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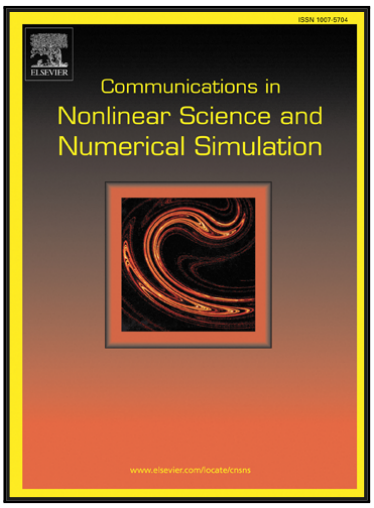

Indirect model reference adaptive control for a class of fractional order systems

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Highlights

- A constrained gradient estimation method is proposed for linear commensurate fractional order systems;
- An indirect model reference adaptive controller is designed for a class of fractional order systems based on the proposed CGEM.
- By selecting suitable filter and cost function, the asymptotical convergence of tracking error can be proven rigorously by indirect Lyapunuov method rather than using certainty equivalence principle;
- Fractional order update laws are utilized to update the parameters, with which the system performances are much more satisfying than the integer order case.

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