

Research Results Tables

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August 6, 2025

1 Introduction

This document contains tables presenting the results of computational experiments.

2 Toy Example Results

Table 1: Results on Toy Examples.

	SMMD		MMD		Bayesflow		DNN-ABC	W2-ABC
	Original	Refined	Original	Refined	Original	Refined	Original	Original
MMD(n=50)	3.43	1.39	3.91	1.82	2.45	1.71	12.47	10.73
MMD(n=25)	4.15	2.26	3.91	1.92	3.84	3.31	12.57	10
MMD(n=100)	6.26	2.52	4.28	3.02	5.5	3.47	13.76	13.12
Run Time(n=50)	00:05:45	00:03:19	00:04:40	00:03:10	00:25:46	00:03:11	00:06:08	00:47:46
Run Time(n=25)	00:05:40	00:04:01	00:04:49	00:03:57	00:25:41	00:03:57	00:05:58	00:26:28
Run Time(n=100)	00:05:57	00:06:19	00:05:17	00:06:13	00:36:21	00:06:19	00:06:08	02:08:02

Note: All values in the table except run time are the original data multiplied by 100, rounded to two decimal places.

3 Lotka-Volterra Model Results

Table 2: Results on Lotka-Volterra Model.

	SMMD		MMD		Bayesflow		DNN-ABC	W2-ABC
	Original	Refined	Original	Refined	Original	Refined	Original	Original
Bias	1.47	0.18	1.42	0.13	1.66	0.2	3.37	42.3
95% CI Len (θ_1)	2.16	1.96	2.94	1.59	1.2	0.85	16.03	22.95
95% CI Len (θ_2)	2.64	2.29	2.91	2.03	3.45	1.9	11.22	67.67
95% CI Len (θ_3)	2.15	1.3	3.07	1.48	1.02	0.67	15.77	23.48
95% CI Len (θ_4)	3.04	2.96	2.74	3	3.69	2.42	13.33	67.95
Run Time	00:14:29	00:16:46	00:13:52	00:16:34	00:26:19	00:14:02	00:28:11	01:47:42

Note: All values in the table except run time are the original data multiplied by 10, rounded to two decimal places.

4 SIR Model Results

Table 3: Results on SIR Model.

	SMMD		MMD		Bayesflow		DNN-ABC	W2-ABC
	Original	Refined	Original	Refined	Original	Refined	Original	Original
Bias	0.99	0.02	1.2	0.04	0.04	0.03	0.09	0.39
95% CI Len (θ_1)	5.95	2.56	8.02	3.65	4.8	4.26	7.78	27.85
95% CI Len (θ_2)	6.69	3.16	8.43	4.66	4.88	4.4	7.38	22.43
Run Time	00:07:55	00:03:18	00:07:16	00:03:26	00:36:08	00:03:24	00:05:09	02:53:43

Note: Values for "Bias" are the original data multiplied by 10, while values for "95% CI Len" are the original data multiplied by 100. All results are rounded to two decimal places.