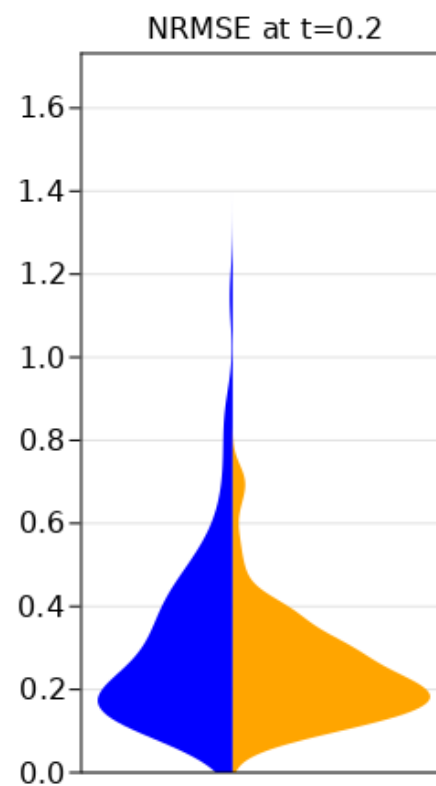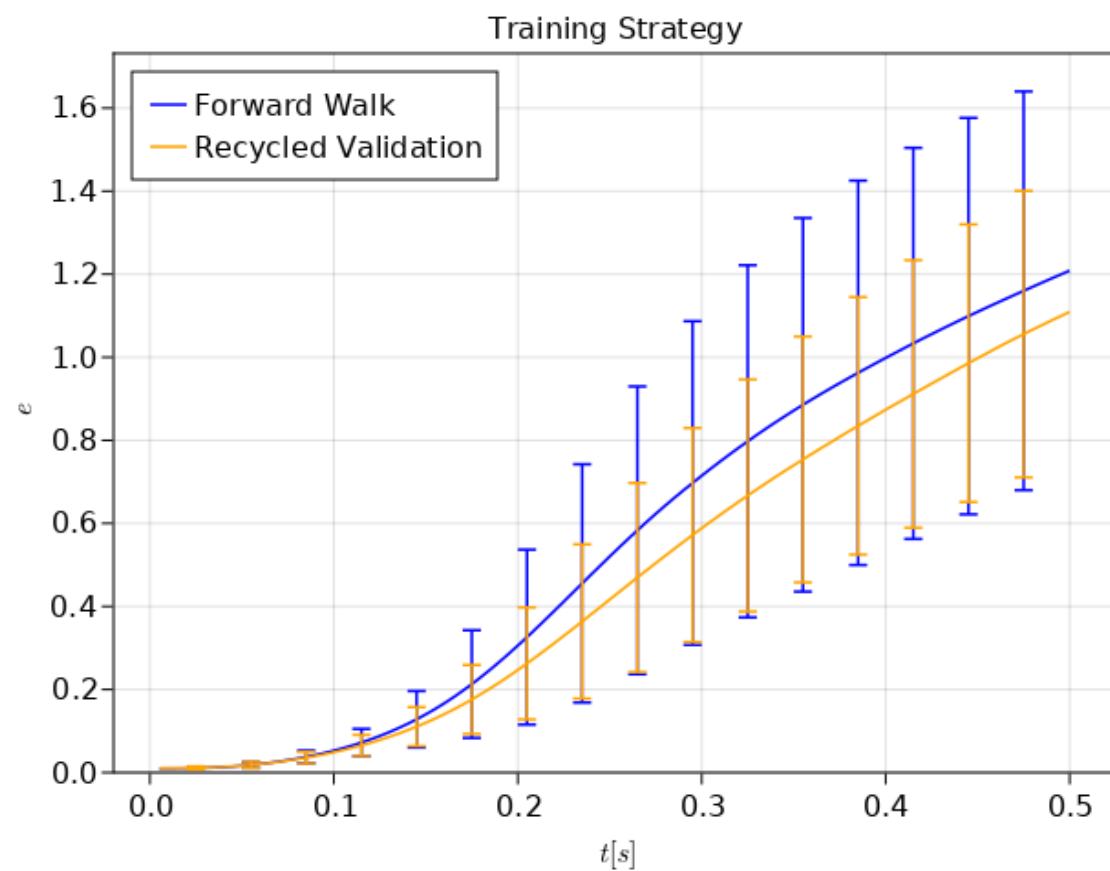# Progress Report
RC in NLS

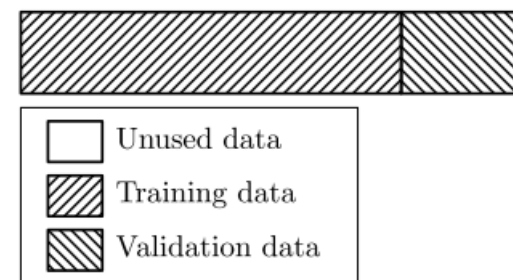Abrari N H

14 March 2022

Main Difference from Previous Work

- Using Reservoir with Real Number
- Shorter Training Data: 8000 timesteps, (4s in NLS time)
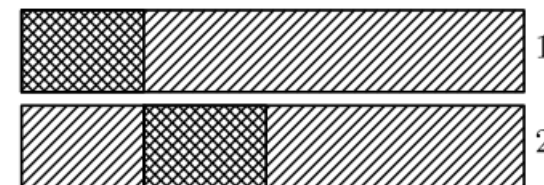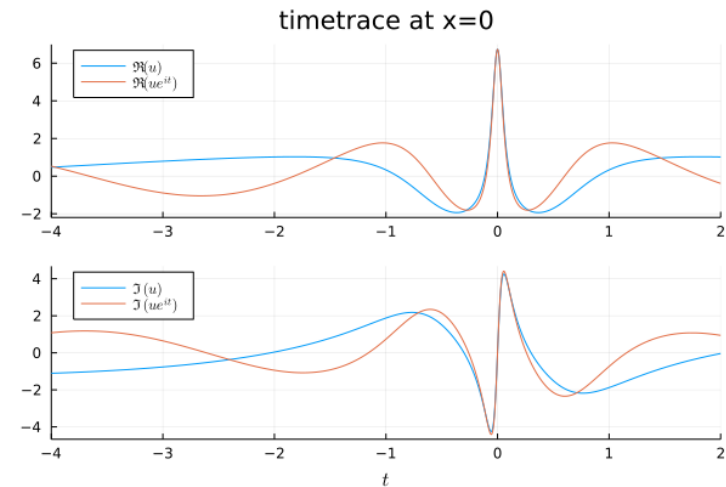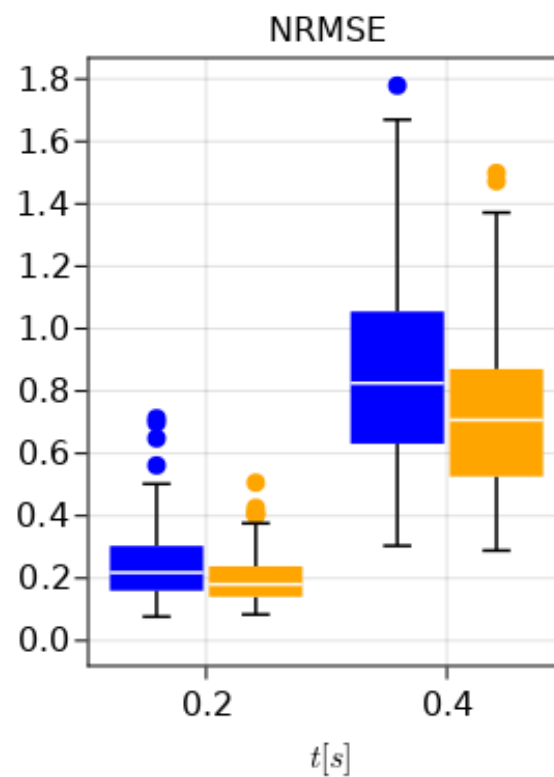- Using L_2 norm instead of H^1

Train Strategy
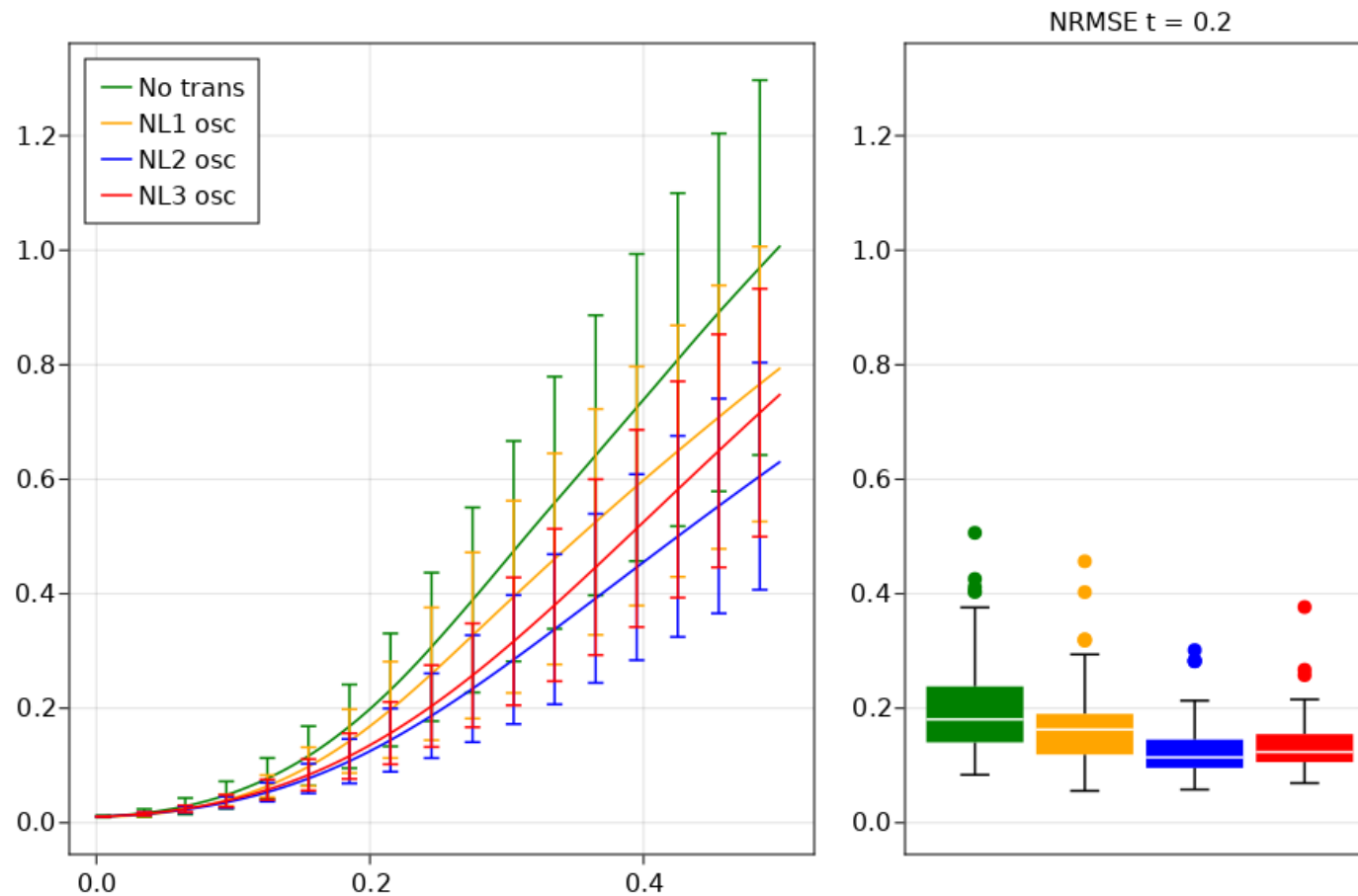

(Racca, 2021)

Different Training Data

Different NLT

NRMSE t = 0.2
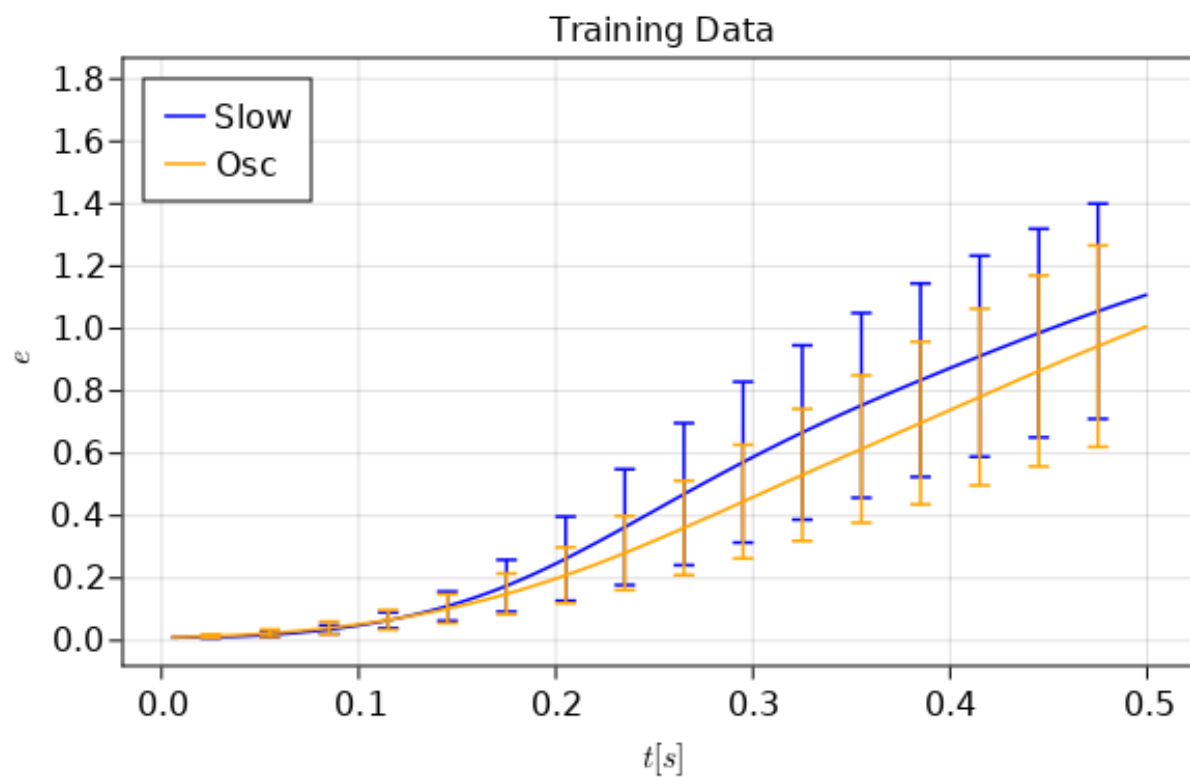
$$\text{NL1} \quad \hat{r}_{ij}^{(k)} = \begin{cases} r_{ij}^{(k)} & j \text{ is odd} \\ \left(r_{ij}^{(k)} \right)^2 & j \text{ is even} \end{cases}$$

$$\text{NL2} \quad \hat{r}_{ij}^{(k)} = \begin{cases} r_{ij}^{(k)} & j \text{ is odd} \\ \left| r_{ij}^{(k)} \right| r_{ij}^{(k)} & j \text{ is even} \end{cases}$$

$$\text{NL3} \quad \hat{r}_{ij}^{(k)} = \begin{cases} r_{ij}^{(k)} & j \text{ is odd} \\ \left| r_{ij}^{(k)} \right|^2 r_{ij}^{(k)} & j \text{ is even} \end{cases}$$