

# Angana Chakraborty

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## Contact Information

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## Current Position

**Senior Research Fellow (SRF), Indian Statistical Institute, Kolkata**

*Supervisor:* **August, 2011 - present**  
Prof. Sanghamitra Bandyopadhyay, Fellow of NASI, Fellow of INAE, Humboldt Fellow as Senior Researcher, Shanti Swarup Bhatnagar Awardee in Engineering Sciences, 2010.

## Research Interests

Machine Learning, Pattern Recognition, Data Mining, Sequence Analysis.

## Education

Degree	Year	Board/University	Marks Obtained	Remarks
M.Sc In Computer Science	2009-2011	Calcutta University	87.2%	<b>1st Class First Rank-1st</b>
B.Sc In Computer Science	2006-2009	Bethune College Calcutta University	83.4%	<b>1st Class First Rank-1st</b>
Higher Secondary Examination	2004-2006	West Bengal Council Of Higher Secondary Education	92.6%	<b>Rank-3rd in Howrah</b>
Madhyamik Examination	2004	West Bengal Board Of Secondary Education	86%	<b>Division-I*</b>

## Honors and Awards

- ★ Received the **Best Paper Award** in the 2nd International Conference on Recent Advances in Computational Systems (RAICS), IEEE 2013.
- ★ Qualified UGC-NET(**JRF & Lectureship**) in June, 2013.
- ★ Junior Research Fellowship for Ph.D. in Indian Statistical Institute, Kolkata, India from August 2011 to Present (on the basis of the JRF Entrance Examination held in May-June 2011).
- ★ M.Sc(Computer Science) , **1st Class First (Rank-1)** Calcutta University, 2011 .
- ★ GATE 2011 Score :758 **percentile : 99.67**
- ★ B.Sc from University Of Calcutta Computer Science Hons 2009 **Rank : 1st**

- ★ The prestigious **PC Chandra Gold Medal Award** For securing highest marks among all Hons graduates from Bethune College 2009 B.Sc Exam.
- ★ Ganesh Das and Pratima Das Memorial **Gold Medal** for standing First in B.Sc Exam, 2009.
- ★ Sushama Basu Memorial **Gold Medal**, First in B.Sc Exam, 2009.
- ★ 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.
- ★ Stood within top 1% students of West Bengal in Higher Secondary Examination, 2006.

#### Patent

- ◇ Invention selected for Patenting titled "Converting K-ary tree to its equivalent binary tree using a Complete Height Balanced Method" (**Invention ID: IN-820931**) on March 1, 2012. [Status: Patent filed]

#### Publication

- ◇ **Angana Chakraborty**, Sanghamitra Bandyopadhyay FOGSAA: Fast Optimal Global Sequence Alignment Algorithm. *Scientific Reports, Nature Publishing Group.* 3, 1746; DOI:10.1038/srep01746 (2013) [**IF: 5.078**].
- ◇ 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%**]

#### Workshops Attended

- ◇ FAPESP and **Microsoft Research** Latin American e-Science workshop "Turning Data into Insight" @ Sao Paulo, **Brazil**, May 2013.
- ◇ 5th International Conference on Pattern Recognition and Machine Intelligence (PREMI'13) @ MIU, ISI Kolkata, 2013.
- ◇ NIBMG-EBI Winter School on Next Gen Sequence Analysis, Kalyani, West Bengal, 2013.

- ◇ Workshop on Social Network Analysis(SNAW'12) @ Center for Soft Computing Research, ISI Kolkata, June 2012.
- ◇ Document Freedom workshop @ Indian Statistical Institute, Kolkata, 28-29 March 2012.

### Presentations Given

- ◇ 2nd ASE International Conference on Big Data Science and Computing, **Stanford University**, CA, USA, May 27-31, 2014.
- ◇ Recent Advances in Intelligent Computational Systems, IEEE RAICS, Trivandrum, 2013.
- ◇ Latin American e-Science workshop “Turning Data into Insight” @ Sao Paulo, **Brazil**, May 2013.
- ◇ Tools for Next Gen Sequencing Data Analysis, MIU, ISI Kolkata, 2013.
- ◇ Locality Sensitive Hashing to address Nearest Neighbor Problems, MIU, ISI Kolkata, 2013.
- ◇ Let’s Learn to make a Machine Learn, MIU, ISI Kolkata, 2012.

### Research Responsibilities

- Worked as reviewer in Mindanao Journal of Science and Technology in 2013.

### Newspaper/ Magazine Reports

- 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.

### Teaching Experience

- Programming Techniques and Data Structure (Sanghamitra Bandyopadhyay & **Angana Chakraborty**), Mtech(QR-OR), Indian Statistical Institute, Kolkata, 2013-2014.
- Programming Techniques and Data Structure (Sanghamitra Bandyopadhyay & **Angana Chakraborty**), Mtech(QR-OR), Indian Statistical Institute, Kolkata, 2012-2013.

### Software Projects

- **Agent Based Modeling In cloud Computing Domain Using JADE (Java Agent Development Environment )**  
Supervisor:  
Dr. Sankhayan Choudhury  
Associate Professor, Department Of Computer Science and Engineering  
University Of Calcutta
- **Web Design and Professor University database management using php, mysql, javascript, CSS**  
Supervisor:  
Dr. Sankhayan Choudhury  
Associate Professor, Department Of Computer Science and Engineering  
University Of Calcutta

- **Game Software Design,” Around The World In 80 Days”**, showing graphics primitives using **JAVA and JOGL**  
Supervisor:  
Sunirmal Khatua  
Assistant Professor , Department Of Computer Science and Engineering  
University Of Calcutta
- **Web Application : Travel Agency Website using JDBC, JAVA servlet and JSP , CSS**  
Supervisor:  
Sunirmal Khatua  
Assistant Professor , Department Of Computer Science and Engineering  
University Of Calcutta
- **Satellite Image Registration using MATLAB**  
Supervisor:  
Banani Saha  
Associate Professor, Department Of Computer Science and Engineering  
University Of Calcutta
- **Railway Reservation System Using Visual Basic (Front End) and Oracle Database Server (Back End)**  
Supervisor:  
Subhashri Basu  
Department Of Computer Science  
Bethune College, Kolkata

#### Technical Skills

- \* **Programming Languages:** C, C++, Core JAVA, MATLAB, Visual Basic, PHP, HTML, CSS, javascript, JOGL Graphics API, perl, CGI, XML, JSP-servlets, UNIX Shell Scripting, PL/SQL, VHDL, Prolog, Microprocessor 8085 programming.
- \* **Softwares:** eclipse, Adobe flash, MATLAB, php\_designer, WPM, perlCreator.
- \* **Operating Systems:** Windows 9x, Windows 7, Windows XP LINUX (ubuntu, fedora, mandriva, Redhat).
- \* **Servers:** WAMP, LAMP, JBOSS, TOMCAT, ORACLE, MySQL.

#### Reference

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