

CURRICULUM VITAE

Name František Kardoš

Present employment Maître de conférences (associate professor)
LaBRI / University of Bordeaux
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Born June 24, 1981 in Košice, Slovakia

Employment history

2011 – 2012: Post-doc at INRIA Sophia Antipolis Méditerranée, France

2006 – 2009 and 2010 – 2011: Assistant professor at Faculty of Science
P. J. Šafárik University, Košice, Slovakia

2009 – 2010: Post-doc at Institute for Theoretical Computer Science
Charles University, Prague, Czech Republic

Education

Nov 2007: PhD. in Discrete Mathematics, P. J. Šafárik University, Košice, Slovakia

June 2005: Ing. in Forestry, Technical University, Zvolen, Slovakia

June 2003: Mgr. in Mathematics, Comenius University, Bratislava, Slovakia

Honors/Awards

2010: Academician Stefan Schwarz Prize Winner
Slovak Mathematical Society

2006: Dean's Prize for excellent research of graduate students
Faculty of Science, P. J. Šafárik University, Košice, Slovakia

1998: Silver medal at International Mathematical Olympiad, Taiwan

Research interests

- Graph colorings.
- Structure of planar graphs (applications in coloring and in chemistry)

Invited conference lectures

1. Probabilistic methods: Lovász Local Lemma and Entropy Compression, ALEA Days (2024), Marseille, France.
2. Entropy compression method, Students Conference on Discrete Mathematics (2021), Kraków, Pologne.
3. Hamilton cycles in cubic planar graphs, Computers in Scientific Discovery 8 (2017), Mons, Belgique.
4. Graph-theoretic properties and invariants of fullerene graphs, CSGT (2017), Hejnice, Tchéquie.

5. Perfect matchings in cubic graphs, CSGT (2011), Šachtický, Slovaquie.

Publications : book chapters

1. V. Andova, F. Kardoš, and R. Škrekovski, Fullerene Graphs and Some Relevant Graph Invariants, in: Topics in Chemical Graph Theory, ed. I. Gutman, Univ. Kragujevac 2014, 39–54.
2. S. Jendroľ and F. Kardoš, Symmetry of fulleroids, in: Handbook of Nanophysics, ed. K. D. Sattler, Taylor & Francis 2010, 28.1–28.13.

Publications : articles in peer-reviewed journals

1. F. Kardoš, E. Máčajová, J.P. Zerafa, Three-cuts are a charm: acyclicity in 3-connected cubic graphs, *Combinatorica* 45(1):11 (2025).
2. Q. Deschamps, C. Feghali, F. Kardoš, C. Legrand-Duchesne, Strengthening a Theorem of Meyniel, *SIAM J. Discrete Math.* 37 (2) (2023) 604–611.
3. F. Kardoš, J. Narboni, R. Naserasr, Z. Wang, Circular $(4 - \epsilon)$ -Coloring of Some Classes of Signed Graphs, *SIAM J. Discrete Math.* 37 (2) (2023) 1198–1211.
4. F. Kardoš, E. Máčajová, J.P. Zerafa, Disjoint odd circuits in a bridgeless cubic graph can be quelled by a single perfect matching, *J. Comb. Theory B* 160 (2023) 1–14.
5. F. Kardoš, Hamiltonicity of Cubic Planar Graphs with Bounded Face Sizes, *SIAM Rev.* 64 (2) (2022) 425–465.
6. S. Bonduelle and F. Kardoš, Subcubic planar graphs of girth 7 are class I, *Discrete Math.* 345 (10) (2022) 113002.
7. F. Kardoš and M. Mockovčiaková, At least half of the leapfrog fullerene graphs have exponentially many Hamilton cycles, *J. Graph Theory* 97 (3) (2021) 382–392.
8. F. Kardoš and J. Narboni, On the 4-color theorem for signed graphs, *Eur. J. Combin.* 91 (2021) 103215.
9. F. Kardoš, A computer-assisted proof of Barnette-Goodey conjecture: Not only fullerene graphs are Hamiltonian, *SIAM J. Discrete Math.* 34 (1) (2020) 62–100.
10. F. Kardoš, M. Maceková, M. Mockovčiaková, É. Sopena and R. Soták. Incidence coloring – Cold cases, *Discuss. Math. Graph Theory* 40 (1) (2020), 345–354.
11. M. Bonamy, F. Kardoš, T. Kelly, P. Nelson, L. Postle, The structure of binary matroids with no induced claw or Fano plane restriction, *Advances in Combinatorics* 1 (2019), 17pp.
12. F. Kardoš, D. Kráľ, A. Liebenau, and L. Mach, First order convergence of matroids, *Eur. J. Comb.* 59 (2017) 150–168.
13. V. Andova, F. Kardoš, and R. Škrekovski, Mathematical aspects of fullerenes, *Ars Math. Contemp.* 11 (2016) 353–379.
14. F. Kardoš, J. Pócs, J. Pócsová, On concept reduction based on some graph properties, *Knowledge-Based Systems* 93 (2016) 67–74.
15. V. Andova, D. Blenkuš, T. Došlić, F. Kardoš, and R. Škrekovski, On Diameter of Nanotubical Fullerene Graphs, *MATCH Commun. Math. Comput. Chem.* 73 (2015) 529–542.
16. V. Andova, F. Kardoš, and R. Škrekovski, Sandwiching saturation number of fullerene graphs, *MATCH Commun. Math. Comput. Chem.* 73 (2015) 501–518.
17. D. Hudák, F. Kardoš, B. Lužar, R. Soták, and R. Škrekovski, Acyclic edge coloring of planar graphs with Δ colors, *Discrete Appl. Math* 160 (2012) 1356–1368.
18. J. Czap, S. Jendroľ, F. Kardoš, and R. Soták, Facial parity edge coloring of plane pseudographs, *Discrete Math* 312 (2012) 2735–2740.
19. F. Kardoš, D. Kráľ, and J. Volec, Maximum edge-cuts in cubic graphs with large girth and in random cubic graphs, *Random Structures & Algorithms* 41 (2012) 506–520.
20. L. Esperet, F. Kardoš, and D. Kráľ, A superlinear bound on the number of perfect matchings in cubic bridgeless graphs, *Eur. J. Combin.* 33 (2012) 767–798.
21. L. Esperet, F. Kardoš, A. King, D. Kráľ, and S. Norine, Exponentially many perfect matchings in cubic graphs, *Adv. Math.* 227 (2011) 1646–1664.

22. F. Kardoš, D. Král, and J. Volec, Fractional colorings of cubic graphs with large girth, *SIAM J. Discrete Math.* 25 (2011) 1454–1476.
23. J. Czap, S. Jendroľ, F. Kardoš, and J. Miškuf, Looseness of plane graphs, *Graphs and Combinatorics* 27 (2011) 73–85.
24. J. Czap, S. Jendroľ, F. Kardoš, Facial parity edge colouring, *Ars Math. Contemp.* 4 (2011) 255–269.
25. J. Czap, S. Jendroľ, F. Kardoš, On the strong parity chromatic number, *Discuss. Math. Graph Theory* 31 (2011) 587–600.
26. B. Brešar, J. Katrenič, F. Kardoš, and G. Semanišin, Minimum k -path vertex cover, *Discrete Appl. Math.* 159 (2011) 1189–1195.
27. J. Katrenič, F. Kardoš, and I. Schiermeyer, On computing the minimum 3-path vertex cover and dissociation number of graphs, *Theor. Comput. Sci.* 412 (2011) 7000–7017.
28. F. Kardoš, Fullerooids with dihedral symmetry, *Discrete Math.* 310 (2010), 652–661.
29. F. Kardoš, M. Krnc, B. Lužar, and R. Škrekovski, Cyclic 7-edge-cuts in fullerene graphs, *J. Math. Chem.* 47 (2010) 771–789.
30. F. Kardoš, D. Král, and J.-S. Sereni, The last fraction of a fractional conjecture, *SIAM J. on Discrete Math.* 24 (2010) 699–707.
31. F. Kardoš and J. Miškuf, Maximum vertex and face degree of oblique graphs, *Discrete Math.* 309 (2009), 4942–4948.
32. F. Kardoš, D. Král, J. Miškuf, and J.-S. Sereni, Fullerene graphs have exponentially many perfect matchings, *J. Math. Chem.* 46 (2009), 443–447.
33. R. Erman, F. Kardoš, and J. Miškuf, Long cycles in fullerene graphs, *J. Math. Chem.* 46 (2009), 1103–1111.
34. F. Kardoš and R. Škrekovski, Cyclic edge-cuts in fullerene graphs, *J. Math. Chem.* 44 (2008), 121–132.
35. S. Jendroľ and F. Kardoš, On octahedral fullerooids, *Discrete Appl. Math.* 155 (2007), 2181–2186.
36. F. Kardoš, Tetrahedral fullerooids, *J. Math. Chem.* 41 (2007) 101–111.