

Periodic solutions to indefinite singular equations

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The efficient conditions guaranteeing the existence of a T -periodic solution to the following second order differential equations

$$u'' = \frac{h(t)}{u^\mu}, \quad \mu > 0; \quad u'' = \frac{h(t)}{\cos^2 u}$$

will be established in this talk. Here, the weight $h \in L(\mathbb{R}/T\mathbb{Z})$ is a sign-changing function. The approach is based on Leray-Schauder continuation degree theory.