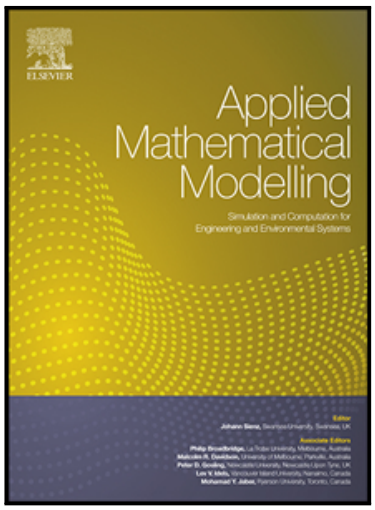

Sliding mode control of inventory management systems with bounded batch size

Andrzej Bartoszewicz, Paweł Latosiński

PII: S0307-904X(18)30452-9
DOI: https://doi.org/10.1016/j.apm.2018.09.010
Reference: APM 12462

To appear in: *Applied Mathematical Modelling*

Received date: 20 March 2018
Revised date: 1 August 2018
Accepted date: 6 September 2018

Please cite this article as: Andrzej Bartoszewicz, Paweł Latosiński, Sliding mode control of inventory management systems with bounded batch size, *Applied Mathematical Modelling* (2018), doi: https://doi.org/10.1016/j.apm.2018.09.010

Highlights

- Sliding mode control of discrete time systems is considered and a new reaching law for the systems is proposed.
- The proposed reaching law is applied to control the inventory system with multiple suppliers.
- Constraints of the suppliers and the warehouse are explicitly taken into account in the control strategy design process.
- Essential properties of the system are stated in six theorems and proved analytically.