

Fisher-Kolmogorov equations for neurodegenerative diseases

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1 Introduction

Description of the problem.

1.1 Fisher-Kolmogorov equation

Description of the equation.

1.2 Mesh

Mesh explanation.

2 Methods

List and description of the implemented methods with numerical analysis.

2.1 1D implementation

2.1.1 Stability and Accuracy

2.1.2 Algorithm

2.2 Fully explicit

2.2.1 Stability and Accuracy

2.3 Semi-implicit

2.3.1 Stability and Accuracy

2.4 Fully implicit

2.4.1 Stability and Accuracy

Stability and accuracy analysis of the implemented methods.

3 Results and algorithmic comparison

Results of the project for all the implemented algorithms and graphs.