PRITISH KAMATH

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Research Interests

Complexity Theory, Coding Theory and Applied Probability and Statistics.

Education

PhD. [June 2015 - ongoing]
Massachusetts Institute of Technology, Cambridge, MA, USA
Electrical Engineering and Computer Science
Advisors: Madhu Sudan (Harvard), Ronitt Rubinfeld (MIT)

S.M. [August 2013 - June 2015]
Massachusetts Institute of Technology, Cambridge, MA, USA
Electrical Engineering and Computer Science
Advisor: Madhu Sudan (Microsoft Research New England, MIT)
S.M. Thesis: Communication complexity of permutation-invariant functions

B.Tech. (Honours in CSE + Minor in Mathematics) [July 2008 - April 2012]
Indian Institute of Technology Bombay, Mumbai, INDIA
Department of Computer Science and Engineering
CGPA (core) = 9.70/10.0; CGPA (overall) = 9.77/10.0
B.Tech. Advisor: Supratik Chakraborty
B.Tech. Thesis: Studies on Preservation Theorems and Weaker Ehrenfeucht-Fraïssé games

Other Experience

Research Assistant, **Microsoft Research India**, Bangalore, India — Neeraj Kayal
Lower Bounds in Arithmetic Complexity Theory — June 2012 - July 2013

Research Intern, **IST, Austria** — Krishnendu Chatterjee
Efficient algorithms for computing simulation relations between systems — May - July 2011

Research Intern, **INRIA, Rennes-Bretagne, France** — Rumen Andonov
Protein Classification via Maximum Cliques on Alignment graphs — May - July 2010

Publications /Manuscripts

- **Communication complexity of permutation-invariant functions**
  Badih Ghazi, Pritish Kamath, Madhu Sudan
  Symposium on Discrete Algorithms (SODA), 2016 (to appear) [pdf]
- **Communication with partial noiseless feedback**
  Bernhard Haeupler, Pritish Kamath, Ameya Velingker
  International Workshop on Randomization and Computation (RANDOM), 2015 [pdf]
- **Arithmetic circuits: A chasm at depth three**
  Ankit Gupta, Pritish Kamath, Neeraj Kayal, Ramprasad Saptharishi
  Foundations of Computer Science (FOCS), 2013 [pdf]

- **Approaching the chasm at depth four**
  Ankit Gupta, Pritish Kamath, Neeraj Kayal, Ramprasad Saptharishi
  IEEE Conference on Computational Complexity (CCC), 2013 **(Best Paper Award)** [pdf]
- **Preservation under substructures modulo bounded cores**
  Abhisekh Sankaran, Bharat Adsul, Vivek Madan, Pritish Kamath, Supratik Chakraborty
  International Workshop on Logic, Language, Information and Computation (WoLLIC), 2012 [pdf]
- **Faster algorithms for alternating refinement relations**
  Krishnendu Chatterjee, Siddhesh Chaubal, Pritish Kamath
  Computer Science and Logic (CSL), 2012 [pdf]
- **Using dominances for solving the protein family identification problem**
  Noël Malod-Dognin, Mathilde Le Boudic-Jamin, Pritish Kamath, Rumen Andonov
  Workshop on Algorithms in Bioinformatics (WABI), 2011 [pdf]

Academic Awards and Honors

Post-Undergraduate

- **Akamai Presidential Fellowship** (MIT) 2013-2014
- **Best Paper Award** *(co-winner)* at CCC 2013

Undergraduate

- **President of India Gold Medal** for best academic performance in the graduating batch across all disciplines of B.Tech programme at IIT Bombay
- **Institute Silver Medal** for best academic performance in the graduating batch of B.Tech programme in the Computer Science and Engineering Dept, IIT Bombay
- **Minor in Mathematics** with GPA of 10.0/10.0

Pre-Undergraduate

- **All India Rank of 21** in IIT Joint Entrance Examination 2008 (among 375,000 students)
- **All India Rank 41** (State Rank 3) in All Indian Engineering Entrance Exam (AIEEE) 2008 (among 700,000 students)
- **Gold Medal** and **Certificate of Merit** in *Indian National Physics Olympiad 2008* for being ranked among the top 35 students in the country
- **Certificate of Merit** in *Indian National Mathematics Olympiad 2008* (ranked among the top 30); attended the International Mathematics Olympiad Training Camp 2008
- Scholarship for attending **Nurture Program for Advanced Mathematics** at Indian Statistical Institute (ISI) Delhi, conducted by National Board for Higher Mathematics (NBHM)

Teaching Experience

Teaching Assistant, **6.841 : Advanced Complexity Theory** — Spring 2015
Instructor: Prof. Dana Moshkovitz — MIT

Teaching Assistant, **CS 208 : Automata Theory and Logic** — Fall 2012
Instructor: Prof. Supratik Chakraborty — IIT Bombay