Joel H. Spencer
Professor of Mathematics and Computer Science
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Personal:
Born: April 20, 1946
Married, Two Children
Citizen of U.S.

Education:
B.S. Massachusetts Institute of Technology, 1965
Ph.D. Harvard University (advisor A. Gleason), 1970

Employment:
S.U.N.Y. at Stony Brook 1975-1988
M.I.T. 1972-1975
U.C.L.A. 1971-1972
Rand Corporation 1968-1971
Bell Laboratories 1967-1968

Of Special Note:
Putnam Competition Winner 1962
Sloan Foundation Fellow, 1977-81
Ford Award, 1984
Invited Speaker, ICM Zürich, 1994
Fellow of the AMS, 2012

Visits
N.A.S. Exchange Fellow, Budapest 1976-77
Weizmann Institute (Israel) visitor, 1980
University of Reading (U.K.) visitor, 1981
IREX Exchange Fellow, Budapest, 1984
M.I.T. visitor, 1987, 1990, 2001
Institute for Mathematics and Its Applications, visitor 1993
Institute for Advanced Study, visitor 1997 Winter, 1998 Fall
University of Melbourne, Australia, Jan-Apr 1998
Microsoft, Sept-Dec 2003
Mittag-Leffler, Sweden, March-April 2009
IMA visitor, UMinn Ordway Professor, Fall 2014

Lecture Series:
NSF-CBMS Lecturer, Durango, 1986
ARIDAM lecturer, 1988
St. Flour (France) Probability School, Lecturer 1991
Nachdiplom Lectures, ETH (Zurich), Summer 1995
Erdos Memorial Lectures, Hebrew University (Jerusalem), 2001
ICTP Lectures (Trieste), 2002
Caesarea Rothschild Lectures, Haifa University, 2008
EPFL (Lausanne), 2009
Yandex (Moscow), 2014

Journals:
Random Structures and Algorithms, Co-Founder, Co-Editor-in-Chief 1990-2007
Editor: Combinatorica, 1979-2009
Associate Editor: American Math Monthly, 1986-1991
Editor: Discrete Mathematics, 1988-1996
Editor, The Annals of Applied Probability, 1990-1994

Professional:
Member of A.M.S., M.A.A., and S.I.A.M.
M.A.A. Olympiad Committee 1975-78
Putnam Competition Committee, 1980
Budapest Semesters in Math Advisory Board, 1984-present
Ford Prize Committee, 1986-89
Polya Prize Committee, 1990
Vice Chair, SIAM Disc Math Group, 1991-1993
Chair, SIAM Disc Math Group, 1997-9
AMS Program Committee for National Meetings 1994-6 , chair 1995-6
AMS Council, 1997-9
Committee on Meetings and Conferences (AMS), Chair, 1997-9
AMS Executive Committee 1998-2001
Young Scholars Award Committee (chair) 1999-2003
Judge, National Finals, Siemens Competiton, 2002-present
AMS Nominating Committee, 2004-06
MAA Polya Lecturer Committee, 2005-2008

Recreation:
Brain Bogglers (as Maxwell Carver), Discover, 1987-89

Books

1. Probabilistic methods in combinatorial math, (with P. Erdős) (1974) Academic Press/Akadamia Kiado, Publishers.

2. Editor, The Art of Counting, 1973 (M.I.T. Press).

3. Ramsey Theory ,John Wiley (1980) , 2nd Ed., John Wiley (1990) (with R.L. Graham and B.L. Rothschild). 3rd Ed. (in preparation)

4. Ten Lectures on the Probabilistic Method, (1987), 2nd Ed. (1994) SIAM.

5. Nine Lectures on Random Graphs, in Ecole d' Eté de Probabilités de Saint-Flour XXI-1991 (P.L. Hennequin, ed.) Lecture Notes in Mathematics 1541, Springer-Verlag.

6. The Probabilistic Method, John Wiley (1992) (with N. Alon and P. Erdős). 2nd Ed., Wiley (2000). 3rd Ed., Wiley (2008)

7. The Strange Logic of Random Graphs, Springer-Verlag (2001)

8. Asymptopia, A.M.S. (2014)

Selected Recent Work

1. A Halfliar's Game, Theoretical Computer Science, 313 (2004), 353-369 (with Ioana Dumitriu)

2. A Scaling Result for Explosive Processes, Electronic J. Combinatorics R31 (2004) (with M. Mitzenmacher and R. Oliveira)

3. Random Subgraphs of Finite Graphs: I. The Scaling Window under the Triangle Condition, Random Structures & Algorithms 27 (2005), 137-184. (with Christian Borgs, Jennifer T. Chayes, Remco van der Hofstad and Gordon Slade)

4. Counting Connected Graphs Asymptotically (with Remco van der Hofstad), European Journal of Combinatorics 27 (2006), 1294-1320

5. Birth Control for Giants (with Nick Wormald), Combinatorica, 27 (2007), 587-628

6. Deterministic Random Walks on the Integers (with Joshua Cooper, Benjamin Doerr and Gabor Tardos), European Journal of Combinatorics 28 (2007), 2072-2090

7. Explosive Percolation in Random Networks, Science, 323 (5920) 1453-1455. (2009) (with Raissa D'Souza and Dmitris Achlioptas)

8. Phase Transitions for Modified Erdős-Rényi Processes, Arkiv för Matematik 50 (2012), 305-329 (with Svante Janson)

9. The Bohman-Frieze process near criticality, Random Structures & Algorithms 43 (2013), 221-250 (with Mihyun Kang and William Perkins)

10. Queueing with Future Information Annals of Applied Probability 24 (2014), 2091-2142 (with Madhu Sudan and Kuang Xu)

Selected Papers

1. Asymptotic Lower Bounds for Ramsey Functions, Discrete Math 20 (1977), 69-76.

2. Ramsey's Theorem for Spaces, Trans. Amer. Math. Soc. 249 (1979), 363-371.

3. Six Standard Deviations Suffice, Trans. Amer. Math. Soc., 289 (1985), 679-706.

4. Discrepancy of set-systems and matrices, Europ. J. of Comb.7 (1986) 151-160 (with L. Lovász and K. Vesztergombi).

5. Sharp concentration of the chromatic number on random graphs $G_{n,p}$. Combinatorica 7 (1987) 121-129 (with E. Shamir).

6. Zero-One Laws for Sparse Random Graphs, J. Amer. Math. Soc. 1 (1988) 97-115 (with S. Shelah).

7. Ulam's Searching Problems with a Fixed Number of Lies, Theoretical Computer Science 95 (1992), 307-321

8. Zero-One Laws with Variable Probability, Journal of Symbolic Logic 58 (1993), 1-14

9. Asymptotic Packing via A Branching Process, Random Structures & Algorithms 7 (1995), 167-172

10. Discrepancy in Arithmetic Progressions (with J. Matoušek), J. American Math. Soc. 9 (1996), 195-204

11. Sudden emergence of a giant k-core in a random graph. (with B. Pittel, N. Wormald) J. Combinatorial Theory, Ser B. 67 (1996), 111-151

12. Nearly perfect matchings in regular simple hypergraphs. (with N. Alon and J.-H. Kim) Israel J. Math 100 (1997), 171-187

A Full Publication list (roughly 200 refereed papers) is available on request or on The Web at
http://www.cs.nyu.edu/cs/faculty/spencer/index.html