Topics in Numerical Methods for Initial-Value Problems Mark P. Robinson Western Kentucky University

Abstract: In this talk we examine several difference methods which are used for the numerical solution of initial-value problems in ordinary differential equations. Various topics of interest will be investigated, including the natural connection between certain difference schemes and well-known methods for approximating integrals, difficulties encountered by difference schemes, and appropriate selection of methods. Treatment of systems of ordinary differential equations by difference methods will also be discussed.