WAVEFORM RELAXATION METHODS OF NONLINEAR INTEGRAL-DIFFERENTIAL-ALGEBRAIC EQUATIONS

收稿日期   修回日期   网络版发布日期   接受日期

摘要
关键词

分类号

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Abstract In this paper we consider continuous-time and discrete-time waveform relaxation methods for general nonlinear integral-differential-algebraic equations. For the continuous-time case we derive the convergence condition of the iterative methods by invoking the spectral theory on the resulting iterative operators. By use of the implicit difference forms, namely the backward-differentiation formulae, we also yield the convergence condition of the discrete waveforms. Numerical experiments are provided to illustrate the theoretical work reported here.

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