:30 - 11:45</b>	The Modeling of Ion-Selective Membrane <b>Dung T. Nguyen , Khai H. Nguyen , Van-Sang Pham</b>
<b>11:45 - 12:00</b>	Analysis Hydrodynamic Performance of the Autonomous Underwater Vehicle for a different Hull shape <b>Ngo Van He, Vu Ngoc Tuan, Ngo Van Hien</b>
<b>12:15 - 13:30</b>	<b>COFFEE BREAK</b>

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<b>S10b - EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 3 (903-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 3</a>)</b>
<b>13:30 - 15:30</b>	<b>Chair: Dr. Dinh Cong Truong</b>
<b>13:30 - 13:45</b>	OpenFOAM Simulation for Mixing of Liquids in a Vortex Micromixer <b>Yuki Tanaka , M. M. A. Alam , Manabu Takao</b>
<b>13:45 - 14:00</b>	Research on resistance of some typical fishing vessels in Vietnam <b>Hoang Cong Liem , Nguyen Duc Manh</b>
<b>14:00 - 14:15</b>	A study on design two pitch propeller to apply for the small fishing vessel <b>Luong Ngoc Loi, Nguyen Chi Cong, Nguyen Manh Nen, Ngo Van He</b>
<b>14:15 - 14:30</b>	Numerical study for flow behavior and drag of axisymmetric boattail models at different Mach number <b>The Hung Tran , Cong Truong Dao, Dinh Anh Le, Trang Minh Nguyen</b>
<b>14:30 - 14:45</b>	Numerical Simulation of Hot Water Flashing Flow in a Converging - Diverging Nozzle <b>Anh Dinh Le, Quan Hoang Nguyen, Long Ich Ngo, Anh Viet Truong, Okajima Junnosuke, Iga Yuka</b>
<b>14:45 - 15:00</b>	Electroosmosis of the second kind on flat charged surfaces – a direct numerical simulation study <b>Truong V. Dang, Huong T.T. Pham, Van-Sang Pham</b>
<b>15:00 - 15:15</b>	CFD simulation of temperature distribution of atrium space in a residential building <b>Kieu Hiep Le, Tien Cong Do, Van Thuan Nguyen, Tien Anh Nguyen, Viet Dung Nguyen</b>
<b>15:30 - 15:45</b>	<b>COFFEE BREAK</b>

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<b>S10c - EXPERIMENTAL AND COMPUTATIONAL FLUID DYNAMICS</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 3 (903-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 3</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Dr. Ho Xuan Thinh</b>
<b>15:45 - 16:00</b>	CFD simulation of swirl-stabilized pulverized coal flames in a cylindrical combustion chamber  <b>Tien Anh Nguyen, Kieu Hiep Le*, Gia My Tran, Tran Tho Dang</b>
<b>16:00 - 16:15</b>	Numerical Study of Ultraviolet Germicidal Effect against SARS-CoV-2 Virus  <b>Nguyen Duy Minh Phan, Ngo Quoc Huy Tran, Le Anh Doan, Quang Truong Vo, Duy Chung Tran, Thi Thanh Vi Nguyen, Van Sanh Huynh, Tran Anh Ngoc Ho, Duc Long Nguyen, Cuong Mai Bui</b>
<b>16:15 - 16:30</b>	Numerical Analysis on Lift and Drag of a Finite-thickness Circular Arc Hydrofoil in Different Camber  <b>Thanh Van Nguyen , Anh Dinh Le , Anh Viet Truong</b>
<b>16:30 - 16:45</b>	Smoothed Particle Hydrodynamics Simulation of a Wave Making System  <b>Huy Nguyen Tran, Thinh Xuan Ho</b>
<b>16:45 - 17:00</b>	Aerodynamic Performance of a Multi-stage Axial Compressor with Tip Clearance coupled with Hub Fillet  <b>Hoang-Quan CHU, Quang-Hai NGUYEN, Quang-Huy NGUYEN, Quoc-Viet NGUYEN, Van-Hoang NGUYEN, Kim-Dung Thi HOANG, Xuan-Truong LE, Cong-Truong DINH and Thanh-Tung TRAN</b>
<b>17:00 - 17:15</b>	A Numerical Method and OpenFOAM Solver for Microfluidic Problems with Geometrical Periodicity  <b>Manh-Hung Nguyen, Thi-Thai Le, Van-Sang Pham</b>

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<b>S11a - DIGITAL INDUSTRIAL ENGINEERING</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 4 (701-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 4</a>)</b>
<b>13:30 - 15:30</b>	<b>Chair: Assoc. Prof. Hoang Sy Hong</b>
<b>13:30 - 13:45</b>	A-star algorithm for robot path planning based on digital twin <b>Doan Thanh Xuan , Le Giang Nam, Dang Thai Viet, Vu Toan Thang</b>
<b>13:45 - 14:00</b>	Disturbance Observer-based Speed Control of Interior Permanent Magnet Synchronous Motors for Electric Vehicles <b>Duc Thinh Le, Van Trong Dang, Bao Hung Nguyen Dinh, Hoang Phuong Vu, Viet Phuong Pham, Tung Lam Nguyen</b>
<b>14:00 - 14:15</b>	A systems engineering-based model to develop controllers of autonomous underwater vehicles <b>Ngo Van Hien, Ngo Van He</b>
<b>14:15 - 14:30</b>	Integral Action Finite Set Model Predictive Current Control for Brushless DC Motor <b>Lam Cuong Quoc Thai, Van Tu Duong, Huy Hung Nguyen, and Tan Tien Nguyen</b>
<b>14:30 - 14:45</b>	A Model-Based Implementation to Realize Controllers for Quadrotor Unmanned Aerial Vehicles <b>Ngo Van Hien, Pham Gia Diem, Ngo Van He</b>
<b>15:30 - 15:45</b>	<b>COFFEE BREAK</b>

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<b>S11b - DIGITAL INDUSTRIAL ENGINEERING</b>	
<b>December 11<sup>th</sup></b>	<b>Conference Room 4 (701-Ta Quang Buu Library - <a href="#">TEAMS Meeting Room 4</a>)</b>
<b>15:45 - 17:45</b>	<b>Chair: Assoc. Prof. Nguyen Quang Dich</b>
<b>15:45 - 16:00</b>	State of charge estimation Lithium-ion battery pack in Battery Management System <b>Manh Tuyen Ta, Hong Quang Nguyen</b>
<b>16:00 - 16:15</b>	NURBS Curve Trajectory Tracking Control for Differential-Drive Mobile Robot by a Linear State Feedback Dynamic Controller <b>Nguyen Hong Thai, Hoang Thien, Trinh Thi Khanh Ly</b>
<b>16:15 - 16:30</b>	Control Strategies for Beer Recovery Process from Surplus Yeast <b>Lan Anh Dinh Thi, Viet Dung Nguyen, Van Nhat To, Thu Ha Nguyen and Thanh Ha Tran</b>
<b>16:30 - 16:45</b>	Developed Programmable Logic Controllers with PI-Iterative Learning Control Algorithm a Case Study for BioGas-Based Generators <b>Anh Hoang, Duc Tung Trinh, Thanh Trung Cao, Hung Dung Pham</b>
<b>16:45 - 17:00</b>	Modeling and Controller Design of a Tilt tri-rotor UAV <b>Vu Dinh Quy, Le Thi Tuyet Nhung, Nguyen Quang Hung, Nguyen Ngoc Quynh</b>