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On well-posedness of multipoint nonlocal reverse parabolic difference problems

We consider the Rothe difference scheme for the approximate solution of the abstract parabolic equation in a Hilbert space with non local boundary condition. We establish the stability estimates, coercivity and almost coercivity estimates for the solution of this difference scheme. Applying the abstract results, we also obtain new coercivity inequalities for the solution of multi-point nonlocal boundary value problem for reverse parabolic difference equations.

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