

**OSCILLATION AND ASYMPTOTIC BEHAVIOR OF THIRD  
ORDER NEUTRAL DIFFERENTIAL EQUATIONS  
WITH MIXED DEVIATING ARGUMENTS**

**Thesis submitted to Periyar University in partial fulfillment of the  
requirements for the award of the degree of**

**DOCTOR OF PHILOSOPHY  
IN  
MATHEMATICS**

**Submitted by**

**M. SATHISH KUMAR**

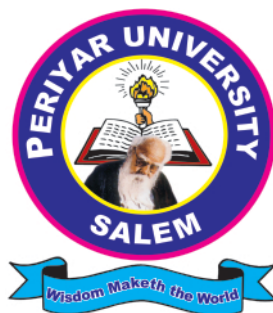
**under the guidance of**

**Dr. V. GANESAN**

**Assistant Professor and Head**

**PG and Research Department of Mathematics**

**Aringar Anna Government Arts College, Namakkal – 637002**



**DEPARTMENT OF MATHEMATICS  
PERIYAR UNIVERSITY  
PERIYAR PALKALAI NAGAR  
SALEM - 636 011  
TAMILNADU, INDIA**

**JULY - 2019**