

## Observer Design for (max,+) Linear Systems

Submitted by Emmanuel Lemoine on Thu, 01/30/2014 - 14:35

Titre	Observer Design for (max,+) Linear Systems
Type de publication	Article de revue
Auteur	Hardouin, Laurent [1], Maia, Carlos-Andrei [2], Cottenceau, Bertrand [3], Lhommeau, Mehdi [4]
Editeur	Institute of Electrical and Electronics Engineers
Type	Article scientifique dans une revue à comité de lecture
Année	2010
Langue	Anglais
Date	2010
Numéro	2
Pagination	538 - 543
Volume	55
Titre de la revue	IEEE Transactions on Automatic Control
ISSN	0018-9286

Résumé en anglais

This paper deals with control of max-plus linear systems which are discrete event dynamic systems characterized by delays and synchronization phenomena. Control of these discrete event systems consists in choosing the date of input events in order to reach some performances, e.g., to obtain output events at the given dates. This kind of control is optimal according to a just-in-time criterion when the input events dates are delayed as much as possible while ensuring the output events occur before the given output events dates. This paper presents an observed-based controller, where only a subset of the states obtained from measurement is available for the controller. This is an output feedback problem which is solved in two steps, first an observer yields an estimation of the state by using the input and the output measurements, then this estimated state is used in state feedback scheme. The observer and state feedback design is based on the residuation theory which is suitable to deal with mapping inversion defined over order sets.

URL de la notice <http://okina.univ-angers.fr/publications/ua1458> [5]

---

### Liens

- [1] <http://okina.univ-angers.fr/laurent.hardouin/publications>
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=4189](http://okina.univ-angers.fr/publications?f[author]=4189)
- [3] <http://okina.univ-angers.fr/bertrand.cottenceau/publications>
- [4] <http://okina.univ-angers.fr/lhommeau/publications>
- [5] <http://okina.univ-angers.fr/publications/ua1458>

Publié sur *Okina* (<http://okina.univ-angers.fr>)