

Optimization of CNC trajectories

Zhang and Zhu (2011) propose four types of PSO for sequence optimization.

Questions

1. Explain the application. Why is hole machining optimization important? What other methods have been used for it? Describe briefly at least two with their advantages and shortcomings.
2. Explain and implement a PSO algorithm. Compare the results obtained for a synthetic example to those obtained with another method.

References

- Zhang, W.-B. and Zhu, G.-Y. (2011). Comparison and application of four versions of particle swarm optimization algorithms in the sequence optimization. *Expert Systems with Applications*, 38:8858–8864.