

1D Shallow Water Equation Solver

Computational Science NL Hackathon 2025

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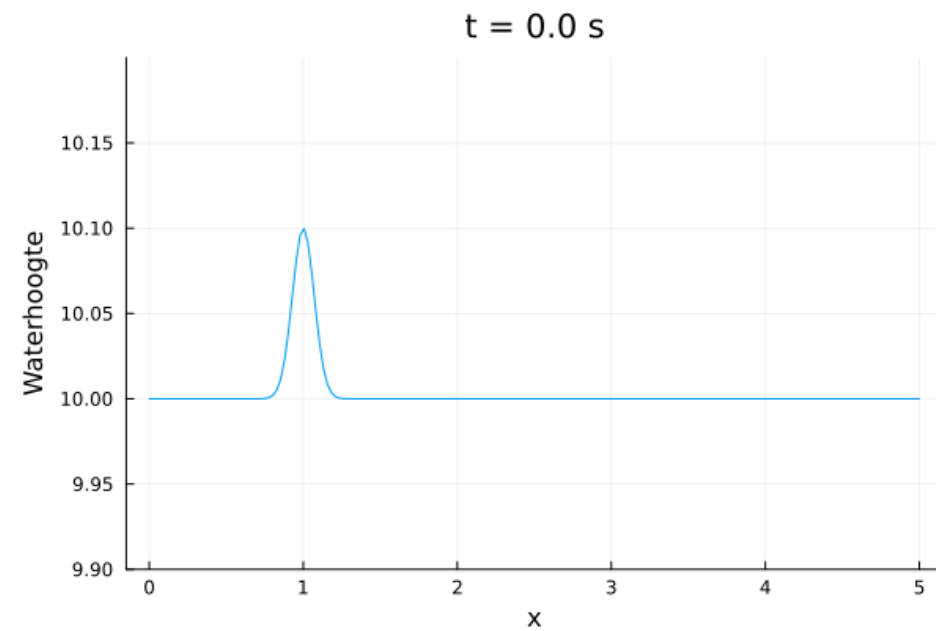
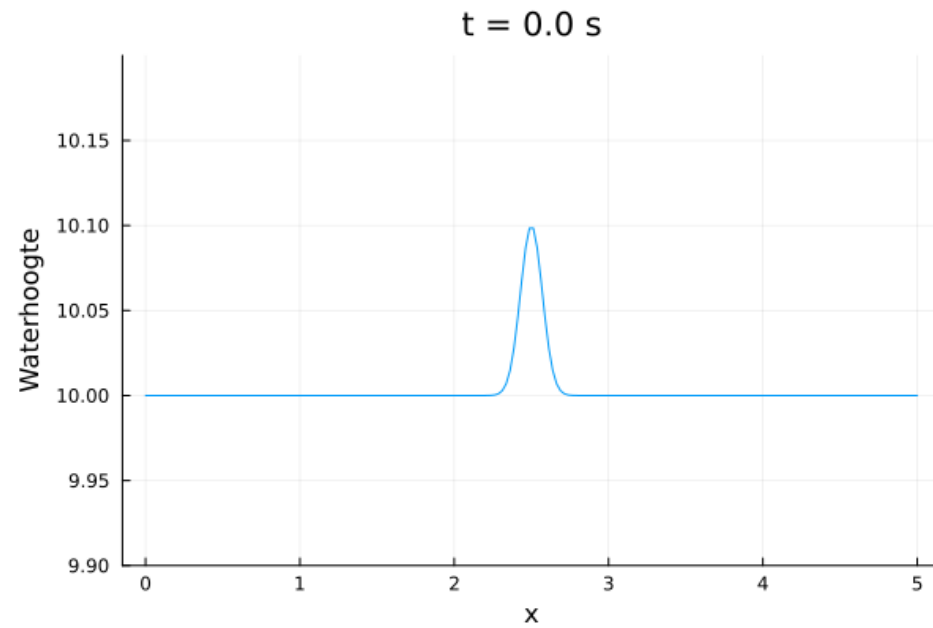
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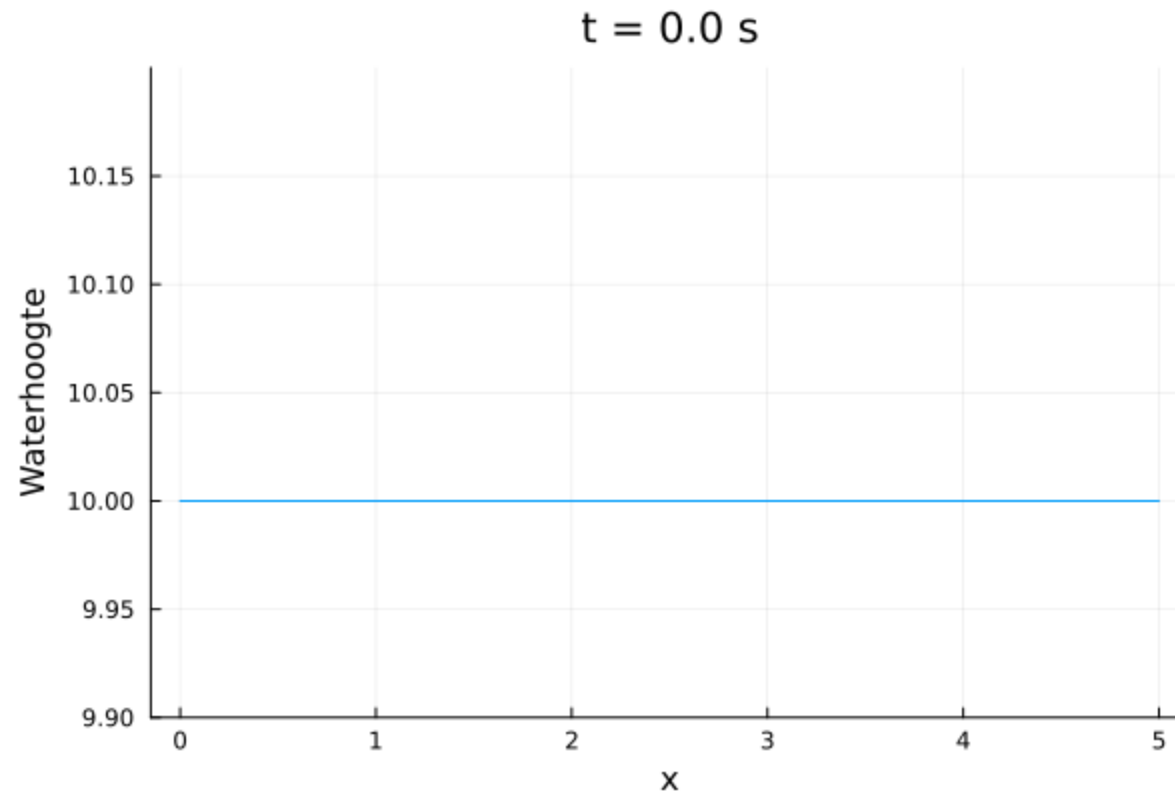
Introduction (Who are we)

- Rotterdam university of applied sciences
- Second year
- Informatics
- DISCLAIMER

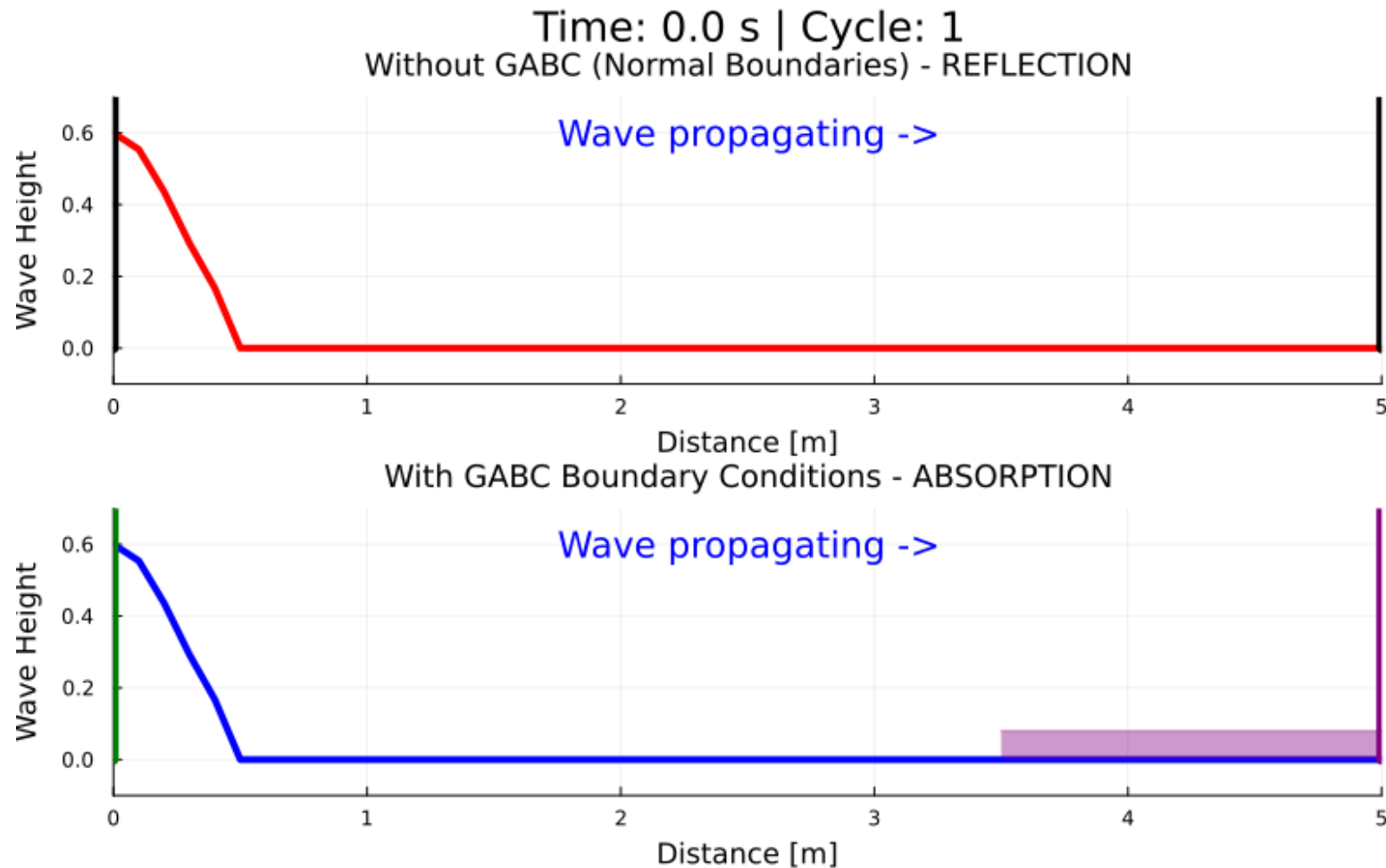
Periodic boundary conditions



Dirichlet and Neumann boundary conditions



Generating-Absorbing Boundary Conditions (GABC)





Shallow Water Equations Animation

Comparison of wave behavior with and without GABC boundary conditions

 Without GABC (Normal)

Time: 6.0s



 Reflection completed

 With GABC

Time: 6.0s



 Perfect absorption achieved

 Restart Animation

Questions

- We dont have answers tho 