SANJEEV ARORA

Curriculum Vitae, November 2004.

Born January 1968, in India. US Permanent Resident

Career

July'03–	Professor of Computer Science, Princeton University.
Sept'01—June'02	Visiting Associate Professor, UC Berkeley .
Feb.'99–June'03	Associate Professor of Computer Science, Princeton University.
Sept.'94–Jan.'99	Assistant Professor of Computer Science, Princeton University.

Education

Ph.D., Computer Science, UC Berkeley, 1994. Advisor: U.V. Vazirani
S.B., Math with CS, MIT, 1990.

Professional Activities and Honors

- Best paper award (cowinner), ACM Symposium on Theory of Computing, 2004.
- Invited speaker, International Symposium on Math Programming 2003.
- Distinguished Alumnus Award from UC Berkeley Computer Science Dept., 2003.
- Invited speaker, International Congress of Mathematicians, 2002.
- EATCS-SIGACT Gödel prize (cowinner), 2001.
- Codirector of DIMACS, 2000-2001 (1 term)
- Invited speaker, ACM Symposium on Theory of Computing, 1998.
- David and Lucile Packard Foundation Fellowship, 1997–2002.
- Alfred P. Sloan Fellowship, 1996.
- NSF CAREER Award for junior faculty, 1995.
- ACM Doctoral Dissertation Award (cowinner), 1995.
- Member of editorial board, *Computational Complexity*, *Journal of Combinatorial Optimization, Information and Computation, Electronic Colloquium on Computational Complexity.*
- Program committee member for: *ACM Symposium on Theory of Computing, 1996*, *International Computing and Combinatorics Conference, 1997*, *IEEE Foundations of Computer Science, 2000*, *ACM Symposium on Theory of Computing, 2003*. Program Chair for *APPROX 2003*.

- Invited speaker at *Logic Colloquium'94*, McGill Workshop on Complexity Theory, 1996, *CUNY Logic Day* 1996, *Dimacs Workshop on Networks Design*, 1997, *NYU Geometry Day*, 1997, Lecturer at IAS-Park City *Summer school in Complexity Theory, 2000*, *Bay Area Theory Day 2001*, *Foundations of Software Technology and Theoretical CS 2001*, *Dimacs workshop on Geometric Algorithms 2003*, *Foundations of Computation Theory 2003*, *NYU/Columbia Theory Day, 2004*.

Selected Publications

1. S. Arora and S. Safra. Probabilistic Checking of Proofs: A New Characterization of NP. *Journal of the ACM* **45**(1):70–122, 1998.

2. S. Arora, C. Lund, R. Motwani, M. Sudan, and M. Szegedy. Proof verification and intractability of approximation problems. *JACM* **45**(3):501–555, 1998.

3. S. Arora. Polynomial-time approximation schemes for Euclidean TSP and other geometric problems. *JACM* **45**(5):753–782, 1998. (Based on papers in IEEE FOCS 1996 and 1997.)

4. S. Arora, S. Rao, and U. Vazirani. Expander flows, geometric embeddings, and graph partitioning. *Proc. ACM STOC*, 2004.

5. S. Arora, J. Lee, and A. Naor. Euclidean distortion and Sparsest Cut. *Manuscript, 2004*.

6. S. Arora, D. Karger, and M. Karpinski. Polynomial Time Approximation Schemes for Dense Instances of $\mathcal{NP}$-Hard Problems. *JCSS* **58** 1999. (Special Issue devoted to STOC 1995.)

7. S. Arora, L. Babai, J. Stern, and Z. Sweedyk. The hardness of approximate optima in lattices, codes, and systems of linear equations. *JCSS*, 54(2):317-331, 1997. (Prelim. version in *IEEE FOCS* 1993.)

8. S. Arora and M. Sudan. Improved low degree testing and its applications. *Combinatorica*, 2004. (Prelim version in ACM STOC 1997.)

9. S. Arora, E. Hazan, S. Kale. $O(\sqrt{\log n})$-approximation to SPARSEST CUT in $\tilde{O}(n^2)$ time. *Proc. IEEE FOCS* 2004.

10. S. Arora, S. Rao, and P. Raghavan. Polynomial-time approximation schemes for Euclidean facility location and k-median. *Proc. ACM STOC*, 106–113, 1998.

11. S. Arora, B. Bollobás, and L. Lovász. Proving integrality gaps without knowing the linear program. *Proc. IEEE Foundations of Computer Science,* 313-322, 2002.

12. S. Arora and R. Kannan. Learning mixtures of separated non-spherical gaussians. To appear in *Annals of Applied Probability*, 2005. (Prelim version in *Proc. ACM STOC* 2001.)

13. S. Arora, T. Leighton and B. Maggs. Online Algorithms for Path Selection in a Nonblocking Network. *SIAM J. Comp.* **25**(3):600–625, 1996. (Prelim. version in ACM STOC 1990.)