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Positive and Nontrivial Solutions for the Urysohn Integral Equation

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Abstract We establish new criteria for the existence of either positive or nonzero solutions of the Urysohn integral equation. We also discuss the existence of an interval of positive eigenvalues and sufficient conditions for the existence of at least a positive eigenvalue with a nonzero or positive eigenfunction for the Urysohn integral operator. Among others, we employ techniques based on fixed point index theory for compact maps, which are new for this type of equation.

Key words [Urysohn integral equation](#) [positive solutions](#) [eigenvalues](#)

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