

Iterative learning control law with initial state learning for impulsive differential systems

JinRong Wang¹

Zhuoyan Gao²

Shengda Liu³

^{1,3}Guizhou University, China ²Shanxi University of Finance and Economics, China

¹sci.jrwang@gzu.edu.cn; ²gaozhuoyan2006@163.com; ³thinksheng@foxmail.com

Abstract: In this paper, we study *PID*-type iterative learning control for impulsive differential equations. We present convergence results for open-loop iterative learning schemes in the sense of λ -norm. Finally, an example is given to illustrate our theoretical results.

Keywords: iterative learning control; impulsive differential equations; λ -norm.

MSC 2010: 34A37; 93E99.

References

- [1] L. Shengda, J. R. Wang, W. Wei, A study on iterative learning control for impulsive differential equations, *Communications in Nonlinear Science and Numerical Simulation*, **24**(1) (2015) 4–10.
- [2] J. R. Wang, Y. Zhou, Zeng Lin, On a new class of impulsive fractional differential equations, *Applied Mathematics and Computation*, **242** (2014) 649–657.