Flowshop: n trabajos que tienen que pasar por m máquinas en el mismo orden. Se busca minimizar el tiempo total.

A Heuristic Algorithm for the m-Machine, n-Job Flow-shop Sequencing Problem
MUHAMMAD NAWAZ

- Este algoritmo tiene enfoque en la cantidad de trabajos

Step 1. For each job i calculate

$$T_i = \sum_{j=1}^{m} t_{i,j}$$

where $t_{i,j}$ is the process time of job i on machine j.

Step 2. Arrange the jobs in descending order of T_i.

Step 3. Pick the two jobs from the first and second position of the list of Step 2, and find the best sequence for these two jobs by calculating makespan for the two possible sequences. Do not change the relative positions of these two jobs with respect to each other in the remaining steps of the algorithm. Set $i = 3$.

Step 4. Pick the job in the ith position of the list generated in Step 2 and find the best sequence by placing it at all possible i positions in the partial sequence found in the previous step, without changing the relative positions to each other of the already assigned jobs. The number of enumerations at this step equals i.

Step 5. If $n = i$, STOP, otherwise set $i = i + 1$ and go to Step 4.

A review of simheuristics: Extending metaheuristics to deal with stochastic combinatorial optimization problems

Angel A. Juana,*, Javier Faulinb, Scott E. Grasmanc, Markus Rabed, Gonçalo Figueirae

- Tiene dos características distintivas:
    a. It promotes a closer integration between optimization and simulation. In particular, the evaluation of solutions is performed not only by simulation, but also by problem-specific analyti- cal expressions. Hence, it mixes simulation and ad hoc approxi- mations, although generic metamodels are avoided – while the simple nature of these models is appealing for optimization purposes, they do not accurately represent the real underlying system.
    b. The feedback of simulation can be used not only to evaluate solutions, but also to refine the analytical part, so that the latter is able to generate and/or evaluate more realistic solutions.
- Habla de simulación - optimimzación

A simheuristic algorithm for solving the permutation flow shop problem with stochastic processing times

Angel A. Juan , Barry B. Barrios, Eva Vallada, Daniel Riera, Josep Jorba