

RESEARCH INTERESTS Pseudorandomness, Complexity, Coding Theory, Combinatorics

EXPERIENCE

ASSISTANT PROFESSOR

University of Washington, Seattle, WA

2010-present

Working on various problems in theoretical computer science.

SENIOR POSTDOCTORAL RESEARCHER

Princeton University, Princeton, NJ

2009-2010

Working on various problems in theoretical computer science.

POSTDOCTORAL RESEARCHER

Institute for Advanced Study, Princeton, NJ

2007-2009

Working on various problems in theoretical computer science.

RESEARCH ASSISTANT

University of Texas at Austin, Austin, TX

2003-2007

Worked on problems in theoretical computer science under David Zuckerman.

EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN

Austin, TX — Ph.D., 2003-2007

Computer Science. Thesis: “Randomness Extractors for Independent Sources and Applications”

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA — B.S., B.S., 1998-2002

Bachelors’ in Mathematics and Computer Science

HONORS AND AWARDS

SLOAN RESEARCH FELLOWSHIP

2011

BEST STUDENT PAPER AWARD

ACM Symposium On Theory of Computing, 2006

DEAN’S EXCELLENCE AWARD

University of Texas at Austin, 2003

MCD FELLOWSHIP

University of Texas at Austin, 2003

BEST MATH SENIOR

Georgia Institute of Technology, 2002

PRESIDENT’S AWARD FOR UNDERGRADUATE RESEARCH

Georgia Institute of Technology, 2002

J. C. CURRIE AWARD

Georgia Institute of Technology, 2002

CONFERENCE COMMITTEES

41st ACM Symposium on Theory of Computing (STOC), 2009. PC Member

27th IEEE Conference on Computational Complexity (CCC), 2011. PC Member

JOURNAL REFEREEING

SIAM Journal of Discrete Mathematics (SIDMA)

Theory of Computing (ToC)

Random Structures and Algorithms (RSA)

Foundations and Trends in Theoretical Computer Science

CONFERENCE REFEREEING

IEEE Foundations of Computer Science (FOCS)
ACM Symposium on Theory of Computing (STOC)
IEEE Conference on Computational Complexity (CCC)
International Workshop on Randomized Techniques in Computation (RANDOM)
ACM-SIAM Symposium on Discrete Algorithms (SODA)
International Colloquium on Automata, Languages and Programming (ICALP)

INVITED TUTORIAL TALK

WORKSHOP ON RANDOMIZATION AND COMPUTATION
Cambridge, MA *August 2008*
Survey of Parallel Repetition Results.

INVITED TALKS

PRINCETON UNIVERSITY
Princeton, NJ *August 2010*
Workshop at Intractability Center: "Barriers in Computational Complexity."

BANFF INTERNATIONAL RESEARCH STATION
Banff, Alberta, Canada *August 2010*
Workshop: "Workshop on Computational Complexity."

UNIVERSITY OF WASHINGTON
Seattle, WA *December 2008*
Theory Seminar.

BERKELEY
Berkeley, CA *December 2008*
Theory Seminar.

NEW YORK UNIVERSITY
New York, NY *October 2008*
Cryptography Seminar.

DIMACS CENTER, RUTGERS UNIVERSITY
New Brunswick, NJ *September 2008*
Theory Seminar.

BANFF INTERNATIONAL RESEARCH STATION
Banff, Alberta, Canada *August 2008*
Workshop: "Analytic Methods in Computational Complexity."

GEORGIA INSTITUTE OF TECHNOLOGY
Atlanta, GA *April 2008*
Algorithms and Randomness Center Colloquium.

INSTITUTE FOR PURE AND APPLIED MATHEMATICS
Los Angeles, CA *February 2008*
Workshop: "Expanders in Pure and Applied Mathematics."

COLUMBIA UNIVERSITY
New York, NY *November 2007*
Computer Science Theory Seminar

DAGSTUHL
Wadern, Germany *September 2007*
Workshop: "Algebraic Methods in Computational Complexity."

<p>TSINGHUA UNIVERSITY <i>Beijing, China</i> Workshop: “China Theory Week.”</p>	<p><i>September 2007</i></p>
<p>OBERWOLFACH <i>Oberwolfach, Germany</i> Workshop: “Computational Complexity.”</p>	<p><i>July 2007</i></p>
<p>MASSACHUSETTS INSTITUTE OF TECHNOLOGY <i>Cambridge, MA</i> Theory Colloquium</p>	<p><i>March 2007</i></p>
<p>INSTITUTE FOR ADVANCED STUDY <i>Princeton, NJ</i> Computer Science / Discrete Math Seminar</p>	<p><i>November 2006</i></p>
<p>BANFF INTERNATIONAL RESEARCH STATION <i>Banff, Canada</i> Workshop: “Recent Advances in Computational Complexity.”</p>	<p><i>August 2006</i></p>
<p>WEIZMANN INSTITUTE OF SCIENCE <i>Rehovot, Israel</i> Computer Science Theory Seminar</p>	<p><i>July 2006</i></p>
<p>TEL AVIV UNIVERSITY <i>Tel Aviv, Israel</i> Computer Science Theory Seminar</p>	<p><i>June 2006</i></p>
<p>TECHNION <i>Haiifa, Israel</i> Computer Science Theory Seminar</p>	<p><i>June 2006</i></p>
<p>GEORGIA INSTITUTE OF TECHNOLOGY <i>Atlanta, GA</i> Computer Science Theory Seminar</p>	<p><i>June 2006</i></p>
<p>INSTITUTE FOR ADVANCED STUDY <i>Princeton, NJ</i> Computer Science / Discrete Math Seminar</p>	<p><i>October 2005</i></p>

PUBLICATIONS

JOURNAL PUBLICATIONS

1. Anup Rao.
Parallel Repetition in Projection Games and a Concentration Bound
SICOMP Special Issue for STOC 2008.
2. Anup Rao.
Extractors for a Constant Number of Polynomially Small Entropy Independent Sources
SICOMP Special Issue for STOC 2006.
3. Jesse Kamp, Anup Rao, Salil Vadhan, David Zuckerman.
Deterministic Extractors for Small Space Sources
Journal of Computer and System Sciences, 2010.
4. Boaz Barak, Mark Braverman, Xi Chen, Anup Rao.
How to Compress Interactive Communication
SICOMP Special Issue for STOC 2010.

CONFERENCE PROCEEDINGS

1. Yael Tauman Kalai, Allison Lewko, Anup Rao
Formulas Resilient to Short-Circuit Errors
Manuscript, 2012.
2. Mark Braverman, Anup Rao
Efficient Communication Using Partial Information
52nd Annual IEEE Symposium on Foundations of Computer Science (FOCS), 2011.
3. Zeev Dvir, Anup Rao, Amir Yehudayoff, Avi Wigderson
Restriction Access
Innovations in Theoretical Computer Science, 2012.
4. Mark Braverman, Anup Rao
Towards Coding for Maximum Errors in Interactive Communication
43rd Annual ACM Symposium on Theory of Computing (STOC), 2011.
5. Mark Braverman, Anup Rao, Ran Raz, Amir Yehudayoff
Pseudorandom Generators for Regular Branching Programs
51st Annual IEEE Symposium on Foundations of Computer Science (FOCS), 2010.
6. Boaz Barak, Mark Braverman, Xi Chen, Anup Rao and Avi Wigderson.
How to Compress Interactive Communication
42nd Annual ACM Symposium on Theory of Computing (STOC), 2010.
7. Boaz Barak, Anup Rao, Ran Raz, Ricky Rosen, and Ronen Shaltiel.
A Strong Parallel Repetition Theorem for Free Projection Games
13th Intl. Workshop on Randomization and Computation (RANDOM), 2009
8. Anup Rao.
Extractors for Low-Weight Affine Sources.
25th IEEE Conference on Computational Complexity (CCC), 2009.
9. Yael Tauman Kalai, Xin Li and Anup Rao.
2-Source Extractors under Computational Assumptions and Cryptography with Defective Randomness
50th Annual IEEE Symposium on Foundations of Computer Science (FOCS), 2009.
10. Guy Kindler, Ryan O'Donnell, Anup Rao and Avi Wigderson.
Spherical Cubes and Rounding in High Dimensions
49th Annual IEEE Symposium on Foundations of Computer Science (FOCS), 2008.
11. Yael Tauman Kalai, Xin Li, Anup Rao and David Zuckerman.
Network Extractor Protocols
49th Annual IEEE Symposium on Foundations of Computer Science (FOCS), 2008.
12. Boaz Barak, Ishay Haviv, Moritz Hardt, Anup Rao, Oded Regev and David Steurer.
Rounding Parallel Repetitions of Unique Games
49th Annual IEEE Symposium on Foundations of Computer Science (FOCS), 2008.
13. Anup Rao and David Zuckerman.
Extractors for Three Uneven-Length Sources
12th Intl. Workshop on Randomization and Computation (RANDOM), 2008.

14. Anup Rao.
A 2-Source Almost-Extractor for Linear Entropy
12th Intl. Workshop on Randomization and Computation (RANDOM), 2008.
15. Anup Rao.
Parallel Repetition in Projection Games and a Concentration Bound
40th Annual ACM Symposium on Theory of Computing (STOC), 2008.
16. Anup Rao.
Extractors for a Constant Number of Polynomially Small Min-Entropy Independent Sources
38th Annual ACM Symposium on Theory of Computing (STOC), 2006.
Co-winner of the Danny Lewin Best Student Paper Award.
17. Boaz Barak, Anup Rao, Ronen Shaltiel and Avi Wigderson.
2-Source Dispersers for Sub-Polynomial Entropy and Ramsey Graphs Beating the Frankl-Wilson Construction.
38th Annual ACM Symposium on Theory of Computing (STOC), 2006.
18. Jesse Kamp, Anup Rao, Salil Vadhan and David Zuckerman.
Deterministic Extractors for Small Space Sources
38th Annual ACM Symposium on Theory of Computing (STOC), 2006.
19. Alessandro Orso, Anup Rao and Mary Jean Harrold.
A Technique for Dynamic Updating of Java Software
International Conference on Software Maintenance, 2002, pp. 649-658.