# CHANDRA NAIR

**Short CV** (for a detailed one, please click: Full CV)

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## EXPERIENCE

### Employment

**The Chinese University of Hong Kong**

🗓 Aug 2007 – Ongoing          ♀ Sha Tin, Hong Kong S.A.R., China

- Professor, Department of Information Engineering
- Program Director, Mathematics and Information Engineering

**Microsoft Research**

🗓 Jun 2005 – Jun 2007          ♀ Redmond, WA, USA

- Post-doctoral researcher at the Theory Group

### Education

**Stanford University**

🗓 Sep 1999 - June 2005          ♀ Stanford, CA, USA

- Master of Science (EE), Jan 2002
- Doctor of Philosophy (EE), June 2005
  - Thesis: Proofs of the Parisi and Coppersmith-Sorkin conjectures in the random assignment problem
- Stanford Graduate Fellow, Sep 2000 - Aug 2004
- Microsoft Graduate Fellow, Sep 2004 - June 2005

**Indian Institute of Technology**

🗓 Jul 1995 - June 1999          ♀ Madras, Tamil Nadu, India

- Bachelor of Technology (EE), July 1999
- Philips (India) and Siemens (India) award for best academic record in EE

## INTERESTS

- Research
  - Primary: Non-Convex Optimization, Network Information Theory, High-Dimensional Probability
  - Secondary: Algorithms, Networking, Combinatorial Optimization
- Teaching
  - Regular: Signals and Systems, Probability Theory, Network Information Theory
  - Occasional: Engineering Mathematics, Random Processes

## RECOGNITION

- IEEE Fellow
- IEEE Information Theory Society Distinguished Lecturer (2017-2018)
- IEEE Information Theory Society best paper award (2016)
- TPC co-chair, IEEE International Symposium on Information Theory (2018)
- Associate Editor, IEEE Transactions on Information Theory (2014-2016)
- Plenary Speaker, The International Symposium on Information Theory and Its Applications (ISITA), 2018

## TALKS

- Optimization and Learning Workshop, TIFR, Short Course, January 2019
- ISITA, Plenary Talk, October 2018
- Princeton University, Departmental Seminar, October 2018
- Massachusetts Institute of Technology, LIDS Special Seminar, April 2018
- CMSA, Harvard University, Workshop on Coding and Information Theory, April 2018
- For a larger list of my talks: please see my full CV

## PUBLICATIONS

- V. Anantharam, V. Jog and C. Nair, "Unifying the Brascamp-Lieb Inequality and the Entropy Power Inequality", *Uploaded to ArXiv*, (2019), arXiv identifier:1901.06619.
- C. Nair, and M. Yazdanpanah, "Sub-optimality of superposition coding region for three receiver broadcast channel with two message sets", *IEEE International Symposium on Information Theory (ISIT)*, (2017), 1038-1042.
- S. Beigi and C. Nair, "Equivalent characterization of reverse Brascamp-Lieb-type inequalities using information measures", *IEEE International Symposium on Information Theory (ISIT)*, (2016), 1038–1042.
- C. Nair, L. Xia, and M. Yazdanpanah, "Sub-optimality of Han-Kobayashi achievable region for interference channels", *IEEE International Symposium on Information Theory (ISIT)*, (2015), 2416–2420.
- Y. Geng and C. Nair, "The capacity region of the two-receiver vector Gaussian broadcast channel with private and common messages", *IEEE Transactions on Information Theory*, (2014), 2087–2104.
- Y. Geng, A. Gohari, C. Nair, and Y. Yu, "The capacity region of classes of product broadcast channels", *IEEE Transactions on Information Theory*, (2014), 22–41.
- C. Borgs, J. Chayes, S. Mertens, and C. Nair., "Proof of the local REM conjecture for number partitioning I: Constant energy scales", *Random Structures and Algorithms*, (2009), 217–240.
- C. Nair, B. Prabhakar, M. Sharma, "Proofs of the Parisi and Coppersmith-Sorkin random assignment conjectures", *Random Structures and Algorithms*, (2005), 413–444.
- For a larger selection of works with a summary: please see my full CV
- For a complete list: please see my homepage