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Google Scholar: https://scholar.google.com/citations?hl=en&user=OALstaoAAAAJ&viewop=listworks
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Research interest
Agentic AI and LLM
Multi-agent Systems
Big Data & Social Network Analysis
Deep Learning on Graph Analytics

Education

PhD (2013), Jadavpur University, Kolkata, West Bengal, India.
M.Tech (2006), National Institute of Technology, Durgapur, West Bengal, India.
B.E. (2002), Regional Engineering College (NIT), Durgapur, West Bengal, India.

PhD Thesis Supervision

Sl No.	Name of scholar	Thesis title	Status
1	Ms. Poulami Dalapati	Multiagent Based Algorithmic Approach for Railway Scheduling, Collision Handling and Optimization	Awarded on 5th June 2018
2	Mr. Bikash Choudhury	An Efficient Service Oriented Middleware for SOC in Mobile Ad Hoc Network	Awarded on 19th April 2019
3	Mr. Abhijit Adhikari	A Framework for Measuring the Semantic Relatedness between Concepts	Awarded on 6th June 2019
4	Ms. Amrita Namtirtha	Identifying Influential Spreaders: A Graph Analytics Approach	Awarded on 15th June 2020
5	Mr. Narayan Changder	Novel Algorithms for Multi-Agents Coalition Structure Generation	Awarded on 25th March 2021
6	Ms. Sangeeta Sen	A Graph Data Model in Semantic Web Environment	Awarded on 17th August 2021
7	Ms. Samriddhi Sarkar	Coalition Formation in Multi-agent Systems	Awarded on 4th August 2023
8	Ms. Arunita Das	Enhancement of Partitional Clustering Techniques for Pathology Image Segmentation	Awarded on 13th January 2025
9	Mr. Amit Paul	Location Prediction in Social Media using Hybrid Modelling	Awarded on 27th March 2025
10	Mr. Suman Nandi	Identifying Influential Spreaders through Network Analysis	Awarded on 16th June 2026
11	Mr. Tuhin Kr. Biswas	Coalition Formation of Multi-agent Systems in Heterogeneous Environment	Thesis submitted on 15th Dec 2025
12	Ms. Srestha Sadhu	Influential Spreaders Identification Across a Diverse Range of Networks	Ongoing
13	Ms. Nilanjana Saha	Mining Social Graphs to Identify Leaders in Network Activities	Ongoing

PhD Thesis Supervision (Contd...)

Sl No.	Name of scholar	Thesis title	Status
14	Ms. Devlina Karmakar	Temporal Network Modeling: Predictive Reasoning and Integrity	Ongoing
15	Ms. Suchismita Sarkar	—	Ongoing
16	Ms. Sarjita Soo	—	Ongoing

Current/past research projects (National)		
Sl No.	**Sponsoring Agency**	**Title of the Project**
1	Science Engineering & Research Board (SERB) Sanction Order No. MTR/2023/000267	Coalition Formation in Multi Agent Systems: An Algorithmic Approach
2	Department of Science and Technology. Ref No. SB/FTP/ETA-407/2013	Agent Based Algorithmic Approach for Modeling and Optimization of Indian Railway System
3	Department of Science and Technology. Ref No. DST/KIRAN/GE-1/2019/17	Gender Advancement for Transforming Institutions (GATI) Pilot Project
4	Department of Electronics and Information Technology (DeitY). Ref No. 11(16)/2012-ELG.	Development of Personalized and Performance based E-Learning tool for existing E-resources
Current/past research projects (International)		
5	European Union (with Polytechnic of Porto, Portugal)	Erasmus + ICM (International Credit Mobility)
6	Department of Science and Technology. Ref No. DST/INTPORTUGAL/P-06/2017 (with University of Minho and ISCAP Polytechnic of Porto, Portugal)	Empower SSE: A Linked Open Data Framework for the Empowerment of Social and Solidarity Economy Agents

Patent:

- "A Real Time Traffic Forecasting System" by Animesh Dutta, Tuhin Kumar Biswas, Indian Patent published on 31/10/2025.
- "AI and IoT Enabled System and Method for Electric Vehicle Charging" by Animesh Dutta, Srestha Sadhu and Deepanwita Mallick, Indian Patent published on 05/09/2025.

Award and recognition:

- Delegation to Seventh BRICS Working Group Meeting on ICT & HPC and WAIC 2023 (World AI Conference) at East China Normal university, Shanghai, P. R. China, during July 6-10, 2023.
- GATI (Gender Advancement for Transforming Institutions) study visit to UK universities during 27th-31st March 2023 funded by DST, Govt of India, British Council and Advance HE UK.
- ASEM-DUO Professor Fellowship 2020 with Claude Beranard University Lyon 1, France, by European Union
- Delegation of young Indian leaders to "Discover Israel" program, Israel, 1st - 7th Sept 2018.
- Delegation to First BRICS Working Group Meeting and Innovation Collaboration Forum on ICT and HPC, Guangzhou, 23rd -26th April 2017.

- Visvesvaray Young Faculty Research Fellowship Award in 2016, by Ministry of Electronics and Information Technology, Govt. of India.

Research Collaboration:
National:

- **Dr. Biswanath Dutta,** Assistant Professor, Documentation Research and Training Centre (DRTC), Indian Statistical Institute (ISI), India.

International:

- **Prof. Samir Aknine,** Department of Computer Science and Engineering, Claude Bernard University of Lyon 1, France
- **Prof. Ana Alice Baptista,** Algorithmic Research Centre, University of Minho, Portugal
- **Dr. Mariana Curado Malta,** Information System Department, ISCAP Polytechnic of Porto, Portugal
- **Prof. Frans Coenen,** Department of Computer Science and Engineering, University of Liverpool,UK
- **Prof. Viviana Mascardi,** DIBRIS - Department of Computer Science, Bioengineering, Robotics and Systems Engineering, Faculty Member, University of Genova, Italy

Foreign visit for academic purpose:

- Thirty-ninth AAAI Conference on Artificial Intelligence (AAAI-25) in Philadelphia, USA, February 25- March 4, 2025.
- Delegation to Seventh BRICS Working Group Meeting on ICT & HPC and WAIC 2023 (World AI Conference) at East China Normal university, Shanghai, P. R. China, during July 6-10, 2023.
- Delegation to GATI (Gender Advancement for Transforming Institutions) study visit to UK universities during 27th-31st March 2023 funded by DST, Govt of India, British Council and Advance HE UK.
- Research Visit to Polytechnic of Porto, Portugal under ERASMUS+ICM (International Credit Mobility) Project funded by Euoropean Union during January 16-20, 2023.
- Thirty-fourth AAAI Conference on Artificial Intelligence (AAAI-20) in New York, USA, February 7-12, 2020.
- AAAI 2019 Spring Symposium on Combining Machine Learning with Knowledge Engineering (AAAI-MAKE) at Stanford University, USA, March 25-29, 2019
- Thirty-third AAAI Conference on Artificial Intelligence (AAAI-19) at Honolulu Hawaii, USA, January 27- February 1, 2019
- Delegation to Discover Israel Program, Israel, in September 1-7, 2018
- 10th International Conference on Agents and Artificial Intelligence (ICAART) at Funchal, Madeira-Portugal, January 16-18, 2018.

- Collaborative research programme/visit to University of Minho, Guimaraes-Portugal, January 19-26, 2018.
- Collaborative research programme/visit to Guangzhou Milestone Software Co. Ltd, Guangzhou, Guanghzou, P. R. China, December 17-30, 2017
- Delegation to First BRICS Working Group Meeting and Innovation Collaboration Forum on ICT and HPC at Guanghzou, P.R. China, April 23-26, 2017
- The 12th Semantic Web Summer School (SSSW 2016) at Bertinoro, near Bologna, Italy, July 17-23, 2016.
- Research Visit to University of Genova, Italy, July 25-27, 2016.
- IEEE Region 10 TENCON 2016 Conference at Marina Bay Sands, Singapore, November 22-25, 2016
- International Conference on Principles and Practice of Multi-Agent Systems (PRIMA), Phuket Thailand, August 22-26, 2016.
- 12th International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS 2014), at Salamanca, Spain, June 4-6, 2014.
- Research Visit to BISITE (Bioinformatic, Intelligent Systems and Educational Technology) Research Group, University of Salamance, Spain, June 7-21, 2014.
- Research Visit at the Agents, Interaction and Complexity Group, School of Electronics and Computer Science, University of Southampton, UK, June 17-30, 2013.
- 15th European Agent System Summer School (EASSS-2013) at King's College London, UK, July 1-5, 2013.
- 24th International Conference on Software Engineering & Knowledge Engineering (SEKE'2012), Redwood City, San Francisco Bay, USA July 1-3, 2012.
- The 2010 International Conference on Software Engineering Research and Practice (SERP'10), Las Vegas, USA, July 12-15, 2010.
- IEEE Region 10 TENCON 2010 Conference at Fukuoka, Japan, November 21-24, 2010,
- The 8th WSEAS International Conference on Software Engineering, Parallel and Distributed Systems (SEPADS '09), at University of Cambridge, UK, February 21-23, 2009.

Publications:

Conferences

[1] Jayshree Bhattacharya, Amrita Namtirtha, and Animesh Dutta. "TACG: A Topic-Aware Community-Guided Framework for Context-Aware Influence Maximization". In: *2026 18th International Conference on COMmunication Systems and NETworks (COMSNETS)*. IEEE. 2026, pp. 767–771. URL: https://ieeexplore.ieee.org/abstract/document/11418161.

[2] Srestha Sadhu et al. “SMART: Spatio-Temporal Attention-based Large Language Model for Real-Time Traffic Prediction”. In: *Companion Proceedings of the ACM Web Conference 2026*. WWW Companion ’26. Dubai, United Arab Emirates: ACM, 2026, pp. 1–9. ISBN: 979-8-4007-2308-7. DOI: 10.1145/3774905.3794651. URL: https://dl.acm.org/doi/10.1145/3774905.3794651.

[3] Sarjita Soo, Amrita Namtirtha, and Animesh Dutta. “Anomaly Detection using Directed Motif and Node Attributes”. In: *2026 18th International Conference on COMmunication Systems and NETworks (COMSNETS)*. IEEE. 2026, pp. 797–801. URL: https://ieeexplore.ieee.org/abstract/document/11418264.

[4] Koyena Chowdhury, Amit Paul, and Animesh Dutta. “CancelOut CommGCN (CCGCN): Influence Maximization on Social Networks based on Communities”. In: *Proceedings of the 13th ACM IKDD International Conference on Data Science*. 2025, pp. 27–34. URL: https://dl.acm.org/doi/full/10.1145/3799830.3799834.

[5] Devlina Karmakar et al. “LP-GRU Model: A Graph Analytics Approach to Detect Misinformation Infiltrators in Online Communities”. In: *2025 17th International Conference on COMmunication Systems and NETworks (COMSNETS)*. IEEE. 2025, pp. 862–866. URL: https://ieeexplore.ieee.org/abstract/document/10885620.

[6] Srestha Sadhu et al. “TGNN-Bet: Approximation of Temporal Betweenness Centrality using Temporal Graph Neural Network”. In: *2025 17th International Conference on COMmunication Systems and NETworks (COMSNETS)*. IEEE. 2025, pp. 911–915. URL: https://ieeexplore.ieee.org/abstract/document/10885618.

[7] Srestha Sadhu et al. “TMGCN-ATT: A Traffic Prediction Model with Multi-Hop GCN and Self-Attention Mechanisms”. In: *2025 17th International Conference on COMmunication Systems and NETworks (COMSNETS)*. IEEE. 2025, pp. 950–954. URL: https://ieeexplore.ieee.org/abstract/document/10885556.

[8] Nilanjana Saha et al. “Hide Exposures by Removing Masterminds External Sources on Social Network”. In: *Accepted in: The 39th Annual AAAI Conference on Artificial Intelligence 2025(AAAI)*. AAAI. 2025. URL: https://ojs.aaai.org/index.php/AAAI/article/view/35296.

[9] Sarjita Soo et al. “Identification of Phishing Mechanism of the Mastermind of Anomaly Community in the Social Networks”. In: *2025 17th International Conference on COMmunication Systems and NETworks (COMSNETS)*. IEEE. 2025, pp. 926–930. URL: https://surl.li/ucnvyg.

[10] Tuhin Kumar Biswas, Ankit Roy, and Animesh Dutta. “Utility-Profit Based Large-Scale Simultaneous Coalition Structure Generation and Assignment in Constrained Environments”. In: *Accepted in: The 23rd IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)*. IEEE. 2024. URL: https://ieeexplore.ieee.org/abstract/document/10973582.

[11] Tuhin Kumar Biswas et al. “Coalition Formation for Task Allocation Using Multiple Distance Metrics”. In: *Proceedings of the AAAI Conference on Artificial Intelligence*. Vol. 38. 21. 2024, pp. 23443–23444. URL: https://ojs.aaai.org/index.php/AAAI/article/view/30421.

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[13] Suman Nandi, Dwiparna Mandal, and Animesh Dutta. "CCC: A spreader selection approach to control spreading dynamics in complex networks". In: *Accepted in: The 23rd IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)*. IEEE. 2024. URL: https://ieeexplore.ieee.org/abstract/document/10973409.

[14] Srestha Sadhu et al. "LPC: A Local Path-Based Centrality Method for Identifying Influential Nodes in Temporal Networks". In: *Accepted in: 8th International Conference on Data Science and Management of Data (12th ACM IKDD CODS and 30th COMAD)*. ACM. 2024. URL: https://dl.acm.org/doi/full/10.1145/3703323.3703346.

[15] Nilanjan Saha, Amrita Namtirtha, and Animesh Dutta. "CM-GCN: Crossbred Method based-Graph Convolution Networks for identifying influential spreaders from directed networks". In: *16th International Conference on COMmunication Systems & NETworkS (COMSNETS)*. IEEE. 2024. URL: https://tinyurl.com/2cca37sj.

[16] Nilanjana Saha, Amrita Namtirtha, and Animesh Dutta. "Hide Mastermind using an Intermediate Connection on Social Network". In: *2024 IEEE 31st International Conference on High Performance Computing, Data and Analytics Workshop (HiPCW)*. IEEE. 2024, pp. 99–100. URL: https://ieeexplore.ieee.org/document/10898998.

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[21] Srestha Sadhu, Anju Bhuiya, and Animesh Dutta. "DSGCN: A Degree Strength Graph Convolution Network for Identifying Influential Nodes in Complex Networks". In: *2023 IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)*. IEEE. 2023, pp. 330–334. URL: https://ieeexplore.ieee.org/abstract/document/10350172.

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[23] Nilanjana Saha, Amrita Namtirtha, and Animesh Dutta. "Crossbred Method for Influential Spreaders". In: *Complex Networks Conference*. 2023, pp. 388–400. URL: https://link.springer.com/chapter/10.1007/978-3-031-53503-132.

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[28] Narayan Changder et al. "ODSS: Efficient Hybridization for Optimal Coalition Structure Generation." In: *Proceedings of the 34th Annual AAAI Conference on Artificial Intelligence, New York, USA, February 7-12.* 2020, pp. 7079–7086. URL: https://ojs.aaai.org/index.php/AAAI/article/view/6194.

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[40] S. Sen et al. "Developing a Metadata Application Profile for the Daily Hire Labor". In: *Proceedings of International Conference on Dublin Core & Metadata Applications*. 2018.

[41] Krishnendu Kundu and Animesh Dutta. "Multi-agent based Synchronous Communication for Dynamic Rescheduling in Railway Network". In: *Proceedings of the 9th International Conference on Agents and Artificial Intelligence - Volume 1: ICAART,* INSTICC. SciTePress, 2017, pp. 137–144. DOI: 10.5220/0006120901370144. URL: https://www.scitepress.org/PublishedPapers/2017/61209/.

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[45] Narayan Changder, Animesh Dutta, and Aditya K. Ghose. "A Kernelization approach for Anytime Coalition Structure Generation using Knuth Algorithm X". In: 2016. URL: https://api.semanticscholar.org/CorpusID:52237832.

[46] Amrita Namtirtha et al. "Algorithm for finding influential user: Based on user's information diffusion region". In: *Region 10 Conference (TENCON), 2016 IEEE*. IEEE. 2016, pp. 2734–2738. URL: https://ieeexplore.ieee.org/abstract/document/7848537.

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