

CURRICULUM VITAE

JÓZSEF BALOGH

University of Illinois at Urbana-Champaign
Mathematics Department, Office: 237 Illini Hall
1409 W. Green Street
Urbana, Illinois 61801

Home: (217) 355-0536
Office: (217) 244-1918
E-mail: jobal@math.uiuc.edu
URL: www.math.uiuc.edu/~jobal

Degrees

- Ph.D. in Mathematics, May 2001, The University of Memphis (1997–2001)
Thesis advisor: **Béla Bollobás**
Thesis title: “Graph properties and Bootstrap percolation”
- M.Ed. in Mathematics Education, June 1997, József Attila University, Szeged, Hungary (1993–97)
- M.S. in Mathematics with Honors (summa cum laude), June 1995, József Attila University, Szeged, Hungary (1990–95)
Thesis advisor: **Péter Hajnal**
Thesis title: “On the existence of MDS-cyclic codes”
- University of Gent, Belgium, by European Union Undergraduate Scholarship (Tempus Grant) (Fall 1993–Spring 1994)

Positions

- Tenure-track Assistant Professor, University of Illinois at Urbana-Champaign (8/2005– present)
- Zassenhaus Assistant Professor, The Ohio State University (9/2002– 8/2005)
- Visitor at IAS Princeton (4/2002– 7/2002)
- Shannon Postdoctoral Fellowship, AT&T Labs, Shannon Laboratory (08/2001– 03/2002)

Fellowships and Awards

- Campus Research Board Grant (09072, to support an RA), UIUC, \approx \$8500 (08/2009-05/2010)
- **NSF grant (DMS-0745185), CAREER:** Methods and Outreach in Modern Combinatorics, (\approx \$529,000 (09/2008-08/2013))
- Campus Research Board Grant (08086, to support an RA), UIUC, \approx \$8500 (01/2008-05/2008)
- On the List of Teachers ranked as excellent by their students, Fall 2007, UIUC
- Campus Research Board Grant (07048, to support an RA), UIUC, \approx \$8000 (01/2007-05/2007)
- **NSF Grant (DMS-0600303)** on “Hereditary and Random Combinatorial Structures” with Zoltan Füredi (06/2006–05/2009)
- NSF grant (\$10000) and IMA grant (\$4000) supporting the Excill conference at UIUC, Nov 18-20, 2006 (joint with Füredi, Hartke, Kostochka and West)
- Campus Research Board Grant (06139), UIUC, \$8500 (01/2006-12/2006)
- **NSF Grant (DMS-032804)** on “Extremal Graph Theory and Bootstrap Percolation” (06/2003–05/2006)
- Mortons Dissertation Award, for outstanding dissertation at University of Memphis (2001)
- Soros grant, for starting Hungarian Ph.D. students in USA \$4000 (1997)
- “Outstanding Student of the Natural Sciences” (awarded annually to the best student in the Mathematics Department at University of Szeged) (1995)
- Second Prize, Algebra Section at the National Conference for Undergraduate Researchers in Hungary (1995)
- Hungarian National Fellowship for outstanding undergraduates (1993, 1994, 1995)

- Miklós Schweitzer National Memorial Contest, fourth prize (annual contest for undergraduates at all universities in Hungary) (1994, 1995)
- Kató Rényi Award (nationally awarded to promising undergraduates in mathematics) (1993)
- Tempus Grant, University of Gent, Belgium, (Fall 1993–Spring 1994)
- **International Mathematical Olympiad** (Beijing, China), silver medal (1990)
- **International Mathematical Olympiad** (Braunschweig, Germany), silver medal (1989)
- Dániel Arany Memorial Contest, first prize (annual contest for high school students in Hungary) (1988)

Ph.D. Students

- Noah Prince (graduated Spring 2008)
- Wojtek Samotij (started Fall 2007)
- Jane Butterfield (started Fall 2006)
- John Lenz (started Fall 2006)

Postdoc

- Sujith Vijay (co-mentored, started Fall 2007)

National and International Talks

- Combinatorics, Probability and Computing, Workshop, Oberwolfach, Germany (planned in May 2009)
- Fete of Combinatorics and Computer Science, Keszthely, Hungary, August 2008
- AMS-SBM Joint International Meeting, Rio de Janeiro, Brazil, June, 2008
- AMS Central Sectional Meeting, Chicago, IL (October 2007)
- AMS-PTM Joint International Meeting, Warsaw, Poland, (August 2007)
- Enumeration and Probabilistic Methods in Combinatorics, CRM, Barcelona, Spain (June 2007)
- Extremal Combinatorics, workshop, (invited plenary speaker) Budapest, Hungary, (June 2007)
- Positional Games, Workshop, Oberwolfach, Germany (April 2007)
- Workshop on Random Combinatorial Structures, U. of Nebraska, (April 2007)
- Combinatorics, Probability and Computing, Workshop, Oberwolfach, Germany (Nov. 2006)
- Horizon of Combinatorics, EMS Summer School and Conference, Balatonalmádi, Hungary (July 2006)
- Workshop on “Random Graphs and Large-Scale Real-World”, National University of Singapore, Singapore (June 2006)
- 42nd Midwest Graph Theory Conference, Marion Campus, Ohio State University (April 2006)
- 37th Annual Southeastern Conference on Graph Theory, Combinatorics and Computing, Boca Raton, FL, (March 2006)
- AMS Central Section Meeting, Lincoln, NE (Oct 2005)
- AMS Eastern Sectional Meeting, Annandale-on-Hudson, NY (Oct 2005)
- The 12th International Conference on Random Structures and Algorithms, Poznan, Poland (Aug 2005)
- WaterMellon Workshop on Extremal Graph Theory (invited plenary speaker), CMU, (May 2005)
- AMS Eastern Sectional Meeting, Newark, DE (April 2005)
- AMS Central Sectional Meeting, Evanston, IL (October 2004)
- CombinaTexas, Texas A&M, TX (April 2004)
- Paul Erdős Lecture Series, Memphis, TN (March 2004)
- Advances in Graph and Matroid Theory, Columbus, OH (December 2003)
- AMS Central Section Meeting, Bloomington, IN, (April 2003)
- 14th Cumberland Conference, Memphis, TN, (May 2001)

- 32nd Annual Southeastern Conference on Graph Theory, Combinatorics and Computing, Baton Rouge, LA, (February 2001)
- 31th Annual Southeastern Conference on Graph Theory, Combinatorics and Computing, Boca Raton, FL, (March 2000)
- AMS/MAA Joint Meetings, Washington D.C., (January 2000)
- 30th Annual Southeastern Conference on Graph Theory, Combinatorics and Computing, Boca Raton, FL, (March 1999)
- AMS/MAA Joint Meetings, San Antonio, TX, (January 1999)
- 29th Annual Southeastern Conference on Graph Theory, Combinatorics and Computing, Boca Raton, FL, (March 1998)
- The 8th International Conference on Random Structures and Algorithms, Poznan, Poland (July 1997)
- International Colloquium on Extremal Graph Theory, Balatonlelle, Hungary, (July 1997)
- Minisemester on Selected Topics in Discrete Mathematics at Banach Center, Warsaw, Poland, (September 1996)
- International Conference in Combinatorics, Computing and Graph Theory, Balatonlelle, Hungary, (July 1996)
- International Conference in Combinatorics, Computing and Graph Theory, Balatonlelle, Hungary, (July 1995)

Seminars and Colloquia

- University of California at San Diego, CA, Colloquium, February 2009
- The Ohio State University, OH, Colloquium, January 2009
- University of Szeged, Hungary, Graph Theory Seminar, January 2009
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, December 2008
- Western Kentucky University, KY, Colloquium, November 2008
- University of Illinois at Chicago, IL, Combinatorics Seminar, October 2008
- Microsoft Research, Theory Group, Mathematics Seminar, Seattle, WA, June 2008
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, March 2008
- University of Miami at Ohio, Graph Theory Seminar, Miami, OH, January 2008
- University of Szeged, Hungary, Graph Theory Seminar, January 2008
- U. San Luis Potosi, Graph Theory Seminar, Mexico, November 2007
- Carnegie Mellon, ACO Seminar, Pittsburgh, PA, October 2007
- Cambridge University, Cambridge, UK, Graph Theory Seminar, June 2007
- IMPA, Brasil, May 2007
- Princeton University, NJ, Graph Theory Seminar, May 2007
- University of Szeged, Hungary, Graph Theory Seminar, December 2006
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, October 2006
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, September 2006
- California Institute of Technology, CA, Combinatorics Seminar, May 2006
- MIT, MA, Combinatorics Seminar, April 2006
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, April 2006
- University of Illinois at Urbana-Champaign, IL, Geometry Seminar, March 2006
- Indiana University, Bloomington, IN, Combinatorics Seminar, February 2006
- University of Szeged, Hungary, Graph Theory Seminar, January 2006
- University of Illinois at Urbana-Champaign, IL, New faculty Colloquium, October 2005
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, October 2005
- Iowa State University, IA, Colloquium, September 2005
- Iowa State University, IA, Combinatorics Seminar, September 2005
- University of Western Australia, Perth, Australia, Colloquium, June 2005
- The Ohio State University, OH, Special Colloquium, February 2005
- University of Illinois at Chicago, IL, Special Colloquium, February 2005

- University of Illinois at Urbana-Champaign, IL, Special Colloquium, January 2005
- University of Central Florida, FL, Special Colloquium, January 2005
- The Ohio State University, OH, Ergodic Theory and Probability Seminar, Jan 2005
- University of Memphis, Memphis, TN, Combinatorics Seminar, December 2004
- The Ohio State University, Columbus, OH, Combinatorics Seminar, November 2004
- University of Memphis, Memphis, TN, Combinatorics Seminar, September 2004
- University of Illinois at Urbana-Champaign, IL, Combinatorics Seminar, September 2004
- ETH, Zürich, Swiss, Information Theory Seminar, September 2004
- Wright State University, Colloquium, Dayton, OH, May 2004
- Carnegie Mellon, ACO Seminar, Pittsburgh, PA, April 2004
- University of Illinois at Chicago, IL, Combinatorics Seminar, April 2004
- The Ohio State University, Columbus, OH, Combinatorics Seminar, April 2004
- University of California at Riverside, Riverside, CA, Special Colloquium, March 2004
- The University of Memphis, Memphis, TN, Combinatorics Seminar, January 2004
- The Ohio State University, OH, Ergodic Theory and Probability Seminar, January 2004
- University of Szeged, Hungary, Graph Theory Seminar, September 2003
- The University of Memphis, Memphis, TN, Combinatorics Seminar, September 2003
- IAS, Princeton, NJ, Theoretical Computer Science/Discrete Math Seminar, June 2003
- The Ohio State University, OH, Ergodic Theory and Probability Seminar, October 2002
- The Ohio State University, Columbus, OH, Combinatorics Seminar, October 2002
- IBM Watson Center, NY, Mathematics Seminar, April 2002
- IAS, Princeton, NJ, Theoretical Computer Science/Discrete Math Seminar, April 2002
- Georgia Tech, Atlanta, GA, Graph Theory Seminar, February 2002
- CUNY, New York City, NY, Combinatorics Seminar, February 2002
- The University of Memphis, Memphis, TN, Combinatorics Seminar, November 2001
- DIMACS Discrete Math, New Brunswick, NJ, Theory of Computing Seminar, October 2001
- AT&T Research, Florham Park, NJ, Mathematics Seminar, October 2001
- Microsoft Research, Theory Group, Mathematics Seminar, Seattle, WA, January 2001
- University of Szeged, Hungary, Graph Theory Seminar, December 1998
- The University of Memphis, Memphis, TN, Combinatorics Seminar, October 1997

Research Interests

- Graph theory: behavior of graph parameters, graph properties, extremal graph theory.
- Combinatorics, hypergraphs, finite set systems.
- Random combinatorics, random graphs, sharp threshold functions.
- Interacting particle systems, percolation, bootstrap percolation, phase transitions.
- Application of combinatorics to information, coding theory and cryptography.

Teaching experience

- UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN 2005–present
Discrete Mathematics (M213), Graph Theory (M412), (4 semesters), Discrete Mathematics (M413) (2), Combinatorial Optimization (M588) (2), Topics class (Probabilistic methods in combinatorics, M595) (2), Art of Combinatorics (M595 minicourse), Additive Combinatorics (M595 minicourse)
- THE OHIO STATE UNIVERSITY, Columbus, OH 2002–2005
(Discrete Math. I-II (7, 3 quarters), Probability (1), Trigonometry (1), Analysis (graduate level) (1),
- THE UNIVERSITY OF MEMPHIS, Memphis, TN 1997–2001
(Trigonometry (4 semesters), Discrete Mathematics (1), Instructor in a computer lab equipped with Maple (3)

- JÓZSEF ATTILA UNIVERSITY, Szeged, Hungary 1993–1997
Graph Theory (3 semesters), Graph Theory for CS majors (4), Graph Theory for graduate students (1), Combinatorics (3), Geometry (3), Elementary Mathematics (1)

Other Experience

- Co-organizer (with Furedi) of a Special Session on Extremal and Probabilistic Combinatorics at AMS Sectional meeting at UIUC, March 2009.
- Consultant Researcher, Microsoft Research, Theory Group, Seattle (June 2008)
- Co-organizer (with Jiang and Kaul) of a Special Session on Graph Theory at AMS Sectional meeting at Bloomington, IN, April 2008.
- Co-organizer (with Mubayi) of a Special Session on Extremal and Probabilistic Combinatorics at AMS Sectional meeting at DePaul, October 2007.
- Co-organizer of the Excill conference at UIUC, Nov 18-20, 2006. Grant activity: IMA: \$4000, NSF: \$10000.
- Consultant Researcher, Microsoft Research, Theory Group, Seattle (August 2001)
- NATO Advanced Study Institute: Asymptotic combinatorics with applications to mathematical physics (European Summer School 2001, Russia)
- Visitor at Trinity College Cambridge, U. K., (July 2000)
- Summer School in Probabilistic Methods in Mathematical Physics, International Center of Theoretical Physics, Trieste, Italy (Sept 1999)
- Workshop on Probabilistic Combinatorics, Erdős Center, Budapest, Hungary (June 1998)

Committees, other activities

- Colloquium Committee (UIUC 2008/09)
- Undergraduate affairs committee (UIUC, since Fall 2007)
- NSF Graph Theory Panel (once)
- Postdoc search (UIUC, Spring 2007)
- Graduate student admission (UIUC, Spring 2007, Spring 2008, Spring 2009)
- COMP 580 (UIUC, multiple times)
- NSA reviewer (Spring 2007, Spring 2008)
- Member of Several Ph.D thesis defense and prelim committees.
- Reviewer for Mathschnet (since 2004)

Memberships

- American Mathematical Society
- János Bolyai Mathematical Society, Hungary