

## On Mathematical Modelling and Optimization of Emerging Trends Processes in Advanced Manufacturing

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**Abstract :** Innovation in manufacturing process technologies and associated product design affects the prospects for manufacturing today and in near future. In this study some theoretical methods, useful as tools in advanced manufacturing, are considered. In particular, some basic Mathematical, Operational Research, Heuristic, and Statistical techniques are discussed. These techniques/methods are very handy in many areas of advanced manufacturing processes, including process planning optimization, modelling and analysis. Generally the production rate requires the application of Mathematical methods. The Emerging Trends Processes in Advanced Manufacturing can be enhanced by using Mathematical Modelling and Optimization techniques.

**Keywords :** mathematical modelling, optimization, emerging trends, advanced manufacturing

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