

ACADEMIC PROFILE



DR. ANGANA CHARABORTY

Assistant Professor in Computer Science (W.B.E.S.)

M.Sc., Ph.D.

Email: angana@singurgovtcollege.org

- **Specialization:** Machine Learning, Artificial Intelligence, Deep Learning
- **Date of joining in this college:** 10.01.2025
- **Total teaching experience in college level:** 11 Years
- **Area of research:** Sequence Analysis, Computational Biology, Data Analytics
- **Title of Ph.D. thesis (if any):** Algorithms for Sequence Similarity Search: From Alignment-based to Alignment-free Approaches (Indian Statistical Institute)
- **Research guidance (if any):** Nil
- **Research projects [completed / ongoing] (if any):** Nil
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- **List of publications:**

A. Published papers in Journals:

- **Angana Chakraborty**, Sanghamitra Bandyopadhyay FOGSAA: Fast Optimal Global Sequence Alignment Algorithm. Scientific Reports, Nature Publishing Group. 3, 1746; DOI:10.1038/srep01746 (2013) [IF: 4.3].
- **Angana Chakraborty**, Sanghamitra Bandyopadhyay, “conLSH: Context based Locality Sensitive Hashing for Mapping of noisy SMRT Reads”, Computational Biology and Chemistry, Elsevier, 85, 2020. <https://doi.org/10.1016/j.compbiolchem.2020.107206> [IF: 2.6].
- **Angana Chakraborty**, Burkhard Morgenstern and Sanghamitra Bandyopadhyay, “S-conLSH: Alignment-free gapped mapping of noisy long reads”, BMC Bioinformatics, Springer Nature, 22, 64 (2021). <https://doi.org/10.1186/s12859-020-03918-3> [IF: 3.6]

B. Published papers in Seminars/Symposia/Conferences:

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- Bidisha Goswami, **Angana Chakraborty**, Dr.Sankhyan Choudhury, “An Agent Based Approach for Service provisioning in Cloud”, Proceedings of The first International Conference on Recent and Emerging Trends in Computer and Computational Sciences, RETCOMP13, 2013.
- **Angana Chakraborty**, Sanghamitra Bandyopadhyay, “Clustering of Web Sessions by FOGSAA”, Recent Advances in Intelligent Computational Systems, IEEE RAICS, 2013. [Best Paper Award]
- **Angana Chakraborty**, Sanghamitra Bandyopadhyay, “A Layered Locality Sensitive Hashing based Sequence Similarity Search Algorithm for Web Sessions”, The 2nd ASE International Conference on Big Data Science and Computing, Stanford University, CA, USA, May 27-31, 2014. [Acceptance rate: 8.5%]
- **Angana Chakraborty**, Sanghamitra Bandyopadhyay, “Ultrafast genomic database search using layered locality sensitive hashing”, Fifth International Conference on Emerging Applications of Information Technology (EAIT), 2018.

C. Published Books / Chapters in Books: NIL

D. Participation in Seminars/Symposia/Conferences/Workshops:

Title of the invited lecture /paper presented (oral/poster)	Title of Conference /Seminar with date	Organized by	Level
Bioinformatics for Precision Medicine	International Conference on Bioinformatics, September 10-12, 2019, Jakarta, Indonesia	Asia-Pacific Bioinformatics Network	International
Ultrafast genomic database search using layered locality sensitive hashing	Fifth International Conference on Emerging Applications of Information Technology (EAIT), Kolkata, India, 2018	IEEE	International
A Layered Locality Sensitive Hashing based Sequence Similarity Search Algorithm for Web Sessions	2nd ASE International Conference on Big Data Science and Computing, Stanford University, CA, USA, May 27-31, 2014	Stanford University, USA	International
Clustering of Web Sessions by FOGSAA	Recent Advances in Intelligent Computational Systems, IEEE RAICS, Trivandrum, 2013	IEEE	International

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● **Participation in OP/RC/FIP/FDP:**

Name of the Course	Place	Duration	Sponsoring Agency
Refresher Course on Artificial Intelligence (AI) Literacy	Rani Durgavati Vishawavidyalaya	13.04.2026 to 25.04.2026	UGC (MMTTC)
Refresher Course on Indian Society, Culture and Tradition in Transition: Challenges in the Context of 21st Century	Assam University, Silchar	02.04.2025 to 14.04.2025	UGC (MMTTC)
Faculty Induction Program	Guru Jambheshwar university of Science and Technology, Hisar (Haryana)	18.11.2020 to 23.12.2020	UGC

● **Membership of Learned Societies/ Editorial Boards, etc. (if any): NIL**

- **Patents (if any):** Rajat Kumar Pal, **Angana Chakraborty**, Novarun Deb “K-ary tree to binary tree conversion through complete height balanced technique” US Patent 9,715,514, July, 2017.

● **Awards (if any):**

- Received Ph.D degree from Indian Statistical Institute (Machine Intelligence Unit), Kolkata in 2020.
- Received Gold Medal for Standing First Class First in M.Sc, Computer Science from Calcutta University.
- Received Best Paper Award in the 2nd International Conference on Recent Advances in Computational Systems (RAICS), IEEE 2013.
- Stood first in the West Bengal Public Service Commission Examination for Assistant Professor (Computer science) in 2014.
- The prestigious PC Chandra Gold Medal Award For securing highest marks among all Hons graduates from Bethune College in 2009 B.Sc Examination.
- Ganesh Das and Pratima Das Memorial Gold Medal for standing First in B.Sc Examination, 2009 from Bethune College.
- Sushama Basu Memorial Gold Medal, First in B.Sc Exam, 2009 from Bethune College.
- Sarala Ghosh Memorial Scholarship, for securing highest marks in B.Sc part-I Examination among all Bethunees, 2007.
- Ashoke Kumar Mallik Memorial Gold plated Silver Medal for standing 1st among women and 3rd among both(men and women) students in Howrah Municipal Corporation , Higher Secondary examination, 2006.

- **Other notable activities (if any):**
- Worked as reviewer in Mindanao Journal of Science and Technology, 2013.
- Worked as reviewer in Oxford University Press, 2015.
- Worked as reviewer in Elsevier Journal, Gene, 2016.
- Worked as reviewer in IEEE Transactions on Circuits and Systems for Video Technology, 2017.
- Worked as reviewer in Sadhana: Academy proceedings in Engineering Sciences, 2018.
- Worked as reviewer in Scientific Reports, Springer Nature, 2023.
- Worked as reviewer in PLOS ONE, 2024.
- Worked as reviewer in Scientific Reports, Springer Nature, 2025.
- Newspaper Article titled “Researchers at Indian Statistical Institute Describe Findings in Science” in Science Letter, NewsRX, regarding our finding, FOGSAA: Fast Optimal Global Sequence Alignment Algorithm.
- Interview, given at the International LATAM eScience Workshop 2013, Turning data into insight at Sao Paulo, Brazil, May 2013, has been published in FAPESP magazine.
- The work, FOGSAA, has been mentioned in Wikipedia, <https://en.wikipedia.org/wiki/Needleman-Wunschalgorithm>
