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Periodic-Type Solutions for Differential Equations with Positively Homogeneous Operators

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We establish efficient conditions that guarantee the existence of a solution to the periodic-type boundary-value problem for the two-dimensional system of nonlinear functional-differential equations in the case where the right-hand side of the system is the sum of positively homogeneous terms of degrees λ and $1/\lambda$ and other terms with a relatively slow growth at infinity. The general results are reformulated in the special case of differential equations with maxima.

[1] R. Hakl, E. Trofimchuk, S. Trofimchuk, *Periodic-type solutions for differential equations with positively homogeneous functionals*, Nonlinear Oscillations **25** (2022), No. 1, 119-132.