
Samrat Biswas

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OBJECTIVES

I am a student of engineering in Mechanical Engineering looking for job opportunities, seeking a position to utilize my skills and abilities in the academic sector that offers professional growth while being resourceful, innovative, and flexible.

EDUCATION

Degree	University /Board	Institution	Year of Completion	Field	GPA / % age
Ph.D.	Jadavpur University	Jadavpur University	2021	Aerodynamics (Fluid Mechanics)	91%
M.E.	IEST, Shibpur	IEST, Shibpur	2016	Aerospace Engg. & Applied Mechanics	87 %
B.E.	Jadavpur University	Jadavpur University	2009	Mechanical Engineering	CGPA: 7.48
H.S.	WBCHSE	Hindu School	2005	Science Stream	70.4 %
Madhyamik	WBBSE	GSMS, Taki House	2003	General Stream	88.4 %

RESEARCH PUBLICATIONS

JOURNAL ARTICLES

- Soumya Ghosh, Suvanjan Bhattacharyya, Biswajit Halder, Nirmalendu Biswas, Samrat Biswas, "Exergy and thermal performance analysis of solar air heater with novel hybrid tape vortex generators for rural applications", Solar Energy, Vol. 301, 15 Nov 2025.
- Samrat Biswas, Aritras Roy, Animesh Roy, Prabir Kumar De and Bireswar Majumdar, "Flow Field Investigation on a Double Delta Wing," Journal of Aerospace Sciences and Technologies, vol. 71, no. 2, May 2019.
- Samrat Biswas, Animesh Roy, Prabir Kumar De and Bireswar Majumdar, "Investigation of Flow Field over Swept Back Wing," International Journal of Research and Analytical Reviews, vol. 6, no. 1, March 2019.
- Samrat Biswas, Animesh Roy, Prabir Kumar De, and Bireswar Majumdar, "Experimental and Numerical Investigation of Flow Field Structure over Swept Back Wing," Journal of Emerging Technologies and Innovative Research, vol. 6, no. 3, March 2019.
- Samrat Biswas, Animesh Roy, Prabir Kumar De, and Bireswar Majumdar, "Surface Flow Visualization Tests on Swept Back Wing Configuration Subjected to Subsonic Flow," SAMRIDDHI: A Journal of Physical Sciences, Engineering and Technology, vol. 12, issue. 2, December 2020.
- Samrat Biswas, Animesh Roy, Prabir Kumar De, and Bireswar Majumdar, "Experimental Investigation of Boundary Layer Measurements on Swept-Back Tapered Wing under Different Angle Of Attack," Journal of The Institution of Engineers (India): Series C (Under Review)
- Arijit Mukherjee, Santosh Kumar, Syan Paul, Soumak Bose, Suman Kumar Ghosh, Samrat Biswas "Comparative Study of Wear Behaviour of Heat Treated 304 Austenitic and 410 Martensitic Stainless Steel" International Conference on Engineering Design and Computing (ICEDC-2023) (Accepted)
- Samrat Biswas, Sayan Paul, Soumya Ghosh, Suman Kumar Ghosh, Arijit Mukherjee, Bireswar Majumdar, "Investigation of Transverse Velocity Component over Swept-Back Wing in Subsonic Flow." International Conference on Engineering Design and Computing (ICEDC-2023) (Accepted)
- Animesh Roy, Samrat Biswas, Prabir Kumar De and Bireswar Majumdar "Analysis of Vortex Dominated Flow over Double Delta Wing." Journal of Mines, Metals and Fuels. (Accepted)
- S. Biswas, T. K. Barman, P. Sahoo, "Surface Roughness Modeling in Turning of Brass Using Response Surface Methodology," Recent Trends in Manufacturing Technology (RTMT- 09), pg. 1-6, 2009.
- S. Biswas, T. K. Barman, P. Sahoo, "Analysis of Surface Roughness Modeling in Mild Steel Turning Using Response Surface Methodology," Emerging Trends in Mechanical Engineering (ETME- 09), MS03, pg. 1-6, 2009.

CONFERENCE PROCEEDINGS

- S. Biswas, T. K. Barman, P. Sahoo, "Surface Roughness Modeling in Turning of Brass Using Response Surface Methodology," Recent Trends in Manufacturing Technology (RTMT- 09), pg. 1-6, 2009.
- S. Biswas, T. K. Barman, P. Sahoo, "Analysis of Surface Roughness Modeling in Mild Steel Turning Using Response Surface Methodology," Emerging Trends in Mechanical Engineering (ETME- 09), MS03, pg. 1-6, 2009.
- Arijit Mukherjee, Santosh Kumar, Syan Paul, Soumak Bose, Suman Kumar Ghosh, Samrat Biswas "Comparative Study of Wear Behaviour of Heat Treated 304 Austenitic and 410 Martensitic Stainless Steel" International Conference on Engineering Design and Computing (ICEDC-2023) (Accepted)
- Samrat Biswas, Sayan Paul, Soumya Ghosh, Suman Kumar Ghosh, Arijit Mukherjee, Bireswar Majumdar, "Investigation of Transverse Velocity Component over Swept-Back Wing in Subsonic Flow." International Conference on Engineering Design and Computing (ICEDC-2023) (Accepted)
- Soumak Bose, Sayan Paul, Samrat Biswas, Arijit Mukherjee, Soumya Ghosh, Suman Kumar Ghosh, "Investigational Report on Bead-on-Plate Welding of 316 Austenite Stainless Steel Using Pulsed GTAW Process", Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Soumak Bose, Samrat Biswas, Arijit Mukherjee, "Investigational report on the cladding performance of 316 austenitic stainless steel using pulsed gas tungsten arc welding process", Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Soumak Bose, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh Arijit Mukherjee, Samrat Biswa, "Analysis of Pressure Distribution in the Flow Field around Vertical Axis Wind Turbine," Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Soumak Bose¹, Sayan Paul, Samrat Biswas, Arijit Mukherjee, "Analysis of Velocity Distribution in the Flow Field around Savonious Wind Turbine," Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Samrat Biswas, Sayan Paul, Suman Kr Ghosh, Soumya Ghosh, Soumak Bose, and Arijit Mukherjee, "Explorative Study of Evolution of Pressure Distribution in the Flow Field around Vertical Axis Wind Turbine," Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Samrat Biswas, Sayan Paul, Suman Kr Ghosh, Soumya Ghosh, Soumak Bose, and Arijit Mukherjee, "Investigative Exploration into the Evolution of Velocity Distribution around
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Savonious Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.

- Samrat Biswas, Sayan Paul, Suman Kr Ghosh, Soumya Ghosh, Arijit Mukherjee, and Soumak Bose, “Qualitative Observation of Helicity Distribution for Flow around Drag Type Vertical Axis Wind Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Sayan Paul, Samrat Biswas, Suman Kr Ghosh, Arijit Mukherjee, and Soumak Bose, “Investigative Exploration into the Evolution of Pressure coefficient Coefficient Distribution within the Flow Field Surrounding a Vertical Axis Wind Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Sayan Paul, Samrat Biswas, Suman Kr Ghosh, Arijit Mukherjee, and Soumak Bose, “Qualitative Investigation into the Evolution of Velocity in the sth frame in Rotating Reference Frame Distribution in the Surrounding Frame of a Vertical Axis Wind Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Soumya Ghosh, Samrat Biswas, Sayan Paul, Soumak Bose, Arijit Mukherjee, “Analytical Investigation of Vorticity in the Flow around Savonius Wind Turbines,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Suman Kr Ghosh, Samrat Biswas, Sayan Paul, Soumya Ghosh, Soumak Bose, and Arijit Mukherjee, “An Investigative Examination of Eddy Viscosity Evolution in the Flow Field Surrounding a Savonious Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Abhishek Poddar, Samrat Biswas, Sayan Paul, Suman Kr Ghosh, Soumya Ghosh, and Soumak Bose, “Explorative Study of Evolution of Vorticity Distribution in the Flow Field around Savonious Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Arijit Mukherjee, Suman Kr Ghosh, Sayan Paul, Soumya Ghosh, Soumak Bose, and Samrat Biswas, “An Exploration of Eddy Viscosity Changes in Longitudinal Direction for Flow around Vertical Axis Wind Turbine,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Sudip Chakraborty, Soumya Ghosh, Suman Kumar Ghosh, Arijit Mukherjee, Sayan Paul, Samrat Biswas, “The Prospects of Corn-Based Bio-Fuels in the Future of Indian Transportation,” Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.
- Arka Banerjee, Soumya Ghosh, Rajeev Ranjan, Suman Kumar Ghosh, Sayan Paul, Samrat Biswas, “2D Flows Driven by Boundary Wall Motion for Rheological Fluids using Computational Fluid Dynamics: A Review”, Proceedings of the International Conference

on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.

Soumya Ghosh, Sayan Paul, Suman Kumar Ghosh, Abhishek Poddar, Arijit Mukherjee,

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Arijit Mukherjee, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Abhishek Poddar,

- Samrat Biswas, "Analytical Study of Velocity Swirling Strength for Flow over Savonious Wind Turbine," Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.

Sayan Paul, Samrat Biswas, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee,

- Anupam Mallick, "Literature Survey of Evolution of Vertical Axis Wind Turbine," Proceedings of the International Conference on ICISE 2023, Swami Vivekananda University, West Bengal, India. September 27-29, 2023.

Abhishek Poddar, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh,

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Abhishek Poddar, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh,

- Soumak Bose, "The Whirlwind's Whisper: Unveiling the Distribution of Velocity Circumferential in Flow and its Dance with Flow around HAWT Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

Abhishek Poddar, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Soumak Bose, "Explorative Study of Velocity Curl Distribution at Different Section along

- Span-Wise Location of HAWT Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

Abhishek Poddar, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh,

- Soumak Bose, "Exploration of Distribution of Velocity Divergence at Different Span-wise location along Horizontal Axis Wind Turbine Blade", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024

Abhishek Poddar, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh,

- Soumak Bose, "Exploration of Velocity Field Distribution in the Flow Field around Horizontal Axis Wind Turbine," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

Arijit Mukherjee, Abhishek Poddar, Sayan Paul, Soumya Ghosh, Suman Kumar Ghosh,

Samrat Biswas, "Numerical analysis on Casson nanofluid over a surface with nonlinear

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thermal radiation and binary chemical reaction," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

- Arijit Mukherjee, Suman Kumar Ghosh, Sayan Paul, Soumya Ghosh, Soumak Bose, Samrat Biswas, "Unveiling the Inner Pulse of Turbulence: A Journey into Eddy Frequency Distribution For Flow Field Around HAWT," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
- Arijit Mukherjee, Suman Kumar Ghosh, Sayan Paul, Soumya Ghosh, Soumak Bose, Samrat Biswas, "The Invisible Conductor: Unveiling the Distribution of Radial Component of Velocity in Flow Field with Wind Turbine Blades," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
- Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "From Vortices to Performance: Decoding the Secrets of Wind Turbine Efficiency through Helicity," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
- Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Soumak Bose, Arijit Mukherjee, "Tip Vortices and Beyond: A Multi-Plane Analysis of Pressure Coefficient Distribution and its Implications for Wind Turbine Design," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
- Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Academic Review Paper: Aerodynamics and Optimization of Horizontal Axis Wind Turbine Blades," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
- Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Soumak Bose, Arijit Mukherjee, "Unveiling the Significance of Velocity U Distribution for Wind Turbine Performance", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
- Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Dissecting the Vorticity Distribution at Different Sectional Plane along the Span of Horizontal Axis Wind Turbine Blade", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
- Sayan Paul, Samrat Biswas, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Unveiling the Aerodynamic Symphony: A Numerical Investigation of Pressure Distribution on a Wind Turbine Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
- Sayan Paul, Samrat Biswas, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Qualitative Analysis of Distribution of Turbulence Intensity in the Flow Field around Horizontal Axis Wind Turbine," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

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- Sayan Paul, Samrat Biswas, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Explorative Multi-Plane Analysis of Velocity Angle in the Sth Frame," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Sayan Paul, Samrat Biswas, Suman Kumar Ghosh, Soumya Ghosh, Anupam Mallick, Soumak Bose, "Analyzing Spanwise Velocity Distribution on a Horizontal Wind Turbine Blade for Performance Optimization," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Sayan Paul, Samrat Biswas, Suman Kumar Ghosh, Soumya Ghosh, Anupam Mallick, Soumak Bose, "Unveiling the Significance of Vorticity Y Distribution along Span-Wise Direction for HAWT Blade", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
 - Soumak Bose, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Samrat Biswas, "Deciphering the Flow's Hidden Energy: Analyzing Relative Total Pressure Distribution on a Wind Turbine Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Soumak Bose, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Abhishek Poddar, Samrat Biswas, "From Turbulent Chaos to Flow Harmony: Leveraging Re_t Insights for Optimized and Resilient Wind Turbine Design", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
 - Soumak Bose, Sayan Paul, Suman Kumar Ghosh, Soumya Ghosh, Arijit Mukherjee, Samrat Biswas, "Qualitative Analysis of Longitudinal Vorticity Distribution at Different Sectional Plane along Span-Wise Location of HAWT Blade", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
 - Soumak Bose, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Arijit Mukherjee, Anupam Mallick, "Exploring Gas Metal Arc Welding (GMAW) Cladding: A Comprehensive Review of Process Parameters, Clad Materials, and Corrosion Resistance," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Soumak Bose, Samrat Biswas, Sayan Paul, Suman Kumar Ghosh, Arijit Mukherjee, Anupam Mallick, "Advancements and Perspectives in Gas Tungsten Arc Welding (GTAW) Cladding: A Comprehensive Exploration of Process Parameters, Material Selection, and Performance Characteristics," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Soumya Ghosh, Samrat Biswas, Sayan Paul, Soumak Bose, Arijit Mukherjee, Anupam Mallick, "Unveiling the Energetic Flow: A Multi-Plane Analysis of Dynamic Pressure Distribution on a Wind Turbine Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

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- Soumya Ghosh, Samrat Biswas, Sayan Paul, Soumak Bose, Arijit Mukherjee, Suman Kumar Ghosh, "Explorative Study of Total pressure in Sth frame Distribution in Flow Field around the Wind Turbine Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Soumya Ghosh, Sayan Paul, Suman Kumar Ghosh, Abhishek Poddar, Arijit Mukherjee, Samrat Biswas, "Analysis of Velocity Angle Distribution for Flow around Horizontal Axis Wind Turbine: A Qualitative Study," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Soumya Ghosh, Sayan Paul, Suman Kumar Ghosh, Abhishek Poddar, Arijit Mukherjee, Samrat Biswas, "Numerical Study of Axial Component of Velocity Distribution at Sectional Plane along Span for Flow over HAWT," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Soumya Ghosh, Sayan Paul, Suman Kumar Ghosh, Abhishek Poddar, Arijit Mukherjee, Samrat Biswas, "Analysis of Vorticity Distribution in Z-direction at Different Section along Span-Wise location on the HAWT Blade", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
 - Suman Kumar Ghosh, Sayan Paul, Samrat Biswas, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Unraveling the Turbulent Tapestry: An Investigation of Eddy Viscosity Distribution on a Wind Turbine Blade", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
 - Suman Kumar Ghosh, Sayan Paul, Samrat Biswas, Soumya Ghosh, Abhishek Poddar, Soumak Bose, "Multi-Plane Analysis of K-production Distribution on a Wind Turbine Blade using the k-omega SST Model", International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February, 2024
 - Suman Kumar Ghosh, Samrat Biswas, Sayan Paul, Soumya Ghosh, Anupam Mallick, Soumak Bose, "Explorative Study of Total Pressure Distribution in Flow Field around the Wind Turbine Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Suman Kumar Ghosh, Sayan Paul, Samrat Biswas, Soumya Ghosh, Abhishek Poddar, Soumak Bose, "Analysis of Turbulent Eddy Dissipation for Flow Field around Horizontal Axis Wind Turbine Blade," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024
 - Suman Kumar Ghosh, Sayan Paul, Samrat Biswas, Soumya Ghosh, Arijit Mukherjee, Soumak Bose, "Unveiling the Significance of Velocity W Distribution for Wind Turbine Performance and Flow Physics," International Conference on Engineering Design and Computing (ICEDC)-2024, 22-24th February 2024

PATENT PUBLICATIONS

- “Solar-Powered Beard Trimmer,” Ranjan Kumar, Samrat Biswas, Abhishek Dhar, Saurabh Adhikari, Saikat Majumdar, 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 202331018706A]
- “Solar Powered Water Pump,” Ranjan Kumar, Samrat Biswas, Abhishek Dhar, Saurabh Adhikari, Saikat Majumdar, 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 202331018705A]
- “Sensor-based desalinization and hydroponic technologies to improve agricultural productivity of resource-scarce saline areas,” Md Ershad, Ranjan Kumar, Saurabh Adhikari, Abhishek Dhar, Saikat Majumdar, Soumya Ghosh, Samrat Biswas, 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 202331022652A]
- “Fabrication and Design of the Solar Powered 360-degree rotating vehicle”, Md Ershad, Ranjan Kumar, Saurabh Adhikari, Abhishek Dhar, Saikat Majumdar, Soumya Ghosh, Samrat Biswas, 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 202331022706A]
- “Solar Powered Outdoor Stand Ceiling Fan” Sayan Paul, Samrat Biswas, Arijit Mukherjee, Suman Kumar Ghosh, 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 202331054340A]
- “Mini Belt Grinder,” Suman Kumar Ghosh, Ranjan Kumar, Samrat Biswas, Soumak Bose, 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 202331054863A]
- “Portable Air Conditioning Innovation: Harnessing Thermal Peltier Technology”, Samrat Biswas, Sayan Paul, 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 202431060584A]
- “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]

- “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]

BOOK CHAPTERS

- Ranjan Kumar, Ravi Nigam, Md. Sahid Raza, Md. Erashad, Samrat Biswas, Soumya Ghosh, Sayan Paul, Arijit Mukherjee, Suman Kumar Ghosh, Soumak Bose, Abhishek Poddar, “Mechanical Engineering Advancements: Current Trends and Future Prospects, Chapter 5, pp. 103-118, August 2023 [Swami Vivekananda University, Kolkata (Institutional Publisher), ISBN: 978-81-964878-1-2]
- Ranjan Kumar, Ravi Nigam, Md. Sahid Raza, Md. Erashad, Samrat Biswas, Soumya Ghosh, Sayan Paul, Arijit Mukherjee, Suman Kumar Ghosh, Soumak Bose, Abhishek Poddar, “Recent Research Advancements in Mechanical Engineering: Material, Design, And Production Chapter 7, pp. 77-91, December 2023 [Swami Vivekananda University, Kolkata (Institutional Publisher), ISBN: 978-81-964878-0-5]
- Samrat Biswas, “Innovative insights- A Guide to Mechanical Engineering”, 2024, Swami Vivekananda University, Kolkata (Institutional Publisher), ISBN: 978-81-964878-8-1
- Samrat Biswas, “Innovative Approaches in Engineering and Applied Science, Bright Sky Publication, ISBN: 978-93-6233705-4
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- Samrat Biswas, “Frontiers of Engineering Innovation: Interdisciplinary Approaches and Applications”, 2024, Bluerose Publishers, ISBN: 978-93-6452-860-3]

EXPERIENCES

Swami Vivekananda University, Barrackpore

- Assistant Professor

AUGUST 2022 - PRESENT

- Working as an assistant professor at Swami Vivekananda University, Barrackpore Campus.

BPCL, India - Management Trainee & Operations Officer

SEPTEMBER 2011 - SEPTEMBER 2013

- Worked at the management level in Retail, LPG, and Refinery facilities.
- Worked as a management-level operation officer in the pipeline division.

WPIL Limited, Kolkata - Export Marketing & Research & Development

JANUARY 2010 - SEPTEMBER 2010

- Made several quotations and gave technical advice to several clients.
- Involved in designing and constructing the vertical submersible pump.

ACHIEVEMENTS

- Got prizes in the “ADTM” state-level math competition & won many prizes in other talent search examinations.
- Completed vocational training at Chittaranjan Locomotive Works.
- Completed & published papers of projects on “Surface Roughness Modeling in Turning of Brass using RSM” and “Analysis of Surface Roughness in Mild Steel Turning Using Response Surface Methodology.” Also presented a paper at a conference.
- Qualified in the GATE exam in the year 2010 and 2014.
- Proposed, designed, quoted, implemented, and installed DRA (Drag Reducing Agent) in BPCL- VBPL crude pipeline. Also analyzed the effect of the DRA on pipeline performance.
- Designed and programmed material management/inventory control software from scratch for BPCL.
- Also, upgraded schematics of different facilities at BPCL.
- Also successfully completed e-learning programs in management essentials and management electives arranged by BPCL.
- Completed projects & submitted a thesis on “Turbulent Multiphase Flow Over A Loose Boundary.”
- College Topper in Master of Technology from IEST, Shibpur.
- Completed project and submitted a thesis on “Flow Investigations over Swept Back Wings.”
- Successfully completed an online course study offered by Cornell University on Engineering Simulations.

CONTRIBUTIONS TO ACADEMIC INSTITUTION

- Organizing all the theory classes, tutorial classes, and laboratory classes at the scheduled time and full-time as assigned by the department. Tried to create a learning-centric environment with a positive and proactive attitude.
- Performed activities like preparing study material, laboratory experimental calculation tables, maintaining class conduction reports, etc.
- Tried to promote university brand value through Google reviews and various other methods.
- Took part in the curriculum design of the Diploma/UG program to create a session plan and a lesson plan in line with the outcome-based education system.
- Took proactive participation in regular student mentoring. Kept regular, continuous correspondence with the mentee students and provided them with proper guidance whenever possible or required. Participated in parent-teacher meetings at regular intervals.
- Assigned various innovative and interesting projects to Diploma/UG level students and provided gentle advice to encourage them with project-based or activity-based learning. Additionally encouraged them to make a working model of their project along with a proper report and presentation.
- Assisted in the departmental laboratory setups.
- Proactively assisted in uploading student details to the Banglar Uchchashiksha portal database.
- Actively involved in the total departmental student registration process for the session 2022-2023 and preparing the student database.
- Assisted in arranging, organizing, and sorting student details for the purpose of student Identity Card and Registration Certificate preparation.
- Active participation as an organizing team member in an international conference (ICEDC 2023) and additionally submitted a couple of research papers to contribute towards the research activity of the department and the university.
- Positively assisted in preparing a couple of patent write-ups from the Department of Mechanical Engineering, which contributed to the research activity of the department and the university.
- Actively involved in departmental exam conduction and attached activities.
- Was a part of the external examination process – setting up questions, invigilation, timely evaluation of scripts, and submission of marks.
- Participated in the live webinar with the topic “Understanding Implementing and Practicing OBE for Academic Excellence.”
- Actively assisted in the on-campus placement drive or job fair for the students. Assisted in conducting mock tests and mock interview sessions for students appearing for the on-campus placement.
- Promptly execute any other responsibility as assigned by the department or the university.
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SKILL SETS

- Subject of interest: Fluid Mechanics, Aerodynamics, Thermodynamics.
- Programming languages: Autolisp, Fortran, Matlab, C++, VisualBasic
- Drafting Software: AutoCAD, Solidworks, DesignModeler, SpaceClaim, FreeCAD
- Simulation Software: Fluent, CFX, XFoil, Matlab
- Graphing Software: Grapher, Surfer, Origin, Tecplot, Ensight
- Statistical Software: Minitab, Matlab
- Text Editing: LaTeX, Word, Excel
- Spoken languages: Bengali (Native), English, Hindi

HOBBIES

- Playing guitar.
- Tinkering with electronics & computers.
- Aeromodelling