

# Machine-part cell formation problems with constraint programming

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Machine-Part Cell Formation consists on organizing a plant as a set of cells, each one of them processing machines containing different part types. In recent years, different techniques have been used to solve this problem ranging from exact to approximate methods. This paper focuses on solving new instances of this problem for which no optimal value exists by using the classic Boctor's mathematical model. We employ constraint programming as the underlying solving technique illustrating that global optimums are achieved for the whole set of tested instances. © 2015 IEEE.

Constraint Programming

Machine-Part Cell Formation

Optimization

Cells

Cellular manufacturing

Computer programming

Constraint theory

Cytology

Machinery

Optimization

Approximate methods

Cell formation

Cell formation problem

Constraint programming

Global optimum

Optimal values

Processing machines

Problem solving