

have been continuous algorithmic improvements of orders of magnitude for solving this problem for over four decades. This leads us to believe that similar gains should be possible for more highly structured NP-hard problems.

References

- Alvim, A. C., and Ribeiro, C. C. 2004. A hybrid bin-packing heuristic to multiprocessor scheduling. In *Experimental and Efficient Algorithms*. Springer. 1–13.
- Belov, G., and Scheithauer, G. 2006. A branch-and-cut-and-price algorithm for one-dimensional stock cutting and two-dimensional two-stage cutting. *European Journal of Operational Research* 171(1):85–106.
- Coffman Jr, E.; Garey, M.; and Johnson, D. 1978. An application of bin-packing to multiprocessor scheduling. *SIAM Journal on Computing* 7(1):1–17.
- Dell’Amico, M., and Martello, S. 1995. Optimal scheduling of tasks on identical parallel processors. *ORSA Journal on Computing* 7(2):191–200.
- Dell’Amico, M.; Iori, M.; Martello, S.; and Monaci, M. 2008. Heuristic and exact algorithms for the identical parallel machine scheduling problem. *INFORMS Journal on Computing* 20(3):333–344.
- França, P. M.; Gendreau, M.; Laporte, G.; and Müller, F. M. 1994. A composite heuristic for the identical parallel machine scheduling problem with minimum makespan objective. *Computers & operations research* 21(2):205–210.
- Frangioni, A.; Necciari, E.; and Scutella, M. G. 2004. A multi-exchange neighborhood for minimum makespan parallel machine scheduling problems. *Journal of Combinatorial Optimization* 8(2):195–220.
- Garey, M. R., and Johnson, D. S. 1979. *Computers and Intractability: A Guide to the Theory of NP-Completeness*. San Francisco: W. H. Freeman.
- Graham, R. L. 1969. Bounds on multiprocessing timing anomalies. *SIAM Journal on Applied Mathematics* 17(2):416–429.
- Horowitz, E., and Sahni, S. 1974. Computing partitions with applications to the knapsack problem. *Journal of the ACM (JACM)* 21(2):277–292.
- Karmarkar, N., and Karp, R. M. 1982. *The differencing method of set partitioning*. Computer Science Division (EECS), University of California Berkeley.
- Korf, R. E., and Schreiber, E. L. 2013. Optimally scheduling small numbers of identical parallel machines. In *Twenty-Third International Conference on Automated Planning and Scheduling*.
- Korf, R. E.; Schreiber, E. L.; and Moffitt, M. D. 2013. Optimal sequential multi-way number partitioning. In *International Symposium on Artificial Intelligence and Mathematics (ISAIM-2014)*.
- Korf, R. E. 1998. A complete anytime algorithm for number partitioning. *Artificial Intelligence* 106(2):181–203.
- Korf, R. E. 2009. Multi-way number partitioning. In *Proceedings of the 20th International Joint Conference on Artificial Intelligence (IJCAI-09)*, 538–543.
- Korf, R. E. 2011. A hybrid recursive multi-way number partitioning algorithm. In *Proceedings of the 22nd International Joint Conference on Artificial Intelligence (IJCAI-11) Barcelona, Catalonia, Spain*, 591–596.
- Mertens, S. 2006. The easiest hard problem: Number partitioning. *Computational Complexity and Statistical Physics* 125(2):125–140.
- Moffitt, M. D. 2013. Search strategies for optimal multi-way number partitioning. In *Proceedings of the Twenty-Third international joint conference on Artificial Intelligence*, 623–629. AAAI Press.
- Mokotoff, E. 2004. An exact algorithm for the identical parallel machine scheduling problem. *European Journal of Operational Research* 152(3):758–769.
- Provost, F. J. 1993. Iterative weakening: Optimal and near-optimal policies for the selection of search bias. In AAAI, 749–755.
- Schreiber, E. L., and Korf, R. E. 2013. Improved bin completion for optimal bin packing and number partitioning. In *Proceedings of the Twenty-Third international joint conference on Artificial Intelligence*, 651–658. AAAI Press.
- Schroepffel, R., and Shamir, A. 1981. A $t=O(n^2)$, $s=O(n^4)$ algorithm for certain np-complete problems. *SIAM journal on Computing* 10(3):456–464.