FIXED POINTS AND STABILITY OF A CLASS OF NONLINEAR DIFFERENTIAL SYSTEMS WITH SEVERAL DELAYS OF FEEDBACK CONTROL

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Abstract. In this work we offer existence criteria and sufficient conditions, so that the trivial solution of the differential system with several delays of feedback control is asymptotically stable. Here the fixed point technique is a practical method for this purpose. When these results are applied to some special delay mathematics models, some new results are obtained, and many known results are improved. Lastly, we provide an example that illustrates our results.

MSC 2010. 54H25, 35B09, 35B10, 47H10.

Key words. Fixed points, stability, several delays, nonlinear differential systems.

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The authors would like to thank the anonymous referee for his valuable comments.

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