

ÖZET

İKİNCİ MERTEBEDEN NEUTRAL FONKSİYONEL DİFERENSİYEL DENKLEMLERİN SALINIMI

BOYBAY, Bahri
Niğde Üniversitesi
Fen Bilimleri Enstitüsü
Matematik Anabilim Dalı

Danışman : Yrd. Doç. Dr. Tuncay CANDAN

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Bu tezde aşağıdaki sabit ve periyodik katsayılı ikinci mertebeden neutral fonksiyonel diferensiyel denklemlerin salınımını inceledik.

$$[x(t) + \lambda x(t - \tau) - \mu x(t + \sigma)]'' = q \int_c^d x(t - \xi) d\xi + p \int_c^d x(t + \xi) d\xi$$

ve

$$[x(t) + \lambda x(t - \tau) - \mu x(t + \tau)]'' + \delta \left(\int_c^d q(t, \xi) x(t - \xi) d\xi + \int_c^d p(t, \xi) x(t + \xi) d\xi \right) = 0.$$

Anahtar Sözcük: Salınım, Fonksiyonel Diferensiyel Denklem.

SUMMARY

OSCILLATION FOR SECOND ORDER NEUTRAL FUNCTIONAL DIFFERENTIAL EQUATIONS

BOYBAY, Bahri
Nigde University
Graduate School of Natural and Applied Sciences
Department of Mathematics

Supervisor : Assistant Professor Dr. Tuncay CANDAN

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In this thesis, we consider the oscillation of the constant and periodic coefficients of the second order neutral functional differential equations of the form

$$[x(t) + \lambda x(t - \tau) - \mu x(t + \sigma)]'' = q \int_c^d x(t - \xi) d\xi + p \int_c^d x(t + \xi) d\xi$$

and

$$[x(t) + \lambda x(t - \tau) - \mu x(t + \tau)]'' + \delta \left(\int_c^d q(t, \xi) x(t - \xi) d\xi + \int_c^d p(t, \xi) x(t + \xi) d\xi \right) = 0.$$

Key Word: Oscillation, Functional Differential Equation.