



Flow Control with (Min,+) Algebra

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Mots-clés	Computer [6], Data [7], Information [8], Logics [9], Programming Languages, Compilers, Interpreters [10], Software [11] According to the theory of Network Calculus based on the (min,+) algebra, analysis and measure of worst-case performance in communication networks can be made easily. In this context, this paper deals with traffic regulation and performance guarantee of a network i.e. with flow control. At first, assuming that a minimum service provided by a network is known, we aim at finding the constraint over the input flow in order to respect a maximal delay or backlog. Then, we deal with the window flow control problem in the following manner: The data stream (from the source to the destination) and the acknowledgments stream (from the destination to the source) are assumed to be different and the service provided by the network is assumed to be known in an uncertain way, more precisely it is assumed to be in an interval. The results are obtained by considering the Residuation theory which allows functions defined over idempotent semiring to be inverted.
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