Abstract

Iterative learning control is a control technique used for the tracking of a finite duration trajectory. Iterative learning control (ILC) with focus on speed of tracking specific points and tracking error on these points is analyzed in this paper. A technique is introduced which employs the receding horizon optimization to track the points along with the iterative learning control is introduced. In order to increase the efficiency of optimization, use of Laguerre functions is introduced which gives more freedom in parameterizing the optimization trajectory and in tuning the optimization parameters. Hence the technique can be efficiently used to track points within the trajectory with good performance.

References


Index Terms

Computer Science

Control Systems

Keywords

Point to Point Iterative learning control, receding horizon control, Iterative Learning control