DYNAMICS OF RATIONAL DIFFERENCE EQUATION

$$X_{N+1} = \frac{\alpha + \beta X_N + \gamma X_{N-K}}{B X_N + C X_{N-K}}$$

USING MATHEMATICAL AND COMPUTATIONAL APPROACH

By

Abed Elrazzaq Alawneh

Supervisor

Professor Mohammad Saleh

2007

BIRZEIT UNIVERSITY

FACULTY OF

GRADUATE STUDIES

Dynamics of Rational Difference Equation

$$x_{n+1} = \frac{\alpha + \beta x_n + \gamma x_{n-k}}{B x_n + C x_{n-k}}$$

Using Mathematical And Computational Approach

By

Abed Elrazzaq Alawneh

A Thesis Submitted in Partial Fulfillment of the requirement for MasterDegree in Scientific Computing From the Faculty of Graduate Studies at Birzeit University.

Supervisor

Professor Mohammad Saleh

Birzeit, Palestine

Augest 2007