SUDEEP KAMATH

Postdoctoral Researcher,
EE Department,
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ACADEMIC RECORD

Education

- University of California, Berkeley, CA (2008-2013)
  Ph.D. in Electrical Engineering and Computer Sciences, Major GPA: 4.0/4.0, UC GPA: 3.983/4.0
  Advisors: Prof. David N.C. Tse and Prof. Venkat Anantharam
- University of California, Berkeley, CA
  M.A. in Statistics (2013), M.S. in Electrical Engineering and Computer Sciences (2011)
- Indian Institute of Technology Bombay, Mumbai, India (2004-2008)
  B.Tech in Electrical Engineering, CGPA: 9.91/10.0

Research Interests

- Information Theory
- Learning Theory
- Statistics

Honors & Awards

- Recipient of the *Center for Science of Information (CSoI)* postdoctoral fellowship for the years 2014-16
- Recipient of the *Information Theory and Applications (ITA)* postdoctoral fellowship for the year 2013-14
- Awarded the *Eliahu Jury Award* for the year 2013 (UC Berkeley). This award is given each year to a graduate student for outstanding achievement in the area of Systems, Communications, Control, or Signal Processing
- Secured *Department Rank 1* (out of around 85 students) and *Institute Rank 2* (out of around 500 students) in undergraduate studies at IIT Bombay
- Awarded the prestigious *Rajiv Gandhi National Award* as young achiever for the year 2004. This award is given each year for excellence, and to only one person for academic excellence in India
- *Bronze Medallist* at the 36^{th} International Chemistry Olympiad (IChO) 2004, held in Kiel, Germany
- Secured *Gold Medal* for outstanding performance throughout the Indian National Physics Olympiad 2004
- Secured an *All India Rank of 22* in the IIT-JEE (joint entrance examination) 2004 among over 170,000 students

RESEARCH, COURSE WORK, INDUSTRY EXPERIENCE

Publications and Preprints

- Sudeep Kamath, Alon Orlitsky, Dheeraj Pichapati, Ananda Theertha Suresh "On learning distributions from their samples", **COLT 2015**.
- Sudeep Kamath, Chandra Nair, "The strong data processing constant for sums of i.i.d. random variables", **ISIT 2015**.
- Chandra Chekuri, Sudeep Kamath, Sreeram Kannan, Pramod Viswanath "Delay-constrained unicast and the triangle-cast problem", **ISIT 2015**.
- Sudeep Kamath, Young-Han Kim, "Chop and Roll: Improving the Cutset Bound", **Allerton 2014**.
- Venkat Anantharam, Amin Aminzadeh Gohari, Sudeep Kamath and Chandra Nair, "On Hypercontractivity and a Data Processing Inequality", **ISIT 2014**.

- Sudeep Kamath, David N.C. Tse, Chih-Chun Wang, "Two-unicast is hard", **ISIT 2014**.
- Venkat Anantharam, Amin Aminzadeh Gohari, Sudeep Kamath and Chandra Nair, "On Hypercontractivity and the Mutual Information between Boolean Functions", **Allerton 2013.**
- Venkat Anantharam, Amin Aminzadeh Gohari, Sudeep Kamath and Chandra Nair, "On Maximal Correlation, Hypercontractivity, and the Data Processing Inequality studied by Erkip and Cover", **arXiv: 1304.6133.**
- Sudeep Kamath and Venkat Anantharam, "Non-interactive Simulation of Joint Distributions: The Hirschfeld-Gebelein-Rényi Maximal Correlation and the Hypercontractivity Ribbon", **Allerton 2012**.
- Sudeep Kamath, David N.C. Tse, "On the Generalized Network Sharing bound and edge-cut bounds for network coding", **ISIT 2013**.
- Sudeep Kamath and Pramod Viswanath, "An information-theoretic meta-theorem on edge-cut bounds", **ISIT 2012**.
- Sudeep Kamath, Sreeram Kannan and Pramod Viswanath, "Wireless Networks Under Symmetric Demands", **ISIT 2012**.
- I-Hsiang Wang, Sudeep Kamath and David N.C. Tse, "Two Unicast Information Flows over Linear Deterministic Networks", **ISIT 2011**.
- Sudeep Kamath, Urs Niesen and Piyush Gupta, "The capacity per unit energy of large wireless networks", **ISIT 2011**.
- Sudeep Kamath, David N.C. Tse and Venkat Anantharam, "Generalized Network Sharing outer bound and the Two-Unicast problem", **NetCod 2011**.
- Sudeep Kamath and Venkat Anantharam, "A new dual to the Gács-Körner common information defined via the Gray-Wyner system", **Allerton 2010**.
- Sudeep Kamath and D. Manjunath, "On Distributed Function Computation in Structure-Free Random Networks", **ISIT 2008**.

Related Courses

- *Electrical Engineering and Computer Science*

  Random Processes in Systems (EE 226), Stochastic Control Theory (EE 223), Introduction to Convex Optimization (EE 227A), Information Theory (EE 229A), Error Control Coding (EE 229B), Digital Signal Processing (EE 225A), Fundamentals of Wireless Communications (EE 224B)
- *Mathematics and Statistics*

  Topology and Analysis (MATH 202A), Probability Theory (Stat 205A & B), Stochastic Processes in Evolutionary Biology (STAT 260), Special Topics in Markov Chains (STAT 206A)

Industry Experience

- *Jane Street Capital* Summer 2012

  Worked with the Fixed Income desk and the ADR desk to develop and test trading strategies
- *Alcatel-Lucent Bell Labs* Summer 2010

  Worked on fundamental limits of energy efficiency in wireless networks

Employment History

- *University of California San Diego* October 2013 - September 2014

  Information Theory and Applications (ITA) Center Postdoctoral Researcher
- *Princeton University & Purdue University* September 2014 - present

  Center for Science of Information (CSoI) Postdoctoral Researcher