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ROBUST-ADAPTIVE REPETITIVE CONTROL SYSTEM FOR MANIPULATOR WITH INPUT SATURATIONS

The article is devoted to the problem of synthesizing combined algorithms for decentralized nonlinear repetitive system to control a two-link robotic manipulator with constraints on control actions designed to perform cyclically repetitive operations. The hyperstability criterion, L -dissipativity conditions and high-speed filter-correctors are used as methods for solving the problem. The quality of the proposed control system functioning is illustrated through simulation.

Keywords: nonlinear repetitive control, parametrical uncertainty, mechanical system, hyperstability criterion, L -dissipativity, filter-corrector, implicit reference model, generator for periodic signals.

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