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Iterative learning control for networked stochastic systems with random packet losses.


Summary: The iterative learning control is constructed for discrete-time stochastic systems with random measurement losses modeled by a stochastic sequence. A simple $P$-type update law is used and the almost sure convergence is strictly proved for both linear case and nonlinear case based on stochastic approximation. Illustrative examples show the effectiveness of the proposed approach.

Keywords: iterative learning control; networked stochastic system; random packet losses; stochastic approximation
doi:10.1080/00207179.2014.986762