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Iterative Learning Control for Homing Guidance Design of Missiles

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Abstract

This paper presents an Iterative Learning Control design applied to homing guidance of missiles against maneuvering targets. According to numerical experiments, although an increase of the control energies is appreciated with respect to a previous published base controller for comparison, this strategy, which is simple to realize, is able to reduce the time to reach the *head-on* condition to target destruction. This fact is important to minimize the missile lateral force-level to fulfill engaging in hyper-sonic target persecutions.

Keywords: Terminal Guidance Law, Missiles, Iterative Learning Control.-
2010 MSC: 00-01, 99-00

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