

**Bounded solutions of a class of linear
delay and advanced partial difference equations**

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ABSTRACT. A functional analytic method is used to prove a theorem which establishes the existence and the uniqueness of a solution of a class of linear delay and advanced partial difference equations in the Hilbert space $l^2_{\mathbb{N} \times \mathbb{N}}$ and the Banach space $l^1_{\mathbb{N} \times \mathbb{N}}$. A bound of the solution is also given. Some known linear partial difference equations, which appear in applications, are studied as particular cases of the theorem.

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