DEDICATION

… To My parents

To My brothers, Sisters, and

… Lovely Friends

ACKNOWLEDGMENT

Firstly I specify my great thanks to my God for his benefits, facilities, and properties which cover me, then I want to thank deeply Dr. Mohamed Hassan Mohamed Khabir for his great help in all steps of this research in spite of his great responsibility.

I wish to thank Sudan University of Science and Technology, Faculty of Science for the M.Sc chance.

Lastly my thanks are due to everyone who; asked, encouraged, and gave me any help.

ABSTRACT

We present in this thesis the cubic B-spline collocation method and its applications to the differential equations. First we have given the derivation of the B-spline method in general. Second, uniform convergence of the method has been discussed. We have applied the method for solving some problems in ordinary and partial differential equations and the numerical results have been compared with the exact .solutions

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تناول نا في هذا البحث طريقة - ب – **اللسينية متحدة الموضعية التكعيبية** وتطبيقها على المعادلات التفاضلية. اولا اعطينا الاشتقاق لطريقة - ب – **اللسينية** متحدة الموضعية بصورة عامة . ثانيا تمت مناقشة التقارب المنتظم للطريقة . لقد قمنا بتطبيق الطريقة لحل بعض المسائل في المعادلات التفاضلية العادية والجزئية و قد تمت مقارنة النتائج العددية مع الحلول المضبوطة.

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