CS 5220 Final Project
Alternating Directional Implicit ADI

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Abstract

1 Alternating Directional Implicit

1.1 Application

2D -> 3D

1.2 Algorithm

1.3 Convergence

1.4 Sweeping

2 Implementation

2.1 C++ Version

What has been done and stuffs

2.2 C Version

3 Optimization

3.1 Bottleneck

3.2 Vectorization

3.3 Small changes

3.4 Cache Friendly Operations

3.5 Load Balancing

4 Performance

4.1 Current bottleneck

4.2 Strong & Weak Scaling

4.3 Comparison with Previous Work

5 Discussion

5.1 What has been done

5.2 What might be interesting to look into