

# CURRICULUM VITAE

## Tibor Szabó

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### Positions

- 2009 - present, *Full Professor (W3)*, Department of Mathematics and Computer Science, Freie Universität Berlin, Germany
- 2008 - 2009, *Associate Professor*, Department of Mathematics and Statistics, McGill University, Montreal, Canada
- 2002 - 2008, *Senior researcher*, Department of Computer Science, ETH Zurich, Zurich, Switzerland
- 2000 - 2002, *CGC-postdoc*, Department of Computer Science, ETH Zurich, Zurich, Switzerland
- 1998 - 2000, *J. L. Doob Research Assistant Professor*, Department of Mathematics, University of Illinois at Urbana-Champaign, Urbana, IL, USA
- 1998 Spring, *Member*, School of Mathematics, Institute for Advanced Study, Princeton, NJ, USA
- 1997 Fall, *J. L. Doob Research Assistant Professor*, Department of Mathematics, University of Illinois at Urbana-Champaign, Urbana, IL, USA
- 1996 - 1997 *Member*, School of Mathematics, Institute for Advanced Study, Princeton, NJ, USA.

### Degrees

#### **Habilitation, Theoretical Computer Science**

ETH Zurich, Zurich, Switzerland, 2007.

Dissertation: "Games and Algorithms on Graphs"

#### **Ph.D., Mathematics**

The Ohio State University, Columbus, OH, USA, 1996.

Dissertation: "Extremal problems for graphs and hypergraphs" (Adviser: Á. Seress).

#### **Diploma, Mathematics Education**

Eötvös Loránd University, Budapest, Hungary, 1991.

#### **Diploma, Mathematics**

Eötvös Loránd University, Budapest, Hungary, 1990.

Dissertation: "Isomorphism problems of Cayley graphs" (Adviser: P.P. Pálffy)

## Areas of Interest

Extremal and Probabilistic Combinatorics, Random Structures and Algorithms, Quasirandomness, Ramsey Theory, Positional Games, Applications of Algebra and Topology in Combinatorics, Combinatorics of Linear Programming,

## Grants

- DFG Research Training Network "Facets of Complexity", co-PI, 2018-2022.
- GIF grant G-1347-304.6/2016 (with Noga Alon), 2017-2020.
- FUB-TAU joint workshop grant 2015, 2016, 2017.
- DFG Grant SZ 261/1-1 "The interaction of randomness and positional games", 2011-2014.
- DFG Research Training Network "Methods for Discrete Structures", co-PI, 2009-2015.
- NSERC Discovery Grant 371890-2009 "Graphs, games and quasirandomness", 2009-2014.
- SNF Grant 200020-116649 "Relaxed colorings, transversals, and complexity", 2007.
- SNF Grant 200020-112068/1 "Games and Geometric Unique Sink Orientations" (jointly with Bernd Gärtner), 2006-2008.
- SNF Grant 200021-108099/1 "Transversals and colorings of graphs", 2005-2007.
- SNF Grant 200021-100316/1 "Combinatorial Models for Geometric Optimization Problems" (jointly with Bernd Gärtner), 2004-2006.
- NSF Grant DMS-9970270 "Algebraic and Geometric Representations of Combinatorial Structures" (jointly with Zoltán Füredi), 1999-2002.

## Workshop and Doc-course Organization

- Joint FUB-TAU Research Workshop on Graph and Hypergraph Coloring, FU Berlin  
Aug 20-24, 2018. (with Noga Alon)
- Berlin-Hamburg-Poznan Seminar in Discrete Mathematics  
Jun 8-9, 2018.
- 7th Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Sep 5-8, 2017. (with Chris Kusch)
- Joint FUB-TAU Research Workshop on Graph and Hypergraph Coloring, Tel Aviv University  
Mar 5-9, 2017. (with Noga Alon)
- 6th Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Sep 5-8, 2016. (with Chris Kusch)
- Symposium Diskrete Mathematik, FU Berlin  
Jul 15-16, 2016 (with Juanjo Rue).
- 2nd FUB-TAU workshop on Positional Games, FU Berlin  
Feb 22-26, 2016. (with Michael Krivelevich)
- 5th Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Sep 7-10, 2015. (with Codruț Grosu and Chris Kusch)

- 20th anniversary Berlin-Poznań Seminar on Discrete Mathematics, FU Berlin  
May 29-30, 2015.
- 1st FUB-TAU workshop on Positional Games, Tel Aviv University  
Mar 1-5, 2015. (with Michael Krivelevich)
- MDS Block course “Towards the Freiman-Ruzsa Conjecture”, FU Berlin  
Oct 6-24, 2014. (with Juanjo Rue)
- 4th Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Aug 25-28, 2014. (with Dennis Clemens and Codruț Grosu)
- 3rd Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Sep 2-5, 2013. (with Dennis Clemens and Codruț Grosu)
- Oberwolfach Seminar “Positional Games”  
May 19-25, 2013. (with Dan Hefetz, Michael Krivelevich, Miloš Stojaković)
- Berlin-Poznań Seminar on Discrete Mathematics, FU Berlin  
Nov 9-10, 2012. (with Michał Karonski)
- 2nd Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Sep 3-6, 2012. (with Anita Liebenau)
- MDS Summer School “The Combinatorics of Linear and Semidefinite Programming”  
Döllnsee, Aug 14-16, 2012. (with Friedrich Eisenbrand and Günter Ziegler)
- Oberwolfach Miniworkshop “Hypergraph Turán problems”  
Apr 8-14, 2012. (with Penny Haxell, Dhruv Mubayi, Oleg Pikhurko)
- MDS Block course “Extremal Combinatorics in Random Discrete Structures”, FU Berlin  
Feb 27-Mar 23, 2012.
- 1st Brandenburg Workshop on Open Problems in Combinatorics and Graph Theory  
Sep 19-23, 2011. (with Anita Liebenau)
- Berlin-Poznań Seminar on Discrete Mathematics, Bedlewo, Poland  
Jun 24-25, 2011. (with Michał Karonski)
- MDS Predoc course “Probabilistic and Enumerative Combinatorics” FU and TU Berlin  
Oct 4-Nov 26, 2010. (with Mihyun Kang)
- Oberwolfach Miniworkshop “Positional Games”  
Apr 8-14, 2007. (with Michael Krivelevich)

## Administrative and Professional Service

Member of the executive board of the Discrete Mathematics group of the German Mathematical Society, 2010-18. (Speaker: 2014-16)

Master program commission (substitute chair), 2013-

Member of the Mathematics Institute council (Institutsrat), 2017-

*Discrete Mathematics-Theoretical Computer Science* section leader, ÖMG-DMV Joint Meeting, Innsbruck, Austria, Sept 2013.

## Students

- PhD students

- FU Berlin:

- Patrick Morris, started Nov 2017.
  - Ander Lamaison, started Oct 2017.
  - Christopher Kusch, Oct 2017.
  - Codruț Grosu, May 2016.
  - Tuan Tran, Nov 2015.
  - Dennis Clemens, Jan 2015.
  - Lothar Narins, Dec 2014.
  - Anita Liebenau, Dec 2013.
  - Roman Glebov, Jan 2013.

- ETH Zurich (with Emo Welzl):

- Heidi Gebauer, Oct 2011. (2012 Richard Rado Prize)
  - Philipp Zumstein, Sept 2009.
  - Robert Berke, May 2008.
  - Miloš Stojaković, Sept 2005.
  - Péter Csorba, June 2005. (with Dmitry Kozlov)
  - Ingo Schurr, Oct 2004.

- Master students

- Tomas Bayer, in progress.
  - Brent Moran, in progress.
  - Malte Renken, Jan 2018.
  - Ander Lamaison, Nov, 2017.
  - Patrick Morris, Nov, 2017.
  - Vincent Eigenberger, Aug 2017.
  - Max Marcuse, Sep 2016.
  - Jan Corsten, Sep 2016.
  - Carly Bodkin, Feb 2016.
  - Christopher Pütz, Feb 2015.
  - Olaf Parczyk, Nov 2014
  - Alice Händel, Aug 2014.
  - Jonas Groschwitz, Aug 2014.
  - Kathleen Johst, Dec 2013.
  - Christopher Brandt, Nov 2013.
  - Frederik Garbe, Jul 2013.
  - Merle Breitzkreuz, Jun 2013.
  - Codrut Grosu, Nov 2012.
  - Heidi Gebauer (ETH-Medaille), Mar 2007

- Diploma students

- Richard Lang, Mar 2013.
  - Franziska Fritzsche, Aug 2012.
  - Thuy Chinh Duong, Jul 2012.
  - Huaishan Yao, Jul 2012.
  - Tobias Winzer, Nov 2011.
  - Stefanie Zürcher, Mar 2007.
  - Stefanie Gubler, Mar 2007.
  - Philipp Zumstein, Mar 2005.
  - Marion Wenger, Mar 2005.
  - Andreas Razen, Mar 2005

Elias Vicari, Mar 2004.  
Michael Balmer, Mar 2003.

- Bachelor students

Mara Nehring, Sep, 2017.  
Christian Sicari, Mar 2017.  
Vanessa Schreck, May 2016.  
Philipp Schäffer, May 2016.  
Barbara Schulzke, Feb 2016.  
Simon Treu, Nov 2015.  
Teetje Stark, Oct 2015.  
Eric Badstüber, Apr 2014.  
Daniel Kirchner, Oct 2013.  
Olaf Parczyk, Dec 2012.  
Henrietta Miko, Sep 2012.  
Wilhelm Neubert, Nov 2011.

## Minicourses

- “Maker-Breaker Games, The Connectivity Game, The Neighborhood Conjecture”, three lectures within the *Oberwolfach Seminar “Positional Games”*, Mathematisches Forschungsinstitut Oberwolfach, Germany; May 19-25 2013.
- “Extremal Combinatorics and the Probabilistic Method — an Introduction”, one week minicourse within the MDS Predoc course “*Extremal Combinatorics in Random Discrete Structures*”, FU Berlin, Germany; Feb 27-Mar 2 2012.
- “The Probabilistic Method — an Introduction”, one week minicourse within the MDS Predoc course “*Probabilistic and Enumerative Combinatorics*”, FU Berlin, Germany; Oct 4-8 2010.
- “Sparse Quasirandom Graphs: Constructions and Applications”, two-week minicourse within the MDS Doc-Course “*Random and Quasirandom Graphs*”, Humboldt University, Berlin, Germany; May 19-30, 2008.
- “Positional Games”, NHC Autumn School on Discrete Algorithms, Sunparea, Seto, Aichi, Japan; Nov 15-17, 2006.
- “Positional Games” Institute Henri Poincaré, in the trimester programme “Phenomena in High Dimension”, Paris, France; Apr 24-26, 2006.

## Invited Lectures

- University of Bielefeld, *Mathematics Colloquium*, Bielefeld, Germany; May 17, 2018.
- University of Warwick, *Extremal Combinatorics*, Coventry, UK; Sep 21, 2017.
- The 18th International Conference on *Random Structures and Algorithms*, Gniezno, Poland; Aug 8, 2017.
- University of Novi Sad, *Novi Sad Workshop on Foundations of Computer Science* Novi Sad, Serbia; Jul 19, 2017.
- Universita Politècnica de Catalunya, *Random Discrete Structures and Beyond*, Barcelona, Spain; Jun 8, 2017.

- Tsinghua Sanya International Mathematics Forum, *Recent Advances in Extremal Combinatorics*, Sanya, China; May 24, 2017.
- Berlin Mathematical School, *BMS-days*, Urania, Berlin, Germany; Feb 20 2017.
- Charles University, *Mathematics of Jiří Matoušek*, Prague, Czech Republic; Jul 28, 2016.
- Goethe University, *Kolloquium Mathematische Informatik*, Frankfurt, Germany; July 4, 2016.
- FU Berlin, *Monday Lecture* of GK Methods for Discrete Structures, Berlin, Germany; June 27, 2016.
- ETH Zurich, *Conference on Probabilistic and Extremal Combinatorics*, Zurich, Switzerland; May 24, 2016.
- Tel Aviv University, *One-day meeting to celebrate Michael Krivelevich's 50th birthday*, Tel Aviv, Israel; Apr 1, 2016.
- University of Birmingham, *Workshop on Extremal and Probabilistic Combinatorics*, Birmingham, UK; Sep 23, 2015.
- Banff International Research Station, *Methods and Challenges in Extremal and Probabilistic Combinatorics*, Banff, Canada; Aug 24, 2015.
- University of Novi Sad, *Novi Sad Workshop on Foundations of Computer Science*, Novi Sad, Serbia; Jul 22, 2015.
- University of Utrecht, *Utrecht Combinatorics Workshop*, Utrecht, Netherlands; Nov 7, 2014.
- Institute for Mathematics and its Applications workshop *Probabilistic and Extremal Combinatorics*, Minneapolis, USA; Sept 9, 2014.
- University of Minnesota, *Probability Seminar*, Minneapolis, USA; Sept 5, 2014.
- International Centre for Mathematical Sciences, workshop *Extremal Combinatorics*, Edinburgh, UK; July 14, 2014.
- ETH Zurich, *7th Combinatorial Algorithms Day*, Zurich, Switzerland; June 30, 2014.
- University of Potsdam, *Mathematics Colloquium*, Potsdam, Germany; June 4, 2014.
- Tel Aviv University, *Combinatorics Seminar*, Tel Aviv, Israel; Apr 27, 2014.
- Rényi Institute, *Extremal Combinatorics Seminar*, Budapest, Hungary; May 16, 2013.
- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; May 2, 2013.
- Berlin Mathematical School, *BMS-days*, Urania, Berlin, Germany; Feb 19 2013.
- Kolloquium über Kombinatorik, plenary lecture, TU Berlin, Germany; Nov 16, 2012.
- Freie Universität Berlin, *Monday Lecture* of the Research Training Group "Methods for Discrete Structures", Berlin, Germany; Nov 5, 2012.
- 4th Polish Combinatorial Conference, plenary tutorial lecture, Bedlewo, Poland; Sep 21 2012.
- ETH Zurich, *Combinatorial Algorithms Day*, Zurich, Switzerland; Jun 4 2012.
- Workshop *Discrete Mathematics: Methods, Challenges and Applications*, Eilat, Israel; Jan 5 2012.
- ETH Zurich, Institute of Theoretical Computer Science, *Mittagsseminar*, Zurich, Switzerland; Oct 21 2011.

- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; Oct 13, 2011.
- Joint Israeli-Polish Mathematical Meeting, Univeristy of Lodz, Lodz, Poland; Sep 13, 2011.
- Queen Mary, University of London, *London Combinatorics Colloquia*, London, UK; May 18, 2011.
- Mathematisches Forschungsinstitute Oberwolfach, Workshop "*Combinatorics*", Oberwolfach, Germany; Jan 3, 2011.
- Workshop on "*Extremal and Probabilistic Combinatorics*", Frauenchiemsee, Germany; Aug 25, 2010.
- TU Berlin, *Berlin-Poznań Seminar on Discrete Mathematics*, Berlin, Germany; Jun 4, 2010.
- Jagellonian Univeristy, Department of Computer Science, *Graph Theory Seminar*, Krakow, Poland May 27, 2010.
- University of Warsaw, Institute of Informatics, *Automata Theory Seminar*, Warsaw, Poland; May 26, 2010.
- Freie Universität Berlin, *Monday Lecture* of the Research Training Group "Methods for Discrete Structures", Berlin, Germany; Nov 23, 2009.
- Institute for Pure and Applied Mathematics, UCLA, Workshop "*Topics in Graphs and Hypergraphs*", Los Angeles, CA, USA; Nov 4, 2009.
- 14th Random Structures and Algorithms conference, plenary lecture, Poznan, Poland; Aug 4, 2009.
- University of Waterloo, *WaterMellon Workshop on Extremal Graph Theory*, Waterloo, Canada; May 21, 2009.
- Centre de Recherches Mathématiques, Workshop "*Combinatorics, Randomization, Algorithms and Probability*", Montreal, Canada; May 4, 2009.
- AMS Regional Meeting at the University of Illinois, Special session "*Probabilistic and Extremal Combinatorics*", University of Illinois at Urbana-Champaign, Urbana, IL, USA; Mar 27, 2009.
- University of Vermont, 14th SIAM Meeting on Discrete Mathematics, Minisymposium "*Graph Coloring*", Burlington, VT, USA; Jun 18, 2008.
- American Mathematical Society/Brazilian Mathematical Society Joint International Meeting, Special Session "*Extremal and Probablistic Combinatorics*", IMPA, Rio de Janeiro, Brazil; Jun 4, 2008.
- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; Feb 21, 2008.
- Mathematisches Forschungsinstitute Oberwolfach, Workshop "*Combinatorics*", Oberwolfach, Germany; Jan 8, 2008.
- Freie Universität Berlin, *Monday Lecture* of the Research Training Group "Methods for Discrete Structures", Berlin, Germany; Dec 3, 2007.
- ETH Zurich and University of Zurich, *Optimization and Applications Seminar*, Zurich, Switzerland; Nov 19, 2007.
- EPFL, *Mathematics Colloquium*, Lausanne, Switzerland; May 10, 2007.
- Mathematisches Forschungsinstitute Oberwolfach, Miniworkshop "*Positional Games*", short course (two lectures), Oberwolfach, Germany; Apr 9 and 10, 2007.

- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; Feb 22, 2007.
- Rényi Institute, Workshop “*Quasi-random structures, regularity lemmas and their applications*”, Budapest, Hungary; Jan 25, 2007.
- Mathematisches Forschungsinstitut Oberwolfach, Workshop “*Combinatorics, Probability, and Computing*”, Oberwolfach, Germany; Oct 2006.
- FIM (Institute for Mathematical Research), ETH Zurich, Workshop “*Complexity of Games, Polyhedra and Lattice Points*”, Zürich, Switzerland; May 18, 2006.
- Symposium Diskrete Mathematik 2006, Technical University Berlin, Berlin, Germany; Apr 3, 2006.
- Princeton University, *Discrete Mathematics Seminar*, Princeton, USA; Mar 29, 2006.
- Courant Institute, New York University, *Geometry Seminar*, New York City, USA; Mar 28, 2006.
- Rutgers University, *Discrete Math and Theory of Computing Seminar*, New Brunswick, USA; Mar 23, 2006.
- Institute for Advanced Study, *Theoretical Computer Science and Discrete Math Seminar*, Princeton, USA; Mar 20, 2006.
- Charles University, one lecture in the *Doc-Course “Harmonic Analysis in Computer Science and Combinatorics”*, Prague, Czech Republic; Feb 16, 2006.
- Humboldt University, *Oberseminar Theoretical Computer Science*, Berlin, Germany; Dec 2 2005.
- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; Oct 13 2005.
- Bertinoro International Center for Informatics, *Workshop “Erdős Magic for Algorithms and Games”*, Bertinoro, Italy; Apr 28 2005.
- Princeton University, *Discrete Mathematics Seminar*, Princeton, NJ, USA; Mar 23 2005.
- City University of New York (CUNY), *Combinatorics Seminar*, New York, NY, USA; Mar 16 2005.
- Institute for Advanced Study, *Theoretical Computer Science and Discrete Mathematics Seminar*, Princeton, NJ, USA; Mar 14 2005.
- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; Sep 23, 2004.
- KTH Stockholm, Workshop “*Geometry, Topology, and Combinatorics*”, Sweden; Jul 3, 2004.
- Tel Aviv University, *Combinatorics Seminar*, Tel Aviv, Israel; May 16, 2004.
- EPFL, *Operations Research Seminar*, Lausanne, Switzerland; Apr 30, 2004.
- Bellairs Research Institute of McGill University, Workshop “*Polyhedra, Convex Geometry and Optimization*”, Two tutorial lectures, Holetown, Barbados; Mar 9 and 10, 2004.
- Charles University, *Combinatorics Seminar*, Prague, Czech Republic; Feb 26, 2004.
- Eötvös University, *Egerváry Seminar of Operations Research*, Budapest, Hungary; Oct 6, 2003.
- Rényi Institute, *Combinatorics Seminar*, Budapest, Hungary; Oct 2, 2003.



- Princeton University, *Discrete Mathematics Seminar*, Princeton, NJ, USA; Apr 18, 2002.
- Institute for Advanced Study, *Theoretical Computer Science and Discrete Mathematics Seminar*, Princeton, NJ, USA; Apr 15, 2002.
- Bell Labs (Lucent Technologies), *Mathematics Research Colloquium*, Murray Hill, NJ, USA; Apr 11, 2002.
- “*Towards the Peak*” workshop, La Claustra, Gotthard, Switzerland; Aug 25, 2001.
- University of Illinois at Urbana-Champaign, *Combinatorics Seminar*, Urbana-Champaign, IL, USA; May 30, 2001.
- University of Illinois, *Department Colloquium*; Nov 11, 1999.
- DIMACS, Rutgers University, Workshop “*Pseudorandomness and Explicit Combinatorial Constructions*”; Oct 13, 1999.
- Massachusetts Institute of Technology, *Combinatorics Seminar*; Apr 8, 1999.
- Massachusetts Institute of Technology, *Combinatorics Seminar*; Apr 25, 1997.
- Institute for Advanced Study, *Combinatorics Seminar*; Mar 17, 1997.
- University of Pennsylvania, *Combinatorics Seminar*; Nov 19, 1996.

## Talks

- FU Berlin, *Combinatorics Seminar*, (May 12, 2016)
- FU Berlin, *Combinatorics Seminar*, (Oct 22, 2015)
- Carnegie Mellon University, *17th International Conference on Random Structures and Algorithms*, (Jul 29, 2015)
- FU Berlin, *Combinatorics Seminar*, (Feb 19, 2015)
- FU Berlin, *Combinatorics Seminar*, (Nov 12, 2014)
- FU Berlin, *Combinatorics Seminar*, (Apr 9, 2014)
- FU Berlin, *Combinatorics Seminar*, (Feb 14, 2013)
- FU Berlin, *Combinatorics Seminar*, (Oct 19, 2011)
- FU Berlin, *Combinatorics Seminar*, (Jan 21, 2011)
- FU Berlin, *Combinatorics Seminar*, (Jan 14, 2011)
- FU Berlin, *Combinatorics Seminar*, (Dec 17, 2010)
- FU Berlin, *Combinatorics Seminar*, (Apr 21, 2010)
- FU Berlin, *Combinatorics Seminar*, (Oct 16, 2009)
- 13th International Conference on Random Structures and Algorithms, Tel Aviv University, Tel Aviv, Israel, (May 31, 2007).
- Horizon of Combinatorics, Balatonalmádi, Hungary (Jul 17, 2006)
- Sixth Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications, Prague, Czech Republic (Jul 10, 2006)

- The 12th International Conference on Random Structures and Algorithms, Poznan, Poland (Aug 5, 2005).
- Eleventh Conference on Integer Programming and Combinatorial Optimization (IPCO) Berlin, Germany (June 9, 2005).
- 45th Ann. IEEE Symp. on Foundations of Computer Science (FOCS) Rome, Italy (Oct 17, 2004).
- The 11th International Conference on Random Structures and Algorithms, Poznan, Poland (Aug 12, 2003).
- Workshop on Extremal Graph Theory, Csopak, Hungary (Jun 23, 2003).
- 3in1 Workshop in Graphs, Krynica, Poland (Nov 22, 2002)
- Upper Rhine Algorithms Workshop, ETH Zurich, Switzerland (Oct 19, 2002)
- 2nd Workshop on Combinatorics, Geometry, and Computation, Hiddensee, Germany (Oct 11, 2002)
- 33rd Southeastern Int'l Conf on Combinatorics, Graph Theory, and Computing, Florida Atlantic Univ, Boca Raton FL, USA (March 7, 2002)
- The Fifteenth Midwest Conference on Combinatorics, Cryptography and Computing, Las Vegas, Nevada, USA (Oct 18, 2001)
- 42nd Ann. IEEE Symp. on Foundations of Computer Science (FOCS) Las Vegas, Nevada, USA (Oct 17, 2001)
- The 10th International Conference on Random Structures and Algorithms, Poznan, Poland (Aug 8, 2001)
- Workshop and Conference on Hypergraphs (Gyula O.H. Katona is 60) Budapest, Hungary (Jun 9, 2001)
- Workshop on Combinatorics, Geometry, and Computation, Monte Verità, Centro Stefano Francini, Ascona, Switzerland (May 15, 2001)
- 17th British Combinatorial Conference, University of Kent, Canterbury, UK (July 1999)
- Fifth Czech-Slovak International Conference on Combinatorics, Graph Theory, Algorithms and Applications, Charles University, Prague, Czech Republic (July 1998)
- XXVIIth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Louisiana State University, Baton Rouge, LA, USA (February 1996)
- 10th MCCCC, Southern Illinois University, Carbondale, IL, USA (October 1995)
- XXVIth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, FL, USA (March 1995)
- Eighth Cumberland Conference, Vanderbilt University, Nashville, TN, USA (April 1995)
- XXIIInd Ohio State-Denison Mathematics Conference, The Ohio State University, Columbus, OH, USA. (March 1994)
- International Conference on Combinatorics, Dedicated to Paul Erdős on His 80th Birthday, Keszthely, Hungary (July 1993)

## Teaching

- Full Professor, Institute of Mathematics, Freie Universität Berlin
  - *Discrete Mathematics I (Enumeration and Graph Theory)*  
Summer 2011, 2014, 2015, 2016, 2018.
  - *Extremal Combinatorics (Discrete Mathematics II)*  
Winter 2017/18.
  - *Algorithmic Combinatorics (Discrete Mathematics II)*  
Winter 2014/15.
  - *Discrete Mathematics II (Graph Algorithms and Linear Programming)*  
Winter 2012/13.
  - *Discrete Mathematics II (Graph Theory and Extremal Combinatorics)*  
Winter 2011/12.
  - *Constructive Combinatorics (Discrete Mathematics III)*  
Summer 2012, 2015, 2018.
  - *The Probabilistic Method (Discrete Mathematics III)*  
Winter 2010/11, Summer 2016.
  - *Combinatorics/Discrete Mathematics I*  
Summer 2010.
  - *Stochastik I*  
Winter 2013/14, 2015/16, 2016/17.
  - *Positional Games*  
Winter 2009/10.
  - *Seminar on Designs and Codes*  
Winter 2017/18.
  - *Seminar on The Probabilistic Method*  
Winter 2016/17.
  - *Seminar Algebra, Combinatorics, and Constructions*  
Winter 2015/16.
  - *Seminar on Advanced Colouring and Counting*  
Summer 2015.
  - *Seminar Algebra in Combinatorics*  
Winter 2013/14.
  - *Seminar Constructive Combinatorics*  
Winter 2012/13.
  - *Seminar Probabilistic Coloring*  
Summer 2012.
  - *Seminar Probabilistic Method*  
Summer 2011.
  - *Seminar Ramsey Theory*  
Winter 2010/11.
  - *Research Seminar Combinatorics*  
2009 – present.
- Associate Professor, Department of Mathematics and Statistics, McGill University
  - *Combinatorics and Graph Theory*  
Winter 2009.
  - *Discrete Structures I*  
Fall 2008.

- Senior researcher, Department of Computer Science, ETH Zurich
  - *Graphs and Algorithms: Advanced Topics*  
Fall 2007.
  - *Fourier-analytic Methods in Discrete Mathematics*  
Winter 2006/07.
  - *Graph Theory*  
Winter 2002/03, 2003/04, 2004/05, 2005/06, and 2006/07.
  - *Extremal Combinatorics: Explicit Constructions*  
Summer 2005, 2006, and 2007.
  - *Reading Seminar*  
Fall 2007, Spring 2008.
  - *Seminar Discrete Mathematics: Extremal Combinatorics*  
Summer 2007.
  - *Seminar Discrete Mathematics: Property Testing and Sublinear Algorithms*  
Summer 2006.
  - *Seminar Discrete Mathematics: The Regularity Lemma and Its Applications*  
Summer 2005.
  - *Seminar SAT*  
Summer 2005, 2006, and 2007.
  - *Seminar Extremal Combinatorics*  
Summer 2004.
  - *Mittagsseminar*  
2001-2008.
  - *Pseudorandomness and Algebraic Methods in Combinatorics and Algorithms*  
Winter 2001/02.
- Assistant Professor, Department of Mathematics, University of Illinois at Urbana-Champaign
  - *Algebra in Combinatorics*, graduate course, Spring 2000.
  - *The Probabilistic Method*, graduate course, Spring 1999.
  - *Mathematical Thinking: Problem-solving and Proofs*  
Fall 1999.
  - *Introduction to Graph Theory*  
Fall 1997, Fall 1998, Fall 1999.
  - *Introduction to Discrete Mathematics*  
Fall 1997, Fall 1998.
- Graduate Teaching Assistant, Department of Mathematics, The Ohio State University
  - *Precalculus, Calculus I-IV* 1991-1994, 1996.
- Instructor, Department of Computer Science, Eötvös Loránd University, Budapest, Hungary
  - *Finite Mathematics* 1989-91.

## Publications

- [1] “Dense graphs with cycle neighborhoods” (with Á. Seress), *Journal of Combinatorial Theory, Series B*, **63** (1995) 281–293.
- [2] “Norm-graphs and bipartite Turán numbers” (with J. Kollár and L. Rónyai), *Combinatorica*, **16** (1996), no. 3, 399–406.
- [3] “On nearly regular co-critical graphs”, *Discrete Mathematics*, **160** (1996) 279–281.

- [4] “Extremal bipartite graphs and superpolynomial lower bounds for monotone span programs” (with L. Babai, A. Gál, J. Kollár, L. Rónyai and A. Wigderson), *Proc. of the twenty-eighth Annual ACM Symposium on the Theory of Computing (STOC)*, (1996), 603–611.
- [5] “Intersection properties of subsets of integers”, *European Journal of Combinatorics*, **20** (1999), 429–444.
- [6] “On Erdős’ Eulerian trail game” (with Á. Seress), *Graphs and Combinatorics*, **15** (1999), 233–237.
- [7] “Norm-graphs: variations and applications” (with N. Alon and L. Rónyai), *Journal of Combinatorial Theory, Series B*, **76** (1999), 280–290.
- [8] “A multidimensional generalization of the Erdős-Szekeres lemma on monotone subsequences” (with G. Tardos), *Combinatorics, Probability and Computing* **10** (2001), 557–565.
- [9] “Unique sink orientations of cubes” (with E. Welzl), *Proc. 42nd Ann. IEEE Symp. on Foundations of Computer Science (FOCS)* (2001) 547–555.
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