

## عنوان مقاله:

A Novel Optimization Approach Applied to Multi-Pass Turning Process

## محل انتشار:

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## خلاصه مقاله:

Optimization of turning process is a non-linear optimization with constrains and it is difficult for the conventional optimization algorithms to solve this problem. The purpose of present study is to demonstrate the potential of Imperialist Competitive Algorithm (ICA) for optimization of multipass turning process. This algorithm is inspired by competition mechanism among imperialists and colonies, in contrast to evolutionary algorithmsthat perform the exploration and exploitation in the solution space aiming to efficiently find near optimal solutions using a finite sequence of instructions. To validate the proposed approach, the results of ICA were finally compared with Genetic Algorithm (GA).Based on the results; ICA has demonstrated excellent capabilities such as simplicity, accuracy, faster convergence and better global optimum achievement. The outcome shows the success of ICA in optimizing the machining process indicating that data analysis method developed in this work can be effectively applied to optimize .machining processes

## کلمات کلیدی:

Imperialist Competitive Algorithm, Machining process, optimization

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1146242>



