

CURRICULUM VITAE

NAME Florian Pfender

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EDUCATION Ph.D. Mathematics, August 2002
Emory University, Atlanta, GA
Dissertation: “Four problems in extremal graph theory”

Vordiplom Mathematik, April 95
Technische Universität Berlin, Germany

Abitur, May 93
Eckener-Oberschule (Gymnasium), Berlin, Germany

EXPERIENCE 2012-present Assistant Professor, University of Colorado Denver
2006-2012 Juniorprofessor (W1), Universität Rostock, Germany
2003-2006 Postdoctoral Fellow, DFG research center MATHEON, TU Berlin
2002-2003 Postdoctoral Fellow, Emory University
1997-2002 Doctoral Fellow, Emory University
1995-1997 T. A., TU Berlin

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

- [1] V.B. LE AND F. PFENDER, *Complexity results for rainbow matchings*, Theoretical Computer Science 524 (2014), pp. 27–33.
- [2] M. FERRARA, M. JACOBSON AND F. PFENDER, *Degree conditions for H-linked digraphs*, Combinatorics, Probability and Computing 22 (2013), pp. 684–699.
- [3] J. CUMMINGS, D. KRÁL', F. PFENDER, K. SPERFELD, A. TREGLOWN AND M. YOUNG, *Monochromatic triangles in three-coloured graphs*, Journal of Combinatorial Theory, Series B 103 (2013), pp. 489–503.
- [4] V.B. LE AND F. PFENDER, *Extremal Graphs Having No Stable Cutsets*, Electron. J. Combin. 20 (2013), no. 1, Paper 35, 7pp.
- [5] F. PFENDER, *Complete subgraphs in multipartite graphs*, Combinatorica 32 (2012), pp. 483–495.
- [6] J. DIEMUNSCH, M. FERRARA, A. LO, C. MOFFATT, F. PFENDER AND PAUL S. WENGER, *Rainbow Matchings of Size $\delta(G)$ in Properly Edge-Colored Graphs*, Electronic J. of Combinatorics 19(2) (2012), #P52, 11 pages.
- [7] K.G. MILANS, F. PFENDER, D. RAUTENBACH, F. REGEN AND D.B. WEST *Cycle Spectra of Hamiltonian Graphs*, J. Combinatorial Theory Ser. B 102 (2012), pp. 869–874.
- [8] M. FERRARA, R. GOULD, M. JACOBSON, F. PFENDER, J. POWELL AND T. WHALEN, *New Ore-type conditions for H-linked graphs*, J. Graph Theory 71 (2012), pp. 69–77.
- [9] F. PFENDER, *Total edge irregularity strength of large graphs*, Discrete Math. 312 (2012), pp. 229–237.
- [10] M. KALKOWSKI, M. KAROŃSKI, AND F. PFENDER, *A new upper bound for the irregularity strength of graphs*, SIAM J. Discrete Math. 25 (2011), pp. 1319–1321.
- [11] M. FERRARA, R. GOULD, M. KAROŃSKI, AND F. PFENDER, *An iterative approach to the irregularity strength of trees*, Discr. Appl. Math. 158 (2010), pp. 1189–1194.
- [12] F. PFENDER, *Rooted induced trees in triangle-free graphs*, J. Graph Theory 64 (2010), pp. 206–209.
- [13] M. KALKOWSKI, M. KAROŃSKI, AND F. PFENDER, *Vertex-coloring edge-weightings: Towards the 1-2-3 conjecture*, J. Combin. Theory Ser. B 100 (2010), pp. 347–349.
- [14] M. KALKOWSKI, M. KAROŃSKI, AND F. PFENDER, *Vertex-coloring edge-weightings with integer weights at most 6*, Rost. Math. Kol. 64 (2009), pp. 39–44.
- [15] R. GOULD, T. ŁUCZAK, AND F. PFENDER, *Critical graphs for subpancyclicity of 3-connected claw-free graphs*, J. Graph Theory 62 (2009), pp. 263–278.
- [16] F. PFENDER, *A Note on Cycle Spectra of Line Graphs*, Discrete Math. 309 (2009), pp. 2922–2924.
- [17] F. PFENDER, *Visibility Graphs of Point Sets in the Plane*, Discr. & Comp. Geometry 39 (2008), pp. 455–459.
- [18] F. PFENDER, *Improved Delsarte bounds for spherical codes in small dimensions*, J. Combin. Theory Ser. A 114 (2007), pp. 1133–1147.
- [19] G. CHEN, R. GOULD, K. KAWARABAYASHI, F. PFENDER, AND B. WEI, *Graph minors and linkages*, J. Graph Theory, 49 (2005), pp. 75–91.
- [20] F. PFENDER, *Hamiltonicity and forbidden subgraphs in 4-connected graphs*, J. Graph Theory, 49 (2005), pp. 262–272.
- [21] G. CHEN, R. J. FAUDREE, R. GOULD, M. JACOBSON, L. LESNIAK, AND F. PFENDER, *Linear forests and ordered cycles*, Discuss. Math. Graph Theory, 24 (2004), pp. 359–372.
- [22] G. CHEN, R. GOULD, AND F. PFENDER, *New conditions for k-ordered hamiltonian graphs*, Ars Combinatoria, 70 (2004), pp. 245–255.
- [23] R. GOULD, T. ŁUCZAK, AND F. PFENDER, *Pancyclicity in 3-connected graphs: pairs of forbidden subgraphs*, J. Graph Theory, 47 (2004), pp. 183–202.

- [24] T. ŁUCZAK AND F. PFENDER, *Claw-free 3-connected P_{11} -free graphs are Hamiltonian*, J. Graph Theory, 47 (2004), pp. 111–121.
- [25] F. PFENDER, *2-Factors in Hamiltonian graphs*, Ars Combinatoria, 72 (2004), pp. 287–293.
- [26] F. PFENDER AND G. M. ZIEGLER, *Kissing numbers, sphere packings, and some unexpected proofs*, Notices Amer. Math. Soc., 51 (2004), pp. 873–883.
- [27] G. CHEN, R. GOULD, F. PFENDER, AND B. WEI, *Extremal graphs for intersecting cliques*, J. Combinatorial Theory Ser. B, 89 (2003), pp. 159–171.
- [28] J. FAUDREE, R. GOULD, F. PFENDER, AND A. WOLF, *On k -ordered bipartite graphs*, Electron. J. Combin., 10 (2003). Research Paper 11, 12 pages.
- [29] A. M. FRIEZE, R. GOULD, M. KAROŃSKI, AND F. PFENDER, *On graph irregularity strength*, J. Graph Theory, 41 (2002), pp. 120–137.
- [30] R. GOULD AND F. PFENDER, *Pancyclicity in claw-free graphs*, Discrete Math., 256 (2002), pp. 151–160.

CONFERENCE PROCEEDINGS

- [31] F. PFENDER, *Improved Delsarte bounds via extension of the function space*, COE Workshop on Sphere Packings I, Kyushu University, Japan, 2004.
- [32] F. PFENDER, *A result about dense k -linked graphs*, Congr. Numer., 140 (1999), pp. 209–211.

JOURNAL ARTICLES UNDER REVIEW

- [33] J. BALOGH, P. HU, B. LIDICKY, F. PFENDER, J. VOLEC AND M. YOUNG, *Rainbow triangles in three-colored graphs*, 27pp, arXiv:1408.5296.
- [34] M. FERRARA, M. JACOBSON, F. PFENDER AND P. WENGER, *Graph saturation in multipartite graphs*, 16pp, arXiv:1408.3137.
- [35] F. PFENDER, G. ROYLE, *Quartic graphs with every edge in a triangle*, accepted pending revisions to Journal of Graph Theory, 10pp, arXiv:1308.0081.
- [36] M. KALKOWSKI, M. KAROŃSKI AND F. PFENDER, *The 1-2-3 Conjecture for Hypergraphs*, 12pp, arXiv:1308.0611.
- [37] F. PFENDER, *Total weight choosability of Hypergraphs*, 5pp, arXiv:1312.6329.
- [38] F. PFENDER, *Combined degree and connectivity conditions for H -linked graphs*, 13pp, arXiv:1206.1427.

OTHER PUBLICATIONS

- [39] A. KOSTOCHKA, F. PFENDER AND M. YANCEY, *Large rainbow matchings in large graphs*, arXiv:1204.3193.
- [40] M. ANHOLZER, M. KAROŃSKI AND F. PFENDER, *Total irregularity strength of forests*, arXiv:1103.2087.

TALKS	Invited, Joint meeting DMV/PTM, Poznan, Poland	9/2014
AT MEETINGS	Invited, SIAM Discrete Mathematics	6/2014
	Invited, Joint meetings AMS/MAA, Baltimore	1/2014
	Invited Main Speaker, Cycles and Colourings, Slovakia	9/2013
	Czech-Slovak International Symposium on Graph Theory, Combinatorics, Algorithms and Applications, Kosice	7/2013
	Invited, AMS regional meeting, Boulder	4/2013
	Invited, Atlanta Lecture Series, Atlanta	11/2012
	Conference on Cycles in Graphs, Nashville	6/2012
	KolKom, Magdeburg University	11/2011
	Invited, Graph Theory 2011, Kolding	4/2011
	Combinatorics, Graph Theory, and Applications, Elgersburg	3/2011
	KolKom, Magdeburg University	11/2010
	KolKom, Magdeburg University	11/2009
	Random Structures and Algorithms, Poznan	8/2009
	KolKom, Magdeburg University	11/2008
	Invited, Berlin-Poznan Seminar	6/2008
	Invited, Berliner Algorithmentag, Humboldt University	7/2003
	Invited, Cumberland Conference, University of Mississippi	5/2002
	AMS Sectional Meeting, University of Tennessee	10/2001
	Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton	3/2000
	Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton	3/1999
	Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton	3/1998

INVITED	Departmental Combinatorics Seminar, U of I Urbana	10/2013
TALKS AT	Graph Theory Seminar, University of Illinois Urbana	10/2013
SEMINARS/ WORKSHOPS	Colloquium, University of Wyoming	2/2013
	Departmental Combinatorics Seminar, Hamburg	6/2012
	Colloquium, University of Southern Denmark	5/2012
	DIMAP Workshop: Combinatorics and Graph Theory, Warwick	4/2011
	Workshop: Extremal and Probabilistic Combinatorics, Frauenthiemsee	8/2010
	Workshop: Linear and semidefinite programming bounds, HIM Bonn	2/2008
	Colloquium, Universität Ilmenau	1/2007
	Colloquium, Universität Rostock	4/2007
	Colloquium, Emory University	2/2006
	Workshop in Discrete Geometry, University of Calgary	5/2005
	COE Workshop on Sphere Packings, Kyushu University Fukuoka	11/2004
	Colloquium, Emory University	9/2004
	Departmental Combinatorics Seminar, Emory University	11/2003
	Colloquium, Vanderbilt University	2/2002
	Departmental Combinatorics Seminar, Georgia Tech	2/2002
	Colloquium, Microsoft Research Group	11/2001
	Colloquium, Emory University	10/2000
MASTERS STUDENTS	Konrad Sperfeld, “Vollständige Untergraphen in multipartiten Graphen”, April 2009.	
	Roman Glebov, “Extremal Graphs for Clique-Paths”, June 2009.	
	Matthias Jentsch, “Diskrete Optimierung einer Distributionslogistik”, February 2010.	
	Martin Haufschild, “A Complex Systems Approach to Biological Aging and Negligible Senescence by Memory Evolutive Systems”, June 2010.	
	Susanne Gau, “Gradschranken für H -verbundene Graphen”, April 2011.	
	Hannes Bauer, “Semidefinite Programmierung in der Graphentheorie”, July 2012.	
DOCTORAL STUDENTS	Konrad Sperfeld, “Semidefinite programming in extremal graph theory”, July 2012.	

COURSES TAUGHT	Algebra (grad)	
	Applied Combinatorics (grad)	
	Applied Graph Theory (grad)	
	Calculus for Chemistry 1 and 2	
	Calculus for Life Sciences 1 and 2	
	Combinatorics	
	Discrete Mathematics	
	Flag Algebra and Probabilistic Methods (grad)	
	Graph Theory 1 and 2 (grad)	
	Graph Theory	
	Intro to Stats and Probs	
	Linear Algebra	
	Polytope Theory (grad)	
	Prep program for upcoming seniors from inner-city high schools	
	Probability and Statistics for Engineers	
	Seminar Graph Theory (grad)	
	SERVICE	Merit committee 2013 & 2014
Search committee for numerical math		2015
Organizer Workshop <i>GRWC</i>		7/2014
Search committee for applied combinatorics		2014
Chair of analysis prelim committee		2014
Undergraduate committee		2012-15
Prelim committees linear algebra and analysis		2013
Search committee for computational math		2013
Bylaws committee		2012-14
DMV contact person in Rostock		2006-12
Organizer Workshop <i>Polyhedra, Symmetry and Optimization</i>		10/2011
Coordinator: <i>International Mathematics Olympiad</i> Bremen		2010
Coordinator: <i>Baltic Way</i> Greifswald		2011
Conference organizer <i>ODSA</i>		9/2010
Member of Faculty Council		2008-10
Coordinator of <i>Year of Mathematics 2008</i>		2008
Lead organizer of traveling exhibition <i>Mathematik zum Anfassen</i> , 8000 visitors		10/2008
Member of Organizing Committee of conference <i>STAUNT</i>		9/2008
Member of Organizing Committee <i>Science at Sail 2008</i>		8/2008

- PRIZES 2006 Chauvenet Prize, MAA (with G. M. Ziegler)
- PROFESSIONAL Referee: Journal of Graph Theory, European Journal of Combinatorics,
ACTIVITIES Combinatorica, Combinatorics, Probability and Computing, SIAM Journal on Discrete Mathematics, Journal of Combinatorial Theory Series B, Graphs and Combinatorics, Discrete & Computational Geometry, Discrete Applied Mathematics, Discrete Mathematics, Information Processing Letters, Computers and Mathematics with Applications, Ars Combinatoria, Discrete Mathematics & Theoretical Computer Science, Czechoslovak Mathematical Journal, Discrete Mathematics, Algorithms and Applications, Australasian Journal of Combinatorics, Electronic Journal of Combinatorics, SODA
Member: AMS, DMV, DHV
Guest Editor: Optimal Discrete Structures and Algorithms ODSA 2010, Discrete Applied Mathematics 163 (2014), part 2.
- GRANTS NSF, PI (one of four) "The Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics, July 27 - August 9, 2014," \$23996
NSF, project grant, 2014-2017, \$ 331000, not funded.
Simons Foundation, Collaboration grant, 2013-2018, \$35000
DAAD, travel grant, 2012, 1300 Euro
Deutsche Telekom Stiftung, "Regionale Aktivitäten und Vernetzung mit Schulen", 2008–2010, 6000 Euro
OSPA and Siemens, "Mathematik zum Anfassen", 2008, 4500 Euro
- PUBLIC TALKS Mathclub, Colorado State University 12/2013
Kinderuni, children (400-500) 11/2010
Familiuniversität, talk in circus tent, youth (50) 4/2009
Ringvorlesung, general audience (100) 11/2008
Science at Sail, general audience (150) 8/2008
Mathematik in der Strassenbahn, talk in a moving street car, youth (100) 6/2008