

Modelling and optimisation of manufacturing processes using soft computing methods

There is a great need for simulation and optimisation methodologies that provide rapid and tangible improvements to shop floor manufacturing processes. Both shop floor operators and managers need efficient and easy to use methods to enable control of highly complex production processes. This research aims to investigate the application of modelling methodologies, such as multivariate linear regression, fuzzy neural networks and discrete event simulation, coupled with multi-agent optimisers to improve facility optimisation and decision making.