

RESEARCH DIRECTORY

**January 2025
Volume 5**



**UNIVERSITY OF ENGINEERING AND MANAGEMENT,
KOLKATA**

University Area, Plot No. III-B/5, New Town, Action Area-III, Kolkata-70016

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PRELUDE

The Research Directory is a compendium that provides various research avenues in the University and comprehensive information of research works at one place. This gives an access to the centralized information on various facets and directions of researches being pursued in an institution. The Directory contains the data base of faculty who are open to discuss research opportunities with the undergraduate and postgraduate students of that institution. This also identifies the Faculty Research Mentors in an Institution.

The Research Directory regularly being published by leading Research Universities in the world like Massachusetts Institute of Technology, University of California, John Hopkins University, Texas A & M University, Princeton University, George Institute of Technology, Stanford University, University of California-Berkley, Columbia University and many other institutions of eminence that carries its legacy and long heritage in research and innovation.

Top Tier, Nationally Competitive Research Universities popular for world class research excellence develops comprehensive documentation of versatile research activities not only for the University's own circulation but for dissemination of knowledge to the outside world. This is one of the best practices they follow.

Keeping in pace with the annual global trend, University of Engineering and Management, Kolkata is publishing its own Research Directory for reinforcing the research culture and to create opportunities for interdisciplinary collaborative researches further through intensive networking.

MESSAGE FROM THE DESK OF CHANCELLOR



It is with great pride that I present the 5th Volume of the University Research Directory—a reflection of our university's steadfast commitment to fostering innovation and advancing knowledge.

This edition highlights the exceptional work of our faculty and research scholars, whose dedication continues to drive impactful research across disciplines. Their contributions not only address contemporary challenges but also pave the way for future breakthroughs.

In a rapidly evolving world, meaningful research is more crucial than ever. At UEM Kolkata, our researchers are not just exploring ideas—they are creating solutions and shaping the future. This directory stands as both a record of their achievements and a resource for collaboration and inspiration within and beyond our university. This year has witnessed a manifold increase in research outcome at various segments as documented.

My heartfelt congratulations to all contributors and sincere thanks to the editorial team. May this volume continue to inspire excellence and fuel the spirit of discovery.

Warm regards,

Prof. Banani Chakrabarti
Chancellor
UEM, Kolkata

MESSAGE FROM THE DESK OF VICE-CHANCELLOR



Research Intense Education and Creation of Knowledge are two distinctive features of a university. Research Outcomes are revealed through publication of papers in reputed journals & conferences, Research project activities, publication of patents for new concepts & products, Testing & Consultancies, Creation of knowledge & Innovation. University of Engineering and Management, Kolkata (UEMK) is evolving towards a Center of Excellence involving all spheres of research. Since last few months, I was walking down memory lane to unearth best practices embedded into the frontline research activities of BESU (erstwhile BE College, Shibpur) while I was functioning as Dean (Research & Consultancy) almost 35 years back. Suddenly I recollected that with the inspiration of our seniors we had published a RESEARCH DIRECTORY to develop a comprehensive document compiling various research outcomes. At that time there was no scope to create softcopies of documents or computer edited versions. Everything was done manually and with hard labor.

Today, in UEMK, we have decided to implement the same idea. Information on research outcomes may be available through various sources. Our objective is to bring them together under one umbrella to collate and disseminate information professionally. I sincerely expect that after publication of the Directory, all our faculty and students will draw immense benefits, especially while presenting before regulatory authorities and accredited agencies. The first Research Directory, Volume 1 was published by the University in July 2021. The Volume 5 is being published now. UEMK will continue publishing this document every year with a view to project achievements of the University on research front.

I like to convey my sincere thanks and gratitude to those faculty and staff whose untiring efforts and high-end dedication have made it possible to publish this Directory within a reasonable time. I owe my thankfulness to the entire teaching fraternity of the University.
Best wishes to all.

A handwritten signature in black ink, appearing to be 'Sajal Dasgupta', with a horizontal line extending from the end.

Prof. (Dr.) Sajal Dasgupta
Vice Chancellor UEM, Kolkata

MESSAGE FROM THE DESK OF PRO VICE- CHANCELLOR



The Research Directory of University of Engineering and Management, Kolkata aims to bring under one umbrella the research and entrepreneurial endeavors undertaken by the students and faculty members of this young and growing University. Our highly motivated students have not only published their research works in international journals and applied for patenting their inventions; they have also started their own startup companies with seed money provided by the University. We want our students to grow into good innovators and entrepreneurs who will be worthy citizens of our country and assets for our society. Our teachers are of course playing a significant role in guiding the students. The high-grade international journals reported in this Research Directory are also a mandate of the quality of research studies our faculty members are involved in.



Prof. (Dr.) Satyajit Chakrabarti
Pro Vice Chancellor
UEM, Kolkata

MESSAGE FROM THE DESK OF DEAN (ENGINEERING)

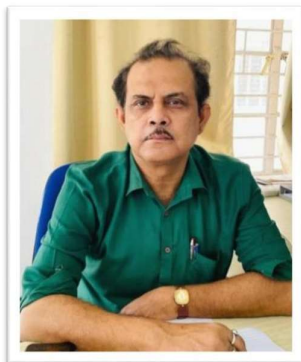


I express my heartfelt congratulations to all students and faculty of University of Engineering and Management, Kolkata for the wide spectrum of research and developmental activities portrayed in the Research Directory. I would especially like to commend the Vice Chancellor, UEMK for his vision of compiling all various research activities of the University in this Directory. It will help us to realize our strengths and weaknesses in this domain and also encourage inter disciplinary research activities. I wish all the students and faculty members of UEMK keep marching steadily on the path of excellence in research and entrepreneurship under the able guidance of Chancellor, Vice Chancellor, Pro Vice Chancellor and all the Deans of the University.



Prof. (Dr.) Kamakhya Prasad Ghatak
Dean (Engineering)
UEM, Kolkata

MESSAGE FROM THE DESK OF DEAN (RESEARCH)



I would like to welcome you to the University Research Directory to learn about our efforts in research. The University's Research Excellence is built upon subject matter experts from various departments and research group that join over more than 378 research scholars to pursue joint endeavors in myriad research and development program of the University. We will do our best in this faculty to make studying here a transformative learning experience and a spring board to a bright and fulfilling future for our students. We also welcome our alumni to visit us to provide their views and feedback and to lend us their support. I believe this is what striving for more meaningful work can help us to do.

A handwritten signature in blue ink, reading "Abir", written in a cursive style.

Prof. (Dr.) Abir Chattopadhyay
Dean (Research)
UEM, Kolkata

MESSAGE FROM THE DESK OF THE DEAN (SCIENCE)



The Research Directory of University of Engineering and Management, Kolkata is a mandate of the innovative and highly motivated students that our enthusiastic faculty members are nurturing. The entrepreneurial activities and startups our students are involved in have resulted not only due to the seed money and constant encouragement provided by the University but also due to their enterprising attitude and untiring efforts. Our faculty members are also carrying on panorama of research activities in various branches of science and technology and their works are getting published in highly reputed journals. Some of the faculty members are also patenting their inventions along with their students. I wish students and faculty members of UEMK keep on their proliferating research and developmental activities in years to come.

Prof. (Dr.) Rajiv Ganguly
Dean (Science)
UEM, Kolkata

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***Publications in International/National
Journals
(January 2024 to December 2024)***

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Department of Electrical Engineering

1. Ghosh, A. (2024). Fault analysis of inverter-based distributed generation in different operational modes. *International Journal of Engineering Research and Applications*, 14(2), 1-8.
2. Ghosh, P., Panda, S., & Ghosh, A. (2024). Real-time face mask detection using MobileNet V2. *International Journal for Research in Applied Science & Engineering Technology*, 12 (V), 3047.

Department of Law

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2. Chattopadhyay, S. & Singh, D. M. (2024). Cyber-crimes against elderly people in India – Search for defence mechanism to counter. NUJS Journal of Regulatory Studies, 9(3).
3. Dey, S. K. & Dey, A. (2024). Empowering Indian women: Scrutinizing major constitutional provisions & legislations on women's rights in context. International Journal of English Language, Education and Literature Studies (IJEEL), 3(3), 41.
4. Mondal, N.; Bilung G. A. & Nayak V. (2024). The evolving role of minority shareholders in corporate decision making: Navigating the tensions between unsettling concerns and reassuring outcome. NUJS Journal of Regulatory Studies, 9(1). ISSN: 2456-4605.
5. Routh, S. (2024). Constitutional validity of same sex marriage: A dynamic analysis. Juris Centre, 2(5).

Summary Table

Publication in National and International Journals

Department	July 2020 to December 2023 (Cumulative)	January 2024 to December 2024				July 2020 to December 2024 (Cumulative)
		SCI/ SCIE	SCOPUS	UGC CARE	Total	
BSH	75	54	2	0	56	131
BT	116	12	27	0	39	155
CST & CSIT	31	4	3	0	7	38
ECE	34	10	2	0	12	46
CSE	27	0	3	3	6	33
EE	18	0	0	2	2	20
CSE (IOT, CS, BT)	3	0	0	0	0	3
CSE (AI&ML)	3	0	0	0	0	3
CA	19	0	1	13	14	33
LAW	20	0	0	5	5	25
Total	431	80	38	23	141	572

***Publications in International/National
Conferences
(January 2024 to December 2024)***

Department of Basic Sciences & Humanities

1. Basak, S., Bhattacharjee, T., Kumar, D., Pal, A. *et al.* (2024). Shape coexistence picture in ^{152}Sm : Observation of $K\pi = 0^+_{4, 0^+_{5}}$ and $2^-_{1, 1^-}$ bands. Proceedings of the DAE Symposium on Nuclear Physics, 68, 65.
2. Bera A., Bisoi A., Rahaman R., Sapkota, Y. *et al.* (2024). Spectroscopic study of ^{52}Cr . Proceedings of the DAE Symposium on Nuclear Physics, 68, 155.
3. Kumar, S., Kumari, N., Majhi, D., Bera, A., *et al.* (2024). Spectroscopic study of ^{49}Ti . Proceedings of the DAE Symposium on Nuclear Physics, 68, 153.
4. Mandal, S. (2024). Robustness and monotonicity of a similarity-based reasoning fuzzy inference mechanism. AIP Conference Proceedings, ICNASC-2. Accepted.
5. Mondal, S., Mandal, S., & Khatua, D. (2024). Predictive analytics for product demand: An end-to-end model assessment. AIP Conference Proceedings, ICNASC-24. Accepted.
6. Nandi, B. (2024). A linear programming approach for efficiency measurement of selected mutual funds in India. International Conference on Emerging Trends in Mathematical Sciences & Computing 2024 (pp. 531). Cham: Springer Nature, Switzerland.
7. Nandi, S. (2024). Introspecting the “other” in Kalki Subramaniam’s *We Are Not the Others*: Charting the trajectory of identity through the intersectional approach. 3rd International Conference on Advances in English Language Studies (ICAELS – 2024), November 15–17, 2024. Organised by UEM Jaipur.
8. Nemu, A. (2024). An extension of soft set and its application to decision making. In IEMSCA-23, Emerging Trends in Mathematical Sciences and Computing.
9. Rahaman, R., Bisoi, A., Sapkota Y., Gupta, A. *et al.* (2024). Spectroscopic study of unnatural parity states in ^{43}Ca . Proceedings of the DAE Symposium on Nuclear Physics, 68, 151.

Department of CST & CSIT

1. Bhowal, K. (2024). Blockchain-enabled secure and efficient integration of IoT devices: A novel approach for the Internet of Medical Things (IoMT). 4th International Conference on Computer, Communication, Control and Information Technology (C3IT 2024).
2. Chakraborty, S. (2024). Machine learning models for network intrusion detection based on ResNet-GAN model. IEEE 9th International Conference on Engineering, Technologies & Applied Sciences (ICETAS 2024).
3. Chakraborty, S. (2024). Study of IoT enabled water logging detection and control in drainage system for smart city. International Conference on Big Data Analytics in Bioinformatics (DABCON-24), IEEE.
4. Chatterjee, S. (2024). Imbalance aware multimodal attention enabled latent space oversampling for emotion recognition. International Conference CIPR 2024, Springer.
5. Ganguly, A., & Datta Mitra, D. (2024). A switched current mirror-based VLSI architecture of 1-D DCT for compressed ECG signal acquisition. IEEE Kolkata Section Conference (CALCON 2024), December 2024.
6. Mishra, S. (2024). A comparative analysis for rainfall prediction: Efficient transfer learning approach. First International Conference on Advanced Computing and Systems (AdComSys 2024).
7. Mukherjee, C., Chakraborty, A., Chakraborty, S., Roy, P., et al. (2024). Recurrent neural network-based closing index prediction of Indian software industry stocks. 2024 IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI), Gwalior, India. <https://doi.org/10.1109/IATMSI60426.2024.10503019>
8. Pal, S. B., Ganguly, R., Das Bhattacharya, K., & Chanda, C. K. (2024). Solar PV cleaning system in Eastern Indian climatic zone. IEEE Kolkata Section Conference (CALCON 2024), December 2024.
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Department of Electronics & Communication Engineering

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2. Byabarta, N., Chattopadhyay, A., & Mitra, S. K. (2024). Radial basis function method for linearization of thermocouple data: An efficient and accurate approach. Conference presentation.
3. Chakraborty, S. (2024). On the gas-sensing mechanism of resistive-based SnO₂ QD gas sensor. UEMCOS Conference.
4. Chakraborty, S., Chatterjee, A. (2024). A novel anaemia biosensor based on 2D photonic crystal. 7th International Conference on Electronics, Materials Engineering and Nano-Technology (IEMENTECH). IEEE Xplore.
5. Chatterjee, A. (2024). A javelin-shaped UWB antenna with notch band for remote sensing applications. Proc. of 6th International Conference on Sensors & Transducers (UEMCOS 2024).
6. Chatterjee, A. (2024). A reflective FSS at 28 GHz with SIW slotted array antenna for 5G applications. Conference on Advancing Technology for Sustainable Development. DELCON-2024.
7. Chatterjee, A., & Chattopadhyay, A. (2024). An ultra wide-band patch transducer for remote sensing application in surface penetrating radar. IRTM 2024, IEEE Xplore.
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9. Das, A. (2024). A novel method for spatially-selective ZnO thin film growth by the sol-gel technique. Second International Conference on Recent Trends in Applied Physics & Material Science (RAM 2024).
10. Das, A., Sengupta, R. & Chatterjee, A. (2024). Accessible home: Empowering disability with smart home automation. UEMCOS Conference.
11. Das, A., Sengupta, R. (2024). Flood monitoring & alerting system. UEMCOS Conference.
12. Das, A., Sengupta, R. (2024). Li-Fi music systems for concerts. UEMCOS Conference.
13. Das, M., Roy, S., Saha, N., Roy, S., et al. (2024). EEG-based brain-controlled smart wheelchairs: A comprehensive analysis of current trends, challenges, and future prospects. IRTM 2024. IEEE Xplore.

14. Das, S., Bhattacharya, S., Chattopadhyay, A., Chatterjee, N., et al. (2024). Design and analysis of speed, latency and power consumption for pre-charged module integrated 6T-SRAM cell for AI-enabled circuits. IRTM 2024, NIT Calicut, India. IEEE Xplore.
15. Dutt, A. G., Ghosh, S., & Sharma, A. (2024, December). Advancing non-invasive and equitable cardiac health monitoring: Overcoming challenges and enhancing clinical utility of impedance cardiography. 21st IEEE India Council International Conference (INDICON 2024). IEEE.
16. Garai, S. (2024). Comparative study of fractional order series and parallel cascade control. Optronix 2024.
17. Garai, S., & Ashok. (2024). Comparative study of fractional order systems. Optronix 2024.
18. Ghosh, D. (2024). Lung cancer prediction using supervised machine learning. UEMCOS Conference.
19. Ghosh, D., & Nag, S. (2024). Discrimination of catechin and EGCG through various tea processing stages using clustering techniques. In Proceedings of the First International Conference on Advanced Computing and Systems (AdComSys 2024), Algorithms for Intelligent Systems. Springer Nature.
20. Ghosh, Y., Chaudhury, U., Das, A., & Sengupta, R. (2024). IoT-based agricultural system for smart farming. Optronix 2024.
21. Goswami, A., Dutta, A., & Das, M. (2024). Design and implementation of a smart safety bag for women's protection: A comprehensive study. Optronix 2024.
22. Maaz, M., Agarwal, H., Chauhan, D., Bera, P., et al. (2024). Smart agriculture system. Optronix 2024.
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26. Nag, S. (2024). Efficient vanillin detection in food products using optimized MIP electrode and chemometric analysis. UEMCOS Conference.
27. Naskar, J., Banerjee Roy, R., Chatterjee, A., & Nag, S. (2024). Biosensors in emerging technologies and their applications. IRTM 2024, IEEE Xplore.
28. Naskar, J., Das, A. K., Sarkar, S., Nag, S., et al. (2024). IR remote controlled 16-channel switch panel for home automation. Optronix 2024.
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32. Roy, S., Nag, S., & Ghosh, S. (2024). An IoT-based smart health monitoring wheelchair system for physically challenged people. 39th Indian Engineering Congress.
33. Roy, S., Roy, S., Kheya Bharadwaj, Saha, N., et al. (2024). An integrated AI doctor assistant bot with facial emotion recognition and smart medication dispensing for enhanced patient care. Optronix 2024.
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35. Sengupta, R., Chatterjee, A. (2024). Gain enhancement of substrate integrated waveguide-based cavity-backed slotted planar antenna array using FSS superstrate. Proc. of IEEE Microwaves, Antennas and Propagation Conference (MAPCON-2024).
36. Swathi, T., Dattatreya, S. M., Reddy, V. A., Sathyanarayana, G. S. S., et al. (2024). Comparative performance analysis of adder circuits using different CMOS technologies. IEEE International Conference on Smart Power Control and Renewable Energy 2024. IEEE Xplore.
37. Sutradhar, S., & Sengupta, A. (2024). Series and parallel cascade control. Optronix 2024.

Department of Computer Science and Engineering

1. Mukhopadhyay, B., Dhar, S., Das, S., Banerjee, P., *et al.* (2024). A comparative analysis of ML techniques to detect human emotions from text-based data. In RAAISA 2024, UEM Kolkata.
2. Poddar, V., & Das Bit, S. (2024). QoS aware energy efficient call admission control for 5G networks. In INDICON 2024, IIT Kharagpur.
3. Roy, S., Mandal, B. K., Khamaru, K., & Bhattacharya, A. (2024). Prediction and classification of brain tumor using modified transfer learning. In 2024 11th International Conference on Computing for Sustainable Global Development (INDIACom) (pp. 850–854). IEEE.

Department of CSE (IOT, CS & BT)

1. Banerjee, S., Ray, H., Tiwari, S., Aslam, K., et al. (2024). Enhanced stock price forecasting using a hybrid bidirectional LSTM-GRU model: Addressing volatility and time dependencies in time series data. In IRTM 2024.
2. Basu, D., Sur, H., Ghosh, D., Das, A., et al. (2024). Enhancing student-alumni engagement through a graph-driven recommendation framework with paraphrase-MiniLM-L6-v2. In RAAISA 2024. Springer.
3. Chaki, S., Rakshit, P., & Das, S. (2024). Markov model-based treatment path prediction of patients with severe mental disorder. In 2024 International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE) (pp. 1–8). IEEE.
4. Das, S., & Kundu, A. K. (2024). A high gain and high isolated textile MIMO antenna for biotelemetry application. In IEEE Microwaves, Antennas and Propagation Conference (MAPCON), Hyderabad, India.
5. Dutta, S., Chakraborty, S., & Kule, M. (2024). A novel two-phase social network-based consensus mechanism: Opinion dynamics for large-scale group decision-making. In IEEE TENCON 2024.
6. Nandi, A., Halder, R., Ghosh, S., & Konar, A. (2024). Cluster shape detection using dual attention induced convolutional-clustering algorithm. In 2024 IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS) (pp. 1–6). IEEE.
7. Nandi, A., et al. (2024). Empowering crop disease detection with RGB image analysis: A comprehensive deep learning framework. In International Conference on Artificial Intelligence, Machine Learning and Big Data Engineering (ICAIMLBDE), Kolkata.
8. Roy, S., Dutta, A., Saha, S. K., Saha, T., et al. (2024). Ensuring security and transparency in E-voting systems through blockchain technology. In International Conference on Data Mining and Information Security (ICDMIS 2024). ECMT, India & Universitas Al Asyariah Mandar, Indonesia.
9. Samanta, P. K., Biswas, S., Dutta, S., & Garai, A. (2024). DForged-Net: Discrimination among original, forged, and AI-generated handwritings. In IEEE TENCON 2024.
10. Sur, H., Mandal, G., Das, K., Nandi, A., et al. (2024). Enhanced convolutional neural network for sign character recognition with mixed pooling and Mish activation function. In International Conference on Innovation in Technology (INOCON 2024) (ISBN: 978-1-6654-8683-5).

Department of CSE (AI & ML)

1. Bandyopadhyay, S., Dey, H., Karmakar, M., Debdas, S., et al. (2024). Machine learning driven blood demand prediction model. 3rd International Conference on Human-Centric Smart Computing (ICHCSC 2024).
2. Das, A., Wahid, I., & Panja, D. (2024). Cement quality prediction and fraud detection by using AI. Recent Advances in Operations Research and Business Analytics (RAORBA 2024).
3. De, N., Bhattacharya, A., Das, S., Pal, S. S., et al. (2024). A machine learning-powered navigation system for smart cities: Optimizing traffic flow and air quality. Doctoral Symposium on Human Centered Computing (HUMAN 2024).
4. Dey, S. (2024). Multimodal sentiment analysis: Impact of LSTM architecture on text data for understanding sentiments. 3rd International Conference on Human-Centric Smart Computing (ICHCSC 2024).
5. Ghosh, A., Ghosh, A., Das, S., Samanta, K., et al. (2024). LOGIOUS: An instant messaging (IM) platform using AI. 2nd International Conference on Recent Advances in Artificial Intelligence & Smart Applications (RAAISA). (Communicated)
6. Pal, D., Mondal, D., Gupta, A., Kaushal, K., et al. (2024). Leveraging generative AI in effective medical diagnosis and delivery of healthcare services. 3rd International Conference on Human-Centric Smart Computing.
7. Sengupta, A., Paul, A., Biswas, R., Dutta, D., et al. (2024). Empowering 5G networks: Machine learning solutions for optimization challenges. International Conference on Human-Centric Smart Computing (ICHCSC 2024).
8. Singha, S., & Ghosh, A. (2024). Comparative analysis for conversion of double base number system (DBNS) from conventional number system using binary search algorithm by changing base patterns for ANN-based applications. 3rd International Conference on Advanced Computing and Applications (ICACA 2024).

Department of Bio-Technology

1. De Mukhopadhyay, K., Guha, T., Basu, A. (2024). AI in the Detection of Breast Cancer and Related Ethical and Legal Issues. In: Proceedings of 5th International Ethical Hacking Conference. eHaCON 2024. Lecture Notes in Networks and Systems, vol 1148. Springer, Singapore. https://doi.org/10.1007/978-981-97-8457-8_9

Department of Electrical Engineering

1. Ghosh, P., & Ghosh, A. (2024). Residential energy regulation by implementing demand side management using artificial intelligence algorithms. Paper presented at the 31st West Bengal Science and Technology Congress, West Bengal, India.

Department of Law

1. Mukherjee, P & Chakrabarty, S. P. (2024). Socio-economic benefits and GI protection on traditional weavers of Shantipore saree in West Bengal. In The International Conference on Optimizing Intellectual Property Rights in the Globalized World and Unleashing the Emerging Issues of the Corporate Laws (Issue 1).

Summary Table

Publications in International and National Conferences

Department	July 2020 to December 2023 (Cumulative)	January 2024 to December 2024	July 2020 to December 2024 (Cumulative)
BSH	16	9	25
BT	23	1	24
CST & CSIT	47	11	58
ECE	39	37	76
CSE	58	3	61
EE	16	1	17
CSE (IOT, CS, BT)	1	10	11
CSE(AI&ML)	7	8	15
CA	21	0	21
LAW	3	1	4
Total	231	81	312

Books
&
Book Chapters
(January 2024 to December 2024)

Department of Basic Sciences & Humanities

1. Acharjee, S., Dubey, S. K., Sil, S., & Pramanik, T. (2024). Exploring the role of nanotechnology in addressing the global snakebite epidemic, The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.
2. Bakshi, A., Chatterjee, I., Paul, S., Nath, N. R., *et al.* (2024). Revolutionizing computer science: The transformative impact of nanotechnology. The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.
3. Banerjee, A. (2024). Shikshar herpher—The education for the green regime. In Rabindranath: Ashimer Chirobishwai. Department of Bengali, Kalyani University. ISBN 978-93-94748-50-7.
4. Banerjee, A. (2024). The wisdom of ecocriticism: Unfolding the environmental concerns. In Indian Writing in English. Perception Publishing House. ISBN 978-93-95949-16-3.
5. Banerjee, A. (2024). Theoretical grounding: Education, law, and ethics. Tagore's Shikha, community and his Shantiniketan. In Environmental Humanities in India. Springer-Singapore. ISBN 978-981-97-3932-5.
6. Chatterjee, S., Bose, R., Sil, S., & Pramanik, T. (2024). Application of nanotechnology in computer science: The futuristic approach. The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.
7. Chattopadhyay, S., Roy Choudhury, R., & Chakraborty, P. (2024). The confluence of law and literature: Exploring the role of literature in constitutional interpretation. In Challenges in Globalization and Inclusivity in Academic Research. ISBN 979-8-3693-1371-8.
8. Deb, T., Pal, S., Pakhira, B., Dutta, S., *et al.* (2024). Revealing nano biosensors: The mighty innovators reshaping our future. In The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.
9. Halder, S., Nemu, A., Sarkar, D., Sil, S., *et al.* (2024). Innovation of nanofiber: Present state and future advancements. In The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.
10. Jana, S., Sarkar, A., Nandi, B., Ghoshal, A., *et al.* (2024). Stock prices prediction of the FMCG sector in NSE India: An artificial intelligence approach. Deep Learning Concepts in Operations Research. Auerbach Publications. ISBN 9781003433309.
11. Kundu, R., Kumar, R., Ghosh, R., Jha, R. K., *et al.* (2024). Nanotechnology: Unlocking tomorrow's potential. The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.
12. Lal, S., Chakraborty, S., Kar, S. K., Chatterjee, S., *et al.* (2024). Nanotechnology: Pioneering the future of innovation. The fascinating world of NANO. Big Book Distributor. ISBN 978-81-965714-0-5.

13. Nandi, B. (2024). Stock prices prediction of the FMCG sector in NSE India: An artificial intelligence approach. In *Deep learning concepts in operations research* (1st ed., pp. 168–179). Auerbach Publications. ISBN: 9781030433309.
14. Nemu, A. (2024). An extension of soft set and its application to decision making. *Emerging Trends in Mathematical Sciences and Computing*. ISBN 979-8-89113-751-6
15. Roy Choudhury, R. (2024). The confluence of law and literature: Exploring the role of literature in constitutional interpretation. Challenges in globalization and inclusivity in academic research (pp. 224–233). <https://doi.org/10.4018/979-3-3693-1371-8>.
16. Roy Choudhury, S., Mukhopadhyay, S., Shit, S., Sinha Roy, S., *et al.* (2024). Impact of nanotechnology on medical science: A concise overview. *The fascinating world of NANO*. Big Book Distributor. ISBN 978-81-965714-0-5.
17. Roy, S., Choudhury, S., Devi, N., Bhaumik, C., *et al.* (2024). Nanostructured plasmonic sensors for real-time detection of environmental pollutants. *The fascinating world of NANO*. Big Book Distributor. ISBN 978-81-965714-0-5.
18. Samanta, R., Samanta, S., Dey, S., Saha, *et al.* (2024). Nanotechnology: Shaping tomorrow's tech landscape. *The fascinating world of NANO*. Big Book Distributor. ISBN 978-81-965714-0-5.
19. De, S. (2024). An empirical analysis on total factor productivity growth in Indian manufacturing. *Basundhara* (Vol. 4, 2024). ISSN: 2395-1079.
20. De, S. (2024). Assessing total factor productivity growth in the Indian chemical industry: Post-reform insights. *India Today* (pp. 460–470). New Delhi: Kunal Books. ISBN: 978-93-6389-177-7.
21. De, S. (2024). Growth of output of Indian manufacturing firms in the post-reform period. In *Society and Transformation* (pp. 44–61). Society for Humanities and Social Sciences (BH College), Barpeta. ISBN: 978-93-85874-37-4.
22. Sarkar, B., Paria, D., Garang, J., Ghosh, J., *et al.* (2024). Nanotechnology: Enhancing healthcare – A quick look. *The fascinating world of NANO*. Big Book Distributor. ISBN 978-81-965714-0-5.
23. Sarkar, D. (2024). A comparative analysis of fuzzy and neutrosophic database models in handling imprecise queries. In *Mathematical Modelling for Computer Applications*. DOI: 10.1002/9781394248438.ch6. ISBN: 9781394248438

Department of Bio-Technology

1. Lahiri, D., & Nag, M. (2024). Microbial advancement towards strategic bioremediation techniques: An overview. *Toxicity of Aquatic System and Remediation*, 169-184, CRC Press, Taylor Francis.
2. Lahiri, D., & Nag, M. (2024). *Systems Biology Approaches: Prevention, Diagnosis, and Understanding Mechanisms of Complex Diseases*. Springer. ISBN 978-981-99-9461-8
3. Lahiri, D., & Nag, M. (2024). *Systems Biology Approach in Understanding Mitochondrial Disease* Springer Nature 2024, ISBN 978-981-99-9461-8
4. Lahiri, D., & Nag, M. (2024). Cross-talk of signalling molecules between microorganisms and plants. In *Microbiome and nano-cross-talk* (pp. 211–229) <https://doi.org/10.1016/B978-0-443-18822-0.00010-4>.
5. Talukder, P. (2024). *Exploring medical biotechnology – in vivo, in vitro, in silico: Biotechnology from labs to clinics and basic to advanced* (1st ed.). CRC Press. ISBN 9781032295558

Department of Computer Science and Engineering

1. Dhar, S. (2024). A survey on domain of application of recommender system. In *Modern Trends in Machine Learning: Issues and Challenges*. Wiley.
2. Dhal, P., Jha, P. K., Kumar, P., & Pradhan, B. (2024). Binary PSO based optimization approach for the image classification of mechanical tools. In *Futuristic Trends in Mechanical Engineering Volume 3 Book 7, IIP Series, Volume 3* (pp. 1–10). <https://doi.org/10.58532/V3BFME7P1CH1>
3. Ganguly, A., Sarkar, A., Ghosh, A., Bhowmick, P., et al. (2024). Application of feedback linearization in adaptive controller design. In M. Pal, J. M. Guerrero, P. Siano, D. Das, & S. Chowdhuri (Eds.), *Innovations in Energy Management and Renewable Resources. Lecture Notes in Electrical Engineering*, vol 1239. Springer. https://doi.org/10.1007/978-981-97-6390-0_10

Department of CST & CSIT

1. Chakraborty, M., (2024). A Review on SML Based Diabetic patient Classification and Prediction for Healthcare domain. In Advancement of Intelligent Computational Methods and Technologies, Taylor & Francis, CRC Press.
2. Ghosh, A., Mukhopadhyay, I., & Chakraborty, S. (2024). Adaptive Authentication Open Banking Customer Consents in Interdisciplinary Research in Technology and Management, Taylor & Francis, CRC Press.
3. Mukherjee, S., (2024). Machine Learning in Medical Imaging: A Comprehensive Study. In Advances in Technological Innovations in Higher Education: Theory and Practices. CRC Press- Taylor & Francis.
4. Mukherjee, S., (2024). Speech Emotion Analyzer Using Deep Learning. In Advances in Technological Innovations in Higher Education: Theory and Practices. CRC Press- Taylor & Francis, March 2024.
5. Sarkar, S., Chakraborty, S., Bhowmik, L., Paul, R., *et al.* (2024). Classification of Breast Cancer Using Deep CNN: A Comparative Analysis. 10.1007/978-981-97-3485-6_20.

Department of Electronics and Communication Engineering

1. Ghosh, S., & Selokar, A., N. (2024). Development of a Cost-Effective Single Lead ECG Data Acquisition Pipeline for Monitoring of Arrhythmia. In Intelligent Applications of Bioinformatics and Healthcare: A Practical Approach. CRC Press.
2. Ghosh, D. (2024). Machine learning in medical imaging: A comprehensive study. In Machine Learning in Medical Imaging (ISBN 9781032453804). CRC Press.

Department of Electrical Engineering

1. Ghosh, A. (2024). Application of feedback linearization in designing an adaptive control scheme. In Innovations in energy management and renewable resources. Springer.

Department of Computer Science and Engineering (IOT, CS & BT)

1. Nandi, A., Ghosh, A., & Das, A. K. (2024). Explainable AI for fuel and energy consumption: A meta-deep learning approach for sustainable vehicle analytics. In *Internet of Vehicles: Scope and Application of Artificial Intelligence-Based Technologies*. Springer Transactions on Computer Systems and Networks.
2. Roy, S. (2024). Blockchain technology in the global supply chain: A theoretical overview and security issues. In *Contemporary Issues in International Trade* (pp. 195–208). Emerald Publishing Limited.
3. Roy, S. (2024). A study of the future generation of smart cities using green technology. In *Green Computing for Sustainable Smart Cities* (1st ed.). CRC Press.
4. Sarker, P., & Roy, S. (2024). An intervention of tele-oncology in palliative care: A critical review and analysis of remote monitoring, cancer diagnosis, and treatment. In *Intelligent Applications of Bioinformatics: A Practical Approach*. Apple Academic Press.

Department of Computer Application

1. Mukherjee, A. (2024, November). Machine learning and artificial intelligence for detecting cyber security threats in IoT environment. In Natural language processing for software engineering methodology. Wiley. ISBN 9781394272433

Department of Law

1. Chakraborty, D., & Chattopadhyay, S. (2024). Uniform Civil Code of India: Proposed blueprint for one nation one law. In Human Rights and the Uniform Civil Code. ISBN: 9788119121564
2. Chattopadhyay, S. (2024). Efficacy of laws relating to the protection of data and the right to privacy within the legal framework of India. In Festschrift on New Horizons of Law & Justice. Department of Law, Central University of Kerala. ISBN: 978-93-340-2161-5
3. Chattopadhyay, S. (2024). Exploring defence mechanisms to counter cyber-crime against elderly people in India. In Information Technology: Cyber Security and Artificial Intelligence Laws and Perspectives. Satyam Law International. ISBN: 9788119119554
4. Chattopadhyay, S. (2024). Inconsistency in crime prevention amidst the emerging technological trend in crime prevention and intervention: A study in Indian perspective. In Exploring the Depths of Criminology in the Contemporary Era. Walnut Publication. ISBN: 978-93-5911-251-0
5. Chattopadhyay, S. (2024). The journey of the doctrine of basic structure under Indian constitutional scheme: An overview. In Doctrine of Basic Structure: Revisiting Keshavananda Bharati Verdict on its 50th Anniversary. National Law University and Judicial Academy, Assam. ISBN: 978-81-954276-8-0
6. Jana, A. (2024). The AI supercharge for the banking system. In Smart Financial Market: AI and the Future of Banking. Naovina Development of Intellectual Property and Research Foundation. ISBN: 978-81-975308-8-3
7. Kundu, I. (2024). The impact of cybercrime on society and measures to prevent it. In LEX-MANTHAN (Vol. 47). ISBN: 978-81-966937-3-2
8. Kundu, I., & Chowdhury, R. (2024). Mental illness is the first knock of crime. In The Legal Chronicles (January Issue). ISBN: 978-93-6128-618-6
9. Roy, S., Bhattacharya, A., Chakraborty, D., & Chattopadhyay, S. (2024). Text and discourse study on criminal law. In Research Trends in Language, Literature & Linguistics (Vol. 3, Book 2, pp. 119–129).
10. Sett, S. (2024). Inconsistency in crime prevention amidst the emerging technological trend in crime prevention and intervention: A study in Indian perspective. In Exploring the Depths of Criminology in the Contemporary Era. Walnut Publication. ISBN: 978-93-5911-251-0
11. Sett, S., & Chatterjee, A. (2024). Tiger of the Ganges: A comprehensive and legal study on conservation initiatives of Ganges River dolphins. In LEX-MANTHAN (Vol. 48). ISBN: 978-81-966937-9-4

Book Details

Sl. No.	Author details	Title of the Book	Publisher	ISBN	Date
1.	Prof. Dr. Kamakhya Prasad Ghatak	Quantum Capacitance in Quantized Transistors	World Scientific Publishing Company	978-981-12-7939-3	March, 2024
2.	Dr. Tanay Pramanik, Dr. Sayantan Sil	The Fascinating World of NANO	Big Book Distributor	978-81-965714-0-5	April, 2024
3.	Pratik Talukder, Ritesh Tandon, Uttam Pal	Exploring Medical Biotechnology – in vivo, in vitro, in silico: Biotechnology from Labs to Clinics and Basic to Advanced (1st ed.)	CRC Press	9781003302131	April, 2024
4.	Sanket Joshi, Rina Rani Ray, Moupriya Nag, Dibyajit Lahiri	Systems Biology Approaches: Prevention, Diagnosis, and Understanding Mechanisms of Complex Diseases	Springer Singapore	9819994616	May, 2024
5.	Susmita Mukherjee, Sanket J. Joshi, Sonali Paul, Rita Kundu	Toxicity of Aquatic System and Remediation: The Contemporary Issues	Taylor and Francis	9781003297901	March, 2024
6.	Aparajita Mukherjee	Design and Analysis of Algorithms	SIPH	978-93-6132-951-7	September, 2024
7.	Aparajita Mukherjee	Theory of Computation	SIPH	978-93-6674-247-2	September, 2024
8.	Prof. (Dr.) Shambhu Prasad Chakrabarty	Inclusive Wealth Generation Through IP Commercialization	Thomson Reuters	987-93-95696-57-9	January, 2024
9.	Prof. (Dr.) Shambhu Prasad Chakrabarty	Traditional Knowledge and Climate Change	Springer Nature	978-981-99-8829-7	March, 2024

Summary Table

Publication of Book Chapters

Department	July 2020 to December 2023 (Cumulative)	January 2024 to December 2024	July 2020 to December 2024(Cumulative)
BSH	47	23	70
BT	31	5	36
CST & CSIT	16	5	21
ECE	18	2	20
CSE	18	3	21
EE	0	1	1
CSE (IOT, CS, BT)	1	4	5
CSE(AI&ML)	2	0	2
CA	6	1	7
LAW	10	11	21
Total	155	55	210

Summary Table

Publication of Books

Department	July 2020 to December 2023 (Cumulative)	January 2024 to December 2024	July 2020 to December 2024(Cumulative)
BSH	2	2	4
BT	5	3	8
CST & CSIT	0	0	0
ECE	0	0	0
CSE	0	0	0
EE	0	0	0
CSE (IOT, CS, BT)	0	0	0
CSE(AI&ML)	0	0	0
CA	0	2	2
LAW	2	2	4
Total	9	9	18

**Departmental
Journals
&
Magazines**

Departmental Journals

Department of Bio Technology

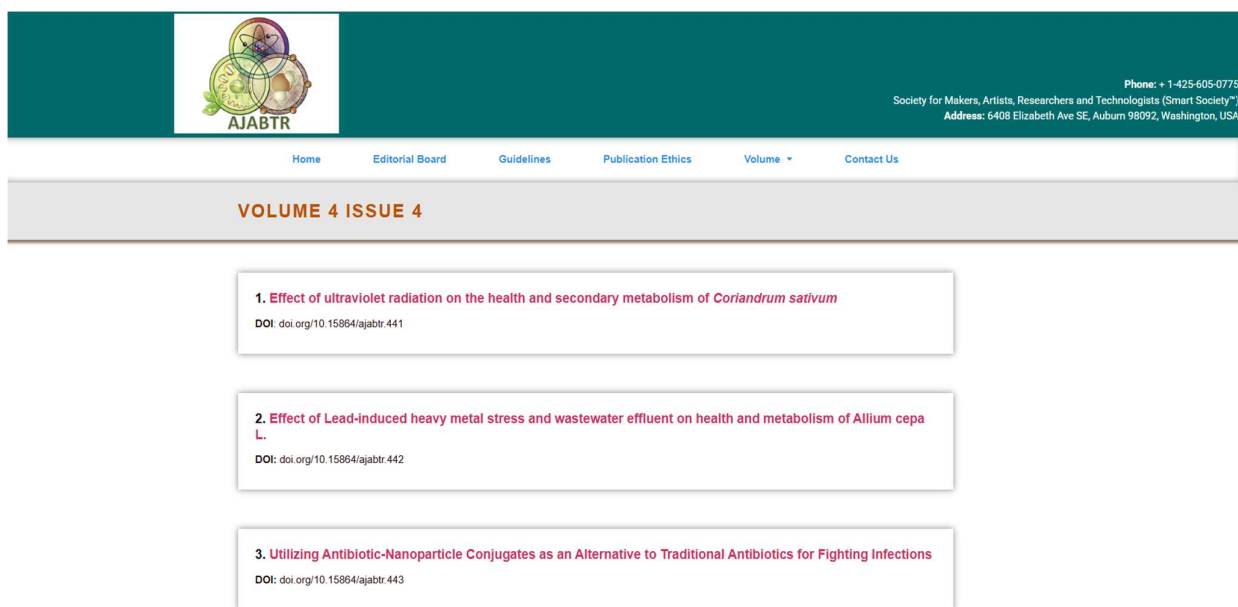
1. **American Journal of Applied Bio-Technology Research (AJABTR), International Journal, published quarterly.**

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Dr. Satyajit Chakrabarti

Pro-Vice Chancellor

University of Engineering & Management, Kolkata, India



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1. **Effect of ultraviolet radiation on the health and secondary metabolism of *Coriandrum sativum***
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2. **Effect of Lead-induced heavy metal stress and wastewater effluent on health and metabolism of *Allium cepa* L.**
DOI: doi.org/10.15864/ajabtr.442
3. **Utilizing Antibiotic-Nanoparticle Conjugates as an Alternative to Traditional Antibiotics for Fighting Infections**
DOI: doi.org/10.15864/ajabtr.443

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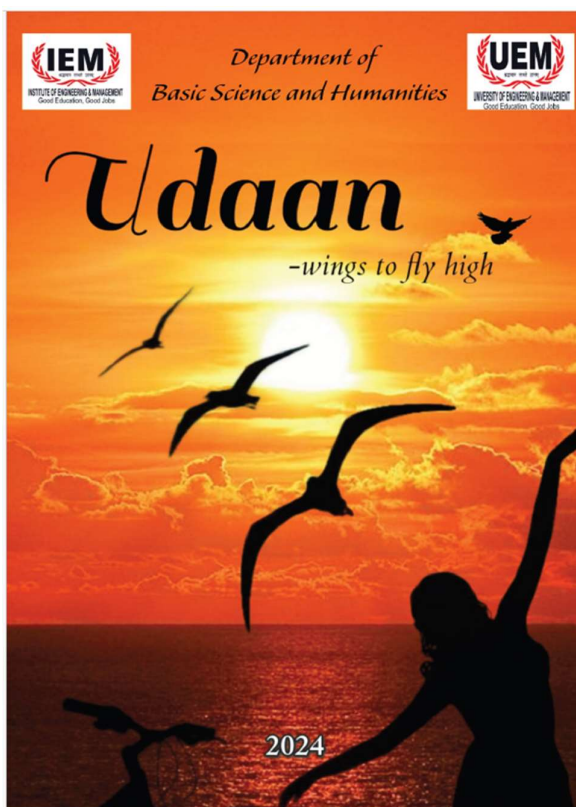
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Department of Bio-Technology

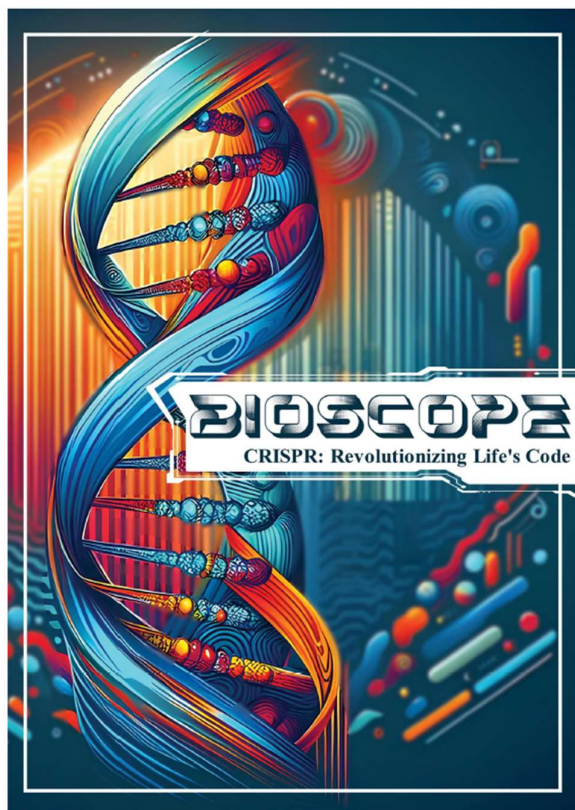
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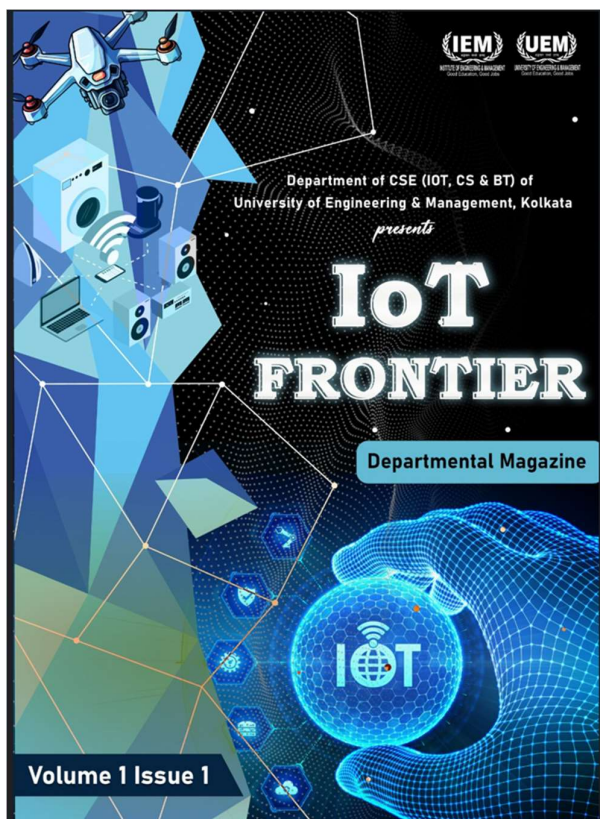
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PhD Candidates

(2015 Onwards)

Ph.D. Enrolment Details

Sl No.	Name of the Scholar	Discipline	Enrollment Year	Status
1	Sayantika Bose Chakraborty	Humanities	2015	Awarded (27.01.2021)
2	Jyoti Sekhar Banerjee	ECE	2015	Awarded (27.01.2021)
3	Koushik Sarkar	ECE	2015	Awarded (08.12.2022)
4	Partha Sarathi Goswami	CSE	2015	Awarded (11.02.2022)
5	Arpita Chakraborty	ECE	2015	Awarded (17.02.2022)
6	Rooprekha Baksi Maiti	Management	2015	Awarded (30.06.2022)
7	Pritha Ghosh	Management	2015	Pursuing
8	Amit Kumar Das	ECE	2015	Pursuing
9	Manan Gupta	Management	2015	Pursuing
10	Subhro Chakraborty	ECE	2015	Pursuing
11	Surajit Sur	ECE	2015	Pursuing
12	Paulami Niyogi	Management	2015	Pursuing
13	Sadhu Prasad Kar	ECE	2015	Pursuing
14	Kartick Dey	Science	2016	Awarded (27.01.2021)
15	Ananjan Maiti	CSE	2016	Awarded (11.02.2022)
16	Anindita Chatterjee	CSE	2016	Pursuing
17	Gautam Ghosh	ECE	2016	Pursuing
18	Rajesh Prasad Sarkar	CSE	2016	Pursuing
19	Gora Chakrabarti	Mechanical	2016	Pursuing
20	Debasish Som	Management	2016	Pursuing
21	Anindya Ghosh	ECE	2016	Pursuing
22	Subhranil Das	EE	2016	Pursuing
23	Sumitava Talukdar	Management	2016	Pursuing
24	Pratik Ghose	CSE	2016	Pursuing

25	Murari Shaw	ECE	2017	Awarded (11.02.2022)
26	Sanjoy Laha	Management	2017	Pursuing
27	Umama Haque	Management	2017	Pursuing
28	Subhabrata Sengupta	CSE	2017	Pursuing
29	Ratna Chakraborty	CSE	2017	Awarded (22.08.2022)
30	Shouvik Chattopadhyay	Management	2017	Pursuing
31	Avijit Bose	Management	2017	Pursuing
32	Abhijit Kargupta	Physics	2017	Pursuing
33	Prabir Das	ECE	2017	Awarded (17.10.2022)
34	Mitali Sengupta	Management	2017	Awarded (12.12.2022)
35	Amrit Raj	Mechanical	2017	Pursuing
36	Arpita Mazumdar	CSE	2017	Pursuing
37	Ashutosh Rai	Management	2017	Pursuing
38	Debkumar Chowdhury	CSE	2017	Pursuing
39	Dipankar Das	Management	2017	Awarded (27.02.2024)
40	Pampi Majumder	Basic Science	2017	Pursuing
41	Pritha Das	Management	2017	Pursuing
42	Rituparna Pal	CSE	2017	Pursuing
43	Samik Datta	Management	2017	Pursuing
44	Sayan Majumder	CSE	2017	Pursuing
45	Snehashish Bhattacharjee	CSE	2017	Awarded (11.03.2024)
46	Shubhadip Banerjee	Management	2017	Pursuing
47	Sudip Kumar Palit	CSE	2017	Pursuing
48	Sudipto Kumar Mondal	CSE	2017	Pursuing
49	Saptaparna Ghosh	Management	2017	Pursuing
50	Nabanita Das	CSE	2017	Awarded (20.11.2024)
51	Rajkumar Dasgupta	Management	2017	Pursuing

52	Debashis Majumdar	ECE	2017	Pursuing
53	Sujata Ghatak	CSE	2017	Pursuing
54	Arindam Ghosh	Mechanical	2017	Pursuing
55	Arunava Mukhopadhyay	ECE	2017	Pursuing
56	Tapan Kumar Hazra	CSE	2017	Pursuing
57	Jayanta Bhattacharya	CSE	2017	Pursuing
58	Sutapa Rayadhikary	Management	2017	Pursuing
59	Tapan Kumar Rana	ECE	2017	Pursuing
60	Suman Kumar Das	CSE	2017	Pursuing
61	Sayantan Rana	Management	2017	Pursuing
62	Abhilasha Raha	Management	2017	Pursuing
63	Paramita Mitra	CSE	2017	Pursuing
64	Pradip Kumar Majumder	CSE	2017	Pursuing
65	Panchali Bhattacharya	CSE	2017	Pursuing
66	Santonu Ghosh	CSE	2017	Pursuing
67	Tristup Saha	Management	2017	Pursuing
68	Suman Ghosh	CSE	2017	Pursuing
69	Sayantan Sarkar	Management	2017	Pursuing
70	Suhaditya Guha	Management	2017	Pursuing
71	Jai Kishor Prasad	Management	2017	Pursuing
72	Ujwal Kakkad	Management	2019	Pursuing
73	Abir Ghosh	Management	2019	Pursuing
74	Sumanta Das	CSE	2019	Pursuing
75	Bibekananda Banerjee	Management	2019	Pursuing
76	S.K.Bala Siddhartha	Management	2019	Pursuing
77	Ajay Kumar Ganguly	Management	2019	Pursuing
78	Arunava Dalal	Management	2020	Awarded (04.10.2024)
79	Anshulika Sahay	CSE	2020	Pursuing
80	Pratim Chatterjee	Management	2020	Pursuing
81	Pragati Sureka	Management	2020	Pursuing
82	Raja Basak	ECE	2020	Pursuing

83	Deepashree Dhar	Humanities (English)	2020	Pursuing
84	Sushovan Chaudhury	CSE	2020	Pursuing
85	Suman Bose	Management	2020	Pursuing
86	Kaushik Kumar Ganguly	Management	2020	Pursuing
87	Biswadeb Bandyopadhyay	CSE	2020	Pursuing
88	Arpan Ganguly	Management	2020	Pursuing
89	Debottama Roy	English	2020	Pursuing
90	Dipannita Chatterjee	Management	2020	Pursuing
91	Sourav Banerjee	Management	2020	Pursuing
92	Somnath Banerjee	Management	2020	Pursuing
93	Peanaky Mridha	Management	2020	Pursuing
94	Karunamayee Dey	ECE	2020	Pursuing
95	Sanghamitra Chakrabarti	Management	2020	Pursuing
96	Sauharda Nandi	Management	2020	Pursuing
97	Koushik Chatterjee	CSE	2020	Pursuing
98	Sohom Chakraborty	ECE	2020	Pursuing
99	Kajari Sur	ECE	2020	Pursuing
100	Sumit Bal	Management	2020	Pursuing
101	Poulami Ghosh	CSE	2020	Pursuing
102	Shyamsundar Kar	Electrical	2020	Pursuing
103	Abhishikta Bhattacharjee	English	2020	Pursuing
104	Avijit Nemu	Science (Mathematics)	2020	Pursuing
105	Mousumi Paul	Humanities (English)	2020	Pursuing
106	Anannya Das	CSE	2020	Pursuing
107	Partha Sarathi Paul	CSE	2020	Pursuing
108	Riya Barui	Humanities (English)	2020	Pursuing
109	Anupam Bhattacharya	Management	2020	Pursuing
110	Ria Roy Choudhury	Humanities (English)	2020	Pursuing
111	Varsha Poddar	CSE	2020	Pursuing

112	Md Mahde Hassan	Management	2020	Pursuing
113	Piyali Banerjee	Management	2020	Pursuing
114	Somnath Hazra	Management	2020	Pursuing
115	Srestha Sadhu	CSE	2020	Pursuing
116	Subindu Saha	ECE	2020	Pursuing
117	Suchana Roy	Humanities	2020	Pursuing
118	Prakash Banerjee	ECE	2020	Pursuing
119	Indranil Basu	CSE	2020	Pursuing
120	Amit Kumar Das	CSE	2020	Pursuing
121	Kaustuv Bhattacharjee	CSE	2020	Pursuing
122	Shakeeb Rehan	English	2020	Pursuing
123	Sayan Roy	CSE	2020	Pursuing
124	Prarthana Banerjee	Management	2020	Pursuing
125	Soham Nandi Ray	ECE	2020	Pursuing
126	Souvik Ghosh	ECE	2020	Pursuing
127	Supratik Sinha	Management	2020	Pursuing
128	Nayantara Mitra	Humanities	2020	Pursuing
129	Ankan Bhowmik	CSE	2020	Pursuing
130	Devjyoti Das	Management	2020	Pursuing
131	Krishnadas Banerjee	CSE	2020	Pursuing
132	Sumit Anand	CSE	2020	Pursuing
133	Joysri Datta	Management	2020	Pursuing
134	Susmita Chaki	CSE	2020	Pursuing
135	Debanjana Ghosh	ECE	2020	Pursuing
136	Subhasri Roy	Management	2020	Pursuing
137	Soumi Saha	ECE	2020	Pursuing
138	Rupsa Sen	CSE	2020	Pursuing
139	Bavrabi Ghosh	CSE	2020	Pursuing
140	Soma Bhattacharya	ECE	2020	Pursuing
141	Aindrila Chakraborty	Management	2020	Pursuing
142	Dibakar Roy Chodhury	Science (Chemistry)	2020	Pursuing
143	Madhurima Chakraborty	Humanities	2020	Pursuing

144	Akanksha Tiwari	CSE	2020	Pursuing
145	Sumanta Chakraborty	CSE	2020	Pursuing
146	Indranil Banerjee	ECE	2020	Pursuing
147	Ajanta Ghosh	Management	2020	Pursuing
148	Lavanya Deepika Tigga	Management	2020	Pursuing
149	Sohini Mukherjee	CSE	2020	Pursuing
150	Titly Dhar	Management	2020	Pursuing
151	Doyel Sarkar	Science (Mathematics)	2020	Pursuing
152	Amlan Pratim Hazarika	CSE	2020	Pursuing
153	Ankana Ghosh Dastidar	Humanities (English)	2020	Pursuing
154	Sumita Ghosh	CSE	2020	Pursuing
155	Subhojit Paul	Electrical	2020	Pursuing
156	Rajat Pathak	Humanities	2020	Pursuing
157	Tapas Kumar Das	Mechanical	2020	Pursuing
158	Satabdi Poddar	Civil	2020	Pursuing
159	Snehasis Pal	ECE	2020	Pursuing
160	Sanoj Divakar	Mechanical	2020	Pursuing
161	Gautam Purkayastha	CSE	2021	Pursuing
162	Patralika Bhattacharjya	Humanities	2021	Pursuing
163	Ankur Biswas	CSE	2021	Pursuing
164	Aparajita Mukherjee	CSE	2021	Pursuing
165	Debdoot Mukherjee	Humanities (English)	2021	Pursuing
166	Shibani Mishra	Management	2021	Pursuing
167	Suchismita Tagore Mukherjee	Humanities	2021	Pursuing
168	Shreejita Mukherjee	CSE	2021	Pursuing
169	Manjur Alam	Management	2021	Pursuing
170	Saurabh Banerjee	CSE	2021	Pursuing
171	Abhijit Mallick	Engineering	2021	Pursuing
172	Pinaki Ghosh	Management	2021	Pursuing
173	Md Mahfuzur Rahman Mullick	Management	2021	Pursuing
174	Riya Chakraborty	Management	2021	Pursuing

175	Naveen Kumar Garika	CSE	2021	Pursuing
176	Sayantani Choudhuri	ECE	2021	Pursuing
177	Koustav Bose	Management	2021	Pursuing
178	Suman Barman	Management	2021	Pursuing
179	Suparna Maitra	Humanities	2021	Pursuing
180	Souvik Mitra	Management	2021	Pursuing
181	Nandini Majumdar	Humanities	2021	Pursuing
182	Susanto Karmokar	ECE	2021	Pursuing
183	Satish Singh Mekale	CSE	2021	Pursuing
184	Reshmi Bose	Science	2021	Pursuing
185	Jayanta Ghosh	ECE	2021	Pursuing
186	Soumen Chakraborty	CSE	2021	Pursuing
187	Shreyasi Datta	Humanities	2021	Pursuing
188	Anjan Samanta	Science	2021	Pursuing
189	Suchetna Mazumder	Humanities	2021	Pursuing
190	Ushashi Chowdhury	CSE	2021	Pursuing
191	Priya Ranjan Ojha	Humanities	2022	Pursuing
192	Paramita Saha	Management	2022	Pursuing
193	Kalyanbrata Ghosh	Management	2022	Pursuing
194	Indrajit Mukherjee	Management	2022	Pursuing
195	Himadri Das	Management	2022	Pursuing
196	Rosalin Mukherjee	Management	2022	Pursuing
197	Rangin Lahiri	Management	2022	Pursuing
198	Tufan saha	CSE	2022	Pursuing
199	Subhashish Bandhopadhyay	MANAGEMENT	2022	Pursuing
200	Anushua Dutta Roy	Management	2022	Pursuing
201	Pritam Sarkar	Engineering	2022	Pursuing
202	Puja Acharjee	Management	2022	Pursuing
203	Debarshi Bandopadhyay	CSE	2022	Pursuing
204	Sohom Goswami	CSE	2022	Pursuing
205	Rajyashree Chandra	CSE	2022	Pursuing
206	Pradipta Sarkar	CSE	2022	Pursuing
207	Ajitesh Ghosh	CSE	2022	Pursuing

208	Sudipa Biswas	CSE	2022	Pursuing
209	Arnab Basu (FULL TIME SCHOLAR)	Management	2022	Pursuing
210	Rituparna Saha (FULL TIME SCHOLAR)	Science	2022	Pursuing
211	Manjita Dey	Management	2022	Pursuing
212	Madhurima Sen (FULL TIME SCHOLAR)	Science	2022	Pursuing
213	Sukanya Basu	CSE	2022	Pursuing
214	Rosalin Nath (Full Time Scholar)	CSE	2022	Pursuing
215	Supriya Mondal (Full Time Scholar)	CSE	2022	Pursuing
216	Sohom Kanti Bishnu	ECE	2023	Pursuing
217	Manab Kumar Das	CSE	2023	Pursuing
218	Manabendra Nath Kar	CSE	2023	Pursuing
219	Pulak Baral	CSE	2023	Pursuing
220	Piyali Mukherjee	Law	2023	Pursuing
221	Monalia Sen	Management	2023	Pursuing
222	Swarup Kayal	CSE+EE	2023	Pursuing
223	ANJIL NATH	CSE	2023	Pursuing
224	Arnab Sengupta	Biotech	2023	Pursuing
225	Sunaina Jhavar	Biotech	2023	Pursuing
226	Pampa Sarakar	Management	2023	Pursuing
227	Partha Das	Management	2023	Pursuing
228	Saurav Sarkar	Management	2023	Pursuing
229	Subhadeep Das	Management	2023	Pursuing
230	Bandita Mukherjee	Management	2023	Pursuing
231	Joy Halder	Management	2023	Pursuing
232	Sayandip Roy	Management	2023	Pursuing
233	Amitava Podder	CSE	2023	Pursuing
234	Ayan Ganguly	Law	2023	Pursuing
235	Sukanya Chatterjee	Management	2023	Pursuing
236	Raj Kiran Syam	Management	2023	Pursuing
237	Sayani Ghosh	Management	2023	Pursuing

238	Pritha Maiti	Humanities (English)	2023	Pursuing
239	Suvodeep Ray	Management	2023	Pursuing
240	Suvayan Biswas	Management	2023	Pursuing
241	Poulami Basu	Management	2023	Pursuing
242	Sayan Karmakar	CSE	2023	Pursuing
243	Santanu Dam	CSE	2023	Pursuing
244	Sajal Das	Law	2023	Pursuing
245	Ankita Mandal	CSE	2023	Pursuing
246	Firoza Khatoon Mallik	CSE	2023	Pursuing
247	Manjima Saha	CSE	2023	Pursuing
248	Chandrani Paul	Management	2023	Pursuing
249	Rajib Chattopadhyay	Law	2023	Pursuing
250	Sougata Banerjee	Management	2023	Pursuing
251	Rajibul Islam	Humanities (English)	2023	Pursuing
252	Ranjan Banerjee	CSE	2023	Pursuing
253	Ria Roy	Management	2023	Pursuing
254	Dwaipayan Gupta	Mechanical	2023	Pursuing
255	Anwesha Sahoo	Management	2023	Pursuing
256	Supatra Ganguly	Management	2023	Pursuing
257	Jhimlee Adhikari Ray	CSE	2023	Pursuing
258	Seshardri Sekhar Mukherjee	Mechanical	2023	Pursuing
259	Niladri Sekhar Paul	CSE	2023	Pursuing
260	Jayanti Mahata	CSE	2023	Pursuing
261	Susmita Sarkar	CSE	2023	Pursuing
262	Sumit Saha	ECE	2023	Pursuing
263	Susmita Bhakat	English	2023	Pursuing
264	Shreejeeta Kargupta	English	2023	Pursuing
265	Aniruddha Das	CSE	2023	Pursuing
266	Sudipta Deb	Management	2023	Pursuing
267	Kamalika Bhowal	CSE	2023	Pursuing
268	Purbasha Mukherjee	Law	2023	Pursuing

269	Mr.Amit Das	Management	2023	Pursuing
270	Shubhra Prakash Dutta	CSE	2023	Pursuing
271	Gourab Chakraborty	Mechanical	2023	Pursuing
272	Munshi Rasidul Islam	Mechanical	2023	Pursuing
273	Sanjoy Debnath	Mechanical	2023	Pursuing
274	Arunima Nandy	Management	2023	Pursuing
275	Anubhav Dutta	Management	2024	Pursuing
276	Puja Mowar Banik	ECE	2024	Pursuing
277	Binoy Debnath	CSE	2024	Pursuing
278	Mrityunjoy Panday	CSE	2024	Pursuing
279	Srijita Kabiraj	Management	2024	Pursuing
280	Proshanta Sarkar	CSE	2024	Pursuing
281	Debasish Dutta	Mechanical	2024	Pursuing
282	Saikat Mazumder	Bio-Tech (Engineering)	2024	Pursuing
283	Biswadeep Bhattacharjee	Management	2024	Pursuing
284	Subham Chakraborty	CSE	2024	Pursuing
285	Toufique Ahammad Gazi	CSE	2024	Pursuing
286	Dibyendu Mitra	Management	2024	Pursuing
287	Santi Ranjan Dandapat	CSE	2024	Pursuing
288	Debolina Brahma	ECE	2024	Pursuing
289	Abhinandita Ghosh	ECE	2024	Pursuing
290	Doyel Mukherjee Prodhan	Management	2024	Pursuing
291	Debashrita Majumder (Full Time)	Bio-Tech	2024	Pursuing
292	Kumar Rishav Dev	Management	2024	Pursuing
293	Bijoyini Bagchi	CSE	2024	Pursuing
294	Abhishake Roy	Law	2024	Pursuing
295	Sucheta Chandra	ECE	2024	Pursuing
296	Bavrabi Ghosh	CSE	2024	Pursuing
297	Debasmita Guha Biswas	CSE	2024	Pursuing
298	Sayantan Das	CSE	2024	Pursuing
299	Arindam Roy	CSE	2024	Pursuing
300	Ujjwal Basu	Management	2024	Pursuing

301	Sayan Paul	Physics	2024	Pursuing
302	Hamid Raja	ECE	2024	Pursuing
303	Bipasha Guha Roy	CSE	2024	Pursuing
304	Arundhati Ray	Management	2024	Pursuing
305	Arijit Dey Sarkar	Management	2024	Pursuing
306	Debkinkar Das	Humanities (English)	2024	Pursuing
307	Dipankar Datta	Management	2024	Pursuing
308	Debajyoti Sengupta	Management	2024	Pursuing
309	Somnath Gorai	ECE	2024	Pursuing
310	Purbita Chatterjee	CSE	2024	Pursuing
311	Soumik Roy	Management	2024	Pursuing
312	Peu Das	Management (Economics)	2024	Pursuing
313	Priyanka Singh	Management	2024	Pursuing
314	Nirban Kumar Saha	EE	2024	Pursuing
315	Isita Chandra	ECE	2024	Pursuing
316	Victor Nayak	LAW	2024	Pursuing
317	Dyutish Chatterjee	Management	2024	Pursuing
318	Pradyumna Kumar Jha	Management	2024	Pursuing
319	Shuvendu Das	CSE	2024	Pursuing
320	Sumit Das	Management	2024	Pursuing
321	Aniruddha Mukherjee	Management	2024	Pursuing
322	Sulagna Saha	Humanities	2024	Pursuing
323	Atanu Chakraborty	Management	2024	Pursuing
324	Madhurima Banerjee	Science (Computer Science)	2024	Pursuing
325	Souvik Paul	CSE	2024	Pursuing
326	Atrayee Chatterjee	CSE	2024	Pursuing
327	Pijush Kanti Goswami	Management	2024	Pursuing
328	Ruchira Dan	Science (Bio-Tech)	2024	Pursuing
329	Amit Verma	LAW	2024	Pursuing
330	Niyasha Patra	ENGINEERING (IT)	2024	Pursuing

331	Rakesh Sharma	Management	2024	Pursuing
332	Bishnu Pada Dey	Management	2024	Pursuing
333	Rabin Singha	Management	2024	Pursuing
334	Sayanti Chandra	BIO-TECH (Engineering)	2024	Pursuing
335	Sudipta Das	Management	2024	Pursuing
336	Aniruddha Mukherjee	Bio-Science	2024	Pursuing
337	Ashrity Shaw	Management	2024	Pursuing
338	Sneha Biswas	Management	2024	Pursuing
339	Kaustav Dutta	CSE	2024	Pursuing
340	Debabrata Bhattacharya	CSE	2024	Pursuing
341	Sreejata Sen Sarma	Science (Mathematics)	2024	Pursuing
342	Deebye Mukherjee	Management	2024	Pursuing
343	Upama Biswas	Management	2024	Pursuing
344	Naveen Kumar Gupta	Mechanical	2024	Pursuing
345	Hiranmoy Samanta	Mechanical	2024	Pursuing
346	Ayantika Das	CSE	2024	Pursuing
347	Tridib Chakraborty	IT	2024	Pursuing
348	Shamik Bandyopadhyay	Management	2024	Pursuing
349	Mainak Banerjee	Management	2024	Pursuing
350	Mahuya Maity	ECE	2024	Pursuing
351	Ankit Halder	Management	2024	Pursuing
352	Deepika Sayaji Dalavi	CSE	2024	Pursuing
353	Debasree Saha	Management	2024	Pursuing
354	Pradip Ghoshal	Management	2024	Pursuing
355	Sayonee Chatterjee	Humanities	2024	Pursuing
356	Amit Kumar	CSE	2024	Pursuing
357	Pintu Kumar Jana	Science (Mathematics)	2024	Pursuing
358	Jaydeep Chakraborty	CSE	2024	Pursuing
359	Piyali Basu Majumder	Science (Bio-Tech)	2024	Pursuing
360	Hillol Ghosh	CSE	2024	Pursuing
361	Rajrupa Ghosh	Science (Bio-Tech)	2024	Pursuing

362	Subhadip Kowar	CSE	2024	Pursuing
363	Ramita Sengupta	EE	2024	Pursuing
364	Dwaipayan Bhounick	Science (Computer Science)	2024	Pursuing
365	Jeevandeep Brahma	Mechanical	2024	Pursuing
366	Anupama Sen	CSE	2024	Pursuing
367	Sourav Chakraborty	Management	2024	Pursuing
368	Ritankar Mahapatra	Management	2024	Pursuing
369	Swagata Sinha	CSE	2024	Pursuing
370	Sreeparna Guha	Science (Computer Science)	2024	Pursuing
371	Mriganka Dutta	Management	2024	Pursuing
372	Nandini Kundu	Management	2024	Pursuing
373	Avijit Chakraborty	Bio -Tech Engineering	2024	Pursuing
374	Md Jasimuddin	Science (Mathematics)	2024	Pursuing
375	Prasenjit Dey	Science (Mathematics)	2024	Pursuing
376	Raja Khara	CSE	2024	Pursuing
377	Triranga Deka	Management	2024	Pursuing
378	Purbali Sengupta	Humanities (English)	2024	Pursuing

Summary Table

Ph.D. Candidates	January 2015 to December 2023	January 2015 to December 2023	January 2015 to December 2024
Pursuing	274	104	378
Awarded	15	4	19

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**Publication of
PhD scholars
(January 2024 – December 2024)**

List of Publications

1. Bedi, P., Bose, R., & Pramanik, T. (2024). Recent advancement in the green synthesis of bis(indolyl) methane via one-pot multicomponent condensation strategy: A mini review. *Oriental Journal of Chemistry*, 40(5), 1207.
2. Bedi, P., Bose, R., & Pramanik, T. (2024). Synthetic methodologies to access bioactive bis-coumarin scaffold: A recent progress. *Zeitschrift für Physikalische Chemie – International Journal of Research in Physical Chemistry and Chemical Physics*.
3. Ghosh, G., & Ganguly, R. (2023). Performance of AI techniques on finding switching angles for SHEPWM inverter—A review. In *2023 International Conference on Intelligent Electronics and Measurements Technology (IEMENTech)*. IEEE. <https://doi.org/10.1109/IEMENTech60402.2023.10423463>
4. Kargupta, A., Dutta, K., & Rana, S. (2024). Spectrophotometric and LC-MS analysis of Sunset Yellow and azo dyes for precise characterization. *Journal for Basic Sciences*, 24, 447–470.
5. Kargupta, A., Dutta, K., Roychoudhury, D., Banerjee, S., Rana, S., & Talapatra, S. N. (2024, July). Electrochemical detection of food-based azo dyes using graphene oxide/reduced graphene oxide-based nano-sensors and their toxicological impact: An overview. *International Journal of Scientific Research*, 13, 1–3.
6. Mekale, S. S., Mukherjee, C., & Chakraborty, M. (2024). Machine learning-based approaches for type 2 diabetes mellitus classification, early-stage identification and prediction. *International Journal of Science, Mathematics and Technology Learning*, 31(1), 1–6.
7. Mekale, S. S., & Chakraborty, M. (2024). A review on SML-based diabetic patient classification and prediction for healthcare domain. In *Advancement of Intelligent Computational Methods and Technologies*. CRC Press. <https://doi.org/10.1201/9781003487906>
8. Roy Choudhury, R., & Banerjee, A. (2024). Preaching environmental advocacy: Ecocriticism and beyond. *Flumenensia*, 35(C, Special Edition).

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Summary Table

January 2015 to December 2023	January 2024 to December 2024	January 2015 to December 2024
197	8	205

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**Externally Funded Research Projects
(January, 2021 to December, 2024)**

Funded Research

Sl. No.	Project Name	Department	Funding Agency Name	Application Date	Principal Investigator	Sanctioned Amount	Status
1.	Preparing environmentally friendly non materials from environmental pollutant sand using them in green energy production	Basic Science and Humanities	TAIF University, Al Hawaiyah, UAE	24 th March, 2021	Dr. Tanay Pramanik	\$50,000.00 (USD)	Granted
2.	Noble agro-waste derived biosafe carbon nanodots for the ragnostic applications in cancer	Basic Science and Humanities	Royal Society of Chemistry UK.	14 th May, 2021	Dr. Suvadra Das	4000 pounds (Released amount = Rs. 397163/-)	Granted
3.	Elucidation of Quorum quenching efficacies of Phytocompounds from Two Medicinal Plants of Bengal (Gulancho and Kalanchoe) Tinospora spp and Kalanchoe spp against biofilm forming ESKAPE pathogens	Biotechnology	UGC-DAE-CSR	23 rd August, 2023	Dr. Dibyajit Lahiri, Dr. Moupriya Nag	Rs. 65000/- + 1 JRF	Granted
4.	Design and Development of Frequency Selective Surfaces for Mitigating Inflated Electromagnetic	Electronics & Communication Engineering	DST-SERB	11 th October, 2023	Dr. Ayan Chatterjee	Rs. 18,29,410/-	Granted

	Radiation						
5.	Development of an Eco-friendly Antimicrobial And Antibiofilm Toilet Cleanser	Biotechnology	iSTEM (DST)		Dr. Dibyajit Lahiri, Dr. Moupriya Nag	Rs 1,00,000/-	Granted

Summary Table

Externally Funded Research Projects	January 2015 to December 2023	January 2024 to December 2024
Granted	5	0
Total		5

**Grant In Aid
Research
Projects Funded
by IEM Trust
(January 2024 to December
2024)**

Grant-In-Aid Projects:

Department of Computer Science and Engineering

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Prof. Nilanjan Chatterjee	Studies on the functions and limits of operation of different linearizer of Transducers in the thermometers and development of a Universal Linearized instrument	Rs.1,60,000/-	15/03/2024
Prof. Varsha Poddar	Automated crop field surveillance and wildfire detection using AI-Driven drone technology	Rs.1,00,000/-	24/08/2024
Prof. Arijit Ganguly	Design and implementation of an efficient and robust controller-based paper counting machine for benchmark industrial applications	Rs.70,000/-	17/02/2024
Prof. Sudipta Dhar	Automated NLP based Robots for Analysing Disaster Location and initiate the resource Operation	Rs.1,00,000/-	24/08/2024
Prof. Nilanjan Chatterjee	A Comprehensive Mathematical Derivation of Linearization for Nonlinear Signals in Dynamical Systems	Rs. 20,000/-	24/08/2024

Department of Basic Science and Humanities

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Dr. Tanay Pramanik	Development of Green Methodologies for Synthesis of CFDQ	Rs.1,00,000/-	22/02/2024
Dr. Pubali De	Development of Spectroscopic Sensor-Based Adulterants Monitoring Tool using a Dictionary Learning-Based Approach	Rs. 50,000/-	22/02/2024
Dr. Poulomi Mukherjee	Development of an application for identifying the stages of diabetic macular edema	Rs.1,00,000/-	17/02/2024
Bhaskar Nandi	AI Based Advanced Quality Estimation Technique for fisheries product for fisheries product	Rs. 50,000/-	02/09/2024
Jayanta Ghosh	Development of Low-Cost Ultra-Thin Wide Band EM Absorber	Rs. 1,50,000/-	24/08/2024
Jayanta Ghosh	Design of Solar Powered Multipurpose Smart Water Bottle	Rs. 16,000/-	24/08/2024
Dr. Sanchita De	Role of Women Entrepreneurs in the Development of MSMEs in Rural West Bengal	Rs. 35,000/-	24/08/2024
Dr. Subrata Saha	An artificial intelligence-based decision support system for Hemoglobinopathy screening (BEHEM)	Rs. 35,000/-	24/08/2024
Dr. Sukanya Paul	Strategic outline of chromo-fluorogenic materials for selective detection of bio-relevant ions (analytes).	Rs. 50,000/-	24/08/2024
Dr. Goutam Paul	Development and Experimental investigation of a dual axis solar tracking system.	Rs. 20,000/-	24/08/2024
Koustov Mondol	Convertible Ambulance E-Rickshaw, Transforming Mobility into Lifesaving Ambulance for Rural Emergency Response	Rs. 1, 00,000/-	17/02/2024
Koustov Mondol	Fabrication and Testing of Natural Fiber Thermosetting Polymer Composite.	Rs. 70,000/-	24/08/2024
Dr. Subhasree Dutta	An overview on coalescence of viscoplastic droplets: A numerical approach	Rs. 30,000/-	03/09/2024

Department of Electrical and Communication Engineering

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Prof. Dr. Abir Chatterjee, Dr. Subhajit Das	Circuit-to-Chip: Full-Stack Development of Indigenous AI-enabled System on Chip (SoC) to Integrate Linearized Sensing Signals from Multi-Sensory Environment	Rs.2,00,000/-	13/05/2024
Prof. Maumita Das	Neuro-Nav Headset: -Autonomous Mind Controlled Wheelchair	Rs.1,30,500/-	17/02/2024
Dr. Shambhu Sharan Kumar Sinha	Computational Investigation of Electronic and Optical Properties in III-V Semiconductor Quantum Dots: A Simulation-Based Study.	Rs. 100000/-	17/02/2024
Dr. Arpita Das	Fabrication of Volatile Organic Compounds (VOC) Sensors using ZnO Nanostructures	Rs. 1,50,000/-	17/02/2024
Dr. Shreya Nag	Gas quality monitoring tool on a mobile device utilizing QCM based sensors	Rs. 2,00,000/-	17/02/2024
Dr. Sudipta Ghosh	Design & Development of a Hand held AI based Automated Hemodynamic Parameter Prediction System from Echocardiogram Images/ Videos	Rs. 1,00,000/-	17/02/2024
Dr. Shambhu Sharan Kumar Sinha	Computational investigation of electronic and optical properties in III-V semiconductor Quantum Dots: a simulation Based Study	Rs. 1,00,000/-	17/02/2024
Dr. Ayan Chatterjee	Design and Implementation of Metamaterial Inspired Conformal Periodic Structures in Wideband Radomes for Defence Applications	Rs. 2,00,000/-	24/08/2024
Prof. Prakash Banerjee	Near Infrared LED based non-invasive glucose monitoring device	Rs. 14,500/-	24/08/2024
Prof, Prakash Banerjee	Revolutionizing Cardiopulmonary Care: An AI Enhanced Device for Real-Time Detection of Life Threatening Anomalies	Rs. 50,000/-	24/08/2024
Prof. Mandar Chakrabarti	Design and manufacturing an Ardino-based CNC milling machine for high quality PCB and Antenna fabrication	Rs. 30,000/-	24/08/2024
Prof. Rimi Sengupta	Investigation of Mutual Coupling Reduction technique for antenna arrays using DGS for wireless Applications	Rs. 30,000/-	24/08/2024
Dr. Subhajit Das	Full-Stack Develop ment of AI- Enabled Poultry Disease Early Detection System Using Deep Learning Technology with Integrated Sensing Signals from Multi-Sensory Environment	Rs. 17,000/-	24/08/2024

Department of Bio-Technology

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Dr. Pratik Talukder	Formulation and development of an ointment from Bacopa monnieri for wound healing.	Rs.1,25,000/-	24/08/2024
Dr. Pratik Talukder	Formulation of herbal laxative with enriched antioxidant compounds and anti- diabetic properties	Rs. 75,000/-	24/08/2024
Dr. Pratik Talukder	Increase in anticancer bioactive compound - Vinblastine & Vincristine production in Catharanthus roseus L. by means of CRISPR-cas mediated gene knockout	Rs. 75,000/-	24/08/2024
Dr. Sonali Paul	Effect of bioplastics in modulating plant metabolism	Rs. 2,00,000/-	24/08/2024
Dr. Susmita Mukherjee	Soil decontamination from microplastics – a potential threat to ecosystem – through a novel biochar formulation	Rs. 1, 50,000/-	24/08/2024
Dr. Moupriya Nag	Unraveling Bacterial Diseases in Millets From Pathogen Profiling to Effective Management	Rs. 2,00,000/-	24/08/2024
Dr. Dibyajit Lahiri	Site Specific Synthetic Lipase and its Potential Application: Next Gen Editble oil	Rs. 2,50,000/-	24/08/2024

Department of Computer Applications

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Prof. Ankur Biswas	Machine Learning-Based Spatial Analysis of Dengue outbreak risk in Kolkata	Rs.1,00,000/-	24/08/2024
Prof. Sujata Ghatak	Intelligent Medical Cloud Based Automated Diagnosis of Gastric Cancer from Histopathological Images	Rs.1,00,000/-	24/08/2024
Prof. Sujata Ghatak	Mobile Application for Skin Lesion Classification Using AWS	Rs. 17,000/-	24/08/2024

Department of CSE (AI & ML)

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Dr. Sudipta Sahana	Non-GPS Based Car Tracking System	Rs.1,00,000/-	17/02/2024
Dr. Aniruddha Ghosh	Smart Cloud based System for Early-Stage Identification & Removal of Infected Fish using Deep Learning	Rs.45,000/-	17/02/2024
Prof. Anasuya Sengupta	Pattern Recognition for Finding Shortest Path for an Ambulance	Rs.49,200/-	17/02/2024
Dr. Ramen Pal	Rescue Rover: A Disaster Response Robotics	Rs.25000/-	17/02/2024
Prof. Aniruddha Das	SmartDrivePi: Optimizing Traffic Flow in Peak Hours	Rs.25,000/-	17/02/2024
Prof. Harshit Srivastava	Full Stack Development of Real Time AQI and Prediction Created a real time air quality index system using Data analytics approach.	Rs.50,000/-	24/08/2024
Prof. Harshit Srivastava	Enhancing Hydroponic Farming through Real-Time Predictive Analytics NS Sensor Networks	Rs.30,000/-	24/08/2024
Prof. Harshit Srivastava	Real Time IoT based Crop Predictor Water irrigation System Using Data Analysis	Rs.60,000/-	24/08/2024
Prof. Harshit Srivastava	AI-Enhanced CCTV system for Accident Detection and Women's Security	Rs.25,000/-	24/08/2024
Prof. Harshit Srivastava	Advanced online voting system for India Migrants Using Secure Authentication Encryption Techniques and Face Recognition	Rs.50,000/-	24/08/2024
Prof. Harshit Srivastava	FPV Drone	Rs.25,000/-	24/08/2024
Prof. Harshit Srivastava	Household Energy Consumption Optimization using Data Analytics approach	Rs.25,000/-	24/08/2024
Prof. Purbita Chatterjee	VisionRec-Record Everything You See	Rs.13,600/-	24/08/2024
Prof. (Dr.) Sudipta Sahana	Tap2Key - Hardware-Based Cloud Password Manager	Rs.60,000/-	24/08/2024
Prof. (Dr.) Sudipta Sahana	Navigation and Vision Assistance for Differently Abled People	Rs.60,000/-	24/08/2024

Department of CSE (IOT, CS, BT)

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Dr. Susmita Biswas	Realization of spectral converters for photovoltaic devices	Rs.1,00,000/-	17/02/2024
Prof. Rangon Sarkar	Practical implementation of Graphene Nanoribbon MOSFET and use it as high frequency devices	Rs.2,00,000/-	24/08/2024
Dr. Siddhartha Roy	IoT and Blockchain-Enabled Real-Time Remote Monitoring and Smart Contract Integration for Organ Donation Management	Rs.12,000/-	24/08/2024
Dr. Siddhartha Roy	Advancing Wound care with IoT Bandages: Integrating Real-Time Monitoring Hydrogel Solutions and Electrical Simulation for Enhanced Healing	Rs.25,000/-	24/08/2024
Dr. Siddhartha Roy	Transforming E-Commerce Deliveries with Smart IoT-Enabled Bags: Ensuring Product Integrity and Security in Transit	Rs.25,000/-	24/08/2024
Dr. Siddhartha Roy	Integrating Advanced Network Scanning Methodologies with GoScam: A Multifaceted Approach to Cyber Defense and Intrusion Detection	Rs.15,000/-	24/08/2024
Prof. Avik Kumar Das	GAPPS: GNSS and AI-Based Precision Positioning System	Rs.1,00,000/-	24/08/2024
Prof. Avik Kumar Das	Track your Green Ride (TYGR): An IoT and AI Enabled Advanced Real-Time Vehicle Tracking system Using GNSS and Health Monitoring for Safety and Sustainability.	Rs.1,00,000/-	24/08/2024
Prof. Avik Kumar Das	SMART-ARAI: Smart Traffic Optimization and Routing System with Artificial Intelligence and V2V Communication	Rs.75,000/-	24/08/2024
Prof. Avik Kumar Das	IoT and AI-Enabled Healthcare Monitoring System Using Active Antennas for Real-Time Data Collection and Analysis	Rs.50,000/-	24/08/2024
Prof. Sangita Dutta	AlzDetect Real Time EEG-Based Alzheimer Detection and Monitoring System using AI	Rs.1,00,000/-	24/08/2024
Dr. Arijeet Ghosh	AI-enabled Real-time Energy Harvesting in Smart Wearables for Perpetual Health Monitoring	Rs.1,00,000/-	24/08/2024
Dr. Arijeet Ghosh	EcoIrrigate: An AI-enabled Plant Watering System Using Raspberry Pi	Rs.30,000/-	24/08/2024
Dr. Arijeet Ghosh	AquaSmart IQ: IoT-Driven Water Quality Monitoring and Fish Farming Prediction using Deep Learning	Rs.25,000/-	24/08/2024
Prof. Apurba Nandi	Unified Communication Bridge: AI-Powered Sign and Voice Translator	Rs.50,000/-	24/08/2024
Prof. Apurba Nandi	Radiation Dose Optimization using AI algorithm and it's hardware implementation	Rs.25,000/-	24/08/2024

Department of Electrical Engineering

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Dr. Sanjay Bhadra	Real-Time Single Lead Electrocardiogram Signal Collection and Steganography	Rs.1,00,000/-	17/02/2024
Dr. Soumyendu Banerjee	Multi-Lead Electrocardiogram (MECG) Signal Collection, Compression, and Data Storage in Real-Time via Google Drive	Rs.1,00,000/-	17/02/2024
Arijit Ganguly	Design and implementation of an efficient and robust controller-based paper counting machine for benchmark industrial applications	Rs. 70,000/-	17/02/2024
Dr. Debrupa Chakraborty	Sustainable Development Goals (SDGs) incorporated Estimation of Energy and Environmental Footprints together with Economic Assessment of Select Micro-Grids in INDIA	Rs.5,03,700/-	15/01/2024
Dr. Soumyendu Banerjee	Optical Controlling of N-DOF Robotic Manipulator using Particle Swarm Optimization and MATLAB	Rs.24,000/-	24/08/2024
Dr. Soumyendu Banerjee	Controlling of End-Effector of 6-DOF-Acylic Robotic Tank Using PS2 Module	Rs.35,000/-	24/08/2024
Dr. Arnab Ghosh	PSO based optimal controlling of household electrical appliances in the view of smart-home monitoring system using GSM module and MATLAB	Rs.23,500/-	24/08/2024
Prof. Isita Chandra	Automated Arduino Control of Radio Telescope for Tracking of Satellites	Rs.20,000/-	24/08/2024

Department of CST & CSIT

Name of the faculty as PI	Title of the Research Project	Amount of the Grant received (INR)	Date of Commencement
Prof. (Dr.) Anirban Ganguly	Low Light or Nighttime Object Detection from Fused Ultrasonic and IR/ Radar Image Sensing utilizing Deep Learning	Rs. 30,000/-	24/08/2024
Prof. Arpita Saha Chowdhury	Classification of Sundarbans Mangrove Ecosystems Utilizing Hyperspectral Imaging Techniques	Rs. 15,000/-	24/08/2024
Prof. Dr. Subhalaxmi Chakraborty	Design of QUADRA care vital sync system (QCVSS): a smart healthcare ventilation system integrated with SpO ₂ , ECG and Saline Monitoring	Rs. 40,000/-	24/08/2024
Dr. Chiradeep Mukherjee	Raspberry PI based Alcohol Sense Engine Lock and Driving License Scanner	Rs. 30,000/-	24/08/2024
Dr. Rajendrani Mukherjee	AI for Social Engineering: Automatic Pollution Conkol of Vehicles Using Smart Techniques	Rs. 70,000/-	17/02/2024
Dr. Aniruddha Ghosh	Smart Cloud Based System for Early-Stage Identification & Removal of Infected Fish Using Deep Learning	Rs. 45,000/-	17/02/2024
Dr. Mohuya Chakraborty	Design of Light Weight Authentication Scheme for Interest of Production (IoP)(	Rs. 50,000/-	17/02/2024
Dr. Subhalaxmi Chakraborty	BIOLOGIX: Prototype design of novel, compact, cost effective, portable, sustainable IOT enabled Biometric Attendance Tool Kit.	Rs. 30,000/-	17/02/2024
Koushik Chatterjee	Automated GradeCare Machine	Rs. 70,000/-	17/02/2024
Dr. Sudipta Basu Pal	Water Based Robotics cleaning systems For PV Installation.	Rs. 1,00,000/-	13/04/2024

Summary Table

Grant-in-Aid	January 2015 to December 2023	January 2024 to December 2024	January 2015 to December 2024
Granted	18	90	108

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Patent Filed
(January 2024-December 2024)

Patents Filed/Published/Granted

Sl. No.	Filing Date	Patent File Number	Title	Status	Faculty Members as Inventors
1	13.05.2016	201631012538	Physical Design Approach of a Novel Architecture of a Junction-Less Transistor Having High K-Spacers	First Examination Complete	Dr. Rajiv Ganguly
2	17.03.2017	201631027479	Implementation of Silicon-On-Insulator (SOI) Based Power Junction-Less Transistor Device Switching in SMPS Circuit	Published	Dr. Rajiv Ganguly
3	15.06.2018	201831015427	Electromagnetic Alternator Engine/Electrical	Published	NA
4	26.04.2019	201931016807	Electric Two-Wheeler Delivery Vehicle With Secure Delivery Box	Patent application filed	NA
5	20.05.2019	201911019831	A Novel Approach to Realize Business Profit on the Basis of Linear Dependency, Exponential Growth and Moving Average	Published	Anirban Das
6	12.09.2019	201931036822	Mango jelly with citrus peel extracted pectin – a novel natural product enhancing the total antioxidant value	Published	Dr. Sonali Paul, Dr. Susmita Mukherjee
7	30.10.2019	201931043975	RYO, an Intelligent Rover to Send Stress Signals in Emergency Through 360 Degree Single Hemispheric Surveillance	Patent application filed	Anirban Das
8	30.10.2019	201931043976	VRTRA JABBERWOKY: An Intelligent Hexa-Copter to Identify Individuals Through	Patent application filed	Anirban Das

			DNA and Tissue Classification		
9	30.10.2019	201931043977	An MIOT-Based Technique to Detect the Probability of Brain Cancer Through Extraction, Isolation and PCR	Patent application filed	Anirban Das
10	30.10.2019	201931043978	A Tri-Folded Intelligent System to Pre-Monitor and Predict Tsunami, Flood and Earthquake-Based Disasters and Guide Safer Directions Prior to Occurrence	Patent application filed	Anirban Das
11	30.10.2019	201911043980	A Decentralized System to Rescue Victims From Natural and Manmade Post Disasters Through DTN, Offline Route Builder and Tracker	Patent application filed	Anirban Das
12	04.11.2019	201931044618	A Novel Composition of Multifunctional (antimicrobial, digestive, natural food life enhancer) Low Cost Herbal Food Additive	Patent application filed	Dr. Biswadeep Chaudhuri, Dr. Pratik Talukder, Dr. Susmita Mukherjee
13	25.11.2019	201911048042	Security and Computational Time Complexity Analysis of RSA With Novel Approach of Variability Concept of Key	Patent application filed	Anirban Das
14	20.01.2020	202011002303	A Method for Security Enhancement of Diffie-Hellman Key Exchange Protocol	Patent application filed	Anirban Das
15	24.02.2020	202011007658	A Technique for Implementing Security Protocol Using Variable Key for Diffie-Hellman Key Exchange, Arbitrated Protocol	Patent application filed	Anirban Das

			and Cipher Using Imaginary Variable Concept		
16	05.05.2020	202011019051	A Technique for Implementing Security Protocol Using Variable Key in Context to Key Sequence, Curves and AES	Patent application filed	Anirban Das
17	11.08.2020	202041034535	IoT and Sensors Based System and Method for Artificial Kidney	Patent application filed	Anirban Das
18	27.01.2021	202131003524	Void Pneuma, An Artificial Leaf For Creating Proper Oxygen Conditions In Mines	Patent application filed	Anirban Das
19	27.01.2021	202131003522	TRISTRAM-ENIGMA: The Code To Create Healthy Cities	Patent application filed	Anirban Das
20	27.01.2021	202131003528	TOUCH-N-CARE: A Gel To Heal Skin	Patent application filed	Anirban Das
21	27.01.2021	202131003529	THUNDER-HOUND, An Under-Water Mining Super-Structure In The Indian Ocean	Patent application filed	Anirban Das
22	27.01.2021	202131003527	STEELASTIC: A Medical Waste Recycled Eco-Alloy For Infrastructural Reengineering	Patent application filed	Anirban Das
23	27.01.2021	202131003535	STAR-DUST: Healing Humongous Waters	Patent application filed	Anirban Das
24	27.01.2021	202131003520	SHATTERED-STAR: A Technique To Energy-Healing	Patent application filed	Anirban Das
25	27.01.2021	202131003517	MOQ-E: The Mosquito Eradi-Nizer	Patent application filed	Anirban Das
26	27.01.2021	202131003519	MOKSHA-AMRITAM, A Miraculous Immunity Therapeutic	Patent application filed	Anirban Das

27	27.01.2021	202131003530	JUXTA-RING, A Pattern To Create Effective Spider-Silk Fabrics	Patent application filed	Anirban Das
28	27.01.2021	202131003536	JEJUNE: An Immuno Booster	Patent application filed	Anirban Das
29	27.01.2021	202131003518	INFANTILE: An Antimicrobial Aqueous Solution	Patent application filed	Anirban Das
30	27.01.2021	202131003532	IMMUNO-CO: A Therapeutic For Cleansing High Toxicity	Patent application filed	Anirban Das
31	27.01.2021	202131003523	HEAL-DESTINY: A Route To Healthy Closed Spaces	Patent application filed	Anirban Das
32	27.01.2021	202131003525	GREENY, An Artificial Leaf To Cleanse The Air And Save Oxygen Deficit Zones	Patent application filed	Anirban Das
33	27.01.2021	202131003531	FANTASY-LAND: Healing The Lithosphere	Patent application filed	Anirban Das
34	27.01.2021	202131003521	Exil1r-Prime: A Multi-Purpose Edible Sterilizer For Cleansing Body Inside Out	Patent application filed	Anirban Das
35	27.01.2021	202131003526	DELTA:RE, A Flavonoid Based Immunity Booster	Patent application filed	Anirban Das
36	27.01.2021	202131003533	BOUND-ROSE: The Strongest Technique To Energy Healing	Patent application filed	Anirban Das
37	27.01.2021	202131003510	AZURE, An Artificial Leaf To Save Marine Ecosystems	Patent application filed	Anirban Das
38	27.01.2021	202131003581	AVYATHI, A New Definition To Oxygen Creation And Fuel Production In Space	Patent application filed	Anirban Das
39	27.01.2021	202131003588	ARISTA: A Therapeutic For Safe And Painless Month	Patent application filed	Anirban Das
40	27.01.2021	202131003579	ANDROMEDA, A Water Programming Technique To Heal Body And Mind	Patent application filed	Anirban Das

41	27.01.2021	202131003584	AMUN & ANAN, A Ring For Medical Diagnosis In Exigency And Communiqué	Patent application filed	Anirban Das
42	27.01.2021	202131003582	Aquaponics Using Arduino Based Smart Cultivation System Functioning With Renewable Solar Energy	Patent application filed	Anirban Das
43	27.01.2021	202131003587	INTELLIBIN: Intelligent Bin With Credit Point Integration	Patent application filed	Anirban Das
44	27.01.2021	202131003583	FOODOPE: The Digital India Ration ATM	Patent application filed	Anirban Das
45	27.01.2021	202131003594	SUJALAM: A Mobile Aqua Decontamination Device	Patent application filed	Anirban Das
46	27.01.2021	202131003580	A Sound Detection Device For Deaf Through Mastoid Bone Conduction	Patent application filed	Anirban Das
47	27.01.2021	202131003592	An Intelligent Helmet to Detect Toxic, Flammable, Suffocating Gases and Heat Hazards in Under-Earth Mines	Patent application filed	Anirban Das
48	27.01.2021	202131003593	Nodal Wireless Communication System for Monitoring Environmental Data Fluctuations in Underground Mines	Patent application filed	Anirban Das
49	27.01.2021	202131003585	RAKSHAK: A Precautionary Device To Protect The Common Man	Patent application filed	Anirban Das
50	27.01.2021	202131003595	Carefree Sole: A Multi-Medicated Waterproof Device Triggered to Stimulate Foot Nerve Points for Treatment and Relief Through Vibrator Motors	Patent application filed	Anirban Das

51	27.01.2021	202131003577	PhoeniX: A Smart Device To Prevent Electrocution From Fallen Electric Posts	Patent application filed	Anirban Das
52	27.01.2021	202131003590	The Gabinetto: A Nano Intelligent Sanitary Hygiene Device	Patent application filed	Anirban Das
53	27.01.2021	202131003539	ISOAP: No-Touch I.O.T Soap Dispenser System	Published	Subhalaxmi Chakraborty
54	27.01.2021	202131003537	Smart Portable Lock With Embedded Security and Alerting System	Patent application filed	Bipasha Mukhopadhyay
55	06.01.2021	2020104352	Future Summer Temperature Average Prediction From Air Temperature Rate Data	Australian Patent Granted	Anirban Das
56	24.04.2021	202131019215	Opalblue: Preserving Natural Water Bodies Chemically, Physically and Ecologically	Patent application filed	Anirban Das
57	24.04.2021	202131019216	Psyched: A Medical Device For Healing Psychological Traumas and Issues	Patent application filed	Anirban Das
58	24.04.2021	202131019217	Titanoboa: An Outer Space Thermal Protection System (OSTPS)	Patent application filed	Anirban Das
59	02.04.2021	202131015750	Assessment of an effective remedial measure against arsenic overload in the affected population of West Bengal	Patent application filed	Dr. Susmita Mukherjee, Dr. Sonali Paul
60	21.04.2021	2021100831	Aqua Plus – A Humidity Dependent Water Extraction Method	Australian Patent Granted	Dr. Tanay Pramank

61	16.06.2021	2021102598	A Wearable Electro Acupuncture Device for COVID Treatment	Australian Patent Granted	Dr. Tanay Pramank
62	16.06.2021	2021102531	Three Dimensional Wind, Airspeed Calculation, and Prediction Method for Aerial Drones Using Deep Learning	Australian Patent Granted	Anirban Das
63	24.06.2021	202141028360	Smart Protective Personal Equipment (PPE Kit) for Healthcare Workers During COVID-19 Pandemic	Published	Anirban Das
64	03.07.2021	202111029975	Sensor Based Artificial Nervous System to Assist Paralyzed People	Patent application filed	Anirban Das
65	21.07.2021	202141032739	System and Method for Performing Secure Transactions of Digital Cryptocurrencies Using Blockchain Technology	Patent application filed	Anirban Das
66	26.04.2019	201931016810	Microcontroller Based Design of Home Cleaning Robot	Patent application filed	Piyali Mukherjee
67	14.05.2019	201931019095	Simulation Based Design of Home Cleaning Robot	Patent application filed	Piyali Mukherjee
68	14.05.2019	201931019094	Smart Street Light Using Arduino	Patent application filed	Sohom Chakraborty
69	26.04.2019	201931016808	Low-Cost Plastic Collector and Instant Money Return Machine	Patent application filed	Tanusree Roy
70	26.04.2019	201931016809	Automation & IoT Based Smart Gardening and Irrigation System for Growing Plants	Patent application filed	NA
71	14.05.2019	201931019093	IoT Based Industrial Security System Using Arduino	Patent application filed	Nilanjan Byabarta, Prakash Banerjee

72	16.03.2020	202031011165	Women Safety Device Using ESP32-CAM	Patent application filed	Sandip Mandal
73	08.01.2021	202141034599	Skin Cancer (Melanoma) Detection And Recommender System Using Deep Learning	Published	Anirban Das
74	11.03.2021	2021105871	Multimode Image Fusion Technique For Automated Correlation Identification In Medical Images	Australian Patent Granted	Anirban Das
75	08.04.2021	202141035168	Intelligent Indoor Navigation And Positioning System Using Augmented Reality (AR)	Published	Anirban Das
76	24.07.2021	202141033317	Sensor Based Intelligent Hand Gloves For Healthcare Professionals For Use During COVID-19 Pandemic	Patent application filed	Anirban Das
77	10.12.2021	2021/07198	A Contactless Ultraviolet-C Based Sanitizing Device	Granted	Tanay Pramanik
78	21.11.2021	2021/09609	An IOT Based Mobile Operated Solar Ball Mill System	Granted	Tanay Pramanik
79	17.11.2021	2021106658	A Method To Refine Feature Vectors For Combining Multiple Neural Networks	Australian Patent Granted	Anirban Das

80	08.12.2021	202141036605	Sensor Based Intelligent Brain Computer Interface System To Assist Hand Paralyzed Patients To Perform Typing By Brain	Published	Anirban Das
81	12.03.2022	G11302DE	A Nano-Cellulose Composition And Process For Production	Granted	Tanay Pramanik
82	30.03.2022	2021104915	Hepatoprotective And Antioxidant Activity Of A Novel Active Herbal Agent Against Nonalcoholic Fatty Liver Diseases	Granted	Suvadra Das
83	18.05.2022	202231028480	Smart Vertical Aquaponics System	Patent application filed	Anirban Das
	01.03.2024				
84	18.05.2022	202231028483	GEA – The Greenology Evolution Arc: A Project Towards Creating A Green City	Published	Anirban Das
	01.03.2024				
85	27.04.2022	202231024775	Digvastra – Recycled Energy To Fuel Up Electrical Cells To Run Drone Propeller Motors	Patent application filed	Anirban Das
86	18.05.2022	202231028482	Robotic Trolley To Facilitate Patients' Emergency Needs, Live Video Streaming And Sanitization Without Human Encounter	Published	Anirban Das
	01.03.2024				
87	11.04.2022	202022101198	Intelligentes System Zum Ein- Und Ausschalten Der Straßenbeleuchtung Auf Der Grundlage Der Objekterkennung	Filed (Germany)	Anirban Das
88	11.05.2022	2022/02530	A Liposomal Formulation With Dual Payload Of Biowaste Derived Carbon Dot And Enzalutamide For Theragnostic Management Of	Granted	Suvadra Das

			Triple Negative Breast Cancer		
90	25.05.2022	2022/00148	A Formulation For Synthesis Of Silymarin Conjugated Gold Nanoparticle To Heal Wound And A Method Thereof	Granted	Suvadra Das
91	06.06.2022	202231032312	VapouroTechgenix: An Optimized Portable and Eco-Friendly Vaporizer Technology Specially Designed for the COVID Pandemic	Published	Anirban Das
	16.02.2024				
92	06.06.2022	202231032311	Wall-E – The Smart Bot	Filed	Anirban Das
	16.02.2024				
93	06.06.2022	202231032310	Synthesis Of Plastic Waste Into Fuel: Turning Waste Into Power	Published (International)	Anirban Das
	16.02.2024				
94	14.07.2022	202231040289	A Sovereign Self-Propelled Tractor Capable Of Bringing About A Radical Change In Agricultural Technology	Published (International)	Anirban Das
	23.02.2024				
95	14.07.2022	202231040290	SOLIBOAN: Sound-Based Comprehensive Security Solutions For Stalker Detection & Client Protection In Low Light Conditions	Published (International)	Anirban Das
	23.02.2024				
96	14.07.2022	202231040292	Byte Immunity: An Anti-COVID Chewing Gum With Anti-Bacterial And Anti-Viral Herbal Mouth Sanitizing Properties	Published (International)	Anirban Das
	23.02.2024				
97	17.08.2022	202231046723	Growtthtastic Curegenics: A Medicine For Fatal Diseases	Published (International)	Anirban Das
	23.02.2024				
	17.08.2022	2021104575	Isoniazide Loaded Nanoparticles Drug Delivery Against Tuberculosis	Granted	Suvadra Das

98	23.06.2022	202241036027	An Image Classifier And Recommendation For Cognition Method Based On The Deep Learning Of Neural Network	Published	Prasenjit Das
99	16.11.2022	2022/12486	A System And Method To Implement Data Hiding For Quality Access Control Of Grayscale Image	Granted	Subhalaxmi Chakraborty
100	11/12/2022	E-12/786/2023/KOL	A Novel Molecular Imprinted Polymer Based Electrochemical Sensor For The Selective And Sensitive Detection Of Metanil Yellow Adulteration In Food	Patent application filed	Shreya Nag
101	16.05.2023 22.11.2024	202331034182	Automatic Fire Fighting Robot	Published	Tanay Pramanik
102	24.08.2023	202331056668	Cloud Enabled USB Storage	Patent application filed	Tanay Pramanik
103	13.06.2023 20.12.2024	202331040175	An IOT-Based Smart Wheelchair For Complete Health Monitoring	Published	Tanay Pramanik
104	20.11.2023	202331078657	Smart Safety Device For Kitchen	Patent application filed	Tanay Pramanik
105	24.08.2023	202331056669	Formulation Of A Novel Composition Of Chlorogenic Acid Spray As Natural Bio-Pesticide	Patent application filed	Pratik Talukder
106	17.03.2023	202331018108	A Novel Composition Of Multipurpose (Hair And Skin) Multifunctional (Antimicrobial, Anti-Inflammatory, Antibacterial, Natural) Low Cost And Effective Herbal Rejuvenator	Patent application filed	Pratik Talukder

107	12.02.2023	202331016156	A Novel Composition Of A Combination Of Azadirachta Indica And Honey In Treating	Patent application filed	Keya De Mukhopadhyay
108	01.08.2023	6300690	Wearable Robotic Exoskeleton For Disabled (International)	Patent application filed	Anirban Das
109	25.05.2023	382818-001	IOT Based Blood Oxygen Saturation Meter	Granted	Sudipta Sahana
110	09.06.2023	201731027744A	Cloud Network Monitoring System	Granted	Sudipta Sahana
111	17.07.2023	389131-001	MediFi: An IoT-Based Health Monitoring Device	Filed	Sandip Mandal
112	04.04.2023	383003-001	Artificial Electronic Hand With Electromyographic (EMG) Signals	Filed	Buddhadeb Pradhan
113	12.05.2023	386120-001	Unmanned Aerial Vehicle For Ambulance	Filed	Buddhadeb Pradhan
114	11.07.2023	390044-001	Drone For Extinguishing Fire	Filed	Buddhadeb Pradhan
115	11.09.2023	394922-001	Smart Device For Mentally Alerting The Alzheimer's Patients	Filed	Tapas Guha
116	20.01.2024	405302-001 b n3	Data Processing Device For Drug Reaction Prediction And Suggestion	Filed	Dr. Sayantan Mandal
117	02.02.2024	202023107713	A system and formulation for developing chitosan and polyvinyl alcohol aerogel loaded with Ketoconazole	Granted International	Dr. Suvadra Das

118	19.03.2024	411018-001	Smart brain monitoring headset	Filed (International Design Patent)	Dr. Rashel Sarkar, Om Prakash Singh, Dr. Sreenivasulu Gogula, Aparajita Mukherjee
119	17.04.2024	6359919	AI and ML humanoid robot for industry	Filed	Rituparna Biswas
120	03.05.2024	202431035258	Formulation of a plant based organic herbal bio-weedicide.	Filed	Dr. Pratik Talukder
121	10.06.2024	202441044738	An Internet of Underwater Things (IoUT)-based Water Quality Monitoring System and Method of Operation	Published	Dr. Avik Kumar Das
122	17.07.2024	202431054736	AI-Powered Sentiment Analysis for Effective Social Media Monitoring	Published	Dr. Karunamayee Dey
123	18.07.2024	2024431054806	Energy-per-Layer Screening Approach towards Modeling of Multilayer Graphene Nanoribbon On-Chip Interconnect	Published	Dr. Subhajit Das
124	18.07.2024	6379208	Test Tube Stand with Holder	UK Patent Filed	A. Singh, Dr. Tanay Pramanik
125	18.07.2024	6379207	Digital Desiccator	UK Patent Filed	A. Singh, Dr. Tanay Pramanik
126	26.07.2024	202431056977	Smart Walker with Health Assistance and Emergency Alert System	Filed	S. Mondal, Dr. Tanay Pramanik

127	26.07.2024	202431056976	ALPINE: Avalanche Likelihood Predictor and Information Navigator Engine	Filed	Dr. Tanay Pramanik, Jayanta Ghosh, Dr. Kartik Sau
128	26.07.2024	202431056978	A Novel Hair Care Product with Psidium guajava leaves'	Filed	Dr. Susmita Mukherjee, Dr. Sonali Paul
129	27.09.2024	202331063691	Autonomous Underwater Vehicle with Wireless Charging and Adaptive Communication System and Method of Operation.	Published	Dr. Avik Kumar Das
130	15.10.2024	202311019680	Method for Gain Enhancement of Microstrip Patch Antenna Using Displacement of SRR Ring Elements	Filed	Suchanda Chatterjee
131	08.11.2024	553659 (Grant No)	Smart Underground Mine Monitoring System	Granted	Dr. Avik Kumar Das
132	18.11.2024	—	Smart Water Monitoring and Management System for Aquatic Environments Using IoT and Machine Learning	Filed	Subhajit Santra
133	18.12.2024	202441100383	Blockchain and Machine Learning for Secure Cloud Storage in IoT Healthcare Management	Filed	Sukanya Roy
134	27.12.2024	202441103442	Artificial Intelligence (AI)- Based Traffic Control System for Real-Time Traffic Management	Published	Dr. Subhajit Das

Summary Table

Patent Details

Departments	Filed/Published/granted patents July 2020 to December 2023 (Cumulative)	Filed/Published/granted patents January 2024 to December 2024	Filed/Published/granted patents July 2020 to December 2024 (Cumulative)
CSE	6	1	7
BioTech	7	2	9
CA	75	1	76
CST/CSIT	4	0	4
BSH	15	7	22
ECE	8	3	11
CSE(AI&ML)	2	0	2
CSE (IOT, CS, BT)	1	3	4
TOTAL	117	17	134

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Consultancies
(January 2024 - December 2024)

Consultancy

Consultancy Jobs Received by CSE Department in the Year 2024

Order No.	Faculty Name	Company Name	Order Amount (Rs. /-)	Order Receive Date (Rs. /-)	Status (Ongoing/ Completed)
GATE95310224	Prof. Nilanjan Chatterjee	TCS	53659/-	22.01.2024	Completed

Consultancy Jobs Received by CSE (IOT) Department in the Year 2024

Order No.	Faculty Name	Company Name	Order Amount (Rs./-)	Received As On	Status
PO NO. 135/2023	Dr. Sandip Mandal	Design-o-Web Technologies	12500/-	07.10.2023	Ongoing

Consultancy Jobs Received by Law Department in the Year 2024

Order No.	Faculty Name	Company Name	Order Amount (Rs./-)	Received As On	Status
		Biodiversity Assessment with reference to felling of Timber M/S Sreema Saw Mill			Ongoing

Consultancy Jobs Received by BSH Department in the Year 2024

Order No.	Faculty Name	Company Name	Order Amount (Rs. /-)	Received As On	Status
EPR-100069	Dr. Subrata Saha	International Centre for Living Aquatic Resource Management (ICLARM) also known as WorldFish	Rs. 60,200/- + \$3800	24.12.2024	Ongoing

Summary Table

Consultancies

Departments	July 2020 to December2023 (Cumulative)	January 2024 to December 2024	January 2020 to December 2024
BSH	0	1	1
Law	1	1	2
CSE	6	1	7
CSE(IOT)	1	1	2
Total	16	4	20

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