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Set-membership state estimation with fleeting data. (English) Zbl 1260.93153

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Summary: This paper deals with offline nonlinear state estimation where measurements are available only when some given equality conditions are satisfied. For this type of problems, which are often met in robot localization when sonar or radar are involved, the data are qualified as fleeting because the measurements are available only at some given unknown dates. In this paper, the first approach able to deal with nonlinear estimation with fleeting data is presented. An illustration related to offline robot localization with a laser rangefinder will be given.

MSC:

93E10 Estimation and detection in stochastic control theory

93C85 Automated systems (robots, etc.) in control theory

Cited in **6** Documents

Keywords:

fleeting data; interval analysis; localization; observer; set-membership estimation

Software:

Numerica

Full Text: [DOI](#)

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