

Supplementary Materials

Computational Analysis of XLindley Parameters Using Adaptive Type-II Progressive Hybrid Censoring With Applications in Chemical Engineering

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Table S1: The AEs (first-column), RMSEs (second-column) and MRABs (third-column) of λ when $\lambda = 0.5$.

T	n	m	PCS	MLE			SEL						
							P1			P2			
1	40	12	1	0.4829	0.0678	0.1081	0.4494	0.0574	0.1025	0.5108	0.0266	0.0365	
			2	0.2880	0.2504	0.4419	0.3007	0.2126	0.3712	0.4093	0.1002	0.1801	
			3	0.2138	0.2884	0.5725	0.2784	0.2345	0.4432	0.3938	0.1183	0.2124	
		24	1	0.4884	0.0530	0.0859	0.4700	0.0346	0.0607	0.5162	0.0194	0.0313	
			2	0.3800	0.1249	0.2401	0.4356	0.0660	0.1288	0.4733	0.0281	0.0534	
			3	0.2996	0.2677	0.5201	0.3007	0.2116	0.3986	0.4100	0.0976	0.1800	
		36	1	0.4948	0.0456	0.1180	0.5052	0.0249	0.0424	0.4903	0.0151	0.0260	
			2	0.4830	0.0866	0.0736	0.5111	0.0295	0.0515	0.4995	0.0156	0.0268	
			3	0.3800	0.1249	0.2401	0.4592	0.0561	0.0851	0.4777	0.0266	0.0474	
	80	24	1	0.4883	0.0525	0.0851	0.4689	0.0385	0.0652	0.4851	0.0204	0.0340	
			2	0.3301	0.2196	0.3986	0.4744	0.0471	0.0713	0.4555	0.0469	0.0889	
			3	0.2361	0.2845	0.5279	0.2964	0.2135	0.4072	0.4093	0.1022	0.1813	
		48	1	0.4957	0.0395	0.0643	0.5090	0.0261	0.0425	0.4934	0.0160	0.0286	
			2	0.3933	0.1161	0.2150	0.4783	0.0263	0.0446	0.5152	0.0185	0.0323	
			3	0.3609	0.2645	0.4820	0.4356	0.0667	0.1288	0.4733	0.0281	0.0534	
		72	1	0.4979	0.0336	0.0531	0.4934	0.0160	0.0286	0.4998	0.0107	0.0182	
			2	0.4925	0.0539	0.0719	0.4977	0.0161	0.0277	0.5035	0.0117	0.0185	
			3	0.3920	0.1167	0.2165	0.4555	0.0469	0.0839	0.4783	0.0263	0.0446	
	2	40	12	1	0.4926	0.0746	0.1134	0.4689	0.0382	0.0652	0.4848	0.0206	0.0317
				2	0.4949	0.0821	0.1253	0.4660	0.0413	0.0710	0.4828	0.0219	0.0350
				3	0.2626	0.2478	0.4825	0.2901	0.2197	0.3155	0.4057	0.1023	0.1887
			24	1	0.4956	0.0511	0.0771	0.4703	0.0344	0.0601	0.5111	0.0140	0.0239
				2	0.4686	0.0760	0.1161	0.4723	0.0353	0.0588	0.5100	0.0150	0.0257
				3	0.5284	0.1159	0.1911	0.4308	0.0717	0.1385	0.4721	0.0355	0.0593
36			1	0.4969	0.0387	0.0607	0.5070	0.0256	0.0405	0.5017	0.0115	0.0181	
			2	0.4971	0.0580	0.0856	0.5028	0.0248	0.0413	0.5035	0.0117	0.0185	
			3	0.4047	0.1046	0.1715	0.4973	0.0245	0.0430	0.5044	0.0122	0.0200	
80		24	1	0.4961	0.0511	0.0770	0.4689	0.0380	0.0648	0.4905	0.0149	0.0258	
			2	0.4648	0.0752	0.1085	0.4655	0.0385	0.0691	0.4872	0.0166	0.0280	
			3	0.3171	0.2201	0.4197	0.4080	0.1003	0.1841	0.4742	0.0352	0.0601	
		48	1	0.4968	0.0331	0.0535	0.5067	0.0242	0.0401	0.5035	0.0115	0.0185	
			2	0.4992	0.0583	0.0892	0.5089	0.0259	0.0423	0.5046	0.0117	0.0188	
			3	0.3904	0.1148	0.2192	0.4575	0.0449	0.0850	0.4700	0.0312	0.0589	
		72	1	0.4981	0.0275	0.0436	0.4922	0.0184	0.0313	0.5001	0.0105	0.0180	
			2	0.4966	0.0364	0.0589	0.4893	0.0203	0.0341	0.4979	0.0109	0.0180	
			3	0.5176	0.0769	0.1197	0.4809	0.0245	0.0412	0.4978	0.0110	0.0188	

Table S2: The AEs (first-column), RMSEs (second-column) and MRABs (third-column) of λ when $\lambda = 1.5$.

T	n	m	PCS	MLE			SEL					
							P1			P2		
1	40	12	1	1.5172	0.3472	0.1631	1.4705	0.0373	0.0209	1.4687	0.0342	0.0202
			2	1.5187	0.3778	0.1818	1.4703	0.0375	0.0210	1.4687	0.0346	0.0208
			3	1.6225	0.4318	0.2089	1.4717	0.0463	0.0209	1.4583	0.0442	0.0208
		24	1	1.5100	0.2138	0.1093	1.4699	0.0345	0.0202	1.5104	0.0147	0.0084
			2	1.5132	0.2280	0.1150	1.4692	0.0352	0.0203	1.5122	0.0161	0.0093
			3	1.2573	0.3155	0.1831	1.4717	0.0363	0.0208	1.5154	0.0190	0.0110
		36	1	1.5033	0.1718	0.0881	1.5068	0.0250	0.0144	1.5044	0.0115	0.0063
			2	1.5010	0.1758	0.0905	1.5063	0.0252	0.0145	1.5050	0.0117	0.0064
			3	1.5624	0.3053	0.1531	1.5063	0.0252	0.0146	1.5053	0.0119	0.0065
	80	24	1	1.5100	0.2142	0.1093	1.4705	0.0370	0.0206	1.4911	0.0147	0.0085
			2	1.5123	0.2343	0.1187	1.4705	0.0373	0.0209	1.4910	0.0148	0.0086
			3	1.1923	0.3381	0.2070	1.4597	0.0435	0.0211	1.4875	0.0167	0.0094
		48	1	1.4990	0.1485	0.0783	1.4948	0.0216	0.0129	1.5044	0.0117	0.0066
			2	1.5008	0.1583	0.0836	1.4948	0.0218	0.0132	1.5050	0.0119	0.0069
			3	1.5716	0.2853	0.1459	1.4821	0.0244	0.0138	1.5053	0.0120	0.0071
		72	1	1.4985	0.1170	0.0627	1.5000	0.0159	0.0091	1.4999	0.0106	0.0061
			2	1.4985	0.1215	0.0648	1.4956	0.0169	0.0097	1.4998	0.0107	0.0062
			3	1.5273	0.1852	0.0984	1.4949	0.0174	0.0099	1.4998	0.0108	0.0063
2	40	12	1	1.5689	0.4386	0.2152	1.4653	0.0375	0.0231	1.4717	0.0363	0.0202
			2	1.5824	0.4358	0.2135	1.4653	0.0378	0.0232	1.4717	0.0364	0.0203
			3	1.6225	0.4318	0.2089	1.4655	0.0379	0.0233	1.4717	0.0365	0.0205
		24	1	1.5289	0.2733	0.1388	1.4692	0.0352	0.0202	1.5135	0.0173	0.0100
			2	1.5353	0.2798	0.1427	1.4717	0.0363	0.0202	1.5148	0.0183	0.0107
			3	1.5715	0.2873	0.1470	1.4715	0.0333	0.0194	1.5154	0.0190	0.0110
		36	1	1.5104	0.2102	0.1087	1.5063	0.0252	0.0144	1.4998	0.0107	0.0061
			2	1.5101	0.2108	0.1093	1.4692	0.0352	0.0208	1.4910	0.0117	0.0061
			3	1.5211	0.2492	0.1313	1.5063	0.0252	0.0144	1.4998	0.0116	0.0086
	80	24	1	1.5293	0.2737	0.1391	1.5063	0.0252	0.0144	1.4998	0.0125	0.0063
			2	1.5400	0.2821	0.1446	1.4717	0.0363	0.0202	1.4925	0.0144	0.0072
			3	1.5716	0.2853	0.1459	1.4717	0.0365	0.0208	1.4910	0.0148	0.0078
		48	1	1.5044	0.1773	0.0951	1.4920	0.0217	0.0130	1.5053	0.0117	0.0062
			2	1.5058	0.1783	0.0953	1.4920	0.0219	0.0131	1.5053	0.0118	0.0065
			3	1.5276	0.1845	0.0982	1.4920	0.0220	0.0132	1.5053	0.0119	0.0066
		72	1	1.5041	0.1429	0.0747	1.5000	0.0159	0.0091	1.5053	0.0105	0.0060
			2	1.5035	0.1436	0.0753	1.4967	0.0162	0.0094	1.5053	0.0110	0.0063
			3	1.5055	0.1763	0.0898	1.4968	0.0165	0.0096	1.5053	0.0114	0.0065

Table S3: The AEs (first-column), RMSEs (second-column) and MRABs (third-column) of $R(t)$ when $\lambda = 0.5$.

T	n	m	PCS	MLE			SEL					
							P1			P2		
1	40	12	1	0.9737	0.0055	0.0046	0.9765	0.0047	0.0043	0.9715	0.0022	0.0016
			2	0.9876	0.0180	0.0164	0.9873	0.0151	0.0140	0.9796	0.0078	0.0071
			3	0.9930	0.0207	0.0212	0.9888	0.0172	0.0169	0.9808	0.0093	0.0086
		24	1	0.9733	0.0044	0.0036	0.9748	0.0028	0.0026	0.9710	0.0016	0.0013
			2	0.9819	0.0099	0.0098	0.9776	0.0052	0.0050	0.9746	0.0021	0.0021
			3	0.9857	0.0194	0.0190	0.9873	0.0158	0.0154	0.9796	0.0078	0.0074
		36	1	0.9728	0.0038	0.0049	0.9719	0.0021	0.0018	0.9732	0.0012	0.0011
			2	0.9735	0.0067	0.0031	0.9714	0.0025	0.0022	0.9724	0.0013	0.0011
			3	0.9819	0.0099	0.0098	0.9757	0.0045	0.0035	0.9742	0.0022	0.0020
	80	24	1	0.9733	0.0043	0.0036	0.9749	0.0031	0.0027	0.9736	0.0017	0.0015
			2	0.9847	0.0160	0.0154	0.9760	0.0038	0.0037	0.9744	0.0038	0.0030
			3	0.9916	0.0198	0.0198	0.9877	0.0160	0.0158	0.9796	0.0081	0.0074
		48	1	0.9727	0.0033	0.0027	0.9716	0.0022	0.0018	0.9729	0.0013	0.0012
			2	0.9808	0.0092	0.0088	0.9742	0.0022	0.0019	0.9711	0.0015	0.0014
			3	0.9813	0.0192	0.0183	0.9776	0.0054	0.0054	0.9746	0.0023	0.0023
		72	1	0.9725	0.0028	0.0023	0.9729	0.0013	0.0012	0.9724	0.0009	0.0008
			2	0.9729	0.0043	0.0030	0.9726	0.0013	0.0012	0.9721	0.0010	0.0008
			3	0.9809	0.0092	0.0088	0.9760	0.0038	0.0033	0.9742	0.0022	0.0019
2	40	12	1	0.9728	0.0062	0.0048	0.9749	0.0030	0.0027	0.9736	0.0017	0.0013
			2	0.9726	0.0069	0.0053	0.9752	0.0034	0.0030	0.9738	0.0018	0.0015
			3	0.9899	0.0182	0.0183	0.9881	0.0164	0.0131	0.9799	0.0081	0.0077
		24	1	0.9727	0.0043	0.0033	0.9748	0.0028	0.0025	0.9714	0.0011	0.0010
			2	0.9748	0.0061	0.0048	0.9746	0.0029	0.0025	0.9715	0.0013	0.0011
			3	0.9697	0.0099	0.0078	0.9780	0.0058	0.0058	0.9747	0.0029	0.0025
		36	1	0.9726	0.0032	0.0026	0.9718	0.0021	0.0017	0.9722	0.0010	0.0008
			2	0.9725	0.0048	0.0036	0.9721	0.0021	0.0018	0.9721	0.0010	0.0008
			3	0.9800	0.0083	0.0074	0.9726	0.0020	0.0018	0.9720	0.0010	0.0009
	80	24	1	0.9726	0.0043	0.0033	0.9749	0.0028	0.0025	0.9732	0.0012	0.0011
			2	0.9751	0.0060	0.0045	0.9752	0.0031	0.0029	0.9734	0.0014	0.0012
			3	0.9859	0.0164	0.0162	0.9797	0.0080	0.0076	0.9745	0.0029	0.0025
		48	1	0.9726	0.0027	0.0023	0.9718	0.0020	0.0017	0.9721	0.0010	0.0008
			2	0.9724	0.0049	0.0038	0.9716	0.0022	0.0018	0.9720	0.0010	0.0008
			3	0.9811	0.0091	0.0070	0.9758	0.0037	0.0036	0.9748	0.0026	0.0024
		72	1	0.9725	0.0023	0.0019	0.9730	0.0015	0.0013	0.9724	0.0009	0.0008
			2	0.9726	0.0030	0.0025	0.9732	0.0017	0.0015	0.9725	0.0009	0.0008
			3	0.9708	0.0065	0.0052	0.9739	0.0020	0.0017	0.9725	0.0009	0.0008

Table S4: The AEs (first-column), RMSEs (second-column) and MRABs (third-column) of $R(t)$ when $\lambda = 1.5$.

T	n	m	PCS	MLE			SEL					
							P1			P2		
1	40	12	1	0.8803	0.0304	0.0249	0.8840	0.0033	0.0032	0.8842	0.0031	0.0031
			2	0.8802	0.0331	0.0278	0.8841	0.0034	0.0033	0.8842	0.0032	0.0032
			3	0.8710	0.0377	0.0317	0.8839	0.0041	0.0043	0.8852	0.0035	0.0032
		24	1	0.8806	0.0192	0.0168	0.8841	0.0031	0.0030	0.8804	0.0013	0.0013
			2	0.8804	0.0205	0.0177	0.8842	0.0032	0.0031	0.8803	0.0015	0.0014
			3	0.9037	0.0290	0.0286	0.8839	0.0033	0.0032	0.8800	0.0017	0.0017
		36	1	0.8812	0.0155	0.0136	0.8808	0.0022	0.0022	0.8810	0.0010	0.0012
			2	0.8814	0.0159	0.0140	0.8808	0.0023	0.0023	0.8809	0.0011	0.0012
			3	0.8760	0.0273	0.0235	0.8808	0.0025	0.0024	0.8809	0.0012	0.0013
	80	24	1	0.8806	0.0192	0.0168	0.8840	0.0032	0.0030	0.8822	0.0012	0.0012
			2	0.8804	0.0210	0.0183	0.8840	0.0034	0.0032	0.8822	0.0013	0.0013
			3	0.9097	0.0311	0.0313	0.8850	0.0040	0.0042	0.8825	0.0015	0.0015
		48	1	0.8815	0.0134	0.0121	0.8818	0.0020	0.0020	0.8810	0.0011	0.0011
			2	0.8814	0.0143	0.0129	0.8818	0.0021	0.0020	0.8809	0.0012	0.0013
			3	0.8752	0.0254	0.0223	0.8830	0.0022	0.0021	0.8809	0.0013	0.0014
		72	1	0.8815	0.0106	0.0097	0.8814	0.0014	0.0014	0.8814	0.0010	0.0010
			2	0.8816	0.0110	0.0100	0.8818	0.0015	0.0015	0.8814	0.0010	0.0011
			3	0.8790	0.0167	0.0152	0.8818	0.0016	0.0015	0.8814	0.0010	0.0012
2	40	12	1	0.8758	0.0384	0.0327	0.8845	0.0034	0.0036	0.8839	0.0033	0.0031
			2	0.8746	0.0381	0.0324	0.8845	0.0035	0.0037	0.8839	0.0035	0.0032
			3	0.8710	0.0377	0.0317	0.8845	0.0036	0.0039	0.8839	0.0036	0.0033
		24	1	0.8790	0.0244	0.0213	0.8842	0.0032	0.0031	0.8801	0.0016	0.0015
			2	0.8785	0.0250	0.0219	0.8839	0.0033	0.0031	0.8800	0.0017	0.0016
			3	0.8752	0.0256	0.0225	0.8840	0.0030	0.0030	0.8800	0.0019	0.0017
		36	1	0.8806	0.0189	0.0168	0.8808	0.0023	0.0022	0.8814	0.0010	0.0009
			2	0.8806	0.0190	0.0168	0.8842	0.0032	0.0032	0.8822	0.0012	0.0009
			3	0.8797	0.0225	0.0202	0.8808	0.0023	0.0022	0.8814	0.0011	0.0013
	80	24	1	0.8790	0.0244	0.0214	0.8808	0.0023	0.0022	0.8814	0.0013	0.0012
			2	0.8780	0.0252	0.0222	0.8839	0.0033	0.0031	0.8820	0.0013	0.0015
			3	0.8752	0.0254	0.0223	0.8839	0.0034	0.0032	0.8822	0.0015	0.0017
		48	1	0.8811	0.0160	0.0147	0.8821	0.0020	0.0020	0.8809	0.0011	0.0010
			2	0.8810	0.0161	0.0149	0.8821	0.0021	0.0021	0.8809	0.0012	0.0010
			3	0.8790	0.0166	0.0151	0.8821	0.0022	0.0023	0.8809	0.0013	0.0012
		72	1	0.8811	0.0129	0.0115	0.8814	0.0014	0.0014	0.8809	0.0010	0.0009
			2	0.8811	0.0130	0.0116	0.8817	0.0015	0.0015	0.8809	0.0011	0.0010
			3	0.8810	0.0160	0.0139	0.8817	0.0015	0.0016	0.8809	0.0012	0.0011

Table S5: The AEs (first-column), RMSEs (second-column) and MRABs (third-column) of $h(t)$ when $\lambda = 0.5$.

T	n	m	PCS	MLE			SEL					
							P1			P2		
1	40	12	1	0.2694	0.0570	0.1617	0.2402	0.0480	0.1520	0.2920	0.0232	0.0561
			2	0.1269	0.1840	0.5786	0.1291	0.1603	0.4952	0.2083	0.0823	0.2604
			3	0.0717	0.2118	0.7462	0.1145	0.1764	0.5950	0.1962	0.0957	0.3056
		24	1	0.2735	0.0450	0.1293	0.2572	0.0292	0.0909	0.2966	0.0168	0.0471
			2	0.1849	0.1013	0.3459	0.2287	0.0551	0.1877	0.2599	0.0230	0.0793
			3	0.1464	0.1992	0.6701	0.1291	0.1623	0.5432	0.2085	0.0799	0.2622
		36	1	0.2787	0.0389	0.1738	0.2873	0.0214	0.0644	0.2743	0.0128	0.0393
			2	0.2707	0.0692	0.1112	0.2924	0.0254	0.0785	0.2823	0.0134	0.0407
			3	0.1849	0.1013	0.3459	0.2486	0.0465	0.1257	0.2637	0.0226	0.0713
	80	24	1	0.2733	0.0446	0.1281	0.2564	0.0324	0.0975	0.2699	0.0173	0.0520
			2	0.1565	0.1637	0.5432	0.2451	0.0395	0.1327	0.2613	0.0393	0.1061
			3	0.0854	0.2027	0.6979	0.1254	0.1637	0.5561	0.2083	0.0834	0.2630
		48	1	0.2794	0.0338	0.0972	0.2906	0.0226	0.0650	0.2770	0.0137	0.0433
			2	0.1956	0.0942	0.3103	0.2642	0.0223	0.0670	0.2958	0.0160	0.0494
			3	0.1920	0.1969	0.6461	0.2287	0.0558	0.1907	0.2599	0.0238	0.0803
		72	1	0.2812	0.0288	0.0805	0.2770	0.0137	0.0433	0.2825	0.0092	0.0277
			2	0.2771	0.0440	0.1101	0.2807	0.0138	0.0420	0.2856	0.0101	0.0282
			3	0.1945	0.0946	0.3125	0.2451	0.0395	0.1227	0.2642	0.0223	0.0670
2	40	12	1	0.2778	0.0643	0.1716	0.2564	0.0322	0.0975	0.2697	0.0174	0.0477
			2	0.2801	0.0716	0.1902	0.2539	0.0348	0.1060	0.2680	0.0186	0.0527
			3	0.1034	0.1864	0.6462	0.1212	0.1677	0.3687	0.2051	0.0835	0.2742
		24	1	0.2796	0.0442	0.1168	0.2574	0.0290	0.0880	0.2922	0.0121	0.0365
			2	0.2575	0.0624	0.1709	0.2592	0.0298	0.0900	0.2912	0.0129	0.0393
			3	0.3103	0.1030	0.2773	0.2248	0.0598	0.2045	0.2590	0.0300	0.0887
		36	1	0.2803	0.0331	0.0918	0.2888	0.0218	0.0611	0.2841	0.0099	0.0275
			2	0.2811	0.0496	0.1295	0.2852	0.0215	0.0626	0.2856	0.0101	0.0282
			3	0.2044	0.0853	0.2648	0.2805	0.0212	0.0655	0.2864	0.0105	0.0304
	80	24	1	0.2800	0.0441	0.1166	0.2564	0.0320	0.0966	0.2745	0.0127	0.0390
			2	0.2543	0.0614	0.1588	0.2535	0.0324	0.1034	0.2717	0.0142	0.0422
			3	0.1443	0.1687	0.5710	0.2069	0.0822	0.2677	0.2609	0.0297	0.0902
		48	1	0.2802	0.0284	0.0810	0.2885	0.0209	0.0612	0.2856	0.0099	0.0282
			2	0.2828	0.0506	0.1356	0.2905	0.0225	0.0647	0.2866	0.0101	0.0285
			3	0.1930	0.0935	0.2172	0.2468	0.0379	0.1269	0.2571	0.0265	0.0882
		72	1	0.2812	0.0236	0.0661	0.2761	0.0157	0.0473	0.2827	0.0091	0.0273
			2	0.2801	0.0312	0.0893	0.2735	0.0173	0.0515	0.2808	0.0094	0.0274
			3	0.2992	0.0677	0.1839	0.2664	0.0208	0.0619	0.2808	0.0095	0.0286

Table S6: The AEs (first-column), RMSEs (second-column) and MRABs (third-column) of $h(t)$ when $\lambda = 1.5$.

T	n	m	PCS	MLE			SEL					
							P1			P2		
Prior \rightarrow												
1	40	12	1	1.2844	0.3578	0.1990	1.2353	0.0384	0.0255	1.2334	0.0352	0.0246
			2	1.2861	0.3893	0.2218	1.2350	0.0386	0.0257	1.2334	0.0353	0.0255
			3	1.3931	0.4455	0.2551	1.2365	0.0456	0.0339	1.2227	0.0387	0.0255
		24	1	1.2764	0.2204	0.1335	1.2347	0.0356	0.0246	1.2764	0.0151	0.0103
			2	1.2797	0.2351	0.1404	1.2339	0.0362	0.0248	1.2782	0.0166	0.0114
			3	1.0175	0.3225	0.2221	1.2365	0.0374	0.0253	1.2815	0.0195	0.0135
		36	1	1.2693	0.1771	0.1075	1.2726	0.0258	0.0175	1.2702	0.0119	0.0074
			2	1.2670	0.1811	0.1105	1.2722	0.0259	0.0176	1.2707	0.0120	0.0075
			3	1.3311	0.3137	0.1867	1.2722	0.0261	0.0177	1.2711	0.0122	0.0078
	80	24	1	1.2765	0.2208	0.1334	1.2353	0.0382	0.0251	1.2565	0.0152	0.0104
			2	1.2789	0.2416	0.1449	1.2353	0.0384	0.0255	1.2563	0.0153	0.0105
			3	0.9509	0.3455	0.2510	1.2241	0.0448	0.0328	1.2528	0.0172	0.0114
		48	1	1.2648	0.1531	0.0956	1.2603	0.0222	0.0158	1.2702	0.0121	0.0078
			2	1.2667	0.1631	0.1020	1.2603	0.0225	0.0161	1.2707	0.0123	0.0080
			3	1.3401	0.2944	0.1783	1.2472	0.0252	0.0168	1.2711	0.0124	0.0086
		72	1	1.2643	0.1205	0.0765	1.2656	0.0164	0.0111	1.2656	0.0109	0.0074
			2	1.2642	0.1252	0.0791	1.2611	0.0174	0.0118	1.2654	0.0112	0.0075
			3	1.2941	0.1910	0.1202	1.2604	0.0179	0.0121	1.2654	0.0116	0.0077
2	40	12	1	1.3381	0.4522	0.2626	1.2299	0.0386	0.0283	1.2365	0.0374	0.0240
			2	1.3520	0.4494	0.2606	1.2299	0.0387	0.0283	1.2365	0.0375	0.0242
			3	1.3931	0.4455	0.2551	1.2301	0.0389	0.0285	1.2365	0.0376	0.0246
		24	1	1.2961	0.2818	0.1695	1.2339	0.0362	0.0246	1.2796	0.0178	0.0122
			2	1.3028	0.2885	0.1742	1.2365	0.0374	0.0246	1.2808	0.0189	0.0130
			3	1.3400	0.2964	0.1796	1.2363	0.0343	0.0237	1.2815	0.0195	0.0135
		36	1	1.2768	0.2166	0.1327	1.2722	0.0259	0.0176	1.2654	0.0112	0.0074
			2	1.2766	0.2172	0.1334	1.2339	0.0362	0.0253	1.2563	0.0120	0.0074
			3	1.2882	0.2564	0.1602	1.2722	0.0259	0.0176	1.2654	0.0121	0.0105
	80	24	1	1.2965	0.2822	0.1698	1.2722	0.0259	0.0176	1.2654	0.0126	0.0079
			2	1.3076	0.2909	0.1765	1.2365	0.0374	0.0246	1.2579	0.0148	0.0104
			3	1.3401	0.2944	0.1783	1.2365	0.0377	0.0253	1.2563	0.0153	0.0106
		48	1	1.2706	0.1827	0.1161	1.2573	0.0224	0.0157	1.2711	0.0120	0.0076
			2	1.2719	0.1838	0.1163	1.2573	0.0225	0.0159	1.2711	0.0122	0.0077
			3	1.2945	0.1902	0.1199	1.2573	0.0226	0.0161	1.2711	0.0123	0.0084
		72	1	1.2701	0.1472	0.0912	1.2656	0.0164	0.0111	1.2711	0.0111	0.0072
			2	1.2695	0.1480	0.0920	1.2622	0.0169	0.0115	1.2711	0.0112	0.0073
			3	1.2717	0.1813	0.1096	1.2623	0.0171	0.0119	1.2711	0.0113	0.0077

Table S7: The ACLs (first-column) and CPs (second-column) of ACI/HPD credible intervals of λ when $\lambda = 0.5$.

T Prior \rightarrow	n	m	PCS	ACI		HPD			
						P1		P2	
1	40	12	1	0.2904	0.943	0.1050	0.940	0.0804	0.945
			2	0.3905	0.940	0.2509	0.937	0.1335	0.942
			3	0.4046	0.939	0.2529	0.936	0.1537	0.941
		24	1	0.1855	0.951	0.0878	0.957	0.0396	0.961
			2	0.1869	0.952	0.0992	0.958	0.0485	0.962
			3	0.2910	0.947	0.1234	0.952	0.1212	0.957
		36	1	0.1269	0.957	0.0642	0.964	0.0382	0.969
			2	0.1852	0.955	0.0646	0.962	0.0389	0.967
			3	0.2413	0.953	0.0650	0.960	0.0523	0.965
	80	24	1	0.2604	0.947	0.0968	0.956	0.0502	0.962
			2	0.2787	0.949	0.0840	0.958	0.0565	0.965
			3	0.2810	0.950	0.2221	0.959	0.1385	0.966
		48	1	0.1268	0.955	0.0576	0.963	0.0377	0.970
			2	0.1606	0.954	0.0779	0.963	0.0482	0.970
			3	0.2092	0.952	0.1218	0.961	0.0572	0.968
		72	1	0.0808	0.960	0.0523	0.968	0.0302	0.975
			2	0.1135	0.958	0.0565	0.968	0.0394	0.974
			3	0.1718	0.955	0.0565	0.964	0.0417	0.971
2	40	12	1	0.4008	0.923	0.0868	0.955	0.0498	0.962
			2	0.4134	0.920	0.0883	0.952	0.0504	0.959
			3	0.4145	0.919	0.1427	0.951	0.1271	0.958
		24	1	0.1918	0.940	0.0815	0.963	0.0396	0.970
			2	0.2898	0.941	0.0840	0.964	0.0422	0.971
			3	0.2956	0.936	0.0911	0.959	0.0562	0.966
		36	1	0.1747	0.947	0.0627	0.969	0.0362	0.976
			2	0.2260	0.945	0.0644	0.967	0.0371	0.974
			3	0.2424	0.943	0.0655	0.967	0.0380	0.973
	80	24	1	0.2852	0.940	0.0840	0.962	0.0379	0.968
			2	0.2853	0.942	0.0865	0.964	0.0396	0.970
			3	0.2953	0.943	0.1229	0.965	0.0710	0.971
		48	1	0.1305	0.948	0.0750	0.971	0.0377	0.976
			2	0.2044	0.947	0.0775	0.970	0.0380	0.975
			3	0.2097	0.945	0.0814	0.967	0.0394	0.973
		72	1	0.1003	0.953	0.0541	0.974	0.0301	0.980
			2	0.1584	0.951	0.0588	0.974	0.0361	0.979
			3	0.1719	0.948	0.0606	0.971	0.0376	0.976

Table S8: The ACLs (first-column) and CPs (second-column) of ACI/HPD credible intervals of λ when $\lambda = 1.5$.

T Prior \rightarrow	n	m	PCS	ACI		HPD				
						P1		P2		
1	40	12	1	1.4377	0.901	0.0866	0.965	0.0542	0.970	
			2	1.4489	0.898	0.0875	0.962	0.0545	0.969	
			3	1.5334	0.897	0.0875	0.961	0.0569	0.968	
		24	1	1.0144	0.908	0.0836	0.973	0.0380	0.980	
			2	1.0184	0.909	0.0838	0.974	0.0384	0.981	
			3	1.0445	0.904	0.0839	0.969	0.0402	0.980	
		36	1	0.8245	0.913	0.0606	0.979	0.0375	0.986	
			2	0.8273	0.912	0.0635	0.977	0.0379	0.984	
			3	0.6708	0.908	0.0638	0.977	0.0380	0.985	
	80	24	1	1.0091	0.914	0.0829	0.971	0.0385	0.985	
			2	1.0181	0.916	0.0836	0.973	0.0402	0.987	
			3	1.0424	0.917	0.0838	0.974	0.0404	0.988	
		48	1	0.7100	0.922	0.0577	0.979	0.0377	0.992	
			2	0.7139	0.921	0.0703	0.978	0.0380	0.992	
			3	0.7180	0.919	0.0705	0.976	0.0383	0.990	
		72	1	0.4458	0.926	0.0564	0.983	0.0373	0.995	
			2	0.5816	0.924	0.0575	0.982	0.0376	0.996	
			3	0.5827	0.922	0.0580	0.979	0.0378	0.993	
	2	40	12	1	1.5074	0.890	0.0875	0.964	0.0551	0.972
				2	1.5081	0.889	0.0877	0.962	0.0553	0.971
				3	1.5338	0.887	0.0878	0.960	0.0554	0.969
24			1	1.0336	0.907	0.0828	0.966	0.0394	0.982	
			2	1.0320	0.908	0.0829	0.967	0.0397	0.983	
			3	1.0509	0.903	0.0831	0.962	0.0402	0.978	
36			1	0.8321	0.911	0.0635	0.974	0.0375	0.989	
			2	0.8305	0.910	0.0635	0.972	0.0376	0.988	
			3	0.8350	0.910	0.0646	0.970	0.0377	0.988	
80		24	1	1.0309	0.909	0.0829	0.965	0.0402	0.984	
			2	1.0335	0.909	0.0830	0.967	0.0404	0.984	
			3	1.0424	0.910	0.0831	0.968	0.0417	0.985	
		48	1	0.7128	0.919	0.0680	0.972	0.0377	0.991	
			2	0.7170	0.917	0.0681	0.972	0.0378	0.990	
			3	0.7182	0.916	0.0683	0.970	0.0379	0.989	
		72	1	0.5829	0.920	0.0564	0.977	0.0372	0.995	
			2	0.5839	0.918	0.0569	0.977	0.0375	0.994	
			3	0.5852	0.918	0.0570	0.973	0.0374	0.994	

Table S9: The ACLs (first-column) and CPs (second-column) of ACI/HPD credible intervals of $R(t)$ when $\lambda = 0.5$.

T Prior \rightarrow	n	m	PCS	ACI		HPD			
						P1		P2	
1	40	12	1	0.0240	0.976	0.0084	0.979	0.0068	0.982
			2	0.0322	0.961	0.0144	0.964	0.0101	0.967
			3	0.0333	0.959	0.0174	0.962	0.0108	0.966
		24	1	0.0142	0.980	0.0073	0.983	0.0033	0.986
			2	0.0143	0.975	0.0083	0.978	0.0040	0.985
			3	0.0240	0.971	0.0099	0.977	0.0094	0.982
		36	1	0.0077	0.983	0.0051	0.986	0.0032	0.989
			2	0.0136	0.983	0.0053	0.986	0.0033	0.989
			3	0.0200	0.976	0.0056	0.979	0.0043	0.987
	80	24	1	0.0174	0.979	0.0078	0.987	0.0041	0.986
			2	0.0217	0.969	0.0068	0.977	0.0046	0.985
			3	0.0233	0.965	0.0134	0.972	0.0105	0.978
		48	1	0.0096	0.982	0.0048	0.990	0.0031	0.993
			2	0.0118	0.981	0.0065	0.989	0.0036	0.992
			3	0.0174	0.978	0.0096	0.986	0.0047	0.989
		72	1	0.0046	0.988	0.0043	0.993	0.0025	0.998
			2	0.0079	0.985	0.0045	0.993	0.0033	0.996
			3	0.0143	0.982	0.0047	0.992	0.0038	0.996
2	40	12	1	0.0332	0.952	0.0072	0.983	0.0041	0.985
			2	0.0342	0.950	0.0073	0.968	0.0041	0.984
			3	0.0350	0.946	0.0111	0.966	0.0098	0.981
		24	1	0.0149	0.968	0.0066	0.987	0.0033	0.993
			2	0.0241	0.961	0.0068	0.982	0.0035	0.992
			3	0.0245	0.957	0.0075	0.978	0.0046	0.990
		36	1	0.0124	0.974	0.0051	0.990	0.0030	0.994
			2	0.0184	0.966	0.0052	0.990	0.0031	0.994
			3	0.0201	0.963	0.0053	0.983	0.0032	0.993
	80	24	1	0.0237	0.962	0.0068	0.989	0.0031	0.991
			2	0.0240	0.959	0.0070	0.979	0.0032	0.989
			3	0.0245	0.955	0.0095	0.975	0.0058	0.987
		48	1	0.0100	0.979	0.0063	0.992	0.0030	0.993
			2	0.0170	0.968	0.0065	0.991	0.0031	0.993
			3	0.0174	0.963	0.0066	0.988	0.0032	0.991
		72	1	0.0064	0.984	0.0044	0.994	0.0025	0.997
			2	0.0129	0.972	0.0049	0.993	0.0028	0.997
			3	0.0143	0.969	0.0050	0.992	0.0030	0.996

Table S10: The ACLs (first-column) and CPs (second-column) of ACI/HPD credible intervals of $R(t)$ when $\lambda = 1.5$.

T	n	m	PCS	ACI		HPD				
						P1		P2		
1	40	12	1	0.1287	0.960	0.0079	0.982	0.0049	0.985	
			2	0.1300	0.958	0.0080	0.969	0.0051	0.978	
			3	0.1359	0.954	0.0081	0.969	0.0052	0.972	
		24	1	0.0916	0.976	0.0076	0.985	0.0035	0.986	
			2	0.0921	0.969	0.0077	0.985	0.0036	0.987	
			3	0.0937	0.965	0.0079	0.985	0.0040	0.985	
		36	1	0.0747	0.982	0.0055	0.986	0.0034	0.988	
			2	0.0750	0.974	0.0058	0.986	0.0035	0.989	
			3	0.0616	0.971	0.0060	0.985	0.0036	0.988	
	80	24	1	0.0911	0.967	0.0076	0.988	0.0035	0.990	
			2	0.0920	0.964	0.0077	0.987	0.0037	0.989	
			3	0.0935	0.960	0.0077	0.987	0.0040	0.988	
		48	1	0.0644	0.984	0.0053	0.990	0.0034	0.992	
			2	0.0648	0.973	0.0064	0.989	0.0035	0.992	
			3	0.0649	0.968	0.0069	0.988	0.0039	0.991	
		72	1	0.0412	0.985	0.0051	0.991	0.0032	0.996	
			2	0.0528	0.977	0.0052	0.991	0.0032	0.996	
			3	0.0529	0.974	0.0053	0.990	0.0033	0.996	
	2	40	12	1	0.1340	0.943	0.0080	0.981	0.0050	0.984
				2	0.1339	0.945	0.0080	0.981	0.0052	0.983
				3	0.1359	0.955	0.0080	0.980	0.0053	0.983
			24	1	0.0931	0.952	0.0076	0.984	0.0034	0.990
				2	0.0928	0.954	0.0076	0.984	0.0035	0.990
				3	0.0943	0.958	0.0076	0.984	0.0036	0.991
36			1	0.0752	0.956	0.0058	0.988	0.0031	0.993	
			2	0.0751	0.955	0.0058	0.988	0.0032	0.992	
			3	0.0753	0.953	0.0059	0.988	0.0034	0.992	
80		24	1	0.0927	0.950	0.0076	0.987	0.0037	0.989	
			2	0.0931	0.949	0.0077	0.988	0.0038	0.991	
			3	0.0935	0.958	0.0078	0.987	0.0038	0.990	
		48	1	0.0645	0.958	0.0061	0.989	0.0033	0.992	
			2	0.0649	0.956	0.0062	0.989	0.0035	0.992	
			3	0.0650	0.962	0.0063	0.988	0.0036	0.991	
		72	1	0.0528	0.963	0.0051	0.992	0.0030	0.995	
			2	0.0529	0.962	0.0052	0.991	0.0031	0.995	
			3	0.0531	0.963	0.0052	0.992	0.0033	0.993	

Table S11: The ACLs (first-column) and CPs (second-column) of ACI/HPD credible intervals of $h(t)$ when $\lambda = 0.5$.

T	n	m	PCS	ACI		HPD				
						P1		P2		
1	40	12	1	0.2475	0.960	0.0865	0.971	0.0699	0.978	
			2	0.3326	0.958	0.1739	0.970	0.1101	0.977	
			3	0.3438	0.954	0.1779	0.969	0.1214	0.975	
		24	1	0.1456	0.976	0.0752	0.980	0.0341	0.986	
			2	0.1464	0.962	0.0853	0.976	0.0415	0.982	
			3	0.2480	0.958	0.1015	0.973	0.0961	0.978	
		36	1	0.0781	0.982	0.0524	0.985	0.0330	0.996	
			2	0.1402	0.969	0.0543	0.984	0.0337	0.989	
			3	0.2065	0.964	0.0552	0.982	0.0442	0.986	
	80	24	1	0.2256	0.967	0.0801	0.982	0.0425	0.989	
			2	0.2403	0.964	0.0704	0.979	0.0470	0.986	
			3	0.1775	0.960	0.1578	0.975	0.1111	0.982	
		48	1	0.0982	0.980	0.0494	0.984	0.0324	0.993	
			2	0.1223	0.969	0.0675	0.982	0.0405	0.990	
			3	0.1791	0.963	0.0982	0.981	0.0485	0.986	
		72	1	0.0470	0.983	0.0442	0.989	0.0254	0.997	
			2	0.0808	0.975	0.0467	0.988	0.0336	0.995	
			3	0.1473	0.971	0.0485	0.986	0.0387	0.993	
	2	40	12	1	0.3435	0.954	0.0745	0.976	0.0420	0.981
				2	0.3536	0.953	0.0754	0.975	0.0426	0.980
				3	0.3633	0.950	0.1141	0.971	0.1004	0.977
			24	1	0.1525	0.973	0.0685	0.983	0.0341	0.990
				2	0.2485	0.959	0.0704	0.979	0.0363	0.987
				3	0.2531	0.954	0.0775	0.975	0.0468	0.984
36			1	0.1276	0.978	0.0526	0.988	0.0312	0.996	
			2	0.1902	0.964	0.0532	0.986	0.0321	0.992	
			3	0.2077	0.959	0.0542	0.985	0.0327	0.989	
80		24	1	0.2449	0.965	0.0704	0.984	0.0326	0.991	
			2	0.2481	0.962	0.0724	0.981	0.0341	0.991	
			3	0.2530	0.958	0.1001	0.978	0.0599	0.987	
		48	1	0.1022	0.976	0.0648	0.989	0.0326	0.995	
			2	0.1751	0.965	0.0670	0.985	0.0325	0.995	
			3	0.1797	0.964	0.0684	0.982	0.0336	0.994	
		72	1	0.0659	0.980	0.0458	0.990	0.0253	0.998	
			2	0.1329	0.971	0.0503	0.988	0.0315	0.996	
			3	0.1473	0.969	0.0518	0.987	0.0323	0.995	

Table S12: The ACLs (first-column) and CPs (second-column) of ACI/HPD credible intervals of $h(t)$ when $\lambda = 1.5$.

T Prior \rightarrow	n	m	PCS	ACI		HPD			
						P1		P2	
1	40	12	1	1.4780	0.949	0.0892	0.968	0.0558	0.980
			2	1.4901	0.947	0.0901	0.966	0.0562	0.979
			3	1.5792	0.944	0.0902	0.966	0.0586	0.977
		24	1	1.0441	0.960	0.0854	0.978	0.0396	0.984
			2	1.0487	0.951	0.0861	0.976	0.0398	0.983
			3	1.0758	0.947	0.0867	0.974	0.0414	0.980
		36	1	0.8490	0.966	0.0624	0.983	0.0387	0.994
			2	0.8521	0.958	0.0654	0.983	0.0390	0.987
			3	0.6842	0.953	0.0657	0.982	0.0391	0.988
	80	24	1	1.0389	0.959	0.0854	0.980	0.0396	0.991
			2	1.0483	0.956	0.0861	0.979	0.0414	0.986
			3	1.0741	0.952	0.0865	0.977	0.0419	0.984
		48	1	0.7312	0.966	0.0595	0.981	0.0389	0.993
			2	0.7353	0.957	0.0725	0.980	0.0391	0.991
			3	0.7398	0.956	0.0748	0.980	0.0398	0.990
		72	1	0.4532	0.971	0.0581	0.985	0.0384	0.995
			2	0.5991	0.967	0.0593	0.984	0.0387	0.994
			3	0.6002	0.963	0.0597	0.984	0.0389	0.991
2	40	12	1	1.5501	0.942	0.0902	0.965	0.0565	0.979
			2	1.5515	0.941	0.0902	0.963	0.0567	0.975
			3	1.5792	0.938	0.0902	0.963	0.0568	0.976
		24	1	1.0642	0.958	0.0854	0.974	0.0406	0.981
			2	1.0626	0.949	0.0854	0.973	0.0409	0.980
			3	1.0829	0.945	0.0854	0.974	0.0414	0.980
		36	1	0.8568	0.965	0.0654	0.980	0.0386	0.988
			2	0.8551	0.955	0.0654	0.980	0.0387	0.987
			3	0.8597	0.950	0.0665	0.979	0.0389	0.988
	80	24	1	1.0615	0.956	0.0854	0.978	0.0414	0.986
			2	1.0640	0.956	0.0855	0.977	0.0416	0.984
			3	1.0741	0.954	0.0857	0.975	0.0429	0.983
		48	1	0.7341	0.964	0.0700	0.979	0.0389	0.985
			2	0.7385	0.956	0.0701	0.976	0.0390	0.985
			3	0.7400	0.956	0.0703	0.977	0.0392	0.984
		72	1	0.6003	0.967	0.0581	0.983	0.0384	0.994
			2	0.6014	0.966	0.0587	0.982	0.0385	0.994
			3	0.6029	0.966	0.0588	0.982	0.0387	0.992