GLOBAL CONVERGENCE OF MINIMUM VARIANCE SELF-TUNING SCHEME BASED UPON DAMPED LEAST SQUARES

Zeng-Qiang Chen, Mao-Qiong Lin and Zhu-Zhi Yuan

ABSTRACT

This paper presents an analysis of the stability and convergence of a damped least squares identification algorithm and establishes the global convergence of a minimum variance self-tuning scheme based upon damped least squares. The results mathematically demonstrate that the damped least squares can generally be applied to achieve system identification and adaptive control.

KeyWords: Adaptive control, self-tuning control, system identification, least squares, convergence.