New sigmoidal growth functions generated by reaction networks

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Sigmoidal growth functions are an important tool for modelling measurement data for the study of evolutionary processes in life sciences [3], [4]. For some particular classes of sigmoidal functions it is possible to find a realization in terms of chemical reaction networks [2], [5]. A reaction network formulation may suggest hints for the interpretation of the intrinsic biological mechanism of the particular dynamical process. In this work we study some characteristics of a class of sigmoidal growth functions that are solutions to autonomous dynamical systems with reaction network realizations [1], [6].

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