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Nonlinear stability of epidemic models including information-related human behaviour

We study the nonlinear stability properties of epidemic models with a feedback mechanism, which describes the influence of information, and of information-related delays, on human behaviour [3,4]. In particular, we give a special example of application of two stability methods: the geometric method for global stability, due to Li and Muldowney [5], and a Lyapunov-based approach, which provides necessary and sufficient conditions for the local nonlinear stability of equilibria [6]. Some of the results presented here are included in the recent papers [1] and [2].

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