INTERVAL OSCILLATION THEOREMS FOR SECOND ORDER NONLINEAR PARTIAL DELAY DIFFERENTIAL EQUATIONS

SHULI CUI AND ZHITING XU

Abstract. Using the integral averaging method and the generalized Riccati technique, we derive new interval oscillation criteria for second order nonlinear partial delay differential equations. These results are different from most known ones in the sense that they are based on information only on a sequence of subintervals of $[0, \infty)$, rather than on the whole $[0, \infty)$. Our results are of a high degree of generality and sharper than the existing results in literature.


Keywords and phrases: oscillation, partial delay differential equations, interval criteria, integral averaging method, generalized Riccati technique.

REFERENCES