Angel, Eric; Bampis, Evripidis; Pascual, Fanny
How good are SPT schedules for fair optimality criteria. (English) Zbl 1152.90422 Ann. Oper. Res. 159, 53-64 (2008).

Summary: We consider the following scheduling setting: a set of \( n \) tasks have to be executed on a set of \( m \) identical machines. It is well known that shortest processing time (SPT) schedules are optimal for the problem of minimizing the total sum of completion times of the tasks. In this paper, we measure the quality of SPT schedules, from an approximation point of view, with respect to the following optimality criteria: sum of completion times per machine, global fairness, and individual fairness.

MSC:
- 90B35 Deterministic scheduling theory in operations research
- 68M20 Performance evaluation, queueing, and scheduling in the context of computer systems

Keywords:
multiprocessor scheduling; SPT; fairness measures; approximation algorithms

Full Text: DOI Link

References:

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