

14th International Conference on Mechanical Engineering

ICME 2023
18-19 December 2023

PROGRAM



Organized by
Department of Mechanical Engineering
Bangladesh University of Engineering and Technology
Dhaka-1000, Bangladesh

Sponsored By



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14th International Conference on Mechanical Engineering ICME 2023

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14th International Conference on Mechanical Engineering (ICME 2023)
18-19 December, 2023, BUET, Dhaka, Bangladesh

Program Schedule

| Time | Venue A Council Building | Venue B ME Building | Venue C ME Building | Venue D ME Building | Venue E ME Building | Venue F ME Building |
|-------------|---|--|--|--|--|------------------------|
| 9:00-10:00 | Day-1: 18 December, 2023 (Monday) | | | | | |
| 10:00-10:30 | Registration (ME Building, 1 st Floor) | | | | | |
| | Inaugural Ceremony (Venue A: Council Building) | | | | | |
| | Tea Break | | | | | |
| 10:30-11:00 | Keynote Session - 1 Keynote Lecture - 1 Prof. Prashantia Dutta Keynote Lecture - 2 Prof. Mrinal C. Saha | | | | | |
| 10:30-12:00 | | | | | | |
| 12:00-1:00 | Technical Session - 1 Fluid Mechanics (FM 1) 101, 107, 115, 117 | Technical Session - 2 Thermal Engineering (TE 1) 197, 235, 264, 289 | Technical Session - 3 Applied Mechanics (AM 1) 19, 20, 51, 75 | Technical Session - 4 Related Mech. Engg. (RE 1) 202, 205, 212, 236 | Technical Session - 5 Applied Mechanics (AM 2) 232, 241, 91, 258 | |
| 13:00-14:00 | Lunch & Prayer Break | | | | | |
| 14:00-14:30 | Poster Session-1 (ME Building, 1 st Floor) 46, 56, 70, 74, 86, 90, 94, 97, 118, 134 | | | | | |
| 14:30-16:00 | Technical Session - 6 Fluid Mechanics (FM 2) 52, 78, 84, 89, 98, 120 | Technical Session - 7 Thermal Engineering (TE 2) 112, 133, 140, 151, 171, 186 | Technical Session - 8 Fluid Mechanics (FM 3) 277, 307, 108, 127, 128, 129 | Technical Session - 9 Applied Mechanics (AM 3) 227, 246, 261, 267, 303, 317 | Technical Session - 10 Energy (E 1) 221, 287, 275, 22, 30, 67 | |
| 16:00-16:15 | Prayer Break | | | | | |
| 16:15-17:15 | Technical Session - 11 Fluid Mechanics (FM 4) 15, 26, 131, 320 | Technical Session - 12 Thermal Engineering (TE 3) 35, 49, 62, 69 | Technical Session - 13 Fluid Mechanics (FM 5) 155, 161, 219, 230 | Technical Session - 14 Applied Mechanics (AM 4) 7, 68, 109, 122 | Technical Session - 15 Energy (E 2) 93, 215, 296, 306 | |
| 17:15-17:45 | Tea Break | | | | | |
| 17:45-19:45 | Technical Session - 16 Fluid Mechanics (FM 6) 29, 36, 38, 42 | Technical Session - 17 Thermal Engineering (TE 4) 72, 103, 111, 162 | Technical Session - 18 Fluid Mechanics (FM 7) 254, 269, 270, 274 | Technical Session - 19 Applied Mechanics (AM 5) 180, 193, 225, 226 | Technical Session - 20 Related Mech. Engg. (RE 2: Virtual) 156, 73, 263, 65, 247, 135, 214, 37 | |
| | Day-2: 19 December, 2023 (Tuesday) | | | | | |
| | Registration (ME Building, 1 st Floor) | | | | | |
| 9:00-10:30 | Keynote Session - 2 Keynote Lecture - 3 Prof. Animesh Dutta Keynote Lecture - 4 (Virtual) Dr. Syed Mashruk | | | | | |
| 10:30-11:00 | Tea Break | | | | | |
| 11:00-13:15 | Technical Session - 21 Biomedical Engg. (BME 1) 8, 53, 110, 113, 154, 175, 250, 292 | Technical Session - 22 Thermal Engineering (TE 5) 293, 295, 305, 17, 80, 143, 218, 319 | Technical Session - 23 Related Mech. Engg. (RE 3) 2, 14, 34, 41, 83, 181, 182, 194 | Technical Session - 24 Applied Mechanics (AM 6) 139, 174, 211, 242, 245, 311, 315, 253 | Technical Session - 25 Fluid Mechanics (FM 8: Virtual) 3, 233, 309, 223, 281, 48, 183, 76, 85, 119 | |
| 13:15-14:15 | Lunch & Prayer Break | | | | | |
| 14:15-14:45 | Poster Session-2 (ME Building, 1 st Floor) 146, 152, 166, 210, 213, 234, 278, 299, 304, 310 | | | | | |
| 14:45-16:15 | Technical Session - 26 Fluid Mechanics (FM 9) 168, 169, 184, 188, 196, 200 | Technical Session - 27 Thermal Engineering (TE 6) 297, 290, 130, 137, 145 | Technical Session - 28 Fluid Mechanics (FM 10) 141, 144, 268, 43, 79, 158 | Technical Session - 29 Applied Mechanics (AM 7) 23, 66, 104, 114, 116, 164 | Technical Session - 30 Related Mech. Engg. (RE 4) 280, 313, 316, 321 | |
| 16:15-18:00 | Tea Break | | | | | |
| 18:00-19:30 | Closing Ceremony (Venue A - Council Building) | | | | | |

Detailed Program Schedule
14th International Conference on Mechanical Engineering

18 December 2023 (Monday)

Inaugural Ceremony (Venue A: Council Building): 9:00-10:00

Tea Break: 10:00-10:30

Keynote Session-1: 10:30-12:00

Venue A: Council Building

Chair: Prof. Muhammad Mahbulul Alam

| Paper ID | Title |
|----------|--|
| K-01 | Machine Learning Techniques for Inverse Heat Transfer Problems <i>Prashanta Dutta</i> |
| K-02 | 3D Printing and Characterization of Carbon Fiber Epoxy Composites <i>Anirban Mondal, Mrinal C. Saha</i> |

Technical Session-1: 12:00-13:00

Fluid Mechanics (FM 1)

Venue B.

Chair: Prof. Muhammed Mahbubur Razzaque

| Paper ID | Title |
|----------|--|
| 101 | Chemical Reaction, and Thermal Buoyancy Impacts on Magneto-convective Boundary-layer Flow over Upright Permeable Plate. <i>Mohammed Jahir Uddin, R. Nasrin</i> |
| 107 | Effects of Rotation on MHD Fluid Flow through a Curved Rectangular Duct with Hall and Ion-slip Currents <i>Ratan Kumar Chanda, Sidhartha Bhowmick, Rabindra Nath Mondal</i> |
| 115 | Flow Separation Control of an Airfoil by Using External Fluid Flow at a High Angle of Attack <i>Md Al-Amin Dodayav, Amlan Biswas, Mohammad Ilias Inam</i> |
| 117 | Investigation on The Effects of Bifurcation and Trifurcation Angle on Plaque Initiation and Rupture <i>Murar E Rabbe Kabbo, M G Azam, M Tarik Arafat</i> |

| Technical Session-2: 12:00-13:00 Thermal Engineering (TE 1) Venue C. Chair: Prof. Md. Ashiqur Rahman | |
|---|---|
| Paper ID | Title |
| 197 | Optimizing Injection Molding: Impact of Conformal Cooling on Cooling Cycle Time, Cooling Quality and Production Rate <i>Md. Sohel Rana, Abdullah-Al-Fahim, Md. Sejan Hossain, Md. Khaled Mohammad Shifullah Bhuiya, Tanjid Bin Saif, Sabbir Ahmed Udoy, Md. Ehsanul Haque Atul, Md. Tarek Hasan Rongon, Md. Kafinur Rhaman, Md. Sadbin Islam</i> |
| 235 | Suppression of Cassie-Baxter to Wenzel transition: From Fakir Droplet to Coalescence Induced Condensed Droplets <i>Jubair A. Shamim, Yukinari Takahashi, Wei-Lun Hsu, Junho Choi, Hirofumi Daiguji,</i> |
| 264 | Productivity Enhancement of Solar Stills using PCM and Nanoparticles as Thermal Energy Storage: A Comprehensive Review <i>Abdullah Bin Asif, Md. Mahmudur Rahman, Sidur Rahman, Rounak Jarin Turna, Mim Mashrur Ahmed</i> |
| 289 | An Artificial Neural Network-based Model for Predicting Diesel Engine Performance and Emissions using Pyrolytic Plastic Oil Blend with Diesel Fuel <i>Sarajit Dutta, Muhammad Neamat Ullah Khan, Md. Emdadul Hoque</i> |

| Technical Session-3: 12:00-13:00 Applied Mechanics (AM 1) Venue D. Chair: Prof. Mohammad Abdul Motalab | |
|---|---|
| Paper ID | Title |
| 19 | Effects of Zn on Mechanical Properties and Aging Response of Mg-2Gd-1Y Ternary Alloy <i>Syed Shahriar Prottoy Alam, Tanvir Mahtab Shuvo, H. M. Mamun Al Rashed</i> |
| 20 | Effects of Rare Earth Element Gd on Corrosion Properties of Mg-Zn Alloys <i>Mita Khanam, Chanchal Kumar Roy, Hossain M. M. A. Rashed</i> |

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| 51 | Effect of Bismuth Ferrite (BiFeO ₃) Nanoparticles on Rheological and Mechanical Properties of Class G Oil Well Cement <i>Partha Saha, Md Jabir Chowdhury, Md Saiful Alam</i> |
| 75 | Surface Modifications and Water Absorption Properties of Sodium Lauryl Sulphate (SLS) Treated Kenaf Fibres for Enhanced Water Repulsion <i>Md. Mashuk, Ibrahim Uddin Bhuiyan, Mushfiqul Moula, Amartya Biswas, Mahbubur Rahman</i> |

| Technical Session-4: 12:00-13:00 Related Mechanical Engineering (RE 1) Venue E. | |
|---|---|
| Chair: Prof. Md. A. Hakim Khan Co-Chair: Dr. Md. Aman Uddin | |
| Paper ID | Title |
| 202 | Wind Generated Waves in Bangladesh Rivers for the Assessment of Inland Vessels Stability Condition Considering Duration Limit <i>Mohammad Saiful Islam, Md. Shakibul Hossain, Muhammad Rabiul Islam</i> |
| 205 | Globally Synchronized Rucklidge Chaotic System: Identical and Non-identical Synchronization Effect <i>Absana Tarammim, Musammet Tahmina Akter</i> |
| 212 | A Traffic Model for Adjusting Backlight Effects in Eulerian Scope <i>Md Anowar Hossain, Nobuyasu Ito, Jun Tanimoto,</i> |
| 236 | Predicting the Effectiveness of Air Curtains in Confining Heat and Smoke Propagation in Informal Shopping Malls using Supervised Machine Learning <i>Md. Asiful Islam, Nelay Kumar Das, Pranto Kumar Shil, Md. Arif Mahmud Shuklo Shoshe, Md. Ashiqur Rahman</i> |

| Technical Session-5: 12:00-13:00 Applied Mechanics (AM 2) Venue F. | |
|--|---|
| Chair: Prof. M. Ashiqur Rahman | |
| Paper ID | Title |
| 232 | Enhancing GFRP Composite Properties with Waste Carbon Fiber Prepreg-Derived Carbon Quantum Dots <i>Monjur Morshed Rabby, Minhazur Rahman, Vamsee Vadlamudi, Rassel Raihan</i> |
| 241 | Band Gap Prediction of Inorganic Materials Using Artificial Intelligence Through Feature Transformation <i>Durjoy Datta Mazumder, Touhid Islam, Arnab N Ushna</i> |
| 91 | An Experimental Investigation for Multi-objective Optimization of Turning Parameters on Graphene/Al ₂ O ₃ Reinforced Polymer Hybrid Nanocomposite using RSM Combined with GRA <i>Md. N. A Chowdhury, Shah Md. Ashiquzzaman Nipu, Nishat Naznin, Abdullah Al Nayeem</i> |
| 258 | Investigation of the Microstructural and Dielectric Properties of Strontium Doped Calcium Copper Titanate Electroceramic. <i>Md Khairul Islam, Md Shamimur Rahman, Shamima Akhter Urmi, Joyen Uddin, Abdullah Al Mamun</i> |

Lunch & Prayer Break: 13:00-14:00

Poster Session-1: 14:00-14:30
ME Building, 1st Floor.
Paper ID: 46, 56, 70, 74, 86, 90, 94, 97, 118, 134

| Technical Session-6: 14:30-16:00 Fluid Mechanics (FM 2) Venue B. | |
|--|---|
| Chair: Prof. Mohammad Nasim Hasan | |
| Paper ID | Title |
| 52 | Permeability Impact on Unsteady Magneto-convective Heat-mass Transference by Micropolar Binary Mixture Passing an Inclined Plate <i>Md. Mosharrof Hossain, R. Nasrin, Md. Hasanuzzaman</i> |

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| 78 | Comparative Analysis of Changing Channel Geometry of a Cross-flow Microchannel Heat Exchanger <i>S. Jahan, R. Nasrin, N. J. Jakia</i> |
| 84 | Magneto-hydrodynamic Natural Convective Flow within Square Enclosure Having Central Circular Hot Obstacle <i>Mohammad Abdur Rob, Muhammad Sajjad Hossain, Md. Abdul Alim</i> |
| 89 | Investigation on the Self-Propulsion Characteristics of a Benchmark Ship Using the Virtual Disk Method <i>Anup Kumar Das, Md. Daluar Hussain, Md. Mezbah Uddin</i> |
| 98 | Convective Heat and Mass Transfer of Cu-Al ₂ O ₃ -H ₂ O Hybrid Smart-Coolant within an Octagonal Cavity Enclosing a Circular Cooler <i>Jiaul Haque Saboj, Preetom Nag, Goutam Saha</i> |
| 120 | Study of Navier-Stokes Informed Neural Networks to Predict Wall Shear Stress on Left Coronary Artery <i>Angkon Biswas, M G Azam, M Tarik Arafat</i> |

| Technical Session-7: 14:30-16:00 Thermal Engineering (TE 2) Venue C. | |
|--|---|
| Chair: Prof. A. K. M. Monjur Morshed | |
| Paper ID | Title |
| 112 | Comparative Study of Radiator Tube Shapes and Nanofluid Types for Heat Transfer Enhancement <i>Fahim Rahaman Rijvi, Mohammad Sultan Mahmud, Abdullah Al-Faruk</i> |
| 133 | Building Energy Consumption Analysis of a University Academic Building: Modelling and Simulation <i>Khaza Shahriar, Md. Hasan H Ali, Syed Abrar Sabab, Mohammad Rezwan Hossain</i> |
| 140 | Numerical Analysis of Extended Annular Jet Impingement for Sustainable Solar Air Heater <i>Mashrur Muntasir Nuhash, Mahmudul Firoz, Arafat Ahmed Bhuiyan, Md. Rezwanul Karim</i> |

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| 151 | Hydro-thermal and Entropy Generation Effects of Helical Tube Heat Exchanger across Different Dean Numbers with Novel Filleted-Hexagonal Profile using SiO ₂ -ZnO/Water Hybrid Nanofluid <i>Nowroze Farhan Ifraj, Mostafa Kamal Fahad, Dipta Chandra Dey, Md Rezwan Rahman, Anas Al Rafin, Istiaq Jamil Siddique</i> |
| 171 | MHD Effect in a Lid-Driven Trapezoidal Porous Cavity Containing a Triangle Heated Blockage using Hybrid Nanofluid <i>Md. Masum Billah</i> |
| 186 | MHD Mixed Convection in a Double Lid-Driven Square Cavity Containing a Star-Shaped Hollow Obstacle <i>Md Ziaur Rahman</i> |

| Technical Session-8: 14:30-16:00 Fluid Mechanics (FM 3) Venue D. | |
|--|--|
| Chair: Prof. Md. Shahjada Tarafder Co-Chair: Dr. Kazi Arafat Rahman | |
| Paper ID | Title |
| 277 | Numerical Investigation on Improvement of Savonius Rotor Performance and Design Optimization. <i>Nazmin Akter Mini, Md. Salman Farshi, Megh Raha, Md. Quamrul Islam</i> |
| 307 | Numerical Prediction of Hydrodynamic Performance of a Bulk Carrier Using CFD <i>Md. Mashud Karim, Ar-Rafi Hasanat, Nazrul Islam,</i> |
| 108 | Numerical Study of Lift Coefficients for NACA Section at High Reynolds Number <i>Minhazul Islam, Touseef Hasan, Md Mashiur Rahaman,</i> |
| 127 | Thermal and Hydrodynamic Characteristics of Non-Newtonian Al ₂ O ₃ -Water Nanofluid Flow through a Porous Medium Encountered in a Backward-facing Step <i>Zarin Akter, Preetom Nag, Md. Mamun Molla</i> |
| 128 | Comparative Analysis of Hydrofoil Sections (S 822 and NACA 63(4)-421) on Performance of Horizontal Axis Hydrokinetic Turbines <i>Goutam Kumar Saha, Imon Ghosh Pranta, Md. Abdul Kader, Tahmid Orville</i> |

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| 129 | Unsteady Two-Dimensional Natural Convection Fluid Flow in a Valley Shaped Cavity <i>Laxmi Rani Roy, Sidhartha Bhowmick, Rabindra Nath Mondal, Suvash C. Saha</i> |
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| Technical Session-9: 14:30-16:00 Applied Mechanics (AM 3) Venue E. Chair: Prof. Fahmida Gulshan Co-Chair: Dr. Mohammad Jane Alam Khan | |
|---|---|
| Paper ID | Title |
| 227 | Effect of Chemical Treatment on the Interlaminar Fracture Toughness of Jute Fiber Reinforced Epoxy Composite. <i>Md Tahmid Hasan, Apurba Roy, G M Ismail Hossain, Durjoy Roy, Jannatul Abu Nayeem, Md Arifuzzaman, Md. Shariful Islam,</i> |
| 246 | Study of Mechanical Properties of Plywood and Its Application in Furniture <i>Mezbah Ahmed Tusar, Ahmad Abdullah Zubair, Md. Abdus Salam Akanda</i> |
| 261 | Difference in Thickness Measurement by Laser Ultrasonic Technique Using Time of Flight Methods <i>Md. Abdur Rahim, Yoshio Arai, Wakako Araki</i> |
| 267 | Atomistic Investigation of Crystallization and Micro-Structural Evolution of Selective Laser Melted ZrNb Alloy <i>Tanvir Ahmed Saikat, Farhan Fuad, Sanjit Sikder, Mohammad Jane Alam Khan</i> |
| 303 | A Molecular Dynamics Study of Mechanical Properties of Vertically Stacked Silicene/MoS ₂ van der Waals Heterostructure <i>Bishawjit Kar, Plabon Paul, Md Arshadur Rahman, Mohammad Jane Alam Khan</i> |
| 317 | Development and Mechanical Characterization of Rice Bran Carbon Reinforced Polypropylene Composites <i>Moyeed Roomi, Md. Afsar Ali, Milia Rahman, Iqbal Hasan Mamun</i> |

Technical Session-10: 14:30-16:00

Energy (E 1)

Venue F.

Chair: Prof. Muhammad Mahbulul Alam

| Paper ID | Title |
|----------|--|
| 221 | Comparative Environmental Impact Assessment of Fuel Cell Electric Vehicles and Internal Combustion Engine Vehicles in Bangladesh <i>Foyzal Ahmed Neerob, Pratic Sarker Sourov, Md Aman Uddin</i> |
| 287 | Assessment of Energy Consumption and Emissions of Fabric Production Line in Bangladesh <i>Khaled Mohammad shifullah, Arnob Azad, Iasin Arafat, Mehedi Hasan, Nahid Intiaz Masuk, Hadaitul Towfiq, Khairul Limon, Osman Tamal, Sabbir Ahmed Udoy, Md. Sohel Rana, Ashraful Islam, Asif Diganta</i> |
| 275 | Sizing Optimization of a Hybrid Power Supply System to Solve the Energy Crisis of an Off-Grid Island in Bangladesh <i>Md Ibrahim Ahmmed, Ponkaj Mondol, Md. Emdadul Hoque</i> |
| 22 | Production and Characterization of Biodiesel from Linseed Using NaOH Catalyst <i>Jyothy Mondal, Dr. A. N. M. Mizanur Rahman</i> |
| 30 | Investigation the Effects of Discharge Current on the Capacity and Active Mass Utilization Coefficient of Easy Bike Battery <i>Md Kamrul Hasan, Golam Kibria, Md Hasibuzzaman</i> |
| 67 | A Novel Power System of ENLIL Turbine for Optimal Energy Generation <i>Md. Musfiqur Rahman, Labib Rahman Bandhan, Hasan Muhommod Robin, Nayem Zaman Saimoon, Nishitha Paul, Easmin Sultana, Md. Hasibul Hasan Sifat</i> |

Prayer Break: 16:00-16:15

| Technical Session-11: 16:15-17:15 Fluid Mechanics (FM 4) Venue B | |
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| Chair: Prof. Mohammad Ali | |
| Paper ID | Title |
| 15 | Effects of Suction and Lorentz Force on an Unsteady MHD Convective Mass and Heat Transfer Nanofluid Flow upon a Vertical Permeable Sheet <i>Hasanuzzaman, Ashish Barmon</i> |
| 26 | Numerical Investigation on Particle Deposition in a Bifurcating Duct <i>Shuvo Chowdhury, A.B.M. Toufique Hasan</i> |
| 131 | Numerical Investigation on Hydrodynamic Performance of a Horizontal Axis Tidal Current Turbine <i>Tausif Razzak, Md Nahid Hossain, Md. Daluar Hussain, Md. Mezbah Uddin</i> |
| 320 | A Numerical Study of Underexpanded Free Jet Under Steady and Imposed Oscillating Inlet Pressure Conditions <i>Mantaka Taimullah; A.B.M. Toufique Hasan</i> |

| Technical Session-12: 16:15-17:15 Thermal Engineering (TE 3) Venue C | |
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| Chair: Prof. Md. Zahurul Haq | |
| Paper ID | Title |
| 35 | Experimental Investigation on Use of Ethanol-Gasoline Blend as Alternate Fuel on SI Engine Performance <i>Karib Hassan Khan, Sobahan Mia</i> |
| 49 | Numerical Analysis of Mixed Convection Heat Transfer in a Hexagonal Enclosure Having a Vertical Fin at the Bottom Wall <i>Rajib Kumar Bhowmik, Md. Fayz -Al-Asad, Md. Shamim Hasan, M.M.A Sarker</i> |
| 62 | Optimizing Linseed Oil Biodiesel Blends for Diesel Engines: A Comparative Study of Performance and Emissions <i>Md. Rakib Hasan, Md. Selim Reza, Miah Himan, Md. Abdul Hannan Miah1</i> |

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| 69 | Thermal Performance Analysis of Different Types of Hollow Bricks in Bangladesh <i>M. Sharmin Akter, Md. Abdul Hakim Khan</i> |
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| Technical Session-13: 16:15-17:15 Fluid Mechanics (FM 5) Venue D | |
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| Chair: Prof. Sumon Saha | |
| Paper ID | Title |
| 155 | Entropy Generation and Conjugate Natural Convection in a Nano-fluid-Filled Hexagonal Cavity Subjected to Different Heating Condition <i>Md. Raihanul Haque, M.M. Alam, M.A. Alim, A.B.M Rafiqul Hasan</i> |
| 161 | A Bio-inspired Approach to Heavy Vehicle Drag Reduction in Turbulent Flow Using Shark Dermal Denticles <i>Ahmed Jurfani Sarker, Arup Das, Md. Maynul Islam, Md. Arif Mahmud Shuklo Shoshe</i> |
| 219 | Numerical Simulation of Magnetohydrodynamic Natural Convection in an Enclosure Filled with Nanofluid <i>Md. Shamim Hasan, Md. Fayz-Al-Asad, Rajib Kumar Bhowmik, Ali Ahmed, K.M. Ariful Kabir, M.M.A Sarker</i> |
| 230 | Performance Analysis of PCM in a Fin and Tube Heat Exchanger <i>Md. Shameem Parvez, Md. Mohiuddin, Md. Rhyhanul Islam, Zahir U. Ahmed</i> |

| Technical Session-14: 16:15-17:15 Applied Mechanics (AM 4) Venue E | |
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| Chair: Prof. Mohammad Abdul Motalab | |
| Paper ID | Title |
| 7 | Sensitivity Analysis of Micro-Scale Piezoresistive Pressure Sensors: The Effects of Sensor Geometry and Aspect Ratio. <i>Awlad Hossain, Joseph Wagoner, Ahsan Mian, Hani Saad</i> |
| 68 | FEM Simulation of Dry Machining Using ANSYS Workbench <i>Ali Wasif, Khan Navid Tousif, Rashid Shahriar Nipun, M. Azizur Rahman, Md. Kharshiduzzaman, Md. Ershad Khan, Md. Shahnawaz Bhuiyan</i> |

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| 109 | Scleral Characteristics and Optic Nerve Damage in Glaucoma: A Computational Study <i>Pritom Saha, Ishtiaque Anwar, M Tarik Arafat</i> |
| 122 | Effect of Hybridisation with Kevlar Layers on the Performance of GLARE Subjected to Multiple Low-Velocity Impacts <i>Sasanka Kakati, Debabrata Chakraborty</i> |

| Technical Session-15: 16:15-17:15 Energy (E 2) Venue F Chair: Prof. Mohammed Mahbubur Rahman Co-Chair: Dr. Md Aman Uddin | |
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| Paper ID | Title |
| 93 | An Overview of Wave Energy Harvesting Technology: Types and Mechanisms <i>Abu Raihan Rakib, Masum Alam, Zobair Ibn Awal</i> |
| 215 | Energy Analysis and Energy Saving Potential of the Textile Industry in Bangladesh <i>Md. Uddin, K. M. Shifullah Bhuiya, Sabbir Ahmed Uday, Abdul Mojib Parvej</i> |
| 296 | Condition Monitoring of Power Plant Engine Oil through FTIR Analysis <i>Sayed Ahmed Yousuf Saad, Asif Hossain, Mim Mashrur Ahmed, Faysal Ahmed, S M Mainul Kabir</i> |
| 306 | An Economical Approach Towards the Green Campus by Implementing Hybrid Renewable Energy System <i>M. M. Hamidur Rahman, Md. Omar Faruq, Mohd. Rafiqul Alam Beg</i> |

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| Tea Break: 17:15-17:45 |
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| Technical Session-16: 17:45-18:45 Fluid Mechanics (FM 6) Venue B Chair: Prof. Muhammed Mahbubur Razzaque | |
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| Paper ID | Title |
| 29 | Numerical Investigation of the Powering Performance of the Flettner Rotor <i>Mahin Hasan Moon, Md. Mezbah Uddin</i> |
| 36 | Aerodynamic Characteristics of an FSAE Car Rear Wing with Multi-Element S1223 Airfoil <i>Md. Almamun Arabi, Mohammad Ilias Inam</i> |
| 38 | A Numerical Study on Effect of Variation of Fuel Injection Pressure on Air-Fuel Mixing in a Dual Cavity Scramjet Combustor <i>Rakiba Benta Kalam, Faria Nasrin, Mostafa Nazmus Sakib</i> |
| 42 | Transient 2D Flow in a Stratified Air-filled Trapezoidal Cavity <i>Md. Mahafujur Rahaman, Sidhartha Bhowmick, Rabindra Nath Mondal, Suvash C. Saha</i> |

| Technical Session-17: 17:45-18:45 Thermal Engineering (TE 4) Venue C Chair: Prof. Alope Kumar Mozumder | |
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| Paper ID | Title |
| 72 | A Study of the Thermal Performance of a Converging-Diverging Microchannel Heat Sink with Triangular Ribs <i>Tahmid Hasan Oni, Mohammad Arif Hasan Mamun</i> |
| 103 | Improving Physical Properties of Polythene Pyrolytic Oil through Gasoline Blending <i>Md Seam Shaikh, Sobahan Mia, Md Rifat Hassan</i> |
| 111 | Convective Heat Transfer of Non-Newtonian MWCNT-Fe ₃ O ₄ -EG Hybrid Nanofluid within an Enclosure With/Without a Mounted Heated Block <i>Anjoom Nur, Dipangkar Dash, Preetom Naga, Md. Mamun Molla</i> |
| 162 | Time-dependent Solution of Dean Flow through a Bent Square Duct with High Curvature <i>Selim Hussien, Md. Eleash Mia, Rifat Ara Rouf, Rabindra Nath Mondal</i> |

| Technical Session-18: 17:45-18:45 Fluid Mechanics (FM 7) Venue D | |
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| Chair: Prof. A. B. M. Toufique Hasan | |
| Paper ID | Title |
| 254 | Effect of Deposition on the Upstream Surface of an Orifice Plate on its Performance <i>Tousif Sadman, Asmita Talukder, M.M. Razzaque</i> |
| 269 | Computational Analysis of Hemodynamic Parameters in the Circle of Willis: Investigating the Impact of Viscosity Variation <i>Jafrin Sultana, Mobin Ibne Mokbul, M Tarik Arafat</i> |
| 270 | Improving the Aerodynamic Performance of Passenger Car using Passive Aerodynamic Devices <i>Amlan Biswas, Pranto Karua</i> |
| 274 | Hydrodynamic Performance Analysis of Wave Propelled Glider for Different Hydrofoils Using CFD Tools <i>Fatin Ihsan, S M Saifullah Arman, Monwar Wadud Hridoy</i> |

| Technical Session-19: 17:45-18:45 Applied Mechanics (AM 5) Venue E | |
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| Chair: Prof. Md. Afsar Ali | |
| Paper ID | Title |
| 180 | Compressive Behavior of Lightweight Sandwich Structures Made of Perlite, Polystyrene and Formica Sheet <i>G M Ismail Hossain, Mehedhi Hasan, Md Tahmid Hasan, Md Aasef Azhar Khan, Md Arifuzzaman, Md Shariful Islam</i> |
| 193 | Numerical Optimization of Auxetic Structures for Energy Absorption Applications <i>Apurba Roy, Md Tanvir Ahmed, Md Arifuzzaman, Md Shariful Islam</i> |
| 225 | Effect of Perlite Content on the Tension and Flexural Properties of Perlite-Filled Epoxy Composites <i>Raju Ahammad, Md Arifuzzaman</i> |

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| 226 | Interlaminar Reinforcement of Fiber Metal Laminate Using Eggshell Microparticles <i>Md Tanvir Ahmed, Raju Ahammad, Apurba Roy, Md Arifuzzaman, Md Shariful Islam</i> |
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| Technical Session-20: 17:45-19:45 Related Mechanical Engineering (RE 2) Virtual Presentation Venue F | |
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| Chair: Prof. Mohammad Mamun | |
| Paper ID | Title |
| 156 | Ambient Temperature Rise and Threatening Climate Changes Affecting the Power System in Bangladesh. <i>Mir Jalal Ahmad, Syed Zubair Ali, Md. Rakibul Islam, Md. Asifuzzaman</i> |
| 73 | Investigation of Optical Efficiency of the Concentrated Solar Power System Located on the Inclined Hillside Areas <i>Anwoy Talukder Ranjak, Sayed Tanvir Ahmed, A. K. M. Ashikuzzaman, Tahmidul Haque Ruvo</i> |
| 263 | Techno-Economic and Environmental Analysis of Different Waste to Energy Strategies for the Developing Countries of the World <i>Nayem Zaman Saimoon, Md. Ahnaf Adit, Durjoy Kumar Paul, Mim Mashrur Ahmed</i> |
| 65 | Assessment and Optimization of Wind Turbine Locations and Configurations for Coastal Areas of Bangladesh: A Comparative Study <i>Sakritapann Chakma Kuntle, Syed Ali Toufique, HM Toufik Ahmed Zisan</i> |
| 247 | Sustainable Solar Irrigation in the Northern and Southern Region of Bangladesh: A Techno-Economic Assessment and Future Prospects <i>Miftahul Mobin Chowdhury, MTH Akash, SF Rahman Muhammad Sammam Sadid, Imrul Kayes, Md. Sanowar Hossain, Nirendra Nath Mustafi</i> |
| 135 | Analysis of a Human Walking Model with a Backload Under Varying Stiffness and Damping Conditions <i>Akhil VM, S K Saha, Rama Krishna K</i> |

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| 214 | Comprehensive CSTR Control Integration for Enhanced Ethanol Production: PI, PID, MPC, Hybrid MPC-PID Strategies in Nonlinear Bioreactors <i>Muntaser Munem, K. Arafat Rahman</i> |
| 37 | Evaluation of Mechanical Properties and Moisture Resistance Behavior of Jute-Glass-Viscose Fiber Reinforced Hybrid Composite <i>Sharmin Akhter Luna, Mahin Muntasir, Razia Khan Sharme , Jahirul Islam</i> |

19 December 2023 (Tuesday)

Keynote Session-2: 9:00-10:30

Venue A: Council Building

Chair: Prof. Md. Ehsan

| Paper ID | Title |
|----------|--|
| K-03 | Upcycling of Wastes for Energy and Materials: A Circular Economy Approach <i>A. Dutta</i> |
| K-04 | Ammonia – A Zero-Carbon Fuel for Power Generation <i>Syed Mashruk</i> |

Tea Break: 10:30-11:00

Technical Session-21: 11:00-13:15

Biomedical Engineering (BME 1)

Venue B

Chair: Prof. A. B. M. Toufique Hasan

| Paper ID | Title |
|----------|---|
| 8 | Designing a Wrist Brace Towards Developing a 3D Scanner for Medical Purpose <i>Masrufa Tasnim, Shamim Ahmed Deowan, Syed Mozaffar Ahmed, Md. Israt Hasan, Taufiq Morshed</i> |

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| 53 | Design and Development of Lower Limb Exoskeleton and Gait Training Setup for Gait Training of Stroke and Spinal Cord Injury Patients <i>Mowbray RV, Rahul Bhamare, Satvik Malpaka, M Sandeep Reddy, Bhandari Purohit, Suparna Ganguly, Sourav Rakshit</i> |
| 110 | Impact of Cerebral Aneurysm Wall Growth on Hemodynamic Parameters in Idealized Bifurcated Cerebral Arteries <i>K. E. Hoque, M. M. Billah, N. F. Ifraj, R. E. Noor</i> |
| 113 | Gait Symmetry Index Analysis in People with Stroke using an In-House Setup <i>Sadia Anjum Aurna, Paromita Kundu, Mohammad Moniruzzaman, Md. Masum Uddin, Rezaul Begg, M Tarik Arafat</i> |
| 154 | Design & Fabrication of a Cost-effective, Refreshable Mechanical Braille Display for Visually Impaired Students in Bangladesh <i>Ummay Wajiha Tabassum, Shuvagata Nath Soumma, Tabassumut Tasfia, Atanu Sen Gupta</i> |
| 175 | Impact of Left Coronary Arterial Tortuosity on Atherosclerosis in Normal and Hypertensive Conditions: A Hemodynamic Perspective <i>Adiba Ashrafee, Syed Muiz Sadat Yashfe, M G Azam, Md Foysal Rabbi, M. Tarik Arafat</i> |
| 250 | Modeling the Impact of Lockdown Measures, Vaccination Strategies, and Treatment Interventions in a Heterogeneous Epidemic Environment <i>Abhi Chakraborty, Mohammad Sharif Ullah, K. M. Ariful Kabir</i> |
| 292 | Optical Ring Resonator Based Biosensor with High Sensitivity for Label-Free Detection of Early-Stage Cancer <i>Mohammad Anamul Haque Chowdhury, Md. Faruque Hossain, Sadia Nawsheen Nijhum</i> |

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| Technical Session-22: 11:00-13:15 Thermal Engineering (TE 5) Venue C. | |
| Chair: Prof. Mohammad Arif Hasan Mamun | |
| Paper ID | Title |
| 293 | Assessing Efficient Waste Heat Recovery System for Marine Engine –: A Thermodynamic Comparison of Organic Rankine Cycle and Kalina Cycle <i>Labib Rahman Bandhan, Md. Musfiqur Rahman, Shams Al Deen Aryan, Md. Sohel Rana, Nishat Akter</i> |

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| 295 | Numerical Investigation of Coupled Heat Transport through Hollow Building Block with Inner Fin Shape Obstacle <i>M M Islam, A. K. Azad, Salma Parvin</i> |
| 305 | MHD Free Convective Flow along with Internal Heat Generation and Joule Heating in a Two Layer Discretely Heated Chamber Partially Filled with Porous Medium <i>Niloy Deb, Sumon Saha, Md. Quamrul Islam</i> |
| 17 | Comparative CFD Study of Convective Heat Transfer in a Triangular Subchannel of Water-Based Hybrid Al ₂ O ₃ -CuO Nanofluid and Base Fluid <i>Drupada Roy, Anik Chakraborty, Anik Sarker</i> |
| 80 | Experimental Study on Bubble Dynamics in Nucleate Boiling for Water and Ethanol on Enhanced Copper Surfaces <i>Nilay Kumar Biswas, Md. Ar Rafee Sarker, Alope Kumar Mozumder</i> |
| 143 | Fine Sand Blended with Phase Change Materials (PCM): Evaluation of Freeze-Thaw Performance <i>Md. Wasif Islam, Mohona Das, Md Mostoba Rafid, Sheikh Ashraful Haque, Sumon Ali, Hasan Ahmed</i> |
| 218 | Numerical Simulation of Microwave Heating of Cylindrical Shaped Biomass Material <i>Istiaq Jamil Siddique, Arshad Adam Salema</i> |
| 319 | Optimizing Passive Design for Enhanced Thermal Comfort in a Tropical Residential Building: A Computational Fluid Dynamics Approach <i>Arnab Mustafi Arka, AKMM Morshed</i> |

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| Technical Session-23: 11:00-13:15 Related Mechanical Engineering (RE 3) Venue D. | |
| Chair: Prof. A.K.M Masud Co-Chair: Dr. Shahereen Chowdhury | |
| Paper ID | Title |
| 2 | Optimization of Trochoidal Toolpath Process Parameters During Hybrid-Electrochemical Magnetorheological (H-ECMR) Finishing through Genetic Algorithm <i>Atul Singh Rajput, Manas Das, Sajan Kapil</i> |
| 14 | Study of a New Dry-docking System in Khulna Shipyard, Bangladesh <i>Mostafa Fayaz Hasan, Subrata Talapatra, Md. Habibur Rahman</i> |

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| 34 | Green Supplier's Performance Evaluation in a Batch Manufacturing Company Using Fuzzy TOPSIS Method <i>M.M Fahim Siddiquee, Pritom Kumar Shaha, Ahsan Akhtar Hasin</i> |
| 41 | Optimizing Manufacturing Processes and Minimizing Manufacturing Lead Time Through Implementation of Lean Six Sigma Methodology <i>Rotan Kumar Saha, Md. Imran Hossain, Md. Mustafizur Rahman, Md. Mukshitul Mumin, Md. Tutul Islam, Md. Shazzad Hossain</i> |
| 83 | Design and Implementation of a CoreXY CNC Milling Machine for PCB Manufacturing Application <i>Md. Saiam Bin Islam, Mohammad Shaikhul Hasib, Md. Shakhawat Hossen, S. M. Tareq Aziz, Md. Rokunuzzaman</i> |
| 181 | Design and Analysis of a Piezo-based Two-Stage Microgripper for Millimeter Grasping Range <i>Rifat Shahrear, Tilok Kumar Das</i> |
| 182 | Effects of Wind Generated Waves on Dynamics of Bangladesh Inland Passenger Vessels <i>Mehrab Hossain Omi, Munjimul Islam, Muhammad Rabiul Islam</i> |
| 194 | Applicability of Wind-Assisted Propulsion System to the Smaller Ships in the Bay of Bengal: A Step towards the Path to Zero Emission <i>Tasnia Faiza Ibnat Nidhi, Md. Shariful Islam, S M Rashidul Hasan</i> |

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| Technical Session-24: 11:00-13:15 Applied Mechanics (AM 6) Venue E. | |
| Chair: Prof. M. Ashiqur Rahman | |
| Paper ID | Title |
| 139 | Investigation of the Microstructure of Mg-3Gd-0.5Y-2Zn Alloy and Its Effect on Creep Behavior <i>Shad Inquiad Mim, H. M. Mamun Al Rashed</i> |
| 174 | A Kirigami Inspired Atomistic Investigation on Enhancement of Mechanical Properties of Single-layer MoS ₂ <i>Shafi Shahriar, Mohammad Tahmidul Alam, Shahereen Chowdhury</i> |
| 211 | Effect of Mg Addition on the Improvement of the Mechanical Properties of Aluminum <i>Modassher Nomani, Azmery Akter, Mohammad Salman Haque</i> |

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| 242 | Investigation of Physical and Mechanical Properties of Porous LaMnO ₃ Prepared with Corn Flour <i>Md. Mostafa Kamal, Mir Imran Bin Samad, Md. Nurul Islam</i> |
| 245 | Investigation of Thermal Properties of Natural Fiber Reinforced Gypsum Composites <i>Md. Afsar Ali, Hasan Imam, Mahathir Muntasir, Mohammad Ariful Islam, Pranto Karua, Jannatul Abu Nayeem</i> |
| 311 | Measurement and Controlling Friction Force in a Sliding Microwire By Size and Boundary Condition Variation <i>Fazlar Rahman, M. A. Salam Akanda</i> |
| 315 | Impact of Resin Flow Velocity on the Mechanical and Thermal Properties of Fiber-Reinforced Composites Fabricated via Vacuum Assisted Resin Infusion Molding (VARIM) Process <i>Dipta Akash Roy, Md. Ashiqur Rahman, Swagata Dutta</i> |
| 253 | Tunable Mechanical Characteristics of Functionally Graded Ta-W Nanowire on the Atomic Scale <i>Koushik Dey, Minhajul Islam, A. M. Afsar</i> |

| Technical Session-25: 11:00-13:15 Fluid Mechanics (FM 8) Virtual Presentation Venue F. | |
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| Chair: Prof. Mohammad Mamun | |
| Paper ID | Title |
| 3 | Thermodynamic Analysis of Multiple-phase flow along to a Curve Duct of Rectangle Shape in a Porous Medium <i>Md. Khalilur Rahman, Salma Parvin, Md. Abdul Hakim Khan</i> |
| 233 | Investigation of the MHD effect on Multiphase Flow through a Rectangle shape Curve Duct in a Porous Medium <i>Md. Khalilur Rahman, Salma Parvin, Md. Abdul Hakim Khan</i> |
| 309 | Aerothermal Characteristics of Hypersonic Flow Around a Circular Arc Airfoil Under Transitional Rarefied Conditions <i>Musarrat Makhmun, Sabbir Ahmed, Fariha Haq, Musfequs Salehin, A.B.M. Toufique Hasan</i> |

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| 223 | Numerical Investigation of Ground Effect on Airfoil <i>Md. Aminul Islam Sobuj, Mohammad Ilias Inam, Syed Ridwan Ahmed, Mushfiqur Rahman Shihab</i> |
| 281 | Impact of Left Coronary Stenosis on Flow Reserve and Pressure Distribution <i>Ashiqur Rahman, Sheikh Mohammad Shavik,</i> |
| 48 | Effect of Plasma Actuators on Film Cooling Performance with Forward Injection Slots: A Numerical Approach <i>Mushfiqur Rahman Shihab, Syed Ridwan Ahmed, Mohammad Ilias Inam</i> |
| 183 | Investigating Chamber Geometry and Orifice Diameter of Oscillating Water Column Device by Two Phase CFD Modelling <i>Md. Mushfiqur Rahman, Abdullah Al-Faruk, Mohammad Sultan Mahmud, Nazmul Islam</i> |
| 76 | Comparison of Thermal Performance Analysis of Horizontal U-tube and Slinky Ground Heat Exchangers <i>Nushrat Jahan, Md. Hasan Ali, Nafisa Lubaba, Nahyan Ahnaf Pratik</i> |
| 85 | Design and Fabrication of a LiBr Absorption Refrigeration System to Utilize the Waste Heat of Engine Exhaust Gas for Vehicle Cabin Cooling Application <i>Suvro Bhowmick, Samiul Islam Pranto, Mst. Tasnia Tabassum Kasfia, Mashhud Hasan Al Faruq</i> |
| 119 | Machine Learning-Based Approach for Predicting the Turbomachinery Component Level Efficiency for SR-30 Small Scale Gas Turbine Engine <i>Sowmya Raghu, Jamil Khan</i> |

Lunch & Prayer Break: 13:15-14:15

Poster Session-2: 14:15-14:45
ME Building, 1st Floor.
Paper ID: 146, 152, 166, 210, 213, 234, 278, 299, 304, 310

| Technical Session-26: 14:45-16:15 Fluid Mechanics (FM 9) Venue B. | |
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| Chair: Prof. Md. Abdul Alim Co-Chair: Dr. Sheikh Mohammad Shavik | |
| Paper ID | Title |
| 168 | Aerodynamic Drag Reduction of a Squareback Ahmed Body with Cylindrical Vortex Generators <i>Md. Sabit Shahriar Haque, Md. Saniad Faruque, Md. Mostafijur Rahman, Md. Arif Mahmud Shuklo Shoshe</i> |
| 169 | Effects of Variable Permeability and Viscous Dissipation on an Unsteady MHD Free Convective Transport over a Vertical Permeable Sheet <i>Tanzila Akter Nabila, Md. Hasanuzzaman, Md. Mosharof Hossain</i> |
| 184 | Cerebral Aneurysm Hemodynamics in Low Hematocrit Conditions: Numerical Simulations and Analysis <i>Md. Ajwad Mohimin, Nafis Mahdi Arefin, Prasanjit Das</i> |
| 188 | Unsteady MHD Mixed Convection in A Rectangular Lid-Driven Enclosure with A Circular Hollow Cylinder Comprising Nanofluids <i>M. M. Billah, U. K. Suma, Aminur Rahman Khan</i> |
| 196 | Numerical Assessment and Analysis of Calm Water Resistance and Interference Factor of the Series 60 Monohull and Catamaran <i>Tayyib Ahsan, Nayma Hassan Emu, Md. Mashud Karim</i> |
| 200 | Simulation Analysis of Blood Flow in Human Atherosclerotic Radial Artery <i>Md. Nurul Amin, Nazma Parveen</i> |

| Technical Session-27: 14:45-16:15 Thermal Engineering (TE 6) Venue C. | |
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| Chair: Prof. Md. Ashraful Islam | |
| Paper ID | Title |
| 297 | A Greener Approach to Food Preservation: Solar-Evaporative Cooling for Reducing Post-Harvest Losses in Bangladesh <i>Asif Hossain, Md. Emon Hossain Babla, Ashraful Hossain Fida, Sayed Ahmed Yousuf Saad, Abdullah MD Tousiful Hoque Chy, Sajjad Hossain</i> |

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| 290 | Burnup Analysis of a Pin cell of VVER-1200 Using OpenMC <i>Sumaiya Islam, Mosharat Belal Tahia, Lamia Zubair, Abdus Sattar Mollah</i> |
| 130 | Analysis of Various Neutronic Parameters of VVER-1000 Assembly Using OpenMC with Different Data Libraries <i>Lamia Zubair, Mosharat Belal Tahia, Sumaiya Islam, Abdus Sattar Mollah</i> |
| 137 | Neutronic & Fuel Cycle Analysis of Accident- Tolerant UN-U ₃ Si ₂ Fuel with SiC Cladding for AP-1000 Reactor <i>Anik Chakraborty, Drupada Roy, Hasib Noor Redoy, Pratik Chakraborty</i> |
| 145 | Sustainable Diesel Alternatives from Waste Transformer Oil: A Comprehensive Statistical Analysis of Performance Characteristics and Emissions Reduction <i>Sourav Dhar, Anik Chakraborty, Rittik Das Gupta, Pratik Chakraborty, Md. Zesanul Kabir</i> |

| Technical Session-28: 14:45-16:15 Fluid Mechanics (FM 10) Venue D. | |
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| Chair: Prof. Mohammad Ali | |
| Paper ID | Title |
| 141 | Computational Investigation in Scale Effect on Marine Propellers for Different Diameters and Bade Area Ratios <i>Adri Das, Rafid Imam, Shahid Abubakar Abtahee, Md. Shahjada Tarafder</i> |
| 144 | Numerical Investigation in Scale Effect on Marine Propellers for Different Pitch-Diameter Ratio <i>Shahid Abubakar Abtahee, Rafid Imam, Adri Das, Md. Shahjada Tarafder</i> |
| 268 | A Comparative Analysis of Flap Position for Improved Aerodynamic Characteristics using NACA 4412 <i>Md. Iqbal Hossain Shuvo, Nazmus Saadat Mooaz, Suchinto Roy Dhrubo, Md. Ashraful Islam</i> |
| 43 | Analysis and Experimental Investigation of a Wind Tunnel System for Spinning Body Using Magnetic Suspension <i>Shahajada Mahmudul Hasan, Takeshi Mizuno</i> |

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| 79 | Investigation on Torque Coefficients of Horizontal Axis Wind Turbine with Symmetrical and Asymmetrical Split-tip Winglets <i>Tazeen Afrin Mumu, Md Quamrul Islam, Muammer Din Arif</i> |
| 158 | Design and Test of a Coupled Fused Deposition–Spinning Unit for Bioresorbable Flow Diverter <i>Mohammad Robiul Hossan, Nathaniel Blair, Alex Matsyko, Mack Harvey</i> |

| Technical Session-29: 14:45-16:15 Applied Mechanics (AM 7) Venue E. | |
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| Chair: Prof. Md. Afsar Ali | |
| Paper ID | Title |
| 23 | Green Synthesis and Characterization of ZnO Nanoparticles from the Extract of Tagetes erecta Leaves <i>Abu Shahid Chowdhury, Muhammad Muinul Islam, Avishek Ghosh</i> |
| 66 | Influence of Interlayer Thickness on Singular Stress Field in Piezoelectric Bonded Joint <i>Md. Sadman Iram Fahim, Md. Shahidul Islam</i> |
| 104 | Production and Evaluation of Sunflower Hull Preforms to Fabricate Panels Using the VARTM Method <i>Hasan Rafsan Jani, Vikram Yadama, Lloyd Smith</i> |
| 114 | Study on Hydrothermal Synthesis, Structure, and Multifunctional Properties of Bi/Nb based ceramics for energy storage applications <i>U. S. M. Mahmuda, Md. Habibul Islam, Mirza H. K. Rubel, Md. A. Matin, Md Borhan Uddin, Md. Najmus Sakib, Mohsin Kazi</i> |
| 116 | A 3D Printed Shape Optimized and Modular Trans-Tibial Pylon with Adaptive Load Capacity <i>Syed Muiz Sadat Yashfe, Adiba Ashrafee, Md. Rahatuzzaman, Akid Ornob</i> |
| 164 | Characterization of Sodium Silicate Solution Synthesized from Waste Rice Husk and Manufacturing of Copper Slag-Based Geopolymers <i>Sarthok Chandra Pandit, Md Arifuzzaman, Md Shariful Islam, Alamin Islam</i> |

Technical Session-30: 14:45-16:15
Related Mechanical Engineering (RE 4)
Venue F.

Chair: Prof. A. K. M. Monjur Morshed

| Paper ID | Title |
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| 280 | A Quantitative Analysis of Ferry Accidents in the Inland Waterways of Bangladesh <i>Umme Tasnim Sarah, Zobair Ibn Awal, Osman Md Amin</i> |
| 313 | A Computational Approach to Evaluate the Effect of Shelter Construction Material and Fuel Load on the Fire Spread Behavior in Rohingya Refugee Camp <i>Md. Fahad Hossain Mishu, Rafia Rizwana Rahim, Md. Ashiqur Rahman</i> |
| 316 | Effect of Fuel Load and Its Location on the Evacuation Safety in case of Metro Station Fire in Bangladesh <i>Tayfur Rahman Maruf, Abu Hanifa, Md. Ashiqur Rahman</i> |
| 321 | Civil Aviation Accidents & Incidents: An Overview from Bangladesh Perspective <i>Ziad Bin Abdul Awal, Mujibur Rahman</i> |

Tea Break: 16:15 -18:00

Closing Ceremony: 18:00-19:30 (Venue A - Council Building)