1 Extra Tables

		new_fisher			
Error	Method	u RMSE	u_t RMSE	u_x RMSE	u_{xx} RMSE
$\sigma = 00$	FD	0.00e+00	7.59e-04	1.48e-06	2.65e-03
$\sigma = 00$	LCVSP	5.37e-05	3.75e-03	6.24e-04	2.13e-01
$\sigma = 00$	LNCVSP	1.77e-06	3.25e-02	2.88e-02	1.46e+00
$\sigma = 00$	ANN	1.50e-01	9.00e+02	4.49e+01	3.20e+02
$\sigma = 01$	FD	1.01e-04	4.99e+03	9.25e+04	2.66e+07
$\sigma = 01$	LCVSP	6.17e-05	6.31e+02	5.76e+03	4.43e+05
$\sigma = 01$	LNCVSP	8.11e-06	6.45e+02	5.74e+03	4.45e+05
$\sigma = 01$	ANN	1.42e-01	1.99e+03	1.31e+01	8.97e+01
$\sigma = 05$	FD	2.46e-03	1.23e+05	1.56e+06	8.71e+08
$\sigma = 05$	LCVSP	1.98e-04	1.06e+04	3.88e+04	4.14e+05
$\sigma = 05$	LNCVSP	1.33e-04	1.09e+04	3.99e+04	4.00e+05
$\sigma = 05$	ANN	1.49e-01	2.03e+03	1.07e+00	9.76e+00
$\sigma = 10$	FD	1.01e-02	8.86e+05	6.95e+06	2.27e+09
$\sigma = 10$	LCVSP	6.57e-04	2.08e+04	1.31e+05	1.16e+07
$\sigma = 10$	LNCVSP	5.31e-04	2.08e+04	1.30e+05	1.06e+07
$\sigma = 10$	ANN	4.40e-02	1.59e+02	5.69e+02	4.18e+03
$\sigma = 25$	FD	6.16e-02	3.87e+06	4.09e+07	2.01e+10
$\sigma = 25$	LCVSP	3.95e-03	1.40e+05	1.86e+06	1.80e+07
$\sigma = 25$	LNCVSP	3.34e-03	1.45e+05	2.23e+06	2.34e+07
$\sigma = 25$	ANN	8.72e-02	1.72e+02	1.13e+02	1.18e+03
$\sigma = 50$	FD	2.45e-01	8.55e+06	5.94e+07	3.76e+09
$\sigma = 50$	LCVSP	1.68e-02	8.90e+05	1.05e+06	3.10e+07
$\sigma = 50$	LNCVSP	1.60e-02	1.01e+06	1.12e+06	3.75e+07
$\sigma = 50$	ANN	3.57e-01	3.42e+02	9.33e+01	1.13e+02

Table 1: New fisher table with new parameter values $D = 0.05, r = 15, K = 2$.

		True Equation
		$u_t = 0.050000u_{xx} + 15.000000u + -7.500000u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.050752u_{xx} + -7.492064u^2 + 14.989317u$
0.01	FD	$u_t = -6.745575u^2 + 13.378114u$
0.05	FD	$u_t = 0$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 2.229899$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.047061u_{xx} + -7.470261u^2 + 14.935312u$
0.01	LCVSP	$u_t = 0.033111u_{xx} + -7.224076u^2 + 14.428541u$
0.05	LCVSP	$u_t = -6.277497u^2 + 12.608248u$
0.10	LCVSP	$u_t = 0$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.048915u_{xx} + -7.473686u^2 + 14.948707u$
0.01	LNCVSP	$u_t = 0.045212u_{xx} + -7.398792u^2 + 14.797981u$
0.05	LNCVSP	$u_t = -6.762326u^2 + 13.442374u$
0.10	LNCVSP	$u_t = -6.527759u^2 + 13.027247u$
0.25	LNCVSP	$u_t = 0$
0.50	LNCVSP	$u_t = 0$
0.0	ANN	$u_t = -6.956080u^2 + 13.709073u$
0.01	ANN	$u_t = -6.801956u^2 + 13.460688u$
0.05	ANN	$u_t = -6.676666u^2 + 13.295807u$
0.10	ANN	$u_t = -6.188582u^2 + 12.628203u$
0.25	ANN	$u_t = -5.997008u^2 + 12.728506u$
0.50	ANN	$u_t = -5.019812u^2 + 12.883464u$

Table 2: Learned equations for the new fisher parameter values $D = 0.05, r = 15, K = 2$

		new_fisher2			
Error	Method	u RMSE	u_t RMSE	u_x RMSE	u_{xx} RMSE
$\sigma = 00$	FD	0.00e+00	6.31e-06	6.60e-07	6.55e-04
$\sigma = 00$	LCVSP	1.77e-06	2.39e-05	2.20e-05	3.51e-02
$\sigma = 00$	LNCVSP	2.19e-07	2.55e-03	9.31e-04	1.17e-01
$\sigma = 00$	ANN	4.33e-03	6.49e-03	1.55e-02	5.68e+02
$\sigma = 01$	FD	9.81e-05	1.44e-01	1.35e+01	1.69e+03
$\sigma = 01$	LCVSP	8.16e-06	9.97e-03	5.90e-01	9.52e+00
$\sigma = 01$	LNCVSP	5.57e-06	1.51e+01	1.44e+00	2.63e+02
$\sigma = 01$	ANN	5.59e-03	1.16e-02	2.08e-02	4.44e+02
$\sigma = 05$	FD	2.51e-03	4.22e+00	3.93e+02	4.50e+04
$\sigma = 05$	LCVSP	1.58e-04	2.16e-01	1.29e+01	2.22e+02
$\sigma = 05$	LNCVSP	1.51e-04	2.65e+02	6.54e+01	1.16e+03
$\sigma = 05$	ANN	4.32e-02	1.06e-01	9.87e-02	2.36e+02
$\sigma = 10$	FD	9.86e-03	1.76e+01	1.22e+03	5.04e+05
$\sigma = 10$	LCVSP	5.84e-04	1.32e+00	5.74e+01	1.33e+03
$\sigma = 10$	LNCVSP	5.27e-04	1.01e+03	4.29e+02	1.17e+04
$\sigma = 10$	ANN	7.98e-02	1.54e-01	1.93e-02	7.33e+01
$\sigma = 25$	FD	6.08e-02	9.20e+01	8.02e+03	4.41e+06
$\sigma = 25$	LCVSP	3.62e-03	5.32e+00	1.86e+02	7.06e+03
$\sigma = 25$	LNCVSP	3.58e-03	6.49e+03	1.10e+03	8.55e+04
$\sigma = 25$	ANN	9.25e-02	1.89e-01	2.37e-02	8.31e+01
$\sigma = 50$	FD	2.39e-01	3.63e+02	2.31e+04	1.97e+07
$\sigma = 50$	LCVSP	1.45e-02	1.20e+01	7.84e+02	3.87e+04
$\sigma = 50$	LNCVSP	1.40e-02	1.44e+04	1.30e+04	6.29e+05
$\sigma = 50$	ANN	1.80e-01	3.41e-01	5.48e-02	1.08e+02

Table 3: RMSE tables for the new_fisher2. D = 0.06, r = 8, K=1

		True Equation
		$u_t = 0.060000u_{xx} + 8.000000u + -8.000000u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.060224u_{xx} + -7.997593u^2 + 7.998698u$
0.01	FD	$u_t = -8.140625u^2 + 7.877816u$
0.05	FD	$u_t = 0$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 0$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.060798u_{xx} + -7.993639u^2 + 7.997859u$
0.01	LCVSP	$u_t = -8.047069u^2 + 7.837815u$
0.05	LCVSP	$u_t = -7.717830u^2 + 7.646102u$
0.10	LCVSP	$u_t = 0$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.060575u_{xx} + -7.999129u^2 + 8.000932u$
0.01	LNCVSP	$u_t = 0.038763u_{xx} + -8.020761u^2 + 7.946824u$
0.05	LNCVSP	$u_t = -8.048716u^2 + 7.842179u$
0.10	LNCVSP	$u_t = -7.903332u^2 + 7.769613u$
0.25	LNCVSP	$u_t = 0$
0.50	LNCVSP	$u_t = 0$
0.0	ANN	$u_t = -8.019138u^2 + 7.773298u$
0.01	ANN	$u_t = -7.496026u^2 + 7.944517u + 0.196401uu_{xx}$
0.05	ANN	$u_t = 0.060779u_{xx} + -6.742112u^2 + 7.297380u$
0.10	ANN	$u_t = 0.062322u_{xx} + -6.887042u^2 + 7.377931u$
0.25	ANN	$u_t = 0.063500u_{xx} + -6.599179u^2 + 7.380899u$
0.50	ANN	$u_t = 0.065114u_{xx} + -5.592244u^2 + 7.353466u$

Table 4: Learned equations for new_fisher2. D = 0.06, r = 8, K=1

		True Equation
		$u_t = 0.050000u_{xx} + 15.000000u + -7.500000u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.051980u_{xx} + -7.486543u^2 + 14.972446u + -0.001170u^2u_{xx}$
0.01	FD	$u_t = -6.725724u^2 + 13.340637u$
0.05	FD	$u_t = 0$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 2.204112$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.047218u_{xx} + -7.467760u^2 + 14.930839u$
0.01	LCVSP	$u_t = 0.032443u_{xx} + -7.225856u^2 + 14.432229u$
0.05	LCVSP	$u_t = -6.273202u^2 + 12.598695u$
0.10	LCVSP	$u_t = -5.056786u^2 + 10.525795u$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.048974u_{xx} + -7.473323u^2 + 14.948203u$
0.01	LNCVSP	$u_t = 0.044950u_{xx} + -7.396123u^2 + 14.792975u$
0.05	LNCVSP	$u_t = 0.048942u_{xx} + -7.202818u^2 + 14.297512u + -0.013800u^2u_{xx}$
0.10	LNCVSP	$u_t = -6.531545u^2 + 13.033069u$
0.25	LNCVSP	$u_t = -5.792197u^2 + 11.760377u$
0.50	LNCVSP	$u_t = 0$
0.0	ANN	$u_t = 0.043204u_{xx} + -7.077074u^2 + 14.048355u$
0.01	ANN	$u_t = -6.810690u^2 + 13.481117u$
0.05	ANN	$u_t = -6.675499u^2 + 13.295502u$
0.10	ANN	$u_t = -7.263199u^2 + 14.786902u + -0.060775u_x^2$
0.25	ANN	$u_t = -5.992709u^2 + 12.719314u$
0.50	ANN	$u_t = 0.075653u_{xx} + -4.925442u^2 + 12.593646u + -0.046506uu_{xx}$

Table 5: Learned equations for new_fisher. D = 0.05, r = 15, K=2 with a pruning level change to 0.1

		True Equation
		$u_t = 0.050000u_{xx} + 15.000000u + -7.500000u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.051981u_{xx} + -7.486461u^2 + 14.972296u + -0.001171u^2u_{xx}$
0.01	FD	$u_t = -6.711507u^2 + 13.309479u$
0.05	FD	$u_t = -5.731036u^2 + 11.472877u$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 2.231048$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.037785u_{xx} + -7.512322u^2 + 15.038475u + 0.010182uu_{xx}$
0.01	LCVSP	$u_t = 0.049276u_{xx} + -7.268874u^2 + 14.473442u + -0.009817u^2u_{xx}$
0.05	LCVSP	$u_t = -6.266310u^2 + 12.583321u$
0.10	LCVSP	$u_t = -5.100803u^2 + 10.612808u$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.049171u_{xx} + -7.473574u^2 + 14.949189u$
0.01	LNCVSP	$u_t = 0.044632u_{xx} + -7.397921u^2 + 14.794819u$
0.05	LNCVSP	$u_t = 0.049291u_{xx} + -7.207236u^2 + 14.305166u + -0.013892u^2u_{xx}$
0.10	LNCVSP	$u_t = -6.517856u^2 + 13.006900u$
0.25	LNCVSP	$u_t = -5.825820u^2 + 11.823868u$
0.50	LNCVSP	$u_t = 0$
0.0	ANN	$u_t = 0.043134u_{xx} + -7.077127u^2 + 14.046231u$
0.01	ANN	$u_t = 0.047008u_{xx} + -6.926319u^2 + 13.817897u$
0.05	ANN	$u_t = 0.051314u_{xx} + -6.812885u^2 + 13.681112u$
0.10	ANN	$u_t = 0.034979u_{xx} + -7.584873u^2 + 15.540571u + -0.078473u_x^2$
0.25	ANN	$u_t = -5.996299u^2 + 12.732009u$
0.50	ANN	$u_t = 0.076424u_{xx} + -4.924109u^2 + 12.585168u + -0.047534uu_{xx}$

Table 6: Learned equations for new_fisher. D = 0.05, r = 15, K=2 with a pruning level change to 0.05

		True Equation
		$u_t = 0.020000u_{xx} + 10.000000u + -6.666667u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.020382u_{xx} + -6.667150u^2 + 10.001645u + -0.000367uu_{xx} + -0.0$
0.01	FD	$u_t = -6.722653u^2 + 9.938338u$
0.05	FD	$u_t = -6.100114u^2 + 9.235569u$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 0$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.020693u_{xx} + -6.678878u^2 + 10.023578u + -0.000890u_x^2$
0.01	LCVSP	$u_t = 0.024922u_{xx} + -6.579353u^2 + 9.782053u + -0.016812uu_{xx}$
0.05	LCVSP	$u_t = -6.434966u^2 + 9.608293u$
0.10	LCVSP	$u_t = -5.517850u^2 + 8.534122u$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.020622u_{xx} + -6.676564u^2 + 10.019236u + -0.000766u_x^2$
0.01	LNCVSP	$u_t = 0.019253u_{xx} + -6.677161u^2 + 10.003910u$
0.05	LNCVSP	$u_t = 0.025660u_{xx} + -6.575010u^2 + 9.704719u + -0.024316uu_{xx}$
0.10	LNCVSP	$u_t = -6.643277u^2 + 9.807169u$
0.25	LNCVSP	$u_t = -5.971759u^2 + 9.127604u$
0.50	LNCVSP	$u_t = -4.715253u^2 + 7.429326u$
0.0	ANN	$u_t = 0.021708u_{xx} + -6.416773u^2 + 9.728288u$
0.01	ANN	$u_t = 0.019399u_{xx} + -6.174328u^2 + 9.424139u$
0.05	ANN	$u_t = 0.022493u_{xx} + -6.218388u^2 + 9.612991u$
0.10	ANN	$u_t = 0.019495u_{xx} + -6.435456u^2 + 9.831228u$
0.25	ANN	$u_t = 0.012132u_{xx} + -7.297119u^2 + 12.469965u + -0.006695u^2u_x + 0.058979uu_x$
0.50	ANN	$u_t = 0.008668u_x + 0.014750u_{xx} + -5.535558u^2 + 11.698027u + 0.012318u^2u_x + 0.0522$

Table 7: Learned equations for new fisher3, D = 0.02, r = 10, K = 1.5. Prune level 0.05

		True Equation
		$u_t = 0.040000u_{xx} + 12.000000u + 10.909091u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.040847u_{xx} + -10.913269u^2 + 12.007682u$
0.01	FD	$u_t = -10.975818u^2 + 11.920849u$
0.05	FD	$u_t = -10.350234u^2 + 11.408251u$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 1.386143$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.040791u_{xx} + -10.895566u^2 + 11.985056u + -0.001614u^2u_{xx}$
0.01	LCVSP	$u_t = 0.024147u_{xx} + -10.894474u^2 + 11.943599u$
0.05	LCVSP	$u_t = -10.446270u^2 + 11.452944u$
0.10	LCVSP	$u_t = -8.703266u^2 + 9.975930u$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.040312u_{xx} + -10.895882u^2 + 11.987894u$
0.01	LNCVSP	$u_t = 0.042935u_{xx} + -10.837042u^2 + 11.851264u + -0.031030u^2u_{xx}$
0.05	LNCVSP	$u_t = -11.058617u^2 + 12.004329u + -0.006897u^2u_{xx}$
0.10	LNCVSP	$u_t = -10.917295u^2 + 11.904940u$
0.25	LNCVSP	$u_t = -10.068480u^2 + 11.046429u$
0.50	LNCVSP	$u_t = 0$
0.0	ANN	$u_t = 0.045411u_{xx} + -10.891719u^2 + 11.974357u$
0.01	ANN	$u_t = 0.046204u_{xx} + -10.868408u^2 + 11.993910u$
0.05	ANN	$u_t = 0.045140u_{xx} + -10.592150u^2 + 11.860814u$
0.10	ANN	$u_t = 0.044145u_{xx} + -10.379769u^2 + 11.749675u$
0.25	ANN	$u_t = 0.036630u_{xx} + -10.009044u^2 + 11.892155u$
0.50	ANN	$u_t = 0.039310u_{xx} + -8.583234u^2 + 11.890651u$

Table 8: Learned equations for new fisher4, D = 0.04, r = 12, K = 1.1. Prune level 0.05

		True Equation
		$u_t = 0.040000u_{xx} + 12.000000u + 10.909091u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.040847u_{xx} + -10.913269u^2 + 12.007682u$
0.0	ANN	$u_t = 0.045411u_{xx} + -10.891719u^2 + 11.974357u$
0.01	ANN	$u_t = 0.046204u_{xx} + -10.868408u^2 + 11.993910u$
0.05	ANN	$u_t = 0.045140u_{xx} + -10.592150u^2 + 11.860814u$
0.10	ANN	$u_t = 0.044145u_{xx} + -10.379769u^2 + 11.749675u$
0.25	ANN	$u_t = 0.036630u_{xx} + -10.009044u^2 + 11.892155u$
0.50	ANN	$u_t = 0.039310u_{xx} + -8.583234u^2 + 11.890651u$

Table 9: Learned equations for new fisher3, D = 0.04, r = 12, K = 1.1. Prune level 0.05. ANN only

		True Equation
		$u_t = 0.020000u_{xx} + 10.000000u + -6.666667u^2$
σ	**Method**	**Learned Equation**
0.0	ANN	$u_t = 0.021708u_{xx} + -6.416773u^2 + 9.728288u$
0.01	ANN	$u_t = 0.019399u_{xx} + -6.174328u^2 + 9.424139u$
0.05	ANN	$u_t = 0.022493u_{xx} + -6.218388u^2 + 9.612991u$
0.10	ANN	$u_t = 0.019495u_{xx} + -6.435456u^2 + 9.831228u$
0.25	ANN	$u_t = 0.012132u_{xx} + -7.297119u^2 + 12.469965u + -0.006695u^2u_x + 0.058979uu_x$
0.50	ANN	$u_t = 0.008668u_x + 0.014750u_{xx} + -5.535558u^2 + 11.698027u + 0.012318u^2u_x + 0.0522$

Table 10: Learned equations for new fisher3, D = 0.02, r = 10, K = 1.5. Prune level 0.05. ANNonly

		True Equation
		$u_t = 0.050000u_{xx} + 15.000000u + -7.500000u^2$
0.0	ANN	$u_t = 0.043134u_{xx} + -7.077127u^2 + 14.046231u$
0.01	ANN	$u_t = 0.047008u_{xx} + -6.926319u^2 + 13.817897u$
0.05	ANN	$u_t = 0.051314u_{xx} + -6.812885u^2 + 13.681112u$
0.10	ANN	$u_t = 0.034979u_{xx} + -7.584873u^2 + 15.540571u + -0.078473u_x^2$
0.25	ANN	$u_t = -5.996299u^2 + 12.732009u$
0.50	ANN	$u_t = 0.076424u_{xx} + -4.924109u^2 + 12.585168u + -0.047534uu_{xx}$

Table 11: Learned equations for new_fisher. D = 0.05, r = 15, K=2 with a pruning level change to 0.05. ANN only

		True Equation
		$u_t = 0.040000u_{xx} + 12.000000u + 10.909091u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.040847u_{xx} + -10.913269u^2 + 12.007682u$
0.01	FD	$u_t = -10.975818u^2 + 11.920849u$
0.05	FD	$u_t = -10.350234u^2 + 11.408251u$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 1.386143$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.040791u_{xx} + -10.895566u^2 + 11.985056u + -0.001614u^2u_{xx}$
0.01	LCVSP	$u_t = 0.024147u_{xx} + -10.894474u^2 + 11.943599u$
0.05	LCVSP	$u_t = -10.446270u^2 + 11.452944u$
0.10	LCVSP	$u_t = -8.703266u^2 + 9.975930u$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0$
0.0	LNCVSP	$u_t = 0.040312u_{xx} + -10.895882u^2 + 11.987894u$
0.01	LNCVSP	$u_t = 0.042935u_{xx} + -10.837042u^2 + 11.851264u + -0.031030u^2u_{xx}$
0.05	LNCVSP	$u_t = -11.058617u^2 + 12.004329u + -0.006897u^2u_{xx}$
0.10	LNCVSP	$u_t = -10.917295u^2 + 11.904940u$
0.25	LNCVSP	$u_t = -10.068480u^2 + 11.046429u$
0.50	LNCVSP	$u_t = 0$
0.0	ANN	$u_t = 0.045411u_{xx} + -10.891719u^2 + 11.974357u$
0.01	ANN	$u_t = 0.046204u_{xx} + -10.868408u^2 + 11.993910u$
0.05	ANN	$u_t = 0.045140u_{xx} + -10.592150u^2 + 11.860814u$
0.10	ANN	$u_t = 0.044145u_{xx} + -10.379769u^2 + 11.749675u$
0.25	ANN	$u_t = 0.036630u_{xx} + -10.009044u^2 + 11.892155u$
0.50	ANN	$u_t = 0.039310u_{xx} + -8.583234u^2 + 11.890651u$

Table 12: Learned equations for new fisher4, D = 0.04, r = 12, K = 1.1. Prune level 0.05

		True Equation
		$u_t = 0.02u_{xx} + 10u - 10u^2$
σ	**Method**	**Learned Equation**
0.0	FD	0.001764
0.01	FD	0.3375212
0.05	FD	1
0.10	FD	1
0.25	FD	1
0.50	FD	1
0.0	LCVSP	0.00845
0.01	LCVSP	0.06305
0.05	LCVSP	0.3623988
0.10	LCVSP	1
0.25	LCVSP	1
0.50	LCVSP	1
0.0	LNCVSP	0.0075555
0.01	LNCVSP	0.0143247
0.05	LNCVSP	0.338905
0.10	LNCVSP	0.341047133333333
0.25	LNCVSP	1
0.50	LNCVSP	1
0.0	ANN	0.0236504
0.01	ANN	0.055789
0.05	ANN	0.023968
0.10	ANN	0.044709
0.25	ANN	0.0573424
0.50	ANN	0.69787

Table 13: Replication of fisher learned with error quantity

		True Equation
		$u_t = 0.020000u_{xx} + 10.000000u + -20.000000u^2$
σ	**Method**	**Learned Equation**
0.0	FD	$u_t = 0.020317u_{xx} + -20.010830u^2 + 10.005465u + -0.002637u^2u_{xx} + -0.00116$
0.01	FD	$u_t = -20.013769u^2 + 9.846423u$
0.05	FD	$u_t = -19.988653u^2 + 9.939128u$
0.10	FD	$u_t = 0$
0.25	FD	$u_t = 0$
0.50	FD	$u_t = 0$
0.0	LCVSP	$u_t = 0.020627u_{xx} + -19.978622u^2 + 9.995013u$
0.01	LCVSP	$u_t = 0.025650u_{xx} + -19.615500u^2 + 9.738541u + -0.045604uu_{xx}$
0.05	LCVSP	$u_t = -19.144541u^2 + 9.540572u$
0.10	LCVSP	$u_t = -16.130858u^2 + 8.330038u$
0.25	LCVSP	$u_t = 0$
0.50	LCVSP	$u_t = 0.347650$
0.0	LNCVSP	$u_t = 0.020758u_{xx} + -19.964382u^2 + 9.982397u + -0.005767u^2u_{xx}$
0.01	LNCVSP	$u_t = 0.019277u_{xx} + -20.010471u^2 + 9.997230u$
0.05	LNCVSP	$u_t = 0.024388u_{xx} + -19.799730u^2 + 9.760204u + -0.057945uu_{xx}$
0.10	LNCVSP	$u_t = -19.986409u^2 + 9.832803u$
0.25	LNCVSP	$u_t = -17.020607u^2 + 8.627845u$
0.50	LNCVSP	$u_t = -15.273364u^2 + 8.052428u$
0.0	ANN	$u_t = 0.020935u_{xx} + -19.572484u^2 + 9.856857u$
0.01	ANN	$u_t = 0.026211u_{xx} + -18.132224u^2 + 8.911963u + -0.086179uu_{xx} + 0.062850$
0.05	ANN	$u_t = 0.023460u_{xx} + -19.797878u^2 + 9.858061u + -0.040008uu_{xx}$
0.10	ANN	$u_t = 0.024649u_{xx} + -20.111717u^2 + 9.956281u + -0.064809uu_{xx}$
0.25	ANN	$u_t = 0.023259u_{xx} + -18.733964u^2 + 9.896262u + -0.044710uu_{xx}$
0.50	ANN	$u_t = -0.022743u_x + 0.022622u_{xx} + -16.107985u^2 + 11.006648u + 0.136400u^2u_{xx} + -$

Table 14: D=0.02, r = 10, K = 0.5, pruning level is 0.05