

- UNDERGRADUATE RESEARCH.
Mathematical Engineering Department.
University of Chile. Santiago, Chile.

1997–1999.

TEACHING AND MENTORING EXPERIENCE

- Course on “Randomized algorithms and matrix decompositions” for the Sixth Summer School of Discrete Mathematics at the Institute of Complex Systems (January 2011), Valparaiso, Chile.
- Instructor of “Computability and unsolvability” (CSE 725, Winter 2010, Spring 2010, Winter 2011), “Topics in randomized algorithms” (CSE 788, Spring 2010), “Introduction to analysis of algorithms and data structures” (CSE 680 Autumn 2010), Computer Science and Engineering, The Ohio State University.
- Mentor for the Summer Program in Undergraduate Research, MIT. 2007.
- Teaching assistant of calculus, multivariable calculus, ODE (University of Chile), statistics, combinatorial optimization and probability theory (MIT).

PUBLICATIONS

PEER REVIEWED JOURNAL ARTICLES

- *Optimization of a convex program with a polynomial perturbation*. R. Kannan and L. Rademacher. Operations Research Letters 2009.
- *Dispersion of mass and the complexity of randomized geometric algorithms*. L. Rademacher and S. Vempala. Advances in Mathematics 2008.
- *Matrix approximation and projective clustering via volume sampling*. A. Deshpande, L. Rademacher, S. Vempala and G. Wang. Theory of Computing 2006.

PEER REVIEWED CONFERENCE PROCEEDING ARTICLES

- *Efficient volume sampling for row/column subset selection*. A. Deshpande and L. Rademacher. FOCS 2010.
- *Learning convex bodies is hard*. N. Goyal and L. Rademacher. COLT 2009.
- *Expanders via random spanning trees*. N. Goyal, L. Rademacher and S. Vempala. SODA 2009.
- *Approximating the centroid is hard*. L. Rademacher. SOCG 2007.
- *Dispersion of mass and the complexity of randomized geometric algorithms*. L. Rademacher and S. Vempala. FOCS 2006.
- *Computing equilibrium prices in exchange economies with tax distortions*. B. Codenotti, L. Rademacher and K. Varadarajan. ICALP 2006.
- *Matrix approximation and projective clustering via volume sampling*. A. Deshpande, L. Rademacher, S. Vempala and G. Wang. SODA 2006.
- *Testing geometric convexity*. L. Rademacher and S. Vempala. FSTTCS 2004.

INVITED TALKS AND POSTERS

- *Efficient volume sampling for row/column subset selection.*
 - Georgia Institute of Technology, College of Computing, ARC Colloquium, Atlanta, GA, 2010.
 - IBM T. J. Watson Research Center, IP for lunch seminar, Yorktown Heights, NY, 2010.
- *On the monotonicity of the expected volume of a random simplex.*
 - Case Western Reserve University, Department of Mathematics, Colloquium, Cleveland, OH, 2010.
 - The Ohio State University, Department of Mathematics, Applied Mathematics Seminar, Columbus, OH, 2010.
 - Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, Workshop on Convex Geometry and its Applications, 2009.
- *Expanders via random spanning trees.*
 - University of Chile, Department of Industrial Engineering, Santiago, Chile, 2009.
 - The Ohio State University, Computer Science and Engineering, Colloquium, 2009.
 - Georgia Institute of Technology, Mathematics Department, Combinatorics Seminar, Atlanta, GA, 2008.
 - Kent State University, Mathematics Department Colloquium, Kent, OH, 2008.
 - Geometry in the Design of Algorithms Workshop, Princeton University, Princeton, NJ, 2008.
 - University of California, Davis, Mathematics Department, Discrete Mathematics and Representation Theory Seminar, Davis, CA, 2008.
- *The complexity of the volume.*
 - Kent State University, Mathematics Department, Kent, OH, 2008.
 - University of Chile, Department of Mathematical Engineering, Alumni Colloquium, Santiago, Chile, 2008.
 - Geometry and Algorithms Workshop, Heriot-Watt University, Edinburgh, 2007.
 - Georgia Tech-DIMACS Workshop on Phase Transitions in Random Structures and Algorithms. Atlanta, GA, 2007.
 - Georgia Institute of Technology, Mathematics Department, Combinatorics Seminar. 2006
 - Yale University. Discrete Mathematics and Theoretical Computer Science Seminar. New Haven, CT, 2006.
- *Matrix approximation and projective clustering via volume sampling.*
 - Workshop on Algorithms for Modern Massive Data Sets, Stanford University, Stanford, CA, 2006. (poster)
 - Toyota Technological Institute at Chicago, Chicago, IL, 2005.
 - IBM T. J. Watson Research Center, Yorktown Heights, NY, 2005.

HONORS AND AWARDS

- “Johnson Prize” from MIT Department of Mathematics for an outstanding research paper published by a graduate student (2007).
- “Marcos Orrego Puelma Award” from the Institute of Engineers of Chile, for the best engineering student graduated from University of Chile during 2002. (2003)
- Liberty Mutual Insurance Company/Boston Foundation Fellowship. (2002-2003)
- “Academic Excellence Fellowship” at University of Chile. Full college tuition due to outstanding grades. (1996–1998)
- Distinguished Student. School of Engineering, Universidad de Chile, (1996–1998).

- First Place, National Olympiad of the Knowledge of Chemistry, Chile. (1995)
- Second Place, National Olympiad of Chemistry, Chile. (1994)
- First Place, National Olympiad of Chemistry, Chile. (1993)

SERVICE

- Reviewer for EJOR (2010), LATIN (2010), FOCS (2006, 2008), ESA (2007, 2010), CSO (2008), RANDOM (2008), SoCG (2007, 2009), APPROX (2008) and SODA (2009).

OTHER QUALIFICATIONS

- Attended Bellairs workshop on algorithmic game theory, Barbados, (2009).
- Attended Summer School on “Fourier analytic and probabilistic methods in geometric functional analysis and convexity.” Kent, OH (2008).
- Attended parallel programming course, Silicon Graphics Inc. Santiago, Chile (1997).
- Computational Experience: Mathematica, Matlab, C, C++, Java, parallel computing.
- Languages: Spanish (native), English (fluent) and German (conversant).

REFERENCES

Available upon request.