

REFERENCES

- [1] Atila Abdulkadiroglu, Yeon-Koo Che, Parag A. Pathak, Alvin E. Roth, and Olivier Tercieux. 2017. *Minimizing Justified Envy in School Choice: The Design of New Orleans' OneApp*. Working Paper 23265. National Bureau of Economic Research.
- [2] Atila Abdulkadiroglu. 2005. College Admissions with Affirmative Action. *International Journal of Game Theory* 33, 4 (2005), 535–549.
- [3] Atila Abdulkadiroglu and Tayfun Sönmez. 1999. House Allocation with Existing Tenants. *Journal of Economic Theory* 88 (1999), 233–260.
- [4] Atila Abdulkadiroglu and Tayfun Sönmez. 2003. School Choice: A Mechanism Design Approach. *American Economic Review* 93, 3 (2003), 729–747.
- [5] Michel Balinski and Tayfun Sönmez. 1999. A Tale of Two Mechanisms: Student Placement. *Journal of Economic Theory* 84, 1 (1999), 73–94.
- [6] Peter Biró, Tamas Fleiner, Robert W. Irving, and David F. Manlove. 2010. The College Admission Problem with Lower and Common Quotas. *Theoretical Computer Science* 411 (2010), 3136–3153.
- [7] Julien Combe, Olivier Tercieux, and Camille Terrier. 2017. The Design of Teacher Assignment: Theory and Evidence. (2017). Working Paper.
- [8] Vladimir Danilov, Gleb A. Koshevoy, and Kazuo Murota. 2001. Discrete convexity and equilibria in economies with indivisible goods and money. *Mathematical Social Sciences* 41 (2001), 251–273.
- [9] Tamás Fleiner. 2001. A Matroid Generalization of the Stable Matching Polytope. In *Integer Programming and Combinatorial Optimization: 8th International IPCO Conference, LNCS 2081*, B. Gerards and K. Aardal (Eds.). Springer-Verlag, 105–114.
- [10] Daniel Fragiadakis, Atsushi Iwasaki, Peter Troyan, Suguru Ueda, and Makoto Yokoo. 2015. Strategyproof Matching with Minimum Quotas. *ACM Transactions on Economics and Computation* 4, 1 (2015), 6:1–6:40.
- [11] Daniel Fragiadakis and Peter Troyan. 2017. Improving Matching under Hard Distributional Constraints. *Theoretical Economics* 12, 2 (2017), 863–908.
- [12] Satoru Fujishige. 2005. *Submodular Functions and Optimizations* (2nd ed.). Annals of Discrete Mathematics, Vol. 58. Elsevier, Amsterdam.
- [13] Satoru Fujishige and Akihisa Tamura. 2006. A General Two-sided Matching Market with Discrete Concave Utility Functions. *Discrete Applied Mathematics* 154, 6 (2006), 950–970.
- [14] Satoru Fujishige and Akihisa Tamura. 2007. A Two-sided Discrete-concave Market with Possibly Bounded Side Payments: An Approach by Discrete Convex Analysis. *Mathematics of Operations Research* 32, 1 (2007), 136–155.
- [15] Etsushi Fujita, Julien Lesca, Akihisa Sonoda, Taiki Todo, and Makoto Yokoo. 2015. A complexity approach for core-selecting exchange with multiple indivisible goods under lexicographic preferences. In *Proceedings of the Twenty-Ninth AAAI Conference on Artificial Intelligence (AAAI-2015)*, 907–913.
- [16] David Gale and Lloyd Stowell Shapley. 1962. College Admissions and the Stability of Marriage. *The American Mathematical Monthly* 69, 1 (1962), 9–15.
- [17] Allan Gibbard. 1973. Manipulation of Voting Schemes: A General Result. *Econometrica* 41, 4 (1973), 587–601.
- [18] Masahiro Goto, Atsushi Iwasaki, Yujiro Kawasaki, Ryoji Kurata, Yosuke Yasuda, and Makoto Yokoo. 2016. Strategyproof matching with regional minimum and maximum quotas. *Artificial Intelligence* 235 (2016), 40–73.
- [19] Masahiro Goto, Fuhito Kojima, Ryoji Kurata, Akihisa Tamura, and Makoto Yokoo. 2017. Designing Matching Mechanisms under General Distributional Constraints. *American Economic Journal: Microeconomics*, 9, 2 (2017), 226–262.
- [20] Pablo Guillen and Onur Kesten. 2012. Matching markets with mixed ownership: the case for a real-life assignment mechanism. *International Economic Review* 53 (2012), 1027–1046.
- [21] Naoto Hamada, Chia-Ling Hsu, Ryoji Kurata, Takamasa Suzuki, Suguru Ueda, and Makoto Yokoo. 2017. Strategy-proof school choice mechanisms with minimum quotas and initial endowments. *Artificial Intelligence* 249 (2017), 47 – 71.
- [22] John William Hatfield and Paul R. Milgrom. 2005. Matching with Contracts. *American Economic Review* 95, 4 (2005), 913–935.
- [23] Woonghee Tim Huh and Ganesh Janakiraman. 2010. On the Optimal Policy Structure in Serial Inventory Systems with Lost Sales. *Operational Research* 58 (2010), 486–491.
- [24] Yuichiro Kamada and Fuhito Kojima. 2015. Efficient Matching under Distributional Constraints: Theory and Applications. *American Economic Review* 105, 1 (2015), 67–99.
- [25] Yuichiro Kamada and Fuhito Kojima. 2017. Stability Concepts in Matching under Distributional Constraints. *Journal of Economic Theory* 168 (2017), 107–142.
- [26] Fuhito Kojima, Akihisa Tamura, and Makoto Yokoo. 2018. Designing Matching Mechanisms under Constraints: An Approach from Discrete Convex Analysis. *Journal of Economic Theory* (forthcoming). the draft version is available at <http://mpa.ub.uni-muenchen.de/78637>.
- [27] Bernhard Korte and Jens Vygen. 2012. *Combinatorial Optimization, Theory and Algorithms, Fifth Edition*. Springer.
- [28] Ryoji Kurata, Naoto Hamada, Atsushi Iwasaki, and Makoto Yokoo. 2017. Controlled School Choice with Soft Bounds and Overlapping Types. *Journal of Artificial Intelligence Research* 58 (2017), 153–184.
- [29] Kazuo Murota. 1991. *Matrices and Matroids for Systems Analysis*. Springer.
- [30] Kazuo Murota. 1996. Convexity and Steinitz's exchange property. *Advances in Mathematics* 124 (1996), 272–311.
- [31] Kazuo Murota. 1998. Discrete convex analysis. *Mathematical Programming* 83 (1998), 313–371.
- [32] Kazuo Murota. 2003. *Discrete Convex Analysis*. SIAM Monographs on Discrete Mathematics and Applications, Vol. 10. Society for Industrial and Applied Mathematics, Philadelphia.
- [33] Kazuo Murota. 2016. Discrete convex analysis: A tool for economics and game theory. *Journal of Mechanism and Institution Design* 1 (2016), 151–273.
- [34] Kazuo Murota, Akiyoshi Shioura, and Zaifu Yang. 2013. Computing a Walrasian Equilibrium in Iterative Auctions with Multiple Differentiated Items. In *The 24th International Symposium on Algorithms and Computation, LNCS 8283*, 468–478.
- [35] Kazuo Murota and Akihisa Tamura. 2003. Application of M-convex Submodular Flow Problem to Mathematical Economics. *Japan Journal of Industrial and Applied Mathematics* 20 (2003), 257–277.
- [36] Kazuo Murota and Yu Yokoi. 2013. On the Lattice Structure of Stable Allocations in Two-Sided Discrete-Concave Market. *Mathematical Engineering Technical Reports* 2013-30 (2013), 1–27.
- [37] Szilvia Pápai. 2000. Strategyproof Assignment by Hierarchical Exchange. *Econometrica* 68(6) (2000), 1403–1433.
- [38] Marek Pycia and M. Utku Ünver. 2011. Trading Cycles for School Choice. (2011). Working Paper.
- [39] Marek Pycia and M. Utku Ünver. 2017. Incentive Compatible Allocation and Exchange of Discrete Resources. *Theoretical Economics* 12 (2017), 287–329.
- [40] Alexander Schrijver. 2003. *Combinatorial Optimization - Polyhedra and Efficiency*. Springer.
- [41] Lloyd Stowell Shapley and Herbert Scarf. 1974. On Cores and Indivisibility. *Journal of Mathematical Economics* 1 (1974), 23 – 37.
- [42] Sujoy Sikdar, Sibel Adali, and Lirong Xia. 2017. Mechanism Design for Multi-Type Housing Markets. In *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence (AAAI-2017)*, 684–690.
- [43] Tayfun Sönmez and M. Utku Ünver. 2011. Matching, Allocation, and Exchange of Discrete Resources. In *Handbook of Social Economics*, Alberto Bisin, Jess Benhabib, and Matthew Jackson (Eds.). North-Holland, 781–852.
- [44] Ning Sun and Zaifu Yang. 2006. Equilibria and Indivisibilities: Gross Substitutes and Complements. *Econometrica* 74 (2006), 1385–1402.
- [45] Zhaohong Sun, Hideaki Hata, Taiki Todo, and Makoto Yokoo. 2015. Exchange of Indivisible Objects with Asymmetry.. In *Proceedings of the 24th International Conference on Artificial Intelligence (IJCAI-2015)*, Vol. 15, 97–103.
- [46] Camille Terrier. 2014. Matching Practices for secondary public school teachers - France, MiP Country Profile 20. (2014). Working Paper.
- [47] Paul Zipkin. 2008. On the Structure of Lost-Sales Inventory Models. *Operational Research* 56 (2008), 937–944.