

LEARNED PDES WITH TIME REVERSAL AND IMAGE INVARIANTS

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Methods for learning PDEs from observations of time series of images make use of a dictionary of features and either directly regress the time-derivative or minimise the loss using the time-integral of the model. The latter is known as the Neural ODE method and corresponds to time-reversal in classical methods for inverse problems from time-domain data. In this talk I will discuss the application of this method for the example of learned image flows. The benefit of using features with image invariance is discussed.