Stability of Differential Equations with Aftereffect

N.V. Azbelev
and
P.M. Simonov
Contents

Introduction to the Series vii

Preface ix

Notations xiii

1 Functional Differential Equations 1
  1.0 Introduction 1
  1.1 Representatives of the Functional Differential Equations with
      Aftereffect 1
  1.2 Linear Functional Differential Equations with Aftereffect 8
  1.3 Comments and References 19

2 Linear Analysis of $D$-stability 25
  2.0 Introduction 25
  2.1 Functional Spaces and $D$-stability 26
  2.2 $D$-stability and Classical Stability 33
  2.3 $D$-stability of Linear Systems with Distributed Aftereffect 42
  2.4 "$W$-method" 48
  2.5 Stability Tests for LFDE with Distributed Delay 60
  2.6 Stability Tests for Linear Equations of Neutral Type 75
  2.7 Comments and References 86