

Job-shop problems with preemption

- **maximal polynomially solvable:**

$J|prec;r_i;n=2;pmtn|\sum w_i U_i$ Sotskov (1991) [5]

$J|prec;r_i;n=2;pmtn|\sum w_i T_i$ Sotskov (1991) [5]

- **maximal pseudopolynomially solvable:**

$J|prec;r_i;n=k;pmtn|\sum w_i U_i$ Middendorf & Timkovsky (1999) [4]

$J|prec;r_i;n=k;pmtn|\sum w_i T_i$ Middendorf & Timkovsky (1999) [4]

- **minimal NP-hard:**

$J2|n=3;pmtn|C_{max}$ Brucker et al. (1999B) [1]

* $J2|pmtn|C_{max}$ Lenstra & Rinnooy Kan (1979) [3]

$J2|n=3;pmtn|\sum C_i$ Brucker et al. (1999B) [1]

* $J2|pmtn|\sum C_i$ Lenstra (-) [2]

References

- [1] P. Brucker, S.A. Kravchenko, and Y.N. Sotskov. Preemptive job-shop scheduling problems with a fixed number of jobs. *Math. Methods Oper. Res.*, 49(1):41–76, 1999.
- [2] J.K. Lenstra. Not published.
- [3] J.K. Lenstra and A.H.G. Rinnooy Kan. Computational complexity of discrete optimization problems. *Ann. Discrete Math.*, 4:121–140, 1979.
- [4] M. Middendorf and V.G. Timkovsky. Transversal graphs for partially ordered sets: sequencing, merging and scheduling problems. *J. Comb. Optim.*, 3(4):417–435, 1999.
- [5] Y.N. Sotskov. The complexity of shop-scheduling problems with two or three jobs. *European J. Oper. Res.*, 53(3):326–336, 1991.