

***P*-median models for solving the GT Cell Formation Problem
with Alternative Process Plans**

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This paper considers the machine-part clustering under the assumption of alternative process plans for each part. Kusiak's p -median model of part family formation(1987) dealing with the problem has critical disadvantages in that the model requires too many binary variables and constraints and the number of part families must be known in advance. Furthermore, the solution quality of the model in terms of the number of exceptional elements is poor for ill-structured problems. Motivated by Viswanathan's work(1996), this paper proposes two p -median models using new measures of similarities between machine pairs: one with the prespecified number of cells and the other without the prespecified number of cells. Computational experience shows the applicability of new p -median models of machine cell formation over Kusiak's model.