

## NUMERICAL REGULARITY MAP FOR BLOW-UP SOLUTIONS OF NONLINEAR ORDINARY DIFFERENTIAL EQUATIONS

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**Abstract.** In the paper, nonlinear ordinary differential equations with blow-up solutions are investigated numerically. The blow-up time is obtained by using our numerical method that consists of the Runge-Kutta method, the bounding transform and the numerical limit. The regularity of the solution in a certain interval is investigated numerically by using the spectral collocation method. From these numerical results we propose a map on the regularity of the solution.

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