

Unraveling long-time quantum dynamics using flow equations

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This dataset contains four main elements.

1. The Python code used to generate the data – please consult github.com/sjt48/PyFlow for full instructions on how to use the code.
2. A Jupyter notebook used to generate the figures in v1 of this work.
3. The folder ‘proc’ which contains all data used in the majority of the work. Note that this data has been processed to remove the raw fourth-order tensors, which require a lot of memory.
4. The folder ‘adaptive’ which contains data from earlier, simpler simulations used to test the performance of the scrambling transform. (Note that the Jupyter notebook also contains some of the code used to compute the induced disorder bandwidth following the application of the scrambling transform, and re-runs some of it using a different random disorder realisations each time.)

The files are organized in subfolders according to the system size, with the disorder strength, interaction strength, and disorder realization number p included in the filename. The individual files are HDF5 files, containing a variety of datasets. For further details as to how to access the datasets, please refer to the accompanying Jupyter notebook.