

SAYAN GOSWAMI

Division of Computer Science & Engineering
2345 Patrick F. Taylor Hall
Louisiana State University
Baton Rouge, LA 70803

Phone: (225) 226-8696
Email: sgoswa1@lsu.edu
Web:

EDUCATION

- Ph.D. Computer Science, Louisiana State University, Baton Rouge (expected) May 2019
- Dissertation: Memory-Efficient High-Performance Assemblers for Big Genome Data
- Committee: Kisung Lee (Chair), Seung-Jong Park (Co-Chair), Jianhua Chen and Seungwon Yang
- B.Tech. Computer Science, National Institute of Technology, Durgapur, India May 2011

RESEARCH INTERESTS

My research lies primarily in the big-data domain of *de novo* whole-genome assembly and in general I am interested in the high-performance computing (HPC) aspect of handling scientific datasets. I am especially interested in designing scalable memory-efficient tools for processing big-data by sketching streaming or partitioning them.

SELECTED PUBLICATIONS

Sayan Goswami, Kisung Lee, Shayan Shams, and Seung-Jong Park. "GPU-Accelerated Large-Scale Genome Assembly", Proceedings of the 32nd IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2018.

Shayan Shams, **Sayan Goswami**, Kisung Lee, Seungwon Yang, and Seung-Jong Park. "Towards Distributed Cyberinfrastructure for Smart Cities using Big Data and Deep Learning Technologies", Proceedings of the 38th IEEE International Conference on Distributed Computing Systems (ICDCS), vision track paper, 2018.

Arghya Kusum Das, Jaeki Hong, **Sayan Goswami**, Richard Platania, Kisung Lee, Wooseok Chang, Seung-Jong Park, and Ling Liu. "Augmenting Amdahl's Second Law: A Theoretical Model to Build Cost-Effective Balanced HPC Infrastructure for Data-Driven Science", Proceedings of the 10th IEEE International Conference on Cloud Computing (CLOUD), 2017.

Sayan Goswami, Arghya Kusum Das, Richard Platania, Kisung Lee, and Seung-Jong Park. "Lazer: Distributed Memory-Efficient Assembly of Large-Scale Genomes", Proceedings of the IEEE International Conference on Big Data (IEEE BigData), 2016.

WORK IN PROGRESS

High-performance assembly of third generation sequencing datasets

At present, I am studying the highly compute intensive process of assembling error-prone third generation DNA sequence datasets and working on a distributed framework to address the issues related to it.

TEACHING EXPERIENCE

Teaching Assistant:

- Big Data Technologies Spring 2018, Spring 2017 and Spring 2016
- Computer Organization & Design Fall 2017, Fall 2015
- Computer Science I Spring 2016
- Cloud & Web Programming Spring 2015
- Theory of Computation Fall 2014
- Object Oriented Design Spring 2014
- Software Systems Development Fall 2013

Lab Assistant:

- Introduction to Engineering Computation Spring 2013
- Stats & Graph using Matlab Spring 2018, Fall 2013, Fall 2014
- Computer Science I Fall 2016, Spring 2016
- Computer Science II Spring 2018

Tutor & Supplemental Instructor

- Stats & Graph using Matlab Fall 2014
- Computer Science I Spring 2015

HONORS AND AWARDS

- Best Poster nominee at Supercomputing Conference November 2016
- Student travel award at IEEE BigData December 2016
- Student travel award at IEEE IPDPS May 2018
- LSU Graduate School Dean's Travel Award Fall 2018

WORK EXPERIENCE

- Associate Technology, Sapient Global Markets July 2011 - January 2013

LANGUAGES AND TOOLS

- C, Java, Python, Hadoop & friends
-