



Robust Controllers in Disturbance Decoupling of Uncertain Max-Plus Linear Systems: An Application to a High Throughput Screening System for Drug Discovery

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| Résumé en anglais | <p>This paper presents robust controllers solving the disturbance decoupling problem of a class of uncertain max-plus linear systems, whose system matrices vary between intervals with known lower and upper bounds. The disturbance decoupling problem in this paper is defined as finding a control interval such that the output trajectory interval for the disturbed controlled system belongs to the output trajectory interval for the undisturbed controlled system. In other words, the controls are able to absorb the effects of disturbances robustly for such uncertain systems by preserving the output trajectories in the same set with or without disturbances. Both of the open-loop control intervals and the output feedback control intervals solving the DDP are constructed using the residuation theory and proved to be optimal based on the just-in-time control criterion. The main results of this paper are illustrated by a high throughput screening system for drug discovery.</p> |
| URL de la notice | http://okina.univ-angers.fr/publications/ua14866 [5] |

Liens

- [1] [http://okina.univ-angers.fr/publications?f\[author\]=4188](http://okina.univ-angers.fr/publications?f[author]=4188)
- [2] <http://okina.univ-angers.fr/laurent.hardouin/publications>
- [3] <http://okina.univ-angers.fr/lhommeau/publications>
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=4189](http://okina.univ-angers.fr/publications?f[author]=4189)
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