

## List of Publications of Csanád Imreh

*Journal papers in English*

- [A1] Cs. Holló, Z. Blázsik, Cs. Imreh, Z. Kovács, On Merging Reduction of the Process Network Synthesis Problem, *Acta Cybernetica* **14**, 251–262, 1999.
- [A2] Z. Blázsik, Cs. Holló, B. Imreh, Cs. Imreh, Z. Kovács, On bottleneck and  $k$ -sum versions of the Process Network Synthesis problems, *Novi Sad Journal of Mathematics* **30**, 11–19, 2000.
- [A3] Z. Blázsik, Cs. Holló, B. Imreh, Cs. Imreh, Z. Kovács, On a well solvable class of the PNS problem, *Novi Sad Journal of Mathematics*, **30**, 21–30, 2000.
- [A4] Cs. Imreh, A new well-solvable class of PNS problems, *Computing*, **66**, 289–296, 2001.
- [A5] Cs. Imreh, Online strip packing with modifiable boxes, *Operations Research Letters*, **29**, 79–86, 2001.
- [A6] Cs. Imreh, An online scheduling algorithm for a two-layer multiprocessor architecture, *Acta Cybernetica* **15**, 163–172, 2001.
- [A7] L. Epstein, Cs. Imreh, R. van Stee, More on Weighted Servers or FIFO is better than LRU, *Theoretical Computer Science* **306**, 305–317, 2003. (a preliminary version is [C5])
- [A8] B. Imreh, Cs. Imreh, M. Ito, On directable nondeterministic trapped automata *Acta Cybernetica*, **16**, 37–45, 2003.
- [A9] B. Imreh, Cs. Imreh, M. Ito, On Monotonic Directable Nondeterministic Automata, *Journal of Automata, Languages and Combinatorics*, **8**, 539–547, 2003.
- [A10] Cs. Imreh, Scheduling problems on two sets of identical machines, *Computing*, **70**, 277–294, 2003.
- [A11] Cs. Imreh, Z. Kovács, On pollution minimization in the optimization models of process network synthesis, *Chemical Engineering Transactions*, **7(2)**, 565–570, 2005.
- [A12] Z. Blázsik, T. Bartók, B. Imreh, Cs. Imreh, Z. Kovács, Heuristics on a Common Generalization of TSP and LOP, *PuMA*, **17(3-4)**, article 4, 2006.
- [A13] J. Dombi, Cs. Imreh, N. Vincze, Learning lexicographical order, *European Journal on Operation Research*, **183(2)**, 748–756, 2007.
- [A14] J. Nagy-György, Cs. Imreh, On-line scheduling with machine cost and rejection, *Discrete Applied Mathematics*, **155**, 2546–2554, 2007.
- [A15] J. Nagy-György, Cs. Imreh, Online hypergraph coloring, *Information Processing Letters*, **109**, 23–26, 2008.
- [A16] Cs. Imreh, M. Ito, On monogenic nondeterministic automata, *Acta Cybernetica*, **18**, 777–782, 2008.

- [A17] Cs. Imreh, Z. Blázsik, Z. Kovács, Heuristic algorithms for a complex parallel machine scheduling problem, *Central European Journal of Operations Research*, **16**(4), 379–390, 2008.
- [A18] Cs. Imreh, On-line scheduling with general machine cost functions, *Discrete Applied Mathematics*, **157**, 2070–2077, 2009.
- [A19] T. Németh, Cs. Imreh, Parameter learning online algorithm for multiprocessor scheduling with rejection, *Acta Cybernetica*, **19**(1), 125–133, 2009.
- [A20] Cs. Holló, B. Imreh, Cs. Imreh, Reduction techniques for the PNS problems: a novel technique and a review, *Optimization and Engineering*, **10**(3), 351–361, 2009.
- [A21] J. Csirik, L. Epstein, Cs. Imreh, A. Levin, On the sum minimization version of the online bin covering problem, *Discrete Applied Mathematics*, **158**(13), 1381–1393, 2010.
- [A22] L. Epstein, Cs. Imreh, A. Levin Class constrained bin packing revisited, *Theoretical Computer Science*, **411**(34-36), 3073–3089, 2010.
- [A23] L. Epstein, Cs. Imreh, A. Levin, Class constrained bin covering, *Theory of Computing Systems*, **46**, 246–260, 2010.
- [A24] T. Bartók, Cs. Imreh, Pickup and Delivery Vehicle Routing with Multidimensional Loading Constraints, *Acta Cybernetica*, **20**(1), 17-33, 2011.
- [A25] Cs. Bujtás, Gy. Dósa, Cs. Imreh, J. Nagy-György, Zs. Tuza, The graph-bin packing problem, *International Journal of Foundations of Computer Science*, **22**(8), 1971-1993, 2011.
- [A26] Cs. Imreh, T. Németh, Parameter learning algorithm for the online data acknowledgment problem, *Optimization Methods and Software*, **26**(3) 397-404, 2011.
- [A27] G. Divéki, Cs. Imreh, Online facility location with facility movements, *Central European Journal on Operations Research*, **19**(2), 191–200, 2011.
- [A28] M. Bárány, B. Bertók, Cs. Imreh, L.T. Fan, F. Friedler, On the equivalence of direct mechanisms and structurally minimal pathways, *Journal of Mathematical Chemistry*, **50**(5), 1347–1361, 2012.
- [A29] L. Epstein, Cs. Imreh, A. Levin, Bin covering with cardinality constraints, *Discrete Applied Mathematics*, **161**(13-14), 1975–1987, 2013.
- [A30] J. Tick, Cs. Imreh, Z. Kovács, Business Process Modeling and the Robust PNS Problem, *Acta Polytechnica Hungarica*, **10**(6), 193–204, 2013.
- [A31] T. Németh, S. Nagy, Cs. Imreh, Online data clustering algorithms in an RTLS system, *Acta Universitatis Sapientiae, Informatica*, **5**(1), 5–15, 2013.
- [A32] J. Csirik, L. Epstein, Cs. Imreh, A. Levin, Online Clustering with Variable Sized Clusters, *Algorithmica*, **65**(2), 251–274, 2013.
- [A33] G. Divéki, Cs. Imreh, An online 2-dimensional clustering problem with variable sized clusters, *Optimization and Engineering*, **14**(4), 575–593, 2013.

- [A34] Gy. Dósa, Cs. Imreh, The generalization of scheduling with machine cost, *Theoretical Computer Science*, **510**, 102–110, 2013.
- [A35] D. Almási, Cs. Imreh, T. Kovács, J. Tick, Heuristic Algorithms for the Robust PNS Problem, *Acta Polytechnica Hungarica*, **11(4)**, 169–181, 2014.
- [A36] E. Bittner, Cs. Imreh, J. Nagy-György, The online k-server problem with rejection, *Discrete Optimization*, **13**, 1–15, 2014.
- [A37] L. Epstein, Cs. Imreh, A. Levin, J. Nagy-György, Online file caching with rejection penalties, *Algorithmica*, to appear, DOI 10.1007/s00453-013-9793-0

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- [B1] Cs. Imreh, Giving a geometric interpretation (in Hungarian) , *POLYGON*, **IV. 2.** (1994), 69-82.
- [B2] Cs. Imreh, Use complex numbers (in Hungarian), *POLYGON*, **VI. 1.** (1996), 65-74.
- [B3] Cs. Imreh, Sz. Imreh, An elementary approach of linear programming (in Hungarian), *POLYGON*, **VII. 1.** (1997), 49-68.
- [B4] Cs. Imreh, On a generalization of the Riemann- integral (in Hungarian), *POLYGON*, **VII. 2.** (1997), 15-34.
- [B5] B. Imreh, Cs. Imreh, Sz. Imreh, On the patching technique and its applications, *Alkalmazott Matematikai Lapok* **22**, 2005, 85–96.

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- [C2] Z. Blázsik, Cs. Holló, Cs. Imreh, Z. Kovács, Heuristics for the PNS problem, *Optimization Theory, Mátrahaza 1999, Applied Optimization* **59** eds. F. Gianessi, P. Pardalos, T. Rapcsák, Kluwer Academic Publishers, Dordrecht, Boston, London, 1–18, 2001.
- [C3] M. Chrobak, J. Csirik, Cs. Imreh, J. Noga, J. Sgall, G. Woeginger, The Buffer Minimization Problem for Multiprocessor Scheduling with Conflicts, *Proceedings of ICALP 2001*, LNCS 2076, 862–874, 2001.
- [C4] J. Csirik, Cs. Imreh, J. Noga, S. S. Seiden, G. Woeginger, Buying a constant competitive ratio for paging, *Proceedings of ESA 2001*, LNCS 2161, 98–108, 2001.
- [C5] L. Epstein, Cs. Imreh, R. van Stee, More on Weighted Servers or FIFO is better than LRU, *Proceedings of MFCS 2002 (27th International Symposium on Mathematical Foundations of Computer Science)*, LNCS 2420, 257–268, 2002.
- [C6] Z. Blázsik, B. Imreh, Cs. Imreh, Z. Kovács, The TSP problem with internal transports, *Proceedings of microCAD 2006, International Scientific Conference, Material flow system, Logistics section*, 9–13, 2006.

- [C7] Z. Blázsik, B. Imreh, Cs. Imreh, Z. Kovács, On a bin packing approach of a shipment construction problem, *Proceedings of microCAD 2006, International Scientific Conference, Material flow system, Logistics section*, 15–19, 2006.
- [C8] Cs. Imreh, T. Németh, On time lookahead algorithms for the online data acknowledgement problem *Proceedings of MFCS 2007 (32nd International Symposium on Mathematical Foundations of Computer Science) LNCS 4708*, 288–297, 2007.
- [C9] J. Csirik, L. Epstein, Cs. Imreh, A. Levin, Online Clustering with Variable Sized Clusters, *Proceedings of MFCS 2010, (35th International Symposium on Mathematical Foundations of Computer Science) LNCS 6281*, 282–293, 2010.
- [C10] T. Németh, B. Gyekiczki, Cs. Imreh, Parameter learning in lookahead online algorithms for data acknowledgment, *Proceedings of 3rd IEEE International Symposium on Logistics and Industrial Informatics (LINDI 2011)*, 195–198, 2011.
- [C11] L. Epstein, Cs. Imreh, A. Levin, J. Nagy-György, On Variants of File Caching *Proceedings of ICALP 2011, LNCS 6755*, 195–206, 2011.
- [C12] T. Bartók, Cs. Imreh, Heuristic algorithms for the weight constrained 3-dimensional bin packing model, *Proceedings of 4th IEEE International Symposium on Logistics and Industrial Informatics (LINDI 2012)*, 121–124, 2012.
- [C13] G. Divéki, Cs. Imreh, Grid based online algorithms for clustering problems, *Proceedings of CINTI 2014 - 15th IEEE International Symposium on Computational Intelligence and Informatics*, 159–162, 2014.

*Papers in Conference Proceedings in Hungarian*

- [D1] Cs. Imreh, Some well-solvable PNS classes (in Hungarian), 168–181, *New lines in the Hungarian Operations Research* ed.: Komlósi, S. and Szántai T., Dialóg Campus Kiadó, Budapest-Pécs, (1999)
- [D2] Cs. Imreh, Online problems with purchasable resources *Proceedings of the V-th conference of Pro Scientia Gold Medal Winners*, 2000, 157–161.
- [D3] Cs. Imreh, The online k-server problem, *Proceedings of the VI-th conference of Pro Scientia Gold Medal Winners*, 2003, 105–108.
- [D4] Cs. Imreh, Process Network Synthesis, *Proceedings of the VII-th conference of Pro Scientia Gold Medal Winners*, 2004, 101–104.

*Books, book chapters, lecture notes*

- [E1] B. Imreh, Cs. Imreh, *Combinatorial Optimization*, 2005 Novodat Bt, in Hungarian, 2005.
- [E2] Cs. Imreh, Competitive analysis, in *Algorithms of Informatics I*, edited by Iványi A. Mondat Kft, Budapest, 395–428, 2007.
- [E3] Gy. Dósa, Cs. Imreh, *Online algorithms*, 2011, Typotex, in Hungarian, 2011.

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[F1] Z. Blázsik, Cs. Holló, B. Imreh, Cs. Imreh, Z. Kovács: On a well solvable class of the PNS problem, The XIII-th Conference on Applied Mathematics, Igalo, Yugoslavia, 1998.

[F2] Z. Blázsik, Cs. Holló, B. Imreh, Cs. Imreh, Z. Kovács: On bottleneck and k-sum versions of the process network synthesis problem, The XIII-th Conference on Applied Mathematics Igalo, Yugoslavia, 1998.

[F3] Cs. Holló, Z. Blázsik, Cs. Imreh, Z. Kovács, On a merging reduction of the process Network Synthesis problem, Conference of PhD students in Computer Science, Szeged 1998.

[F4] Z. Blázsik, Cs. Holló, Cs. Imreh, Z. Kovács, Heuristics for Process Network Synthesis, INFORMS 98, Seattle, USA, 1998.

[F5] J. Noga, Cs. Imreh, Scheduling with machine cost, APPROX 99, The 2nd. International Workshop on Approximation Algorithms for Combinatorial Optimization Problems, Berkeley LA, USA 1999.

[F6] Z. Blázsik, Cs. Holló, Cs. Imreh, Z. Kovács, Heuristics for Process Network Synthesis problem XIV. International Conference on Mathematical Programming, Mátraháza, Hungary, 1999.

[F7] Cs. Imreh, On a two class online classification problem, Conference of PhD students in Computer Science Szeged, Hungary, 2000.

[F8] Cs. Imreh, Online classification problems of two classes with scheduling, V-th International Conference on Applied Informatics, Eger, Hungary, 2001.

[F9] M. Chrobak, J. Csirik, Cs. Imreh, J. Noga, J. Sgall G. Woeginger. The buffer minimization problem for scheduling with conflicts, MAPSP 2001, Fifth Workshop on Models and Algorithms for Planning and Scheduling Problems, Aussois, France, 2001.

[F10] Cs. Imreh, J. Goldmann, Online hypergraph coloring: 4th Joint Conference on Mathematics and Computer Science, Félixfürdő, Romania, 2001.

[F11] J. Csirik, Cs. Imreh, J. Noga, S. Seiden, G. Woeginger, Buying constant competitive ratio for paging, ESA 2001, 9th Annual European Symposium on Algorithms, Aarhus, Denmark, 2001.

[F12] M. Chrobak, J. Csirik, Cs. Imreh, J. Noga, J. Sgall G. Woeginger. The buffer minimization problem for scheduling with conflicts, ICALP 2001, 28th International Colloquium on Automata, Languages and Programming, Crete, Greece, 2001.

[F13] Cs. Imreh: On two level online problems, Workshop on Online algorithms, Schloss Dagstuhl, Germany, 2002.

[F14] L. Epstein, R. van Stee, Cs. Imreh: More on weighted servers or FIFO is better than LRU MFCS 2002, 27th International Symposium on Mathematical Foundations of Computer Science, Warsaw, Poland, 2002.

[F15] Cs. Imreh, On the scheduling problem in the combinatorial model of the PNS problem, VOCAL 2004, Veszprém, Hungary, 2004.

[F16] Cs. Imreh, Z. Kovács, On pollution minimization in the optimization models of process network synthesis, 8-th conference on process integration, modelling and optimization for energy saving and pollution reduction, Giardini of Naxos, Italy, 2005.

- [F17] Cs. Imreh, On the generalized models of on-line scheduling with machine cost, 7th Workshop on Models and Algorithms for Planning and Scheduling Problems, Siena, Italy, 2005.
- [F18] Cs. Imreh, Z. Blázsik, B. Imreh, Z. Kovács, On a Bin Packing Approach of a Shipment Construction Problem Microcad 2006, International Scientific Conference, Miskolc, Hungary, 2006.
- [F19] Z. Blázsik, B. Imreh, Cs. Imreh, Z. Kovács The TSP Problem with Internal Transports Microcad 2006, International Scientific Conference, Miskolc, Hungary, 2006.
- [F20] Cs. Holló, Cs. Imreh, Algorithms for a mixed scheduling and PNS model, MACS06, 6th Joint Conference on Mathematics and Computer Science, Pécs, Hungary, 2006.
- [F21] Z. Blázsik, B. Imreh, Cs. Imreh, Z. Kovács, Heuristics on a Common Generalization of TSP and LOP, MACS06, 6th Joint Conference on Mathematics and Computer Science, Pécs, Hungary, 2006
- [F22] Cs. Imreh, Online scheduling with general machine cost function, Optimal Discrete Structures and Algorithms, ODSA 2006, Rostock, Germany, 2006.
- [F23] Cs. Holló, B. Imreh, Cs. Imreh A new reduction technique for PNS problems VOCAL 2006, Veszprém, Hungary, 2006.
- [F24] Cs. Imreh, Online bin covering with cardinality constraints VOCAL 2006, Veszprém, Hungary, 2006.
- [F25] Cs. Imreh, Z. Blázsik, G. Hajós, Z. Kovács, Heuristic algorithms for a complex resource allocation problem, VIII-th Workshop on Models and Algorithms for Planning and Scheduling Problems, Istanbul, Turkey, 2007.
- [F26] Cs. Imreh, T. Németh, On time lookahead algorithms for the online data acknowledgement problem, 32nd International Symposium on Mathematical Foundations of Computer Science, 2007, Cesky Krumlov, Czech Republic.
- [F27] Cs. Imreh, Cs. Holló, Z. Kovács, On a mixed scheduling and process network synthesis model, GOR07, German Conference on Operations Research, 2007, Saarbrücken, Germany.
- [F28] T. Németh, Imreh Cs., On an empirical analysis for online algorithms for the data acknowledgment problem Microcad 2008, International Scientific Conference, Miskolc, Hungary, 2008.
- [F29] T. Németh, Cs. Imreh, Parameter Learning Algorithms in Online Scheduling, The Sixth Conference of PhD Students in Computer Science, Szeged, Hungary, 2008.
- [F30] T. Bartók, Cs. Imreh, A mixed multidimensional bin packing problem, VOCAL 2008, Veszprém, Hungary, 2008.
- [F31] T. Németh, Cs. Imreh, Parameter learning algorithm for online data acknowledgement problem, VOCAL 2008, Veszprém, Hungary, 2008.
- [F32] G. Divéki, Cs. Imreh, Online 2-dimensional clustering problems, VOCAL 2010, Veszprém, Hungary, 2010.
- [F33] L. Epstein, Cs. Imreh, R. van Stee, Online Clustering with Variable Sized Clusters, MFCS 2010, Brno Czech Republic, 2010.
- [F34] Cs. Imreh, Online packing of rectangles into the minimal perimeter rectangle, ODSA 2010, Rostock, Germany, 2010.

[F35] T. Németh, B. Gyekiczki, Cs. Imreh, Parameter learning in lookahead online algorithms for data acknowledgment, 3rd IEEE International Symposium on Logistics and Industrial Informatics (LINDI 2011), Budapest, Hungary, 2011.

[F36] L. Epstein, Cs. Imreh, A. Levin, J. Nagy-György, ICALP 2011, Zürich, Switzerland, 2011.

[F37] Cs. Imreh, T. Németh. Parameter learning in online scheduling algorithms, 10th Workshop on Models and Algorithms for Planning and Scheduling Problems, Nymburk, Czech Republic, 2011.

[F38] E. Bittner, Cs. Imreh, A. Tomescu, Online string clustering algorithms, VOCAL 2012, Veszprém Hungary, 2012.

[F39] T. Bartók, Cs. Imreh, Heuristic algorithms for the weight constrained 3-dimensional bin packing model, 4th IEEE International Symposium on Logistics and Industrial Informatics (LINDI 2012), Smolenice, Slovakia, 2012

[F40] Cs. Imreh, The generalization of scheduling with machine cost, Workshop on Scheduling, Schloss Dagstuhl, Germany, 2013.

[F41] Cs. Imreh, M. Hellwig, Online restricted assignment with migration, 2nd Annual Scientific Meeting of Computer Science Institute of Charles University and Institute for Theoretical Computer Science, Prague, Czech Republic, 2013.

[F42] G. Divéki, Cs. Imreh, Grid based online algorithms for clustering problems, 15th IEEE International Symposium on Computational Intelligence and Informatics, Budapest, Hungary 2014.

[F43] t. Bartók, Cs. Imreh, The strip covering problem VOCAL 2014, Veszprém, Hungary, 2014.

*Talks at conferences in Hungarian*

[G1] Cs. Imreh, Well-solvable PNS classes, XXIII. Hungarian Conference on Operations Research, 1997, Pécs

[G2] Cs. Imreh, Process Network Synthesis, XXIV. National Research Conference of Students, Budapest, 1999

[G3] Cs. Imreh, Online problems with purchasable resources, 5th conference of Pro Scientia Gold Medal Winners, Sopron 2000

[G4] Cs. Imreh, The online k-server problem, 6th conference of Pro Scientia Gold Medal Winners, Miskolc 2003

[G5] B. Imreh, Imreh Cs, Imreh Sz, On the patching technique and its applications, XXVI. Hungarian Conference on Operations Research, Győr, 2004.

[G6] Cs. Imreh, V. Bilicki, An optimization model for congestion control, XXVI. Hungarian Conference on Operations Research, Győr, 2004.

[G7] Cs. Imreh Process Network Synthesis, 7th conference of Pro Scientia Gold Medal Winners, Gödöllő 2004.

[G8] Cs. Imreh, T. Németh, The data acknowledgement problem, XXVII. Hungarian Conference on Operations Research, Balatonöszöd, 2007

[G9] Z. Blázsik, Cs. Imreh, Z. Kovács, Heuristic algorithms for a shif-job assignment problem, XXVII. Hungarian Conference on Operations Research, Balatonöszöd, 2007

[G10] Cs. Imreh, On practical applications of the assignment problem, Egerváry Jenő Memorial Conference, 2008 Budapest.

- [G11] Cs. Imreh, G. Divéki, Online facility location problems, XXVIII.Hungarian Conference on Operations Research, Balatonöszöd, 2009
- [G12] T. Bartók, Cs. Imreh, vhicle routing with packing constraints, XXVIII.Hungarian Conference on Operations Research, Balatonöszöd, 2009
- [G13] T. Bartók, Cs. Imreh, A hybrid multidimensional bin packing problem, XXIX.Hungarian Conference on Operations Research, Balatonöszöd, 2011
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