Bernard Lidický

Curriculum Vitae

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Education

PhD. Charles University in Prague, Czech Republic	*10/2007–07/2011*
Dissertation: *Graph coloring problems*, advisor J. Fiala	
Master's degree (summa cum laude), Charles University in Prague	*10/2002–09/2007*
Thesis: *Variants of the coloring problem*, advisor J. Fiala	

Academic Appointments

Professor	*08/2022–to date*
Iowa State University, USA	
Associate Professor (with tenure)	*08/2018–08/2022*
Iowa State University, USA	
Assistant Professor	*08/2014–07/2018*
Iowa State University, USA	
J. L. Doob Research Assistant Professor (postdoc)	*08/2011–08/2014*
University of Illinois at Urbana-Champaign, USA	

Awards

- Scott Hanna Professor $90,000   *2023–2026*
- Scott Hanna Faculty Fellow $30,000   *2020–2023*
- Vinograde Award for Excellence in Advising   *2021*
  presented by the Math Graduate Student Organization, ISU
- Award for Early Achievement in Research awarded by College of LAS, ISU   *2020*
- Vinograde Award for Excellence in Teaching   *2020*
  presented by the Math Graduate Student Organization, ISU

Selected Awarded External Funding

- PI on NSF grant, DMS-2152490 Title: FRG: Collaborative Research: Generalized Turan problems $511,449   *2022–2025*
- PI on NSF REU Site grant DMS-1950583 Title: REU SITE: Iowa State University Mathematics REU, co-PI S. Butler $484,398   *2020–2025*

- PI on NSF grant DMS-1855653 (Title: Collaborative Research: Flag Algebra Methods, $125,000)   *2019–2022*
- co-PI on NSF grant DMS-1839918 (Title: RTG: Combinatorics, Computation and Applications at Iowa State, PI L. Hogben, 4 co-PIs, $1,500,000)   *2019–2024*
- PI on NSF grant DMS-1600390 (Title: Collaborative Research: Flag Algebra and Its Applications $83,000)   *2016–2019*
- US PI on Slovenia-US collaboration grant (PI R. Škrekovski, € 3224)   *2017–2019*

Publications

88 papers published, accepted and submitted in refereed journals and refereed conference proceedings (results in both counted once).

Selected publications:

- J. Balogh, D. Dong, B. Lidický, N. Mani, Y. Zhao: *Nearly all k-SAT functions are unate*, 55th Annual ACM Symposium on Theory of Computing (STOCS 2023) 958–962. [arXiv] [doi]
- J. Balogh, F. Clemen, B. Lidický: *Solving Turán's Tetrahedron Problem for the ℓ_2-Norm*, Journal of the London Mathematical Society, **106** (2022) 60–84.
- A. Grzesik, J. Lee, B. Lidický, J. Volec: *On tripartite common graphs*, Combinatorics, Probability and Computing **31** (2022) 907–923. [arXiv] [doi]
- B. Lidický, F. Pfender: *Semidefinite Programming and Ramsey Numbers*, SIAM J. Discrete Math. **35**, (2021), 2328–2344. [arXiv] [doi]
- M. Bucic, B. Lidický, J. Long, A. Zsolt Wagner: *Partition problems in high dimensional boxes* Journal of Comb. Theory A. **166** (2019) 315–336.
- Z. Dvořák, B. Lidický, B. Mohar: *5-choosability of graphs with crossings far apart*, Journal of Comb. Theory B **123** (2017), 54–96.

Talks

42 invited talks, 20 contributed talks, 44 seminar talks, 3 invited graduate lecture series.
Selected invited talks

- Extremal Combinatorics in Illinois IV, Urbana, IL, *Almost all k-SAT functions are unate*
                                                                                         May 2023
- CombinaTexas: Combinatorics in the South-Central U.S., College Station, TX, *Applications of Flag Algebras (50 min)*   *Apr 2023*
- 6th Lake Michigan Workshop on Combinatorics and Graph Theory, Kalamazoo, MI, *Introduction to flag algebras and their applications (3× 50 min)*   *Apr 2019*
- Atlanta Lecture Series XXIII, Atlanta, GA, *Decomposing graphs into edges and triangles (50 min)*
                                                                                         Mar 2019
- Cycles and Colourings, Nový Smokovec, Slovakia, *3-coloring triangle-free planar graphs (50 min)*
                                                                                         September 2016

- Extremal Combinatorics at Illinois III, Chicago, IL, USA, *Decomposing Random d-regular Graphs Into Stars*   *Aug 2016*
- Czech-Slovak Graph Theory Conference, Boží Dar, Czech Republic, *Flag algebra and some applications (50 min)*   *June 2015*

Editorial Service

- Member of editorial board of SIAM Journal on Discrete Mathematics   *Jan 2020–to date*
- Associate Editor at Discrete Mathematics   *Nov 2020–to date*

Selected Institutional Service

- Associate Chair for Research and Faculty Development at the Department of mathematics ISU   *2020–to date*
- Post-bac program (director since 2021), ISU   *2018–to date*
- LAS Faculty Development Committee, ISU   *2019–2025*

Advising

Graduate students

1. Christian McRoberts *PhD*   *expected 2024*
2. Caroline Bang *PhD*, coadvised with J. Smith, Quantitative Model Analyst Assistant VP at US Bank   *Spring 2023*
3. Alejandra Marcelino *MS*   *Summer 2022*
4. Kyle Murphy *PhD*, data scientist at Marriott Hotels   *Spring 2021*
5. Adam Blumenthal *PhD* coadvised with M. Young, Assistant Professor at Westminster College   *Summer 2020*
6. Kacy Messerschmidt *PhD*, Mathematician II at IGT   *Summer 2018*
7. Neha Bora *MS*, Data Scientist at Capital One   *Summer 2017*
8. Kevin Moss *PhD* coadvised with S. Butler, Data Engineer at Facebook   *Spring 2017*

Postdoctoral Scholars

- Anastasia Halfpap   *2023–*
- Emily Heath (co-mentored with R. Martin)   *2021–2024*
- Rachel Kirsch, currently Assistant Professor at George Mason University   *2020–2021*

Long CV available at https://lidicky.name/bernardcv.pdf