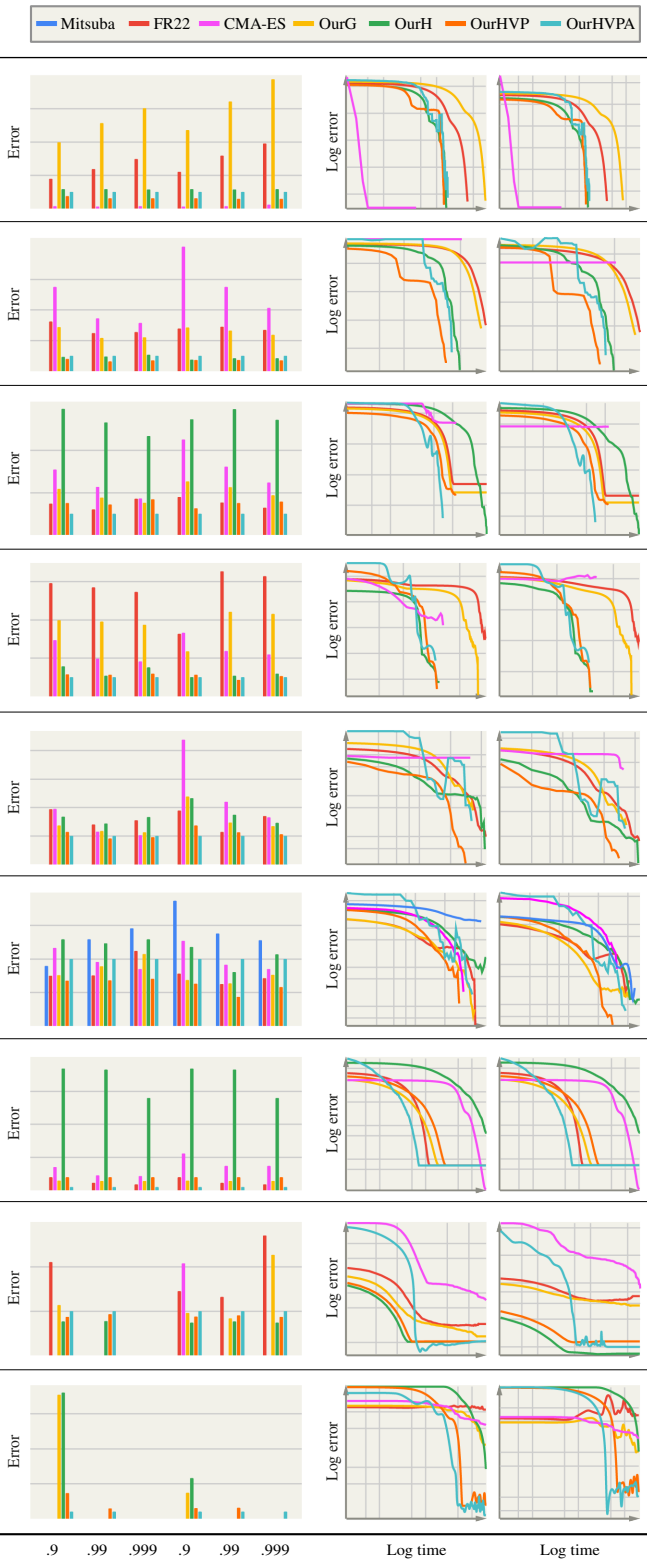
Table 2. Quantitative results of different methods on different tasks (rows) and their convergence plots. We report convergence time in wall-clock units, in ratio to the overall best method, `OurHVPA`. In the numerical columns, .9 and .99 report the time taken to achieve 90 and 99% error reduction from the initial starting configuration, respectively, while the bar plots graphically show these findings. The line plots report image- and parameter-space convergence in the left and right column, respectively, on a log-log scale.

Task	Method	Image error			Parameter error		
		.9	.99	.999	.9	.99	.999
QUAD[1]	Mitsu	— [2]	—	—	—	—	—
	FR22	1.80	2.38	2.98	2.20	3.17	3.90
	CMA-ES	**0.15**	**0.13**	**0.14**	**0.13**	**0.14**	**0.23**
	OurG	3.98	5.13	6.02	4.72	6.42	7.77
	OurH	1.17	1.17	1.15	1.18	1.16	1.17
	OurHVP	0.76	0.62	0.62	0.63	0.59	0.60
	OurHVPA	1.00	1.00	1.00	1.00	1.00	1.00
BOX2[3]	Mitsu	—	—	—	—	—	—
	FR22	3.24	2.49	2.57	2.78	2.89	2.70
	CMA-ES	5.51	3.45	3.15	8.13	5.51	4.13
	OurG	2.88	2.16	2.21	2.86	2.65	2.38
	OurH	0.93	0.95	1.08	0.76	0.84	1.84
	OurHVP	**0.81**	**0.64**	**0.70** [4]	**0.74**	**0.72**	**0.72**
	OurHVPA	1.00	1.00	1.00	1.00	1.00	1.00
BOX10[5]	Mitsu	—	—	—	—	—	—
	FR22	1.49	1.20	1.71	1.80	1.54	1.29
	CMA-ES	3.10	2.27	1.73	4.52	3.23	2.48
	OurG	2.18	1.77	1.53	2.53	2.26	1.88
	OurH	5.97	5.33	4.68	5.48	5.96	5.45
	OurHVP	1.51	1.44	1.69[6]	1.26	1.50	1.58
	OurHVPA	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
MUG[7]	Mitsu	—	—	—	—	—	—
	FR22	5.92	5.69	5.46	3.28	6.53	6.29
	CMA-ES	2.95	1.97	1.82	3.32	2.38	2.20
	OurG	3.99	3.91	3.74	2.36	4.42	4.30
	OurH	1.57	1.09	1.53	1.00	1.08	1.20
	OurHVP	1.15	1.14	1.18	1.14	**0.87**	1.05
	OurHVPA[8]	**1.00**	**1.00**	**1.00**	**1.00**	1.00	**1.00**
SHAD[9]	Mitsu	—	—	—	—	—	—
	FR22	1.94	1.40	1.55	1.89	1.14	1.71
	CMA-ES	1.96	1.15	1.03	4.38	2.20	1.66
	OurG	1.37	1.18	1.13	2.38	1.47	1.34
	OurH	1.67	1.44	1.66	2.32	1.74	1.46
	OurHVP	1.14	**0.91**	**0.96**	1.37	1.13	1.07
	OurHVPA	**1.00**	1.00	1.00	**1.00**	**1.00**	**1.00**[10]
BUNNY[11]	Mitsu[12]	0.90	1.29	1.46	1.87	1.38	1.28
	FR22	0.75	0.75	1.12	0.78	0.63	0.71
	CMA-ES	1.16	0.95	0.85	1.27	0.91	0.85
	OurG	0.76	0.89	1.07	0.69	0.64	0.76
	OurH	1.29	1.23	1.29	1.18	0.80	1.07
	OurHVP	**0.68**	**0.68**	**0.70**	**0.63**	**0.44**	**0.58**
	OurHVPA	1.00	1.00	1.00	1.00	1.00	1.00
TEXTURE[13]	Mitsu	—	—	—	—	—	—
	FR22	4.04	2.27	1.80	4.04	2.27	1.80
	CMA-ES	7.08	4.60	4.35	11.16	7.47	7.44
	OurG	3.03	2.86	2.82	3.03	2.86	2.82
	OurH[14]	40.12	39.78	—	40.12	39.78	—
	OurHVP	4.01	4.00	4.00	4.01	4.00	4.00
	OurHVPA	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
CNN[15]	Mitsu	—	—	—	—	—	—
	FR22	2.11[16]	—	—	1.45	1.32	2.71
	CMA-ES	—	—	—	2.08	—	—
	OurG	1.14	—	—	0.96	0.83	2.28
	OurH	**0.77**	**0.77**	—	**0.74**	**0.77**	**0.74**
	OurHVP	0.87	0.93[17]	—	0.88	0.91	0.87
	OurHVPA	1.00	1.00	— [18]	1.00	1.00	1.00
CNN5[19]	Mitsu	—	—	—	—	—	—
	FR22	—	—	—	—	—	—
	CMA-ES	—	—	—	—	—	—
	OurG	18.68	—	—	3.70	—	—
	OurH	19.00	—	—	5.79	—	—
	OurHVP	3.64[20]	1.46	—	1.49	1.58	—
	OurHVPA	**1.00**	**1.00**	—	**1.00**	**1.00**	**1.00**