

Approximation schemes for differential-functional equations and their applications

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An approximation algorithm of differential equations with delay by a sequence of systems of ordinary differential equations has been considered in [1]. Further investigation of approximation schemes for systems of the delayed and neutral types differential equations and quasilinear differential-functional equations in different function spaces has been implemented in our papers [2, 3, 4]. The accuracy of the solutions approximation of the initial problems of differential-functional equations by the solutions of Cauchy problems for the corresponding approximating system of ordinary differential equations has been investigated.

We offer constructive algorithms for computing non-asymptotic roots of quasipolynomials and construction of coefficient stability domains of linear differential equations with many delays.

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