

Erratum

Erratum to “Learning to Boost the Performance of Stable Nonlinear Systems”

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This addresses errors in [1]. Due to a production error, Figs. 4, 5, 6, 8, and 9 are not rendering correctly in the article PDF. The correct figures are as follows.

REFERENCE

- [1] L. Furieri, C. L. Galimberti, and G. Ferrari-Trecatè, “Learning to boost the performance of stable nonlinear systems,” *IEEE Open J. Control Syst.*, vol. 3, pp. 342–357, 2024, doi: 10.1109/OJCSYS.2024.3441768.

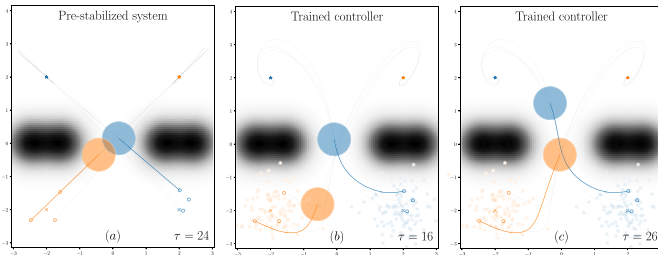


FIGURE 4. Mountains—Closed-loop trajectories before training (left) and after training (middle and right) over 100 randomly sampled initial conditions marked with $\circ$. Snapshots taken at time-instants τ . Colored (gray) lines show the trajectories in $[0, \tau_i]$ ($[\tau_i, \infty)$). Colored balls (and their radius) represent the agents (and their size for collision avoidance).

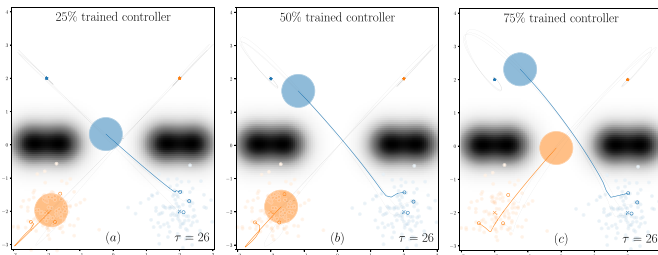


FIGURE 5. Mountains—Closed-loop trajectories after 25%, 50% and 75% of the total training whose closed-loop trajectory is shown in Fig. 4. Even if the performance can be further optimized, stability is always guaranteed.

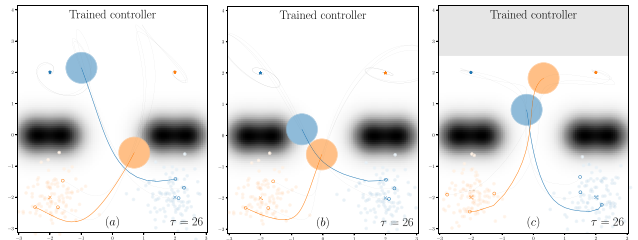


FIGURE 6. Mountains—Closed-loop trajectories after training. (Left and middle) Controller tested over a system with mass uncertainty (-10% and +10%, respectively). (Right) Trained controller with safety promotion through (45). Training initial conditions marked with $\circ$. Snapshots taken at time-instants τ . Colored (gray) lines show the trajectories in $[0, \tau_i]$ ($[\tau_i, \infty)$). Colored balls (and their radius) represent the agents (and their size for collision avoidance).

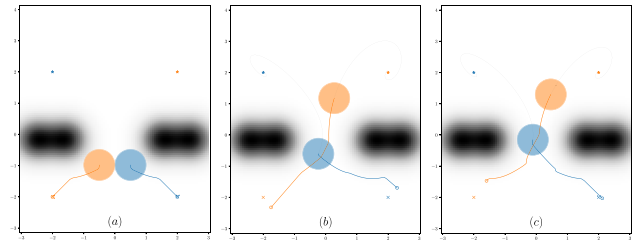


FIGURE 8. Mountains—Closed-loop trajectories when using the online policy given by (48). Snapshots of three trajectories starting at different test initial conditions.

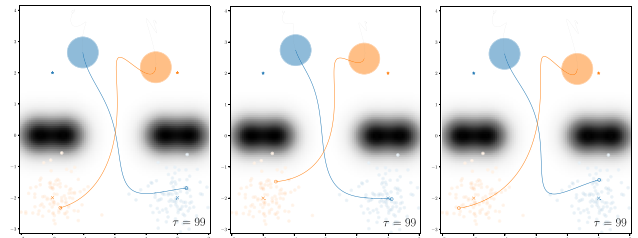


FIGURE 9. Mountains—Three different closed-loop trajectories after training a REN controller without $\mathcal{L}_2$ stability guarantees over 100 randomly sampled initial conditions marked with $\circ$. Colored (gray) lines show the trajectories in (after) the training time interval.