

Name of the Faculty :**Soumya Ghosh**

Designation : **Assistant Professor**

Department : **Mechanical Engineering**

No. of Publication : 24

**Journal Publication : 5**

| Type of Journal | DOI No.   | Name of the Article   | Name of the Author | ISSN No.          | Year of Publication |
|-----------------|---|---|--------------------|-------------------|---------------------|
| Scopus          | <a href="http://dx.doi.org/10.52305/CVRY6117">http://dx.doi.org/10.52305/CVRY6117</a>                       | Introduction to Enhanced Heat Transfer  | Soumya Ghosh       | 2191-530X         | 2022                |
| Scopus          | <a href="http://dx.doi.org/10.1007/978-981-19-6270-7_91">http://dx.doi.org/10.1007/978-981-19-6270-7_91</a> | Investigation of the influence of novel hybrid tape on thermohydraulic characteristics in a solar air heater: An Experimental Study         | Soumya Ghosh       | 978-981-19-6269-1 | 2023                |
| UGC             | <a href="http://doi.org/10.37591/JoPC">http://doi.org/10.37591/JoPC</a>                                     | Experimental Analysis of Cutting Forces Under Different Machining Parameters and Carbide inserts During Turning of Hardened AISI 4340 Steel | Soumya Ghosh       | 2321-8525         | 2023                |
| SCI             | <a href="https://doi.org/10.1016/j.csite.2024.104132">https://doi.org/10.1016/j.csite.2024.104132</a>       | Effects of a novel hybrid turbulator tape on the thermohydraulic performance and irreversibility of a solar air heater                      | Soumya Ghosh       | 2214-157X         | 2024                |
| SCI             | <a href="https://doi.org/10.1080/10407790.2024.2329256">https://doi.org/10.1080/10407790.2024.2329256</a>   | Entropy analysis for two-dimensional double diffusive mixed convective flow of a Williamson   | Soumya Ghosh       | 1040-7790         | 2024                |

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|  |  | nanofluid<br>through a<br>porous medium |  |  |  |
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Book Chapter Publication : 19

| DOI No.   | Name of the Article  | Name of the Author | ISBN No.          | Year Of Publication |
|---|--|--------------------|-------------------|---------------------|
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Exploring Vibration Phenomena in Rotating Machinery: Causes, Detection and Control                                 | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Industrial Cooling Towers: Direct Contact Heat Exchangers for Water Temperature Reduction                          | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Revolutionizing Mobility: Advanced Hydroelectric and Electric Vehicle Technologies for Sustainable Development     | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Process Optimization and Material Characterization in WAAM   | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Helical Flow Dynamics: Numerical Simulation and Analysis of Helicity Distribution in Cyclone Separators            | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Advanced Modal Analysis of NACA 0012 Airfoil Wings: Unveiling Higher-Order Deformation Modes using ANSYS Workbench | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Thermal Pathways:  | Soumya Ghosh       | 978-93-6233-705-4 | 2023                |

|   |  |              |                   |      |
|---|--|--------------|-------------------|------|
|   | Investigating Temperature Distribution Along the Topmost Portion of a 2D Steady-State Heat Conduction Domain         |              |                   |      |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Stress Exploration: Unveiling Minimum Combined Stress in a Cantilever Beam using ANSYS                               | Soumya Ghosh | 978-93-6233-705-4 | 2023 |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Bending Perspectives: Analyzing Total Deformation in a Cantilever Beam using ANSYS                                   | Soumya Ghosh | 978-93-6233-705-4 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Unveiling the Potential of Hydroelectric Power Systems towards Sustainability  | Soumya Ghosh | 978-93-6233-705-4 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Influence of Crack Location on the Natural Frequencies of Composite Beams  | Soumya Ghosh | 978-93-6233-705-4 | 2024 |
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| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Comprehensive Review: Innovative Hydroelectric Solutions for Sustainable Power Generation                            | Soumya Ghosh | 978-93-6233-705-4 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Understanding Skin Friction Dynamics: Numerical Simulation and Analysis of Skin Friction Coefficient Distribution in | Soumya Ghosh | 978-93-6233-705-4 | 2024 |

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|   | Cyclone Separators   |              |                   |      |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Cyclonic Velocity Dynamics: Advanced Numerical Simulation and Analysis of Velocity Distribution in Cyclone Separator             | Soumya Ghosh | 978-93-6233-705-4 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.209">https://doi.org/10.62906/bs.book.209</a> | Advances and Applications of Wire Arc Additive Manufacturing (WAAM) & Process Optimization and Material Characterization in WAAM | Soumya Ghosh | 978-93-6233-705-4 | 2024 |
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|   | Cyclone Separators  |              |                   |      |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Advanced Modal Analysis of NACA 0012 Airfoil Wings: Unveiling Higher-Order Deformation Modes Using ANSYS Workbench                      | Soumya Ghosh | 978-93-6233-761-0 | 2024 |
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| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Unveiling the Potential of Hydroelectric Power Systems towards Sustainability   | Soumya Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Influence of Crack Location on the Natural Frequencies of Composite Beams   | Soumya Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Dynamic Revelations: Advanced Modal Analysis of a Cantilever Beam Using ANSYS   | Soumya Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Understanding Skin Friction Dynamics: Numerical Simulation and Analysis of Skin Friction Coefficient Distribution in Cyclone Separators | Soumya Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Comprehensive   | Soumya       | 978-93-6233-761-0 | 2024 |

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| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Advances and<br>Applications of<br>Wire Arc Additive<br>Manufacturing<br>(WAAM) &<br>Process<br>Optimization and<br>Material<br>Characterization in<br>WAAM | Soumya<br>Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Process<br>Optimization and<br>Material<br>Characterization<br>in WAAM  | Soumya<br>Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Modal Analysis<br>and Directional<br>Bending Moment<br>of a<br>Cantilever Beam<br>Using ANSYS   | Soumya<br>Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Vibrational<br>Insights: Modal<br>Analysis of a<br>Cantilever<br>Beam Using<br>ANSYS  | Soumya<br>Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Production of<br>Biodiesel Using<br>Chicken Waste<br>Fats   | Soumya<br>Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Modal Analysis of<br>a NACA 0012<br>Airfoil Wing<br>Using<br>ANSYS<br>Workbench   | Soumya<br>Ghosh | 978-93-6233-761-0 | 2024 |
| <a href="https://doi.org/10.62906/bs.book.211">https://doi.org/10.62906/bs.book.211</a> | Influence of Fiber  | Soumya          | 978-93-6233-761-0 | 2024 |

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|---|--|--------------|-------------------|------|
|   | Orientation on the Vibration Characteristics of Composite Beams with Cracks  | Ghosh        |                   |      |
| <a href="https://doi.org/10.1007/978-3-031-66609-4_1">https://doi.org/10.1007/978-3-031-66609-4_1</a>   | Heat Transfer Augmentation in a Mini-channel Using Magnetic Nanofluid and Magnetic Vortex”                             | Soumya Ghosh | 978-3-031-66609-4 | 2024 |
| <a href="https://doi.org/10.1007/978-3-031-67241-5_63">https://doi.org/10.1007/978-3-031-67241-5_63</a> | Transition Flow Heat Transfer and Pressure Drop in a Uniformly Heated Inclined Solar Air Heater Fitted with Wavy Tapes | Soumya Ghosh | 978-3-031-67240-8 | 2024 |

### Patent Publication

- i. Title of the invention- HUMOBOT-Multiple robot assistant in post pandemic, Name of the applicant-Swami Vivekananda University, Name of the Inventor-Soumya Ghosh.Application No202231038993 A
- ii. Title of the invention- Smart Solar Grass Cutter,Name of the applicant-Swami Vivekananda University, Name of the Inventor-Soumya Ghosh.Application No202231038992 A
- iii. Title of the invention- Solar Powered Automated Rooftop Shielding Mechanism,Name of the applicant- Swami Vivekananda University, Name of the Inventor- Soumya Ghosh. Application No202231038246 A.
- iv. Title of the invention – HydraulicsRamp Pump System for lifting Water in Hilly Region, Name of the applicant- Swami Vivekananda University, Name of the Inventor- Soumya Ghosh. Application No202231035645 A.
- v. Title of the invention – Solar Powered Automatic Tobacco/ non tobacco products vending machine, Name of the applicant- Swami Vivekananda University, Name of the Inventor- Soumya Ghosh. Application No202431024111 A.
- vi. Title of the invention – Sensor-based desalinization and hydroponic technologies to improve agricultural productivity of resource-scarce coastal saline areas, Name of the applicant- Swami Vivekananda University, Name of the Co-Inventor- Soumya Ghosh. Application No202331022652 A.
- vii. Title of the invention –Fabrication and Design of the Solar Powered 360-degree rotating vehicle, Name of the applicant- Swami Vivekananda University, Name of the Co-Inventor- Soumya Ghosh. Application No202331022706 A.
- viii. Title of the invention – Solar Air Heater, Name of the applicant- Swami Vivekananda University, Name of the Co-Inventor- Soumya Ghosh. Application No202431028487 A.
- ix. “Mini Conveyor: Enhancing Material Handling with Geneva Mechanism”, Soumya Ghosh, Arijit Mukherjee, Suman Kumar Ghosh, Sayan Paul, Abhishek Dhar, Saurabh Adhikari, Subhranil Som, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks,

Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431059750 A]

x. “Portable Air Conditioning Innovation: Harnessing Thermal Peltier Technology”, Samrat Biswas, Sayan Paul, Soumya Ghosh, Suman Kumar Ghosh, Abhishek Dhar, Saurabh Adhikari, Subharnil Som, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431060584A]

xi. “Rainwater Detector System: Enhancing Water Management and Conservation”, Arijit Mukherjee, Sayan Paul, Soumya Ghosh, Samrat Biswas, Abhishek Dhar, Saurabh Adhikari, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431060628A]

xii. “River Cleaning Boat: Innovating Waterway Maintenance for Environmental Conservation”, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Abhishek Dhar, Saurabh Adhikari, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431060629A]

xiii. “Autonomous Robo-Soccer Competition System”, Abhishek Poddar, Soumak Bose, Soumya Ghosh, Bikas Panja, Abhishek Dhar, Saurabh Adhikari, Subharnil Som, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431060663A]

xiv. “Mini Hydraulic Jack: Compact Solution for Lifting and Support”, Sayan Paul, Arijit Mukherjee, Soumya Ghosh, Suman Kumar Ghosh, Abhishek Dhar, Saurabh Adhikari, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431060077A]

xv. “Harnessing Hydro Energy on a Small Scale: Portable Mini Hydropower Plants”, Abhishek Poddar, Soumya Ghosh, Arijit Mukherjee, Suman Kumar Ghosh, Abhishek Dhar, Saurabh Adhikari, Subharnil Som, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431060513A]

xvi. “Safe Guard: Gas Leakage Detection and Protection System for Home and Industries”, Sayan Paul, Soumya Ghosh, Suman Kumar Ghosh, Samrat Biswas, Abhishek Dhar, Saurabh Adhikari, Intellectual Property India, Office of the Controller General of Patents, Design and Trade Marks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India. [Patent Application Number 202431064477A]