

# Akash Nag

Academic Curriculum Vitæ

M. U. C. Women's College  
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## EDUCATIONAL BACKGROUND

Ph.D. Computer Science, The University of Burdwan, 2014–2018.  
M.Sc. Computer Science, University of Calcutta, 2011–2013.  
B.C.A. The University of Burdwan, 2008–2011.

## OTHER QUALIFICATIONS

Diploma French, The University of Burdwan, 2016–2017.  
Certificate French, The University of Burdwan, 2015–2016.

## AWARDS & FELLOWSHIPS

NET (Assistant Professor) Computer Science, University Grants Commission, Apr. 2014.  
Junior Research Fellow Computer Science, University Grants Commission, Apr. 2014.

## POSITIONS HELD

Jan. 2018–present Visiting Faculty, Department of Computer Science, Directorate of Distance Education, The University of Burdwan  
Sept. 2015–present Guest Lecturer, Department of Computer Science, M. U. C. Women's College

## COURSES TAUGHT

Spring	2018	Undergraduate	M. U. C. Women's College, CC-4: Discrete Structures.
Spring	2018	Graduate	DDE, The University of Burdwan, MCS-102: Theory of Computation.
	2017	Undergraduate	M. U. C. Women's College, Paper III(A): Digital Logic and Computer Architecture & Organization.
	2017	Undergraduate	M. U. C. Women's College, Paper-V(A): Formal Language & Language Translation.
Fall	2017	Undergraduate	M. U. C. Women's College, CC-2: Computer System Architecture.
	2016	Undergraduate	M. U. C. Women's College, Paper-III(A): Digital Logic and Computer Architecture & Organization.
	2016	Undergraduate	M. U. C. Women's College, Paper-I(A): Computer Fundamentals.
	2015	Undergraduate	M. U. C. Women's College, Paper-V(A): Formal Language & Language Translation.
	2015	Undergraduate	M. U. C. Women's College, Paper-I(A): Computer Fundamentals.

## COLLABORATORS

I have published papers with the following 8 co-authors: Sunil Karforma (U. Burdwan), Soumendu Banerjee (St. Xavier's College, Burdwan), Sk. Khamirul Islam (U. Burdwan), Bidyut Bandopadhyay (OIST), Anindya S. Panja (BIMS), Smarajit Maiti (OIST), Soumya K. Sarkar (UIT), Asmita Sarkar (UIT).

## PATENTS

1. "Method of Determining the Secondary Structure of Protein". Anindya Sundar Panja, Akash Nag, Bidyut Bandopadhyay, and Smarajit Maiti. Appl. No.: 201631017628. May 2016.

## BOOKS & MONOGRAPHS

2. *Searching in Protein Databases – Algorithms for Secure Protein Submission and Faster Searching*, Lambert Academic Publishing, Germany, Feb. 2017. ISBN-13: 978-3-330-03328-3.

## REFEREED CONFERENCE PUBLICATIONS

3. "Identifying Neurotoxins in Snake Venoms through Automated Generation of Probabilistic Consensus Motifs", Akash Nag, and Sunil Karforma, *Proceedings of SUSTECH 2015*, pages 716–722, DAVIM, Faridabad, Nov. 2015.
4. "A Randomized Algorithm for Fast Sequence Alignment", Akash Nag, and Sunil Karforma, *Proceedings of ICSTM 2015*, pages 1968–1972, University of Delhi, New Delhi, Sep. 2015.
5. "Density-based Clustering using Grids", Akash Nag, and Sunil Karforma, *Proceedings of ICMCTI 2017*, UIT, The University of Burdwan, Burdwan, Feb. 2017.

## REFEREED JOURNAL ARTICLES

6. "Protein Stability Determination (PSD): A Tool for Proteomics Analysis", Anindya S. Panja, Akash Nag, Bidyut Bandopadhyay, and Smarajit Maiti, *Current Bioinformatics*, Volume 13, 2018.
7. "ProMot: A Tool for Fast Discovery of Functional Motifs from Aligned Protein Sequences", *Indian Journal of Science and Technology*, Volume 10, Issue 25, pages 1–12, 2017.
8. "DSA Security Enhancement through Efficient Nonce Generation", Akash Nag, and Sunil Karforma, *Journal of Global Research in Computer Science*, Volume 5, Issue 10, pages 14–19, 2014.
9. "A Space-Efficient Approach towards Distantly Homologous Protein Similarity Searches", Akash Nag, and Sunil Karforma, *International Journal of Advanced Research in Computer Science*, Volume 6, Issue 2, pages 19–22, 2015.
10. "A Heuristic Approach to High-Speed Multiple Sequence Alignment for Phylogenetic Tree Construction", Akash Nag, and Sunil Karforma, *IPASJ International Journal of Computer Science*, Volume 4, Issue 4, pages 10–15, 2016.
11. "Classifying Snake Toxins using Decision Trees", Akash Nag, and Sunil Karforma, *International Journal of Scientific Research*, Volume 5, Issue 8, pages 262–263, 2016.

12. "Snake Toxin Classification using Neural Networks", Akash Nag, and Sunil Karforma, *International Journal of Computer Trends and Technology*, Volume 40, Issue 1, pages 78–83, 2016.
13. "Adaptive Dictionary-based Compression of Protein Sequences", Akash Nag, and Sunil Karforma, *International Journal of Education and Management Engineering*, Volume 7, Issue 5, pages 1–6, 2017.
14. "A Fast Heuristic Algorithm for Solving High-Density Subset-Sum Problems", *International Journal of Mathematical Sciences and Computing*, Volume 3, Issue 2, pages 55–61, 2017.
15. "Applying LSB Steganography for Disseminating Academic Testimonials in E-Learning and its Authentication aspects", Soumendu Banerjee, Sunil Karforma, and Akash Nag, *International Journal of Computer Trends and Technology*, Volume 47, Issue 3, pages 170–175, 2017.
16. "An Efficient Clustering Algorithm for Spatial Datasets with Noise, Akash Nag, and Sunil Karforma, *International Journal of Management, Engineering and Computer Science*, to appear.
17. "Determining the Secondary Structure of Elapid Toxins using Multi-Layer Perceptrons and Kohonen Networks", Akash Nag, and Sunil Karforma, *International Journal on Future Revolution in Computer Science & Communication Engineering*, Volume 4, Issue 4, pages 345–348, 2018.
18. "Object-oriented Metric-based Analysis of Text-transmission in E-Learning System through Natural Language Steganography", Soumendu Banerjee, Kh. Amirul Islam, Sunil Karforma, and Akash Nag, *International Journal of Engineering Technologies and Management Research*, Volume 4, Issue 11, 2017.
19. "Securing Text-transmission in E-learning through Natural Language Steganography: An Object Oriented Approach", *International Journal on Future Revolution in Computer Science and Communication Engineering*, to appear.
20. "Identifying Patients at Risk of Breast Cancer through Decision Trees", Soumya Kanta Sarkar, and Akash Nag, *International Journal of Advanced Research in Computer Science*, Volume X, Issue X, 2017.
21. "Automated Glaucoma Detection from Fundus Images using Clustering and Ellipse-Fitting", Asmita Sarkar, Soumya Kanta Sarkar, and Akash Nag, *IPASJ International Journal of Information Technology*, Volume 6, Issue 4, 2018.
22. "Compressing Protein Sequence Databases without Loss in Indexability", Akash Nag, and Sunil Karforma, *Journal of Biosciences* (Communicated).
23. "Determining the Phylogeny of Elapid Snakes through Iterative Clustering", Akash Nag, and Sunil Karforma, *International Journal of Data Mining in Bioinformatics*. (Communicated)
24. "Protecting IPR of study materials throguh FFT based watermarking in E-learning", Soumendu Banerjee, Akash Nag, and Sunil Karforma, *International journal of Intelligent Systems and Applications*. (Communicated).
25. "Optimal Steganographic Algorithm for Transmission of Login Credentials in E-learning", Soumendu Banerjee, Sunil Karforma, and Akash Nag, *Malaysian Journal of Computer Science*. (Communicated).