Avah (Indranil) Banerjee

CONTACT INFORMATION	Center for Computation and Technology, LSU Baton Rouge, LA 70808 WEBSITE: cct.lsu.edu/~ibanerjee	703-659-7353 ibanerjee@lsu.edu

RESEARCH INTERESTS

General: Algorithms & Data Structures, Graphs & Combinatorics, Computational Geometry

Specific: Approximation hardness of minimization problems, Graph reconfiguration, Sub-graph Connectivity

CURRENT POSITION

I am currently a postdoc at the Center for Computation and technology, LSU. As part of my work I am investigating approximation hardness of certain graph partitioning problems. I am informally associated with LSU Dept. of Mathematics.

EDUCATION

George Mason University, Fairfax, VA

Ph.D., Computer Science, Summer 2018

- Dissertation: *Problems On Sorting Sets and Graphs*
- Advisors: Dana Richards, Ph.D

M.S. (4.0), Computer Science, Dec 2015

- Thesis: *On Maximal Layers of Random Orders*
- Advisor: Dana Richards, Ph.D

National Institute Of Technology, Durgapur, India

B.Tech. (8.54/10.0), Electrical Engineering (with honors), May 2009

- Project: *SMPS Design Using PD Controllers*

REFEREED CONFERENCE PUBLICATIONS

1. Banerjee, I., Richards, D., & Shinkar, I., Sorting On Restricted Topologies, Accepted to SOFSEM 2019.

2. Banerjee, I., & Richards, D. New Results On Routing Via Matchings On Graphs. International Symposium on Fundamentals of Computation Theory (FCT 2017)

3. Banerjee, I., & Richards, D. Sorting Under Forbidden Comparisons. Scandinavian Symposium And Workshop On Algorithms (SWAT 2016)

4. Banerjee, I., & Richards, D. Computing Maximal Layers of Points in $E^{f(n)}$, Theoretical Informatics - 12th Latin American Symposium (LATIN 2016)

REFEREED JOURNAL PUBLICATIONS

5. Banerjee, I., & Richards, D. On Distribution Of Maximal Layers Of Random Orders, Congressus Numerantium 225 (2015), 211-216.

6. Banerjee, I., & Prasun, D. Group Technology Based Adaptive Cell Formation Using Predator-Prey Genetic Algorithm., Applied Soft Computing 12.1 (2012): 559-572.

7. Banerjee, I., & Prasun, D. An Hybrid Detection System Of Control Chart Patterns Using Cascaded SVM And Neural Network Based Detector, Neural Computing and Applications 20.2 (2011): 287-296.

SUBMITTED

8. Banerjee, I., Richards, D., Sorting Network On Trees, submitted to Parallel Processing Letters.

AWARDS	Travel Awards
	• Theoretical Informatics - 12th Latin American Symposium, Ensenada, MexicoApril 2016
	Student Awards
	• George Mason University, Volgenau School Of Engineering, Dean's Fellowship 2012–2013
	• Department Of Computer Science, Outstanding Graduate Teaching Assistant Award, 2017

TEACHING EXPERIENCE	Co-instructor	Fall 2012
	CS 112: Introduction to Computer Programming	
	Under Mark Snyder	
	Computer Science,GMU	
	Teaching Assistant	Springs 2013–17
	I have been a TA for CS583 - Introduction to Algorithms, the primary algorithms course for graduate students for past 4 years. Additionally, I have TA'ed other theory and AI courses (Formal Methods, Intro. To AI etc) along the way.	

INDUSTRIAL EXPERIENCE	Software Engineer, Videonetics Tech. Pvt. Ltd.	Jan 2010 – Mar 2011
	• Developed computer vision applications for traffic surveillance	
	• Worked in Text segmentation/OCR	
	Software Engineer, Tech BLA Pvt. Ltd.	August 2011 – July 2012
	• Development of computer vision based application for mobile devices.	

TALKS	• Presented at 12th Latin American Symposium on Theoretical Informatics.
	• Presented at the inaugural GMU CS PhD Symposium , 2016.
	• Presented at GMU Combinatorics Geometry and Algebra Seminar (CAGS)
	• Presented at Capital Area Theory Seminar (UMD, College Park)
	• I co-organize the CS-Theory colloquium at GMU and given several talks as part of it.

OTHER	• Languages known: C/C++, Python, Java, Mathematica, Lisp, PROLOG

REFERENCES	Dana Richards, PhD	
	Associate Professor	Phone: +1 703-993-1545
	Department Of Computer Science	E-mail: richards@cs.gmu.edu
	George Mason University	
	Fei Li, PhD	
	Associate Professor	Phone:+1 703-993-1540
	Department Of Computer Science	E-mail: lifei@cs.gmu.edu
	George Mason University	
	Walter Morris, PhD	
	Professor	Phone: +1 703-993-1481
	Department of Mathematical Sciences	E-mail: wmorris@gmu.edu
	George Mason University	
	Sanghamitra Bandyopadhyay, PhD	
	Professor	Phone: +91-33-2575-3114
	Machine Intelligence Unit	E-mail: sanghami@isical.ac.in
	Indian Statistical Institute	

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