

This archive contains the source code for all experiments presented in our paper, to facilitate reproducibility.

Folder Structure

- **Burgers' equation /**
- **Allen--Cahn equation /**
- **Fisher--KPP equation /**

Each folder corresponds to the experiments for the respective PDE as discussed in the paper.

File Naming Conventions

- Files named `ntk fail` demonstrate the failure of NTK theory for nonlinear PDEs.
- Files named `convergence` are used to validate Theorem 3 on convergence in our paper.
- Files named `optimizer vs` compare the performance of IGD and Adam optimizers.
- The file named `Theorem-4-convergence` is used to verify Theorem 4 in the paper.

All provided code matches the experimental results reported in the manuscript.