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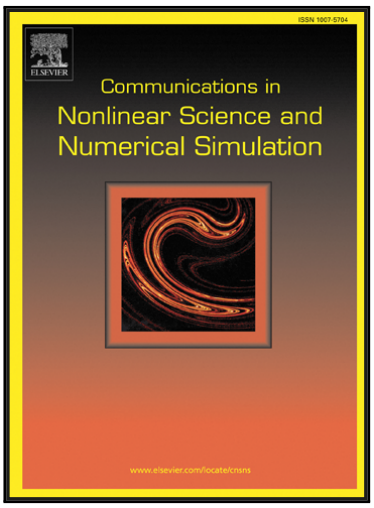

Immersion and Invariance Observers with Time-Delayed Output Measurements

Carlos Murguia, Rob H.B. Fey, Henk Nijmeijer

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Highlights

- A tool for constructing nonlinear observers for general nonlinear systems in the case the output measurements are corrupted with time-delays has been derived.
- The proposed methodology relies on rendering attractive an appropriately selected invariant manifold in the extended state space (the union of the state spaces of the system and the observer).
- Proposition 1 and Proposition 2 in the paper provide an implicit description of the observer dynamics in terms of two mappings which must be selected to render the origin of the estimation error dynamics asymptotically stable.

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