

Publikačná činnosť prof. RNDr. Kataríny Cechlárovej, DrSc.

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A. Extremálne algebry

1. P. Butkovič, K. Cechlárová a P. Szabó, *Strong linear independence in bottleneck algebra*, Linear Algebra Appl. 94 (1987), 133 – 155.
2. K. Cechlárová, *Strong regularity of matrices in a discrete bottleneck algebra*, Linear Algebra and Appl. 128 (1990), 35 – 50.
3. K. Cechlárová, *Eigenvectors in bottleneck algebra*, Linear Algebra Appl. 175 (1992), 63-73.
4. K. Cechlárová, *Fuzzy discrete dynamic systems - efficient algorithms using digraphs*, Tatra Mountains Math. Publ. 6 (1995), 5 – 11.
5. K. Cechlárová, *Unique solvability of max-min fuzzy equations and strong regularity of matrices*, Fuzzy Sets and Systems 75 (1995), 165 – 177.
6. K. Cechlárová, *On the powers of matrices in bottleneck/fuzzy algebra*, Linear Algebra Appl. 246 (1996), 97 – 112.
7. R. A. Cuninghame-Green a K. Cechlárová, *Residuation in fuzzy algebra and some applications*, Fuzzy Sets and Systems 71 (1995), 111 – 116.
8. K. Cechlárová a J. Plávka, *Linear independence in bottleneck algebras*, Fuzzy Sets and Systems 77 (1996), 337 – 348.
9. A. O. L. Atkin, E. Boros, K. Cechlárová, Uri N. Peled, *Powers of circulants in bottleneck algebra*, Linear Algebra Appl. 258 (1997), 137 – 148.
10. K. Cechlárová a K. Kolesár, *Strong regularity of matrices in a discrete bounded bottleneck algebra*, Linear Algebra Appl. 256 (1997), 141 – 152.
11. K. Cechlárová, *Efficient computation of the greatest eigenvector in fuzzy algebra*, Tatra Mountains Math. Publ. 12 (1997), 73 – 79.
12. K. Cechlárová a P. Diko, *Resolving infeasibility in extremal algebras*, Linear Algebra Appl. 290 (1999), 267 – 273.
13. K. Cechlárová, *A note on unsolvable systems of max-min (fuzzy) equations*, Linear Algebra Appl. 10 (2000), 123 – 128.
14. K. Cechlárová, *Solutions of interval linear systems in max-plus algebra*, Proc. SOR 2001, Eds. V. Rupnik, L. Zadnik-Stirn, S. Drobne, Preddvor, Slovenia, 321 – 326.
15. K. Cechlárová a R. A. Cuninghame-Green, *Interval systems of max-separable linear equations*, Linear Algebra Appl. 340/1 – 3 (2002), 215 – 224.
16. K. Cechlárová, *Max-plus algebra: applications, methods, imprecise data*, Proc. SOR 2003, Sept. 24. – 26. 2003, Eds. L. Zadnik-Stirn, M. Bastič, S. Drobne, Slovenia, 3 – 8.
17. K. Cechlárová a R. A. Cuninghame-Green, *Soluble approximation of linear systems in max-plus algebra*, Kybernetika 39(2003), 137 – 141 (tiež z Proc. IFAC workshop on Max-plus Algebra, Praha, August 26. – 29.9.2001, 89 – 91).
18. K. Cechlárová, *Powers of matrices over distributive lattices - a review*, Fuzzy Sets and Systems 138 (2003), 627 – 641.
19. K. Cechlárová, *Eigenvectors of interval matrices over max-plus algebra*, Discrete Applied Math., 150/1 – 3, (2005), 2 – 15.

B. Kombinatorická optimalizácia

1. K. Cechlárová, *On some properties of the algebraic assignment problem*, Ekonomicko-matematický obzor 22 (1986), 562 – 467.
2. K. Cechlárová a P. Szabó, *On the Monge property of matrices*, Discr. Math.81 (1990).
3. K. Cechlárová, *The uniquely solvable bipartite matching problem*, Operations Research Letters 10 (1991), 221 – 224.
4. K. Cechlárová, *Trapezoidal matrices and the bottleneck assignment problem*, Discrete Appl. Math. 58 (1995), 111 – 116.
5. K. Cechlárová, *Persistence in the assignment and transportation problems*, Math. Meth. of OR 47 (1998), 243 – 254.
6. Š. Berežný, K. Cechlárová a V. Lacko, *A polynomially solvable case of optimization problems on graphs with categorization of edges*, Proc. MME, Jindřichuv Hradec (1999), 25 – 30.
7. K. Cechlárová a V. Lacko, *Persistence in some combinatorial optimization problems*, Proc. MME, Jindřichuv Hradec (1999), 53 – 60.
8. Š. Berežný, K. Cechlárová a V. Lacko, *Optimization problems on graphs with categorization of edges*, Proc. SOR 2001, Eds. V. Rupnik, L. Zadnik-Stirn, S. Drobne, Pred-dvor, Slovenia, 171 – 176.
9. K. Cechlárová a V. Lacko, *Persistence in combinatorial optimization problems on matroids*, Discrete Applied Math. 110/2 – 3 (2001), 121 – 132.

C. Párovania s preferenciami účastníkov

1. K. Cechlárová, *On the complexity of exchange stable roommates*, Discr. Applied Math. 116 (2002), 279 – 287.
2. K. Cechlárová a S. Ferková, *The stable crews problem*, Discrete Applied Math. 140/1 – 3 (2004), 1 – 17.
3. K. Cechlárová a D. Manlove, *On the exchange stable marriage problem*, Discrete Applied Math., 152 (2005), 109 – 122.
4. K. Cechlárová a T. Fleiner, *On a generalization of the stable roommates problem*, ACM Transactions on Algorithms, Vol.1, No.1, (2005) 143 – 156.
5. P. Biró, K. Cechlárová a T. Fleiner, *The dynamics of stable matchings and half-matchings for the stable marriage and roommates problems*, Int. Journal of Game Theory 36/3 – 4 , 333 – 352 (2008).
6. V. Borbeľová a K. Cechlárová, *On the stable b -matching problem in multigraphs*, Discrete Applied Math., 156/5 (2008), 673 – 684.
7. V. Borbeľová a K. Cechlárová, *Rotations in the stable b -matching problem*, Theoretical Computer Science 411(2010), 1750 – 1762.
8. K. Cechlárová, P. Eirínakis, T. Fleiner, D. Magos, I. Mourtos, E. Potpinková, *Pareto optimality in many-to-many matching problems*, Discrete Optimization 14 (2014), 160 – 169.

9. K. Cechlárová, T. Fleiner, D. F. Manlove, I. McBride, E. Potpinková, *Modelling practical placement of trainee teachers to schools*, CEJOR 23 (2015), 547 – 562.
10. K. Cechlárová, T. Fleiner, Zs. Jankó, *House-swapping with divorcing and engaged pairs*, Discrete Applied Mathematics 206 (2016), 1 – 8.
11. K. Cechlárová, T. Fleiner, D. F. Manlove, I. McBride, *Stable matchings of teachers to schools*, Theoretical Computer Science 653(2016), 15 – 25.
12. K. Cechlárová, P. Eirinakis, T. Fleiner, D. Magos, D. Manlove, I. Mourtos, E. Oceláková, B. Rastegari, *Pareto Optimal Matchings in Many-to-Many Markets with Ties*, Algorithmic Game Theory, SAGT 2015, Ed. M. Hoefer, LNCS 9347, 27 – 42, 2015 a rozšírená verzia Theory Comput Syst (2016) 59, 700 – 721.
13. K. Cechlárová, P. Eirinakis, T. Fleiner, D. Magos, I. Mourtos, E. Oceláková, *Approximation Algorithms for the Teachers Assignment Problem*, Proc. of the 13th Int. Symp. on Oper. Research SOR '15 (2015), Bled, 479 – 484.
14. K. Cechlárová, T. Fleiner, I. Schlotter, *Possible and Necessary Allocations Under Serial Dictatorship with Incomplete Preference Lists*, J. Rothe (Ed.): ADT 2017, LNAI 10576, 300–314, 2017.
15. K. Cechlárová, T. Fleiner, *Pareto optimal matchings with lower quotas*, Mathematical Social Sciences 88 (2017), 3 – 10.
16. K. Cechlárová, B. Klaus, D. F. Manlove, *Pareto optimal matchings of students to courses in the presence of prerequisites*, Discrete Optimization 29 (2018), 174 – 195.
17. K. Cechlárová, Á. Cseh, D. Manlove, *Selected open problems in Matching Under Preferences*, Bulletin of EATCS. No 128: June 2019.
18. K. Cechlárová, L. Gourvés, J. Lesca, *On the Problem of Assigning PhD Grants*, Proceedings of IJCAI-19, 130 – 136.

D. Vytváranie koalícií

1. K. Cechlárová, M. Dahm a V. Lacko, *Efficiency and stability in a discrete model of country formation*, Journal of Global Optimization 20/3-4 (2001), 239 – 256.
2. K. Cechlárová a J. Hajduková, *Stability testing in coalition formation games*, Proc. SOR '99 (1999), Eds. V. Rupnik, L. Zadnik-Stirn, S. Drobne, 111 – 116.
3. K. Cechlárová a A. Romero Medina, *Stability in coalition formation games*, International Journal of Game Theory 29 (2001), 487 – 494.
4. K. Cechlárová a J. Hajduková, *Computational complexity of stable partitions with B-preferences*, International Journal of Game Theory 31 (2002) 3, 353 – 364.
5. K. Cechlárová a J. Hajduková, *Stable partitions with W-preferences*, Discrete Applied Math. 138/3 (2004), 333 – 347.
6. K. Cechlárová a J. Hajduková, *Stability of partitions under WB-preferences and BW-preferences*, Int. Journal of Information Technology and Decision Making, Special Issue on Computational Finance and Economics 3(4), 605 – 614, 2004.
7. K. Cechlárová, *On max-min linear inequalities and coalitional resource games with sharable resources*, Linear Algebra Appl. 433(2010), 127 – 135.
8. K. Cechlárová, *Stable partition problem*, Encyclopedia of algorithms, Ed. Ming-Yang Kao, Springer (2008 a 2016), str. 885 – 888, ISBN: 978-0-387-30162-4.

E. Spravodlivé delenie

1. K. Cechlárová, E. Pillárová, *A near equitable 2-person cake cutting algorithm*, Optimization 61(11), 1321 – 1330 (2012).
2. K. Cechlárová a E. Pillárová, *On the computability of equitable divisions*, Discrete Optimization 9 (2012) 249 – 257.
3. K. Cechlárová, J. Doboš, E. Pillárová, *On the existence of equitable cake divisions*, Information Sciences 228 (2013) 239 – 245.
4. S. Bouveret, K. Cechlárová, E. Elkind, A. Igarashi, D. Peters, *Fair division of a graph*. In Proceedings of the 26th International Joint Conference on Artificial Intelligence, IJCAI'17, 135 – 141, 2017.
5. S. Bouveret, K. Cechlárová, J. Lesca, *Chore division on a graph*, Autonomous Agents and Multi-Agent Systems (2019) 33: 540 – 563.

F. Výpočet ekonomickej rovnováhy

1. D. Abraham, K. Cechlárová, D. Manlove, K. Mehlhorn: *Pareto-optimality in house allocation problems*, Algorithms and computation, 1163 – 1175, LNCS, 3827, Eds. R. Fleischer, G. Trippen, Springer, Berlin, 2005.
2. K. Cechlárová, *On the complexity of the Shapley-Scarf economy with several types of goods*, Kybernetika 45 (2009) n.5, 689 – 700.
3. K. Cechlárová a T. Fleiner, *On housing markets with duplicate houses*, MATCH-UP 2008, Satellite workshop of ICALP 2008, July 6, Reykjavík (2008)
4. K. Cechlárová a T. Fleiner, *Housing markets through graphs*, Algorithmica 58/1, 170 – 187, 2010.
5. K. Cechlárová a I. Schlotter, *Computing the Deficiency of Housing Markets with Duplicate Houses*, LNCS 6478, Parameterized and Exact Computation, 72 – 83 (2010)
6. K. Cechlárová, E. Jelínková, *Approximability of Economic Equilibrium for Housing Markets With Duplicate Houses*, WG2011, LNCS 6986, eds. P. Kolman a J. Kratochvíl, 95 – 106 (2011).
7. K. Cechlárová, E. Jelínková, *An efficient implementation of the equilibrium algorithm for housing markets with duplicate houses*, Information Processing Letters, 111/ 13, 667 – 670 (2011).

G. Modelovanie transplantácií obličiek

1. K. Cechlárová, T. Fleiner a D. Manlove, *The kidney exchange game*, Proc. of the 8th Int. Symp. on Oper. Research SOR '05 (2005), Nova Gorica, September 28. – 30. Eds. L. Zadnik-Stirn, S. Drobne, 77 – 83.
2. P. Biró, K. Cechlárová: *Inapproximability of the kidney exchange problem*, Information Processing Letters, 101/ 5, (2007), 199 – 202.

3. V. Borbeľová a K. Cechlárová, *Pareto optimality in the kidney exchange problem*, *Kybernetika* 44 (2008) n.3, 373 – 384.
4. K. Cechlárová a V. Lacko, *The kidney exchange problem: How hard is it to find a donor?*, *Annals of OR* 193: 255 – 271, (2012).
5. Biró, P., Haase-Kromwijk, B., Andersson, T., Cechlárová K., Wilson, N., Van Der Klundert, J., *Building kidney exchange programmes in Europe - An overview of exchange practice and activities*, *Transplantation*, 2019, 103(7), pp. 1514 – 1522.
6. K. Cechlárová, D. Plačková, T. Baltessová, *Modelling the kidney transplant waiting list*, *Proc. 19th International Symposium on Operational Research, Bled, 2019*, Eds. L. Zadnik-Stirn, M. Kljajjić Borštar, J. Žerovik, S. Drobne, J. Povh.
7. K. Cechlárová, M. Hančová, D. Plačková, T. Baltessová, *Stochastic modelling and simulation of a kidney transplant waiting list*, *Central European Journal of Operations Research* 29(3), 909 – 931, 2021.

H. Iné aplikácie

1. K. Cechlárová a T. Fleiner, *Optimization of an SMD placement machine and flows in parametric networks*, *Kybernetika* 47 (2011), 730 – 739.
2. K. Cechlárová, T. Fleiner, E. Potpinková, *Assigning evaluators to research grant applications: the case of Slovak Research and Development Agency*, *Scientometrics* (2014) 99: 495 – 506.
3. K. Cechlárová, E. Potpinková, I. Schlotter, *Refining the complexity of the sports elimination problem*, *Discrete Applied Mathematics* 199 (2016) 172 – 186.
4. I. Schlotter, K. Cechlárová, *A Connection Between Sports and Matroids: How Many Teams Can We Beat?*, *Algorithmica* 80 (2018) 258 – 278.
5. K. Cechlárová, Á. Cseh, Zs. Jankó, M. Kireš, L. Miño, *A quest for a fair schedule: The International Young Physicists' Tournament*, *Journal of Scheduling* 26: 3 – 18.
6. K. Cechlárová, J. Lesca, D. Trellová, M. Hančová, J. Hanč, *Hardness of candidate nomination*, *Autonomous Agents and Multi-Agent Systems* (2023) 37:37.

I. Didaktické a popularizačné práce

1. K. Cechlárová a B. Maťašová, *Rozvrhovacie problémy* (41 str.), Metodické centrum Prešov, 1996.
2. K. Cechlárová, I. Semanišinová, D. Šveda, *Matematika každodenného života*, Prírodovedecká fakulta UPJŠ Košice, vydané v rámci projektu Tempus Phare AC-JEP14327-1999, júl 2001.
3. K. Cechlárová, *Limits, logic and traffic regulations*, *Teaching Mathematics and its Appl.* 16(2) (1997), 69 – 70.
4. K. Cechlárová, *Úrokový počet pomocou tabuľkového kalkulátora*, *Matematika-fyzika-informatika* 13, 2003/2004, 108 – 118.

5. K. Cechlárová, D. Manlove, R Irving, *Stability in labour market games*, ERCIM News (Special Theme on Games Technology), 57: 27 – 28, 2004.
6. K. Cechlárová, *On a problem on optimal transport organisation*, Teaching Math. Appl. 24(4) 179 – 181 (2005).
7. K. Cechlárová, *Netradičné úlohy z logiky*, MIF 3 (1992), 16 – 24.
8. K. Cechlárová, *Dve úlohy o optimálnej preprave*, Matematické Obzory 41 (1994), 57 – 66.
9. K. Cechlárová, *Matematická súťaž žiakov vo Veľkej Británii*, Matematika-fyzika-informatika 3 (1993/94), 71 – 75.
10. K. Cechlárová, *Limity, logika a daňové zákony*, MIF 5 (1993). 6 – 8.
11. K. Cechlárová, *Matematika pre manažérov I. Ako hrnčiar Stano vázy maľoval*, MIF 7 (1994), 12 – 18.
12. K. Cechlárová, *Negácie naše každodenné*, MIF 8 (1995), 11 – 16
13. K. Cechlárová a S. Krajči, *20 rokov Korešpondenčného matematického seminára na východnom Slovensku*, MIF 10, 52 – 56, 1996.
14. V. Bañas a K. Cechlárová, *Grafy funkcií vo vyučovaní matematiky*, MIF 16 (1999), 10 – 16.
15. V. Bañas a K. Cechlárová, *Grafy funkcií vo vyučovaní matematiky II*, MIF 17(2000), 3 – 12.
16. K. Cechlárová, M. Harminc, K. Krajníková, *O jednej netypickej slovnej úlohe a čo nám prezradila o budúcnosti učiteľov matematiky*, Obzory matematiky, fyziky a informatiky 1/2017 (46), 1 – 11

J. Skriptá a učebné texty

1. P. Mihók, J. Lihová a K. Cechlárová, *Zbierka úloh z algebry*, ES UPJŠ Košice (1992).
2. K. Cechlárová a O. Kulcsárová, *Úlohy korešpondenčného matematického seminára*, ES UPJŠ Košice (1992).
3. K. Cechlárová a G. Semanišin, *Lineárna optimalizácia*, ES UPJŠ Košice (1999).
4. K. Cechlárová a T. Madaras, *Konvexné programovanie*, UPJŠ, 2015.