

## Sutanu Bhattacharya

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### Education

Ph.D. in Computer Science and Software Engineering Auburn University, USA Advisor: Dr. Debswapna Bhattacharya G.P.A: 3.8	Fall 2017 – Present
M.Tech in Distributed and Mobile Computing Jadavpur University, India Advisor: Dr. Pampa Sadhukhan C.G.P.A: 8.11	June 2014
B.Tech in Information Technology Bengal Institute of Technology, India C.G.P.A: 7.67	June 2011

### Employment

**Lecturer**, Computer Science Department, Chaibasa Engineering College, India, July 2014 – Aug 2017

### Technical Skills

Languages known- C (with Data Structures), Python, Java, C++, Perl  
Operating System: Windows, Linux, Mac OS  
Tools: Eclipse, NetBeans, PyMOL, Matplotlib, vim, jGRASP

### Honors and Awards

Our work has been selected for **Highlight Talk** in the 10th ACM BCB conference, Niagara Falls, NY, Sept 7-10, 2019.

Paper got published as the **Front Cover Article** in the July 2019 issue of PROTEINS: Structure, Function, and Bioinformatics journal.

Awarded **Young Research Excellence Award** (2nd place) at 16th Annual MCBIOS Conference, Birmingham, USA, 2019.

Awarded Travel grant to attend 16th Annual MCBIOS Conference, Birmingham, USA, 2019.

A.I.C.T.E. **National Scholarship** for M.Tech at Jadavpur University, Kolkata, India [2012 – 2014].

## Publications

- (5) **S. Bhattacharya**, R. Roche, D. Bhattacharya, “DisCovER: distance-based covariational threading for weakly homologous proteins”, **bioRxiv**, (2020).
- (4) M. H. Shuvo, **S. Bhattacharya**, D. Bhattacharya, “QDeep: distance-based protein model quality estimation by residue-level ensemble error classifications using stacked deep residual neural networks”, **bioRxiv**, (2020).
- (3) A. McGehee, **S. Bhattacharya**, R. Roche, D. Bhattacharya, “PolyFold: an interactive visual simulator for distance-based protein folding, **arXiv**, (2020).
- (2) **S. Bhattacharya**, D. Bhattacharya, “Evaluating the significance of contact maps in low-homology protein modeling using contact-assisted threading”, **Scientific Reports**, 10(1), 1-13 (2020).
- (1) **S. Bhattacharya**, D. Bhattacharya, “Does inclusion of residue-residue contact information boost protein threading?”, **Proteins: Structure, Function, and Bioinformatics**, 87(7): 596-606 (2019).

## Posters

- S. Bhattacharya**, D. Bhattacharya, “How Effective is Contact-assisted Protein Threading?”, 10th ACM BCB Conference, Niagara Falls, NY, Sept 7-10, 2019.
- S. Bhattacharya**, D. Bhattacharya, “A new contact-assisted threading approach for predicting more accurate protein 3D structure”, 2018 Graduate Engineering Research Showcase, Auburn University, USA, October 28, 2018.

## Oral Presentations

- S. Bhattacharya**, D. Bhattacharya, “Does inclusion of residue-residue contact information boost protein threading?”, 16th Annual MCBIOS Conference, Birmingham, USA, March 28-30, 2019. **(Won 2nd place in student oral presentation)**.
- S. Bhattacharya**, D. Bhattacharya, “How Effective is Contact-assisted Protein Threading?”, 10th ACM BCB Conference, Niagara Falls, NY, Sept 7-10, 2019 **(Highlight Talk)**.

## Teaching Experience

### As a Lecturer (July, 2014 – August, 2017)

1. **Discrete Mathematics**: This course was designed for third semester C.S.E. students (U.G.) and it covers Logic, Set, Relation, Function, Induction and Recursion, Counting, Graphs, Trees.
2. **Operating System**: Fifth semester students of 2013-17 batch took this course in which they learnt Thread, Process Management, Memory Management, Disk Management etc.
3. **Digital logic**: This course covered Combinational Logic circuit as well as Sequential Logic Circuit with application and U.G. students of C.S.E. department of 2013-17 and 2014-18 batches took this course.

**4. Data Structure using C:** Fourth semester C.S.E. students of 2013-17 & 2014-18 batches (U.G.) took this course, where Array, linked List, Stack, Queue, Sorting and Searching, Tree, Graph are covered in C.

**5. Automata:** Fifth semester C.S.E. students of 2013-17 batch (U.G.) took this course where Finite automata, PDA, LBA, Turing Machine were covered.

**6. Programming in Python:** Almost 50 U.G. students took this course as their summer training and it covered Control flow, Function and Module, Files, Input/Output, List, Dictionary.

**7. Introduction to Computing:** This was an introductory course offered to freshman U.G. students.

#### **As a Teaching Assistant at Auburn University (August, 2017 – Present)**

**1. Fundamental of Computing I:** It introduces the fundamentals of computing as well as certain aspects of software engineering which will enable you to construct logical, readable, and correct programs.

**2. Computational Intelligence & Adversarial Machine Learning:** It introduces concepts of Evolutionary Computation, Machine learning techniques such as SVM, NN, Naïve Bayesian Classifiers, Adv Machine learning.