The Sturm Separation Theorem for Impulsive Delay Differential Equations

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Wronskian is one of the classical objects in the theory of ordinary differential equations. Properties of Wronskian lead to important conclusions on behavior of solutions of delay equations. For instance, non-vanishing Wronskian ensures validity of Sturms separation theorem(between two adjacent zeros of a solution there is one and only one zero of every other nontrivial linearly independent solution) for delay equations. We propose the Sturm separation theorem in case of impulsive delay differential equations and obtain assertions about its validity for impulsive delay differential equations.