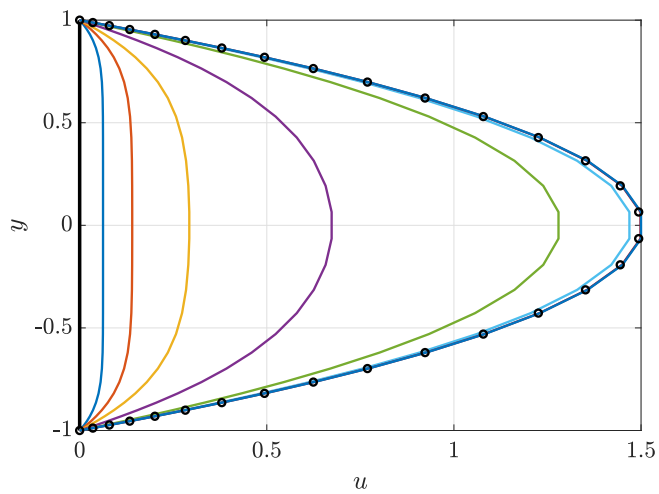# Validation Cases

July 23, 2018
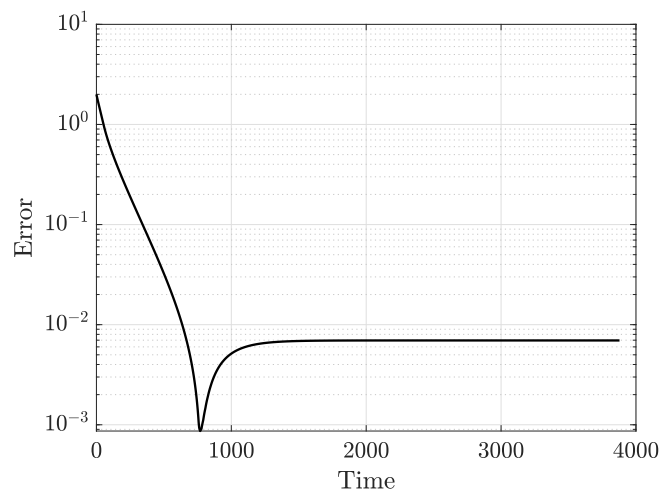
1 Direct Solver

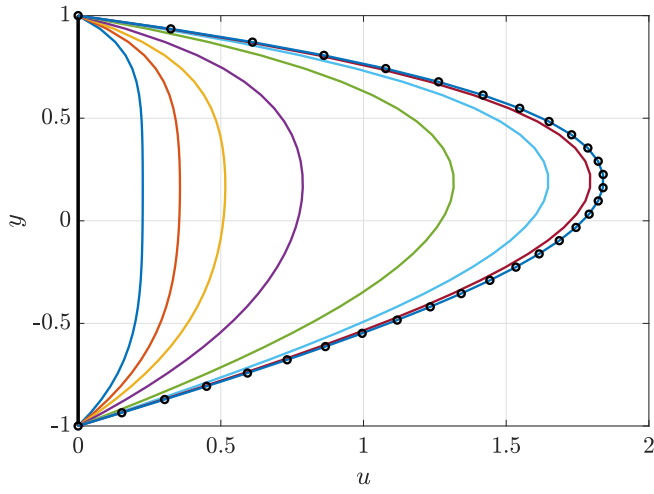## 1.1 Steady States

1.1.1 Uniform Viscosity
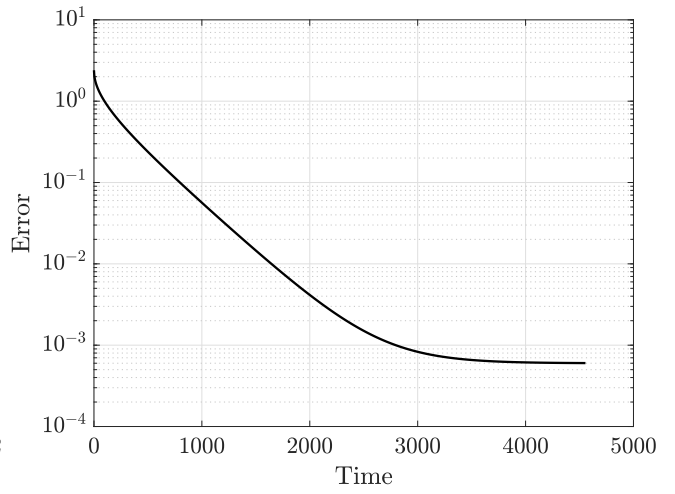

(a) Steady State evolve: uniform grid

(b) Error: Steady State evolve: uniform grid

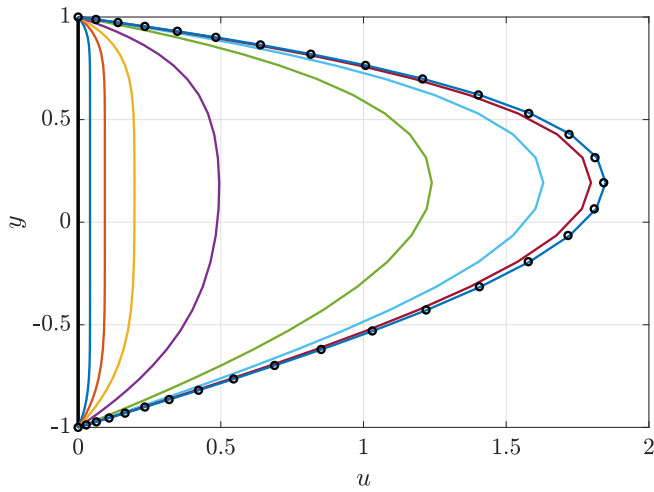Figure 1: Simulations for uniform viscosity.

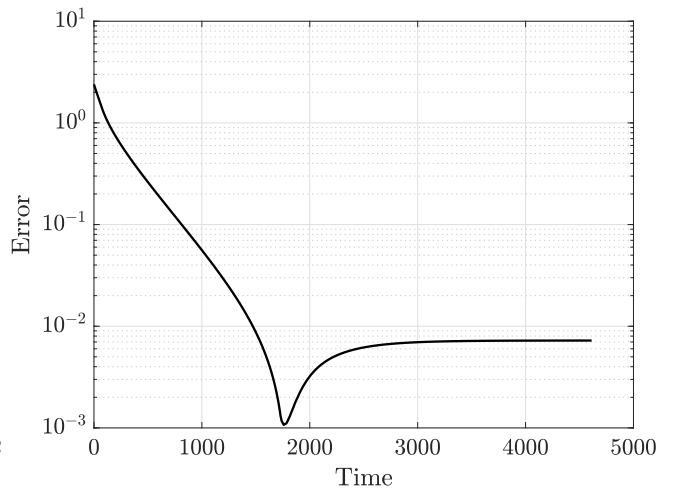### 1.1.2 Stratified Viscosity: Model 1
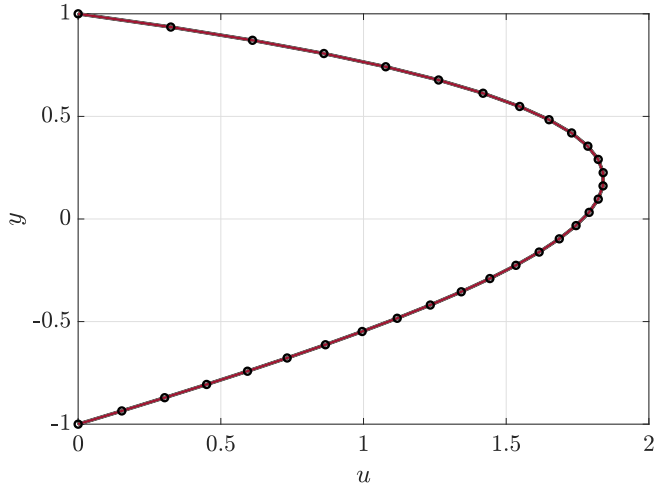
(a) Steady State evolve: uniform grid

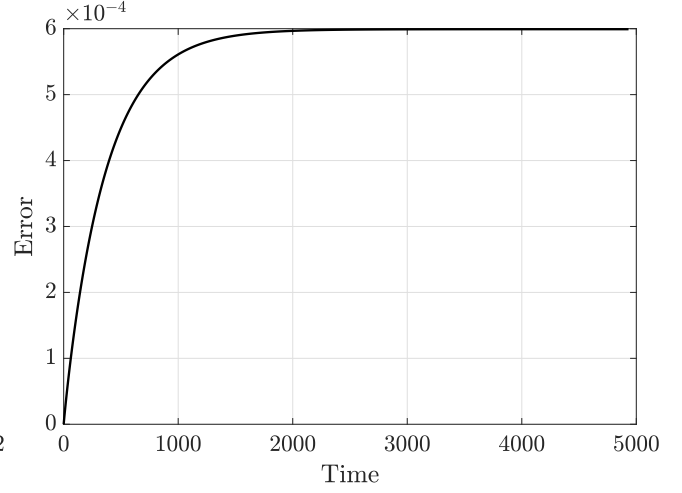(b) Error: Steady State evolve: uniform grid
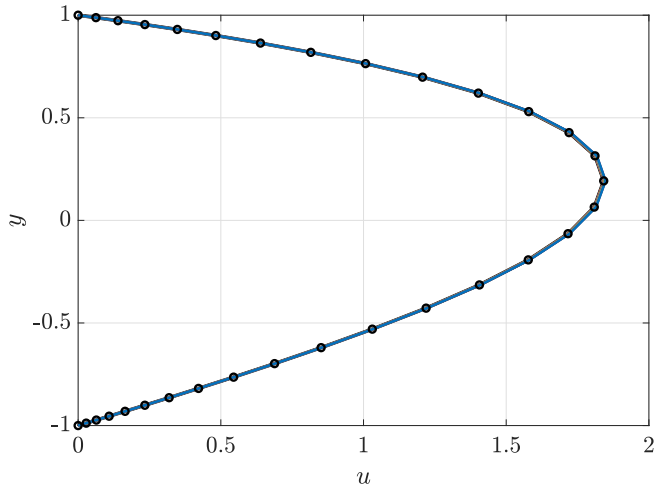
(c) Steady State evolve: stretched grid

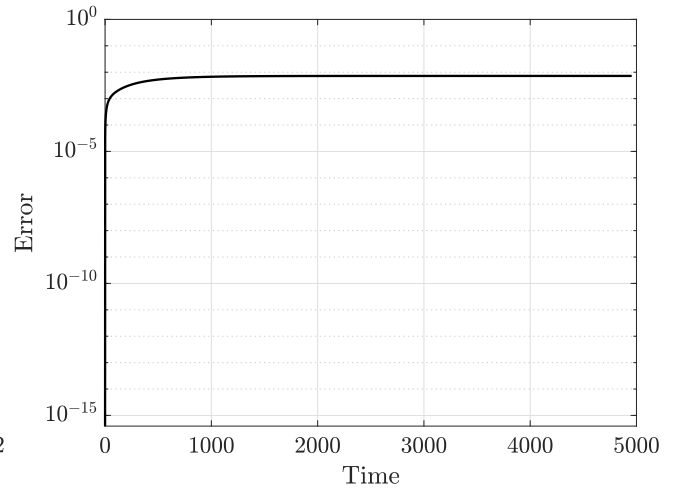(d) Error: Steady State evolve: stretched grid

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(a) Steady State start: uniform grid

(b) Error: Steady State start: uniform grid

(c) Steady State start: uniform grid

(d) Error: Steady State start: uniform grid

Figure 2: Simulations for viscosity model 1.