

Vita

PO-SHEN LOH

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- Research interests** Probabilistic and extremal combinatorics, random structures, and applications of combinatorics to theoretical computer science.
- Current positions** PRINCETON UNIVERSITY, Princeton, New Jersey.
Mathematics Ph.D. student of Benjamin Sudakov.

Intern at MICROSOFT RESEARCH, Redmond, Washington.
- Next position** CARNEGIE MELLON UNIVERSITY, Pittsburgh, Pennsylvania.
Assistant Professor of Mathematics, starting January 2010.
- Education** CAMBRIDGE UNIVERSITY, Cambridge, United Kingdom.
Certificate of Advanced Study in Mathematics with Distinction, 2004–2005.

CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, California.
Bachelor of Science with Honor, Mathematics, 2000–2004.
Class rank 1/208.
- Fellowships and awards** Honorable mention, 2004 AMS-MAA-SIAM Morgan Prize for undergraduate research. Thesis title: *Random graphs and the second eigenvalue problem*.

Fannie and John Hertz Foundation Graduate Fellowship (2005–2010).
NSF Graduate Research Fellowship (2006–2009).
Winston Churchill Foundation Scholarship (2004–2005) for study in the U.K.
National Defense Science and Engineering Graduate Fellowship (declined).

16th and 18th places, 2002 and 2003 Putnam Mathematical Competitions.
7th place team (out of 3,150), 2004 ACM Int'l. Colleg. Programming Contest.
Silver medalist at the 1999 International Mathematical Olympiad in Romania.
- Teaching / professional activities** DEPUTY TEAM LEADER FOR THE UNITED STATES OF AMERICA
at the 2004 International Mathematical Olympiad in Athens, Greece.
Accompanied the national team and defended their solutions before the judges.

INSTRUCTOR ('04, '08, '09), JR. INSTRUCTOR ('03), and TEACHING ASST. ('02)
at the U.S. Math Olympiad Summer Program, the national IMO training camp.

- Publications** *Ramsey games with giants*
(with T. Bohman, A. Frieze, M. Krivelevich, and B. Sudakov), submitted.
- Maximizing the number of q -colorings*
(with O. Pikhurko and B. Sudakov), submitted.
- A note on embedding hypertrees*
(single author), Electron. J. Combin. **16** (2009), N18.
- Constrained Ramsey Numbers*
(with B. Sudakov), Combin. Probab. Comput. **18** (2009), 247–258.
- Large induced trees in K_r -free graphs*
(with J. Fox and B. Sudakov), J. Combin. Theory Ser. B **99** (2009), 494–501.
- Avoiding small subgraphs in Achlioptas processes*
(with M. Krivelevich and B. Sudakov), Rand. Struct. Algo. **34** (2009), 165–195.
- On the strong chromatic number of random graphs*
(with B. Sudakov), Combin. Probab. Comput. **17** (2008), 271–286.
- Independent transversals in locally sparse graphs*
(with B. Sudakov), J. Combin. Theory Ser. B **97** (2007), 904–918.
- Bounding the number of edges in permutation graphs*
(with P. Keevash and B. Sudakov), Electron. J. Combin. **13** (2006), R44.
- USA and International Mathematical Olympiads 2004*
(book, co-edited with T. Andreescu and Z. Feng),
published by the Mathematical Association of America (2005), 100pp.
- Improved expansion of random Cayley graphs*
(with L. Schulman), Discrete Math. Theor. Comput. Sci. **6** (2004), 523–528.
- Finding shortest paths with computational geometry*
(single author), J. Graph Algorithms Appl. **7** (2003), 287–303.

- Talks** Conference on Random Structures and Algorithms, Poznań, Poland. (2009)
- Workshop on combinatorics, randomization, algorithms, and probability,
Centre de Recherches Mathématiques, Montreal. (2009)
- Combinatorics seminar, California Institute of Technology. (2009)
- Special session on probabilistic and extremal combinatorics,
AMS Central Sectional Meeting, Urbana, IL. (2009)
- Discrete math seminar, Princeton University. (2009)

Talks (ctd.) Discrete math seminar, Columbia University. (2009)
Geometry seminar, New York University. (2009)
Combinatorics seminar, Rutgers University. (2009)
Combinatorics seminar, University of California Los Angeles. (2009)
Colloquium, Carnegie Mellon University. (2009)
Probability seminar, University of Southern California. (2009)
Algorithms, combinatorics, and optimization seminar,
Carnegie Mellon University. (2009)
Invited talk showcasing the Fall 2009 IPAM Program on Combinatorics,
SACNAS (Society for Advancement of Chicanos and Native Americans in Science)
National Conference, Salt Lake City, UT. (2008)
SIAM conference on discrete mathematics, Burlington, VT. (2008)
Computer science theory seminar, California Institute of Technology. (2008)
Combinatorics seminar, University of California San Diego. (2008)
Probability seminar, University of California Los Angeles. (2008)
Combinatorics seminar, California Institute of Technology. (2008)
Combinatorics seminar, City University of New York. (2007)
European conference in combinatorics, graph theory, and applications,
Seville, Spain. (2007)
Combinatorics seminar, California Institute of Technology. (2007)
Combinatorics seminar, University of California San Diego. (2007)
Workshop on extremal graphs and hypergraphs, Carnegie Mellon. (2007)
Combinatorics seminar, University of Pennsylvania. (2006)
Computer science / discrete math seminar, Institute for Advanced Study. (2006)
Combinatorics seminar, Rutgers University. (2006)
Combinatorics seminar, City University of New York. (2006)
Combinatorics seminar, California Institute of Technology. (2006)
Workshop on algebraic and geometric methods in combinatorics,
DIMACS, Rutgers University. (2005)
Morgan Prize honorable mention lecture,
AMS-MAA-SIAM Joint Meetings, Atlanta, GA. (2005)