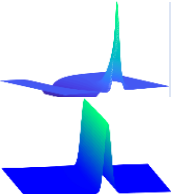
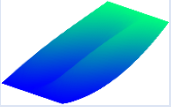
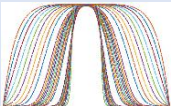
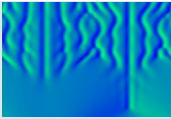
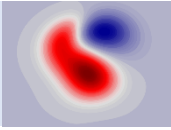
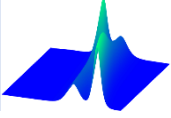
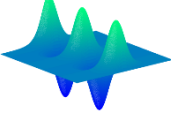
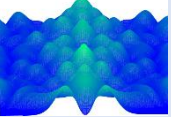


Canonical PDEs	Dynamics	Data	Results discovered by $S^3d$	MSE-STD
FitzHugh-Nagumo $u_t = u_{xx} - u + u^2 - u^3 - w$ $w_t = 0.002u - 0.001w$		$U^{512 \times 401}$ : 10000 10000 18000 27000	$u_t = 1.0023u_{xx} - 1.9910u + 1.2004u^2 - 1.0031u^3 - 1.0050w$ $w_t = 0.001999u - 0.000993w$ $u_t = 1.0025u_{xx} - 1.9810u + 1.1762u^2 - 0.9499u^3 - 0.9920w$ $w_t = 0.001952u - 0.001004w$	0.2649%±0.2462%   1.6795%±1.6690%
Klein-Gordon $u_{tt} = u_{xx} - u - u^3$		$U^{101 \times 1001}$ : 1000  15500	$u_{tt} = 0.9994u_{xx} - 0.9995u - 0.9998u^3$  $u_{tt} = 0.9987u_{xx} - 0.9833u - 1.0303u^3$	0.0426%±0.0220%  1.6100%±1.4513%
Fisher's equation $u_t = 0.1u_{xx} + u - u^2$		$U^{201 \times 1000}$ : 10000  10000	$u_t = 0.0997u_{xx} + 0.9998u - 1.0002u^2$  $u_t = 0.0971u_{xx} + 1.0053u - 1.0079u^2$	0.0960%±0.1342%  1.4104%±1.3007%
Kuramoto Sivashinsky $u_t = -u_{xx} - uu_x - u_{xxx}$		$U^{2048 \times 1001}$ : 14203  59210	$u_t = -1.0000u_{xx} - 1.0000uu_x - 1.0000u_{xxx}$  $u_t = -0.9214u_{xx} - 0.9095uu_x - 0.9238u_{xxx}$	0.0022%±0.0010%  8.1781 %±0.7678%
Navier Stokes $w_t = 0.01w_{xx} + 0.01w_{yy} - uw_x - vw_y$		$U^{100 \times 100 \times 1001}$ : 10000  20000	$w_t = 0.0100w_{xx} + 0.0100w_{yy} - 1.0068uw_x - 0.9987vw_y$  $w_t = 0.0100w_{xx} + 0.0097w_{yy} - 1.0051uw_x - 1.0012vw_y$	0.3700%±0.2305%  0.9447%±1.3498%
Korteweg-de Vries $u_t = -0.000484uu_{xx} + u_{xxx}$		$U^{256 \times 1301}$ : 10000  18750	$u_t = -0.000484uu_{xx} - 0.999247u_{xxx}$  $u_t = -0.000483uu_{xx} - 0.982950u_{xxx}$	0.0855%±0.0145%  0.9982%±0.9995%
Sine-Gordon equation $u_{tt} = u_{xx} - \sin(u)$		$U^{512 \times 256}$ : 10  50	$u_{tt} = 0.9999u_{xx} - 0.9987\sin(u)$  $u_{tt} = 0.9920u_{xx} - 0.9982\sin(u)$	0.0706%±0.0895%  0.4874%±0.4407%
Schrödinger equation $u_t = \frac{10}{3}iu - \frac{10}{3}i u ^2u - 0.3iu_{xx}$		$U^{512 \times 501}$ : 10000  10000	$u_t = -3.3333iu + 3.3333i u ^2u + 0.3000iu_{xx}$  $u_t = -3.3187iu + 3.2947i u ^2u + 0.3013iu_{xx}$	0.0011%±0.0007%  0.6775%±0.4162%