



**Sudan University of Science and
Technology
College of Graduate Studies**

**Functions Spaces and Nonlinear Analysis
of Differential Equations with Some Applications**

**فضاءات الدوال والتحليل اللا خطي
للمعادلات التفاضلية مع بعض
التطبيقات**

**A Thesis Submitted in Partial Fulfillment
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