

## FLOW SHOP SCHEDULING USING GENETIC ALGORITHM: HISTORICAL REVIEW AND CATEGORIZATION OF PROCEDURE

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### Abstract

The primary objective of flow shop scheduling is to obtain the best sequence which optimizes various objectives such as makespan, total flow time, total tardiness, or number of tardy jobs, etc. Due to the combinatorial nature of the flow shop problem (FSP) there is a lot of artificial intelligence methods proposed to solve it. The Genetic Algorithm (GA) of these methods, is considered a valuable search algorithm capable of finding a reasonable solution in a short computational time. GA operators, (selection, crossover and mutation process), will give different forms. The forms of crossover and mutation process in GA method can be combined to give various GAs that can be improved in the quality of the solution. In this paper we present a comprehensive review of different GAs built up-to-date for flow shop scheduling problems. Also, we show the suitable default GA parameters mentioned in literature for different problem sizes.