

APPENDIX

TABLE I
RESULTS ON FSRB AND STROGATZ

Function	RMSE		Sol Recv Rate		Model Size		Function	RMSE		Sol Recv Rate		Model Size	
	0.0	0.1	0.0	0.1	0.0	0.1		0.0	0.1	0.0	0.1	0.0	0.1
feynman_I_14_4	$3e^{-15}$.0224	100%	30%	16.7	15.6	feynman_III_19_51	.0010	.6549	60%	0%	24.4	24.3
feynman_I_12_2	.0000	$7e^{-09}$	90%	100%	12.9	13.5	feynman_I_29_4	$8e^{-12}$	$3e^{-16}$	100%	100%	11.2	6.8
feynman_I_12_1	$2e^{-15}$	$2e^{-15}$	100%	100%	9.2	4.1	feynman_I_32_5	$5e^{-09}$.0725	100%	50%	18.0	18.7
feynman_I_12_5	$2e^{-08}$.0001	100%	100%	14.1	4.1	feynman_I_14_3	$7e^{-09}$.0208	100%	50%	15.1	11.0
feynman_I_12_11	.0000	.0020	70%	70%	24.2	17.1	feynman_II_3_24	.0000	.0106	80%	0%	15.0	20.0
feynman_III_17_37	$2e^{-08}$.0018	100%	100%	14.0	12.3	feynman_III_15_27	.0000	.0015	70%	100%	16.4	12.0
feynman_I_11_19	$5e^{-15}$.0037	100%	100%	16.0	18.0	feynman_II_38_3	.0006	.0021	70%	100%	16.5	13.2
feynman_II_13_17	.0000	.0000	40%	80%	11.8	11.4	feynman_I_18_14	$4e^{-08}$.0190	100%	30%	19.5	17.3
feynman_II_27_16	$1e^{-08}$	$4e^{-14}$	100%	100%	8.8	10.0	feynman_I_39_22	$2e^{-08}$.0198	100%	50%	14.9	15.5
feynman_I_18_12	$2e^{-07}$.0054	100%	100%	14.1	11.0	feynman_I_43_16	$9e^{-07}$.0095	100%	80%	19.0	12.8
feynman_II_27_18	$9e^{-07}$.0030	100%	100%	13.1	7.2	feynman_III_15_12	.0003	.0151	80%	50%	20.1	22.0
feynman_I_43_31	$7e^{-09}$.0206	100%	70%	13.6	9.0	feynman_II_34_2	.0006	.0362	90%	100%	11.0	13.0
feynman_III_15_14	$5e^{-09}$.0000	100%	100%	12.2	12.5	feynman_I_39_1	$4e^{-08}$.0050	100%	100%	14.7	8.0
feynman_I_25_13	$8e^{-07}$	$2e^{-16}$	100%	100%	7.8	4.0	feynman_I_34_8	$3e^{-15}$.0104	100%	80%	17.0	11.4
feynman_I_47_23	$2e^{-11}$.0017	100%	100%	11.0	10.8	feynman_II_2_42	.0021	.0951	40%	0%	21.5	18.2
feynman_I_34_27	$4e^{-09}$.0020	100%	100%	8.4	9.0	feynman_II_15_4	$8e^{-09}$.0145	100%	70%	15.6	20.5
feynman_III_12_43	$1e^{-08}$.0002	100%	100%	9.5	10.0	feynman_II_38_14	.0000	.0152	90%	0%	12.7	8.2
feynman_II_15_5	$3e^{-09}$.0043	100%	60%	17.1	13.3	feynman_I_43_43	.0142	.0298	70%	50%	18.7	16.0
feynman_II_11_3	.0042	.0212	30%	40%	16.3	14.6	feynman_II_8_31	.0000	.0443	90%	60%	18.7	14.6
feynman_I_18_4	.0073	.2353	20%	0%	16.4	16.0	feynman_II_37_1	$4e^{-08}$.0108	100%	100%	18.8	10.8
strogatz_lv1	.0588	.1374	50%	40%	16.1	18.0	strogatz_lv2	$5e^{-15}$.0009	100%	100%	15.4	9.3
strogatz_glider1	.0079	.0370	50%	60%	12.1	12.2	strogatz_glider2	$6e^{-07}$.0106	100%	80%	11.5	8.8
strogatz_predprey1	.2881	.4188	0%	0%	20.2	16.8	strogatz_predprey2	.2286	.2730	0%	0%	18.1	14.8
strogatz_barmag2	.0000	.0684	20%	20%	11.4	9.0	strogatz_vdp1	.2268	.3444	0%	0%	26.2	20.0
strogatz_bacres2	.1613	.1460	0%	0%	18.0	17.5	strogatz_barmag1	.0893	.0870	0%	0%	7.3	8.6
strogatz_vdp2	$2e^{-10}$.0000	100%	100%	5.0	4.4	strogatz_bacres1	.1962	.2729	0%	0%	17.7	20.0
strogatz_shearflow1	$1e^{-14}$.0574	100%	70%	10.5	11.7	strogatz_shearflow2	.0109	.0356	0%	0%	10.2	9.8

TABLE II
RESULTS ON PMLB

Function	RMSE	Model Size	Function	RMSE	Model Size
1028_SWD	0.6406	25.6	581_fri_c3_500_25	0.5961	11.3
712_chscase_geyser1	5.8590	16.5	1096_FacultySalaries	1.2676	19.4
1030_ERA	1.5974	14.5	690_visualizing_galaxy	18.0166	38.6
225_puma8NH	3.3510	36.7	560_bodyfat	1.9323	22.8
485_analcatdata_vehicle	138.7675	35.2	527_analcatdata_election2000	119.9147	30.2
659_sleuth_ex1714	906.8212	24.2	228_elusage	8.9315	24.4
609_fri_c0_1000_5	0.4339	18.3	529_pollen	1.5209	14.2
608_fri_c3_1000_10	0.6301	32.8	1196_BNG_pharynx	312.9888	37.0
663_rabe_266	4.3290	32.8	665_sleuth_case2002	7.3261	10.2
579_fri_c0_250_5	0.4461	19.0	1027_ESL	0.5546	15.0
596_fri_c2_250_5	0.5113	14.2	562_cpu_small	5.4327	41.3
230_machine_cpu	33.5677	34.0	503_wind	3.4793	16.0
1029_LEV	0.6550	13.0	1201_BNG_breastTumor	9.8683	26.0
573_cpu_act	5.8563	20.6	192_vineyard	1.9275	24.7
519_vinnie	1.5269	13.5	1203_BNG_pwLinear	3.0017	31.4
215_2dplanes	1.4543	39.3	1089_USCrime	12.6007	57.6
594_fri_c2_100_5	0.4366	14.4	561_cpu	17.2069	26.8
678_visualizing_environmental	2.5611	17.5	706_sleuth_case1202	41.4587	42.7
613_fri_c3_250_5	0.4734	19.2	695_chatfield_4	14.2940	44.2
547_no2	0.5639	9.0	522_pm10	0.7860	19.5
615_fri_c4_250_10	0.6203	28.7	611_fri_c3_100_5	0.4703	19.5
229_pwLinear	1.5885	33.4	591_fri_c1_100_10	0.5602	8.6
666_rmftsa_ladata	1.7789	14.0	1199_BNG_echoMonths	11.8985	28.4
227_cpu_small	4.1685	42.3	612_fri_c1_1000_5	0.6281	18.3
1595_poker	0.7661	24.8	523_analcatdata_neavote	0.8460	9.5
687_sleuth_ex1605	8.4458	25.0	1193_BNG_lowbwt	474.8430	52.0
564_fried	2.3390	48.0	210_cloud	0.3888	17.5

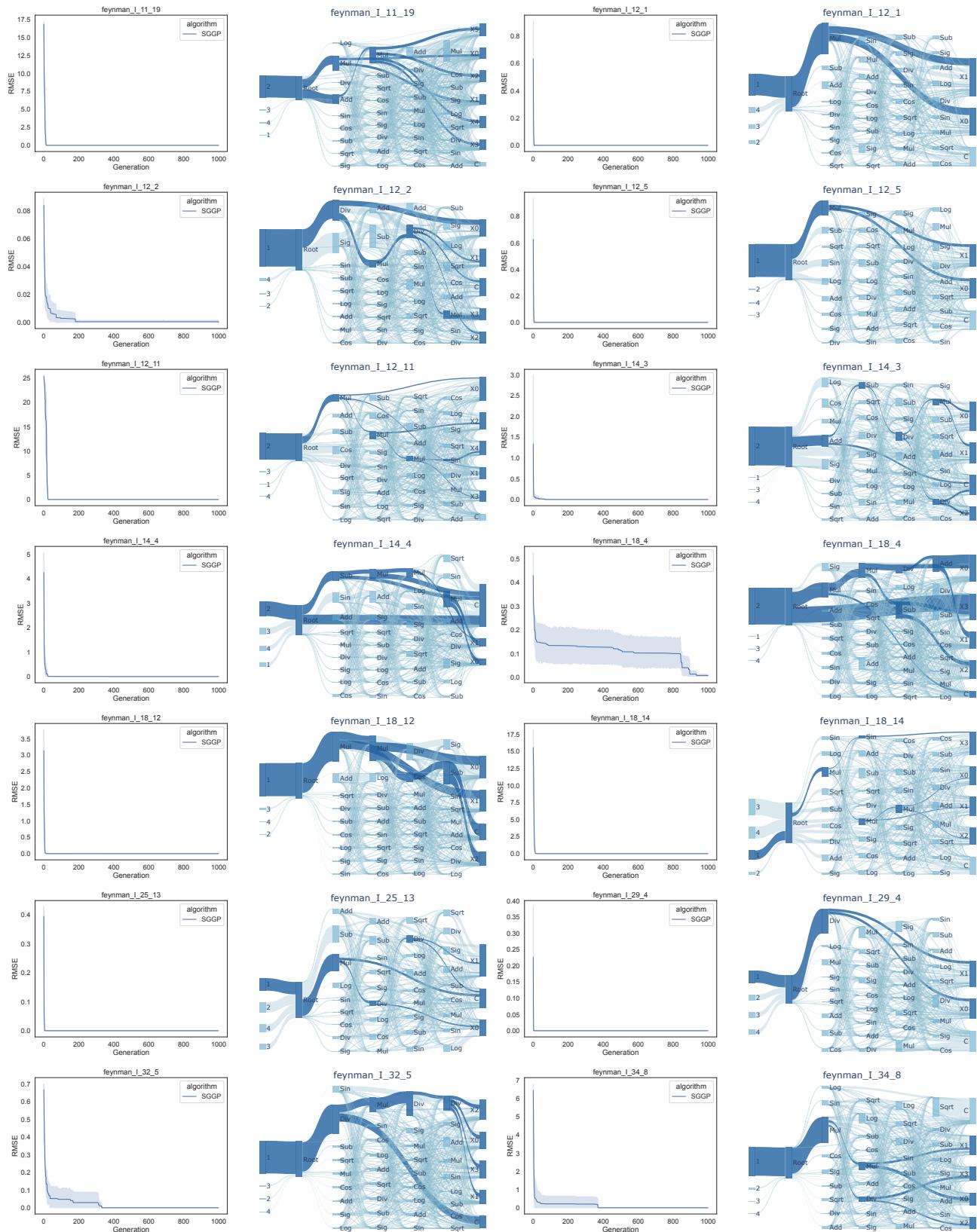


Fig. 1. Convergence results on FSRB.

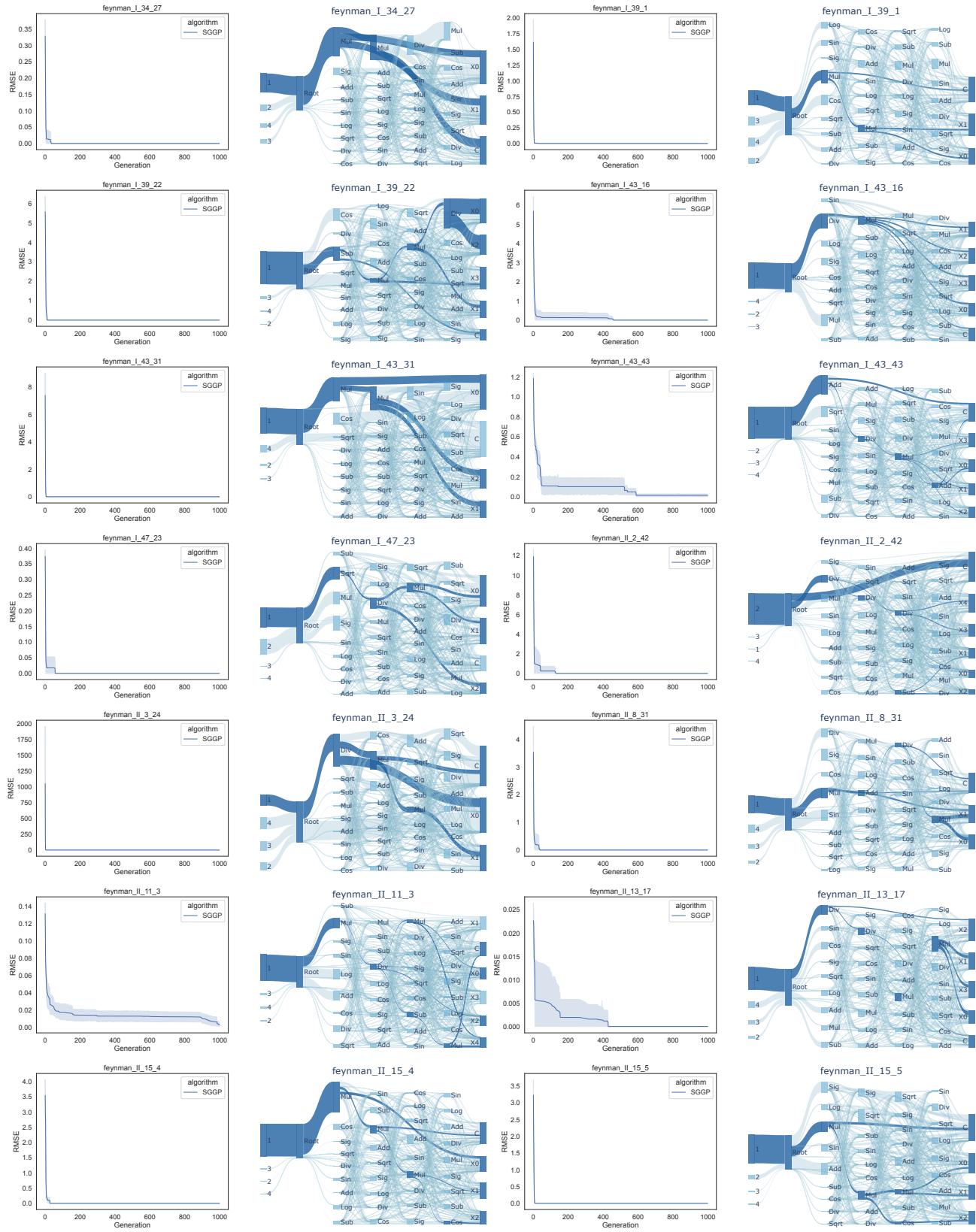


Fig. 2. Convergence results on FSRB.

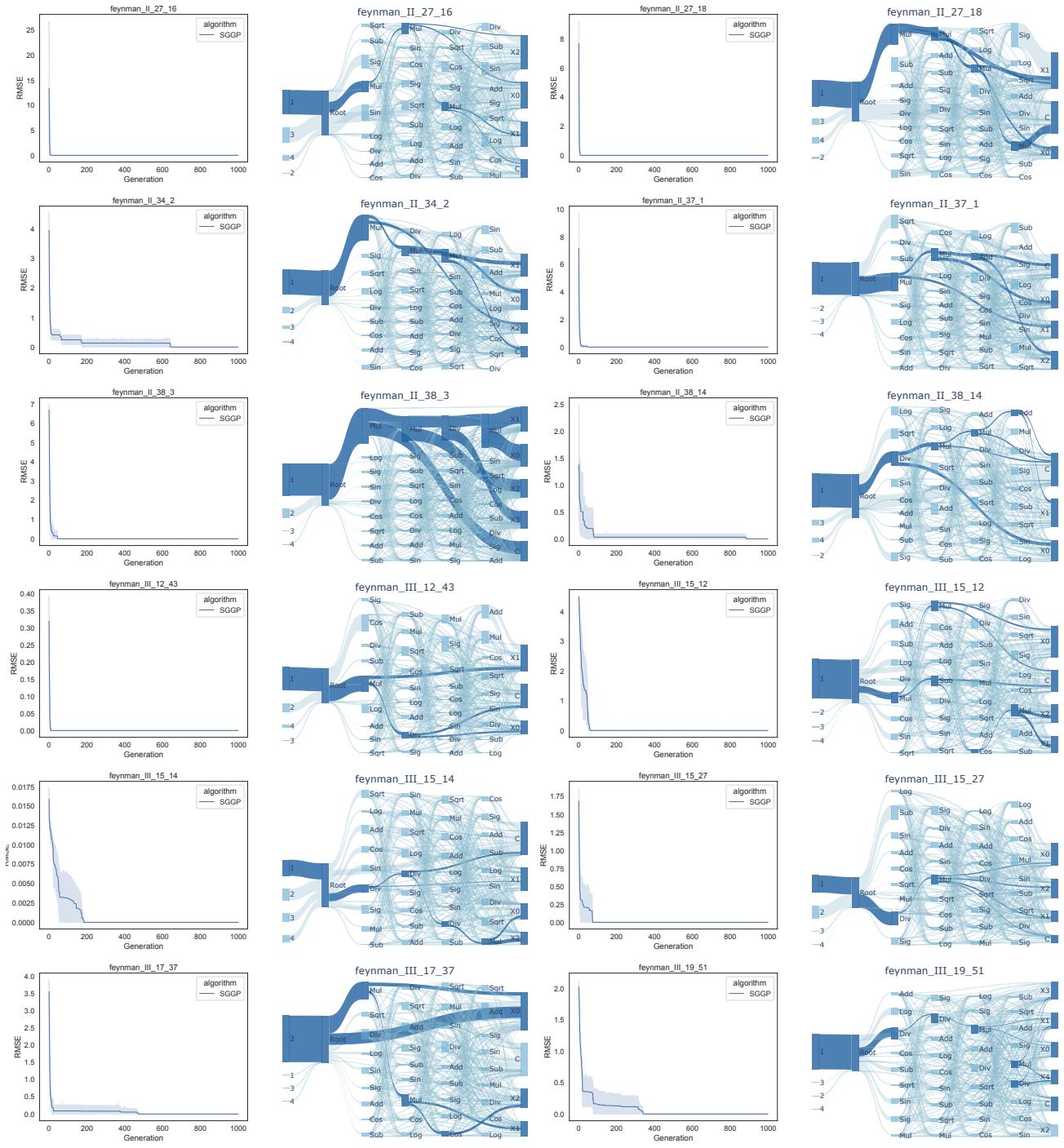


Fig. 3. Convergence results on FSRB.

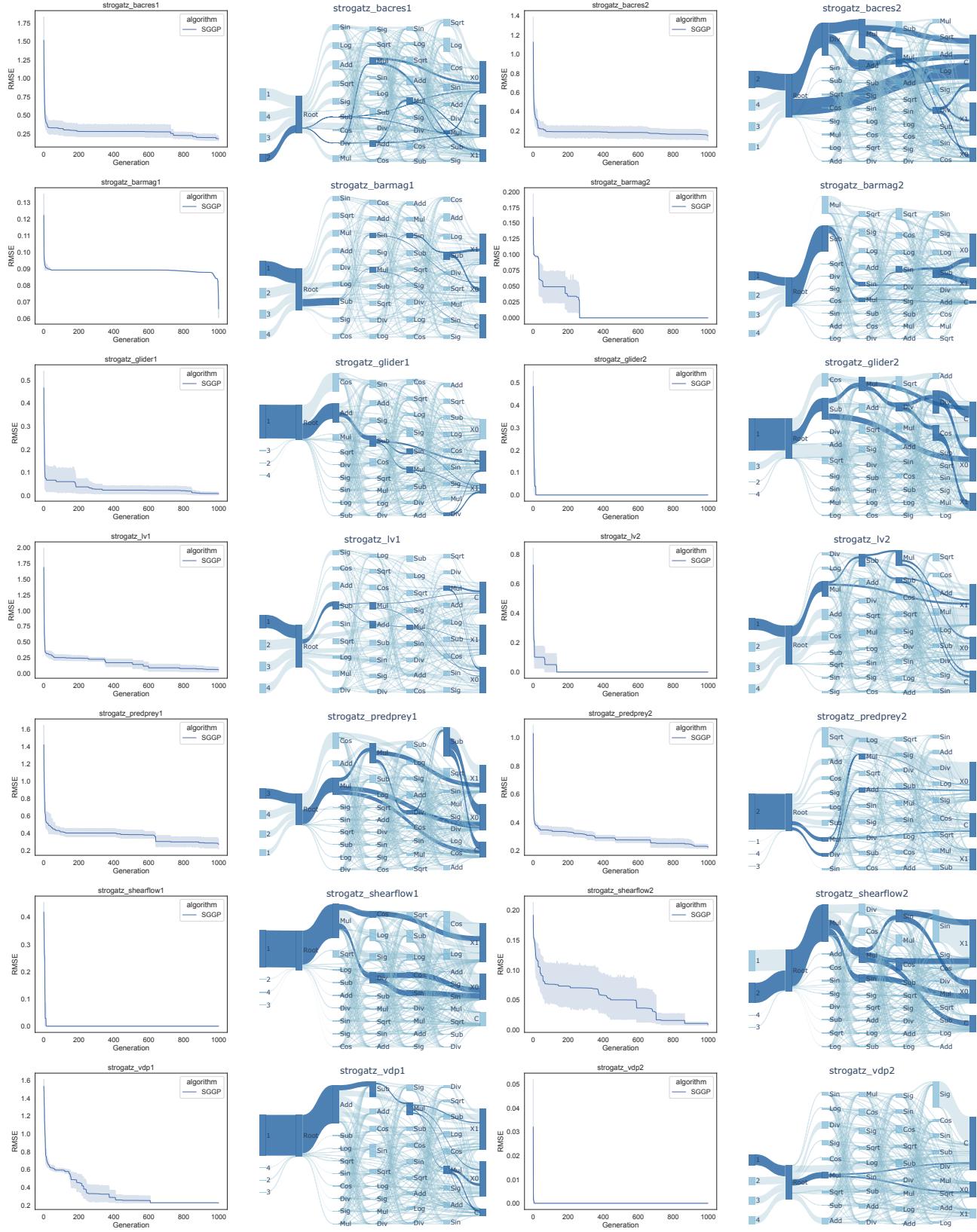


Fig. 4. Convergence results on Strogatz.

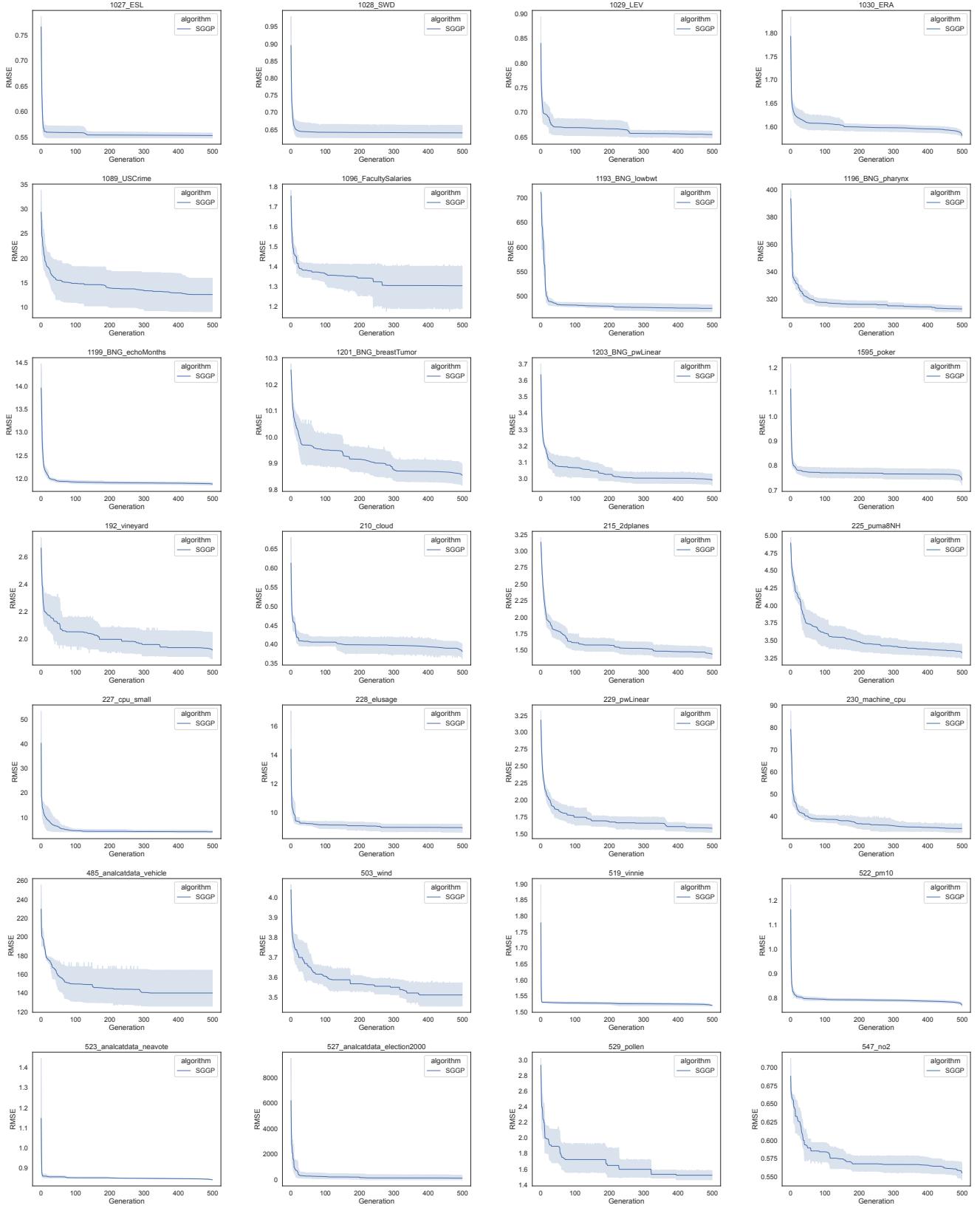


Fig. 5. Convergence results on PMLB.

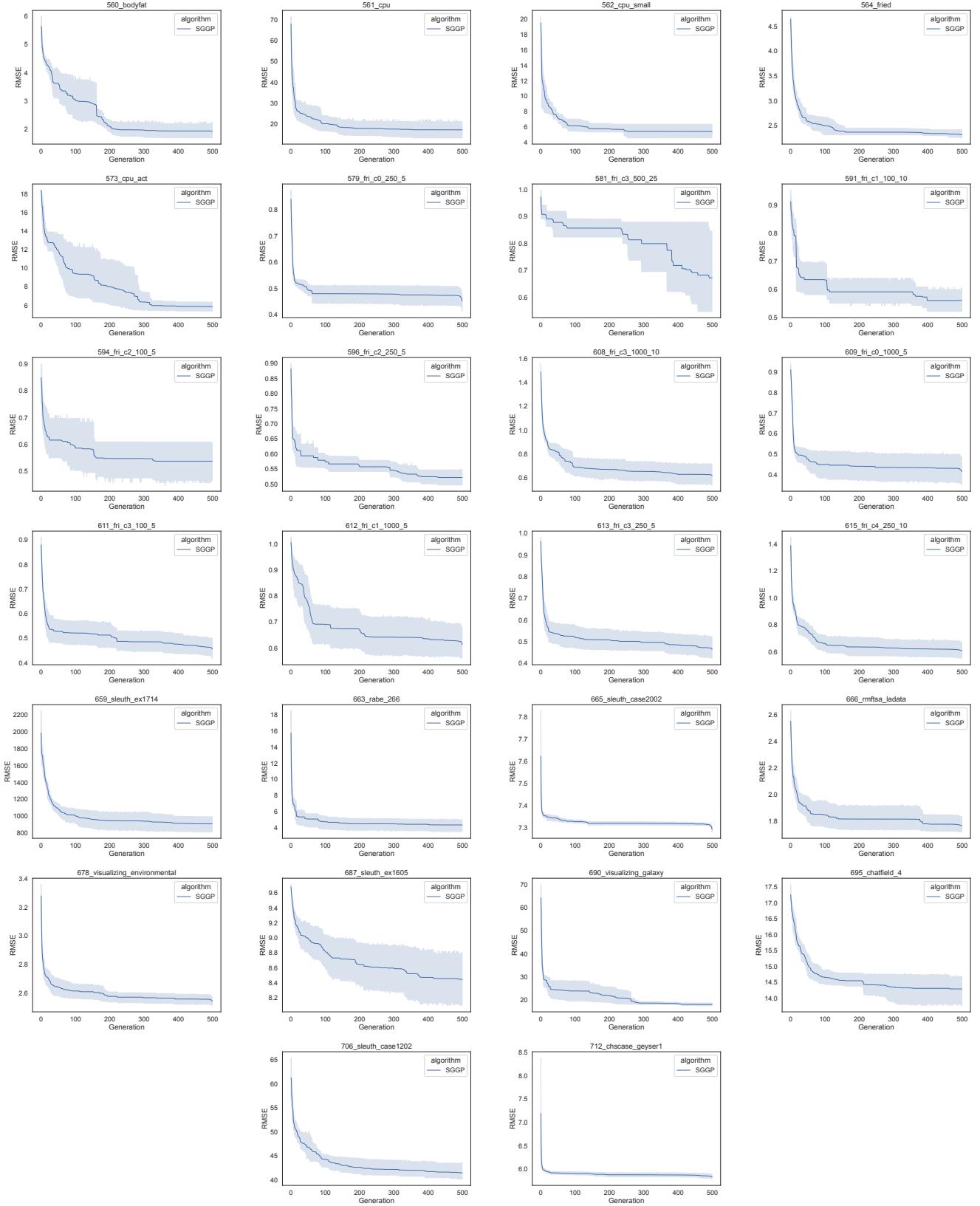


Fig. 6. Convergence results on PMLB.