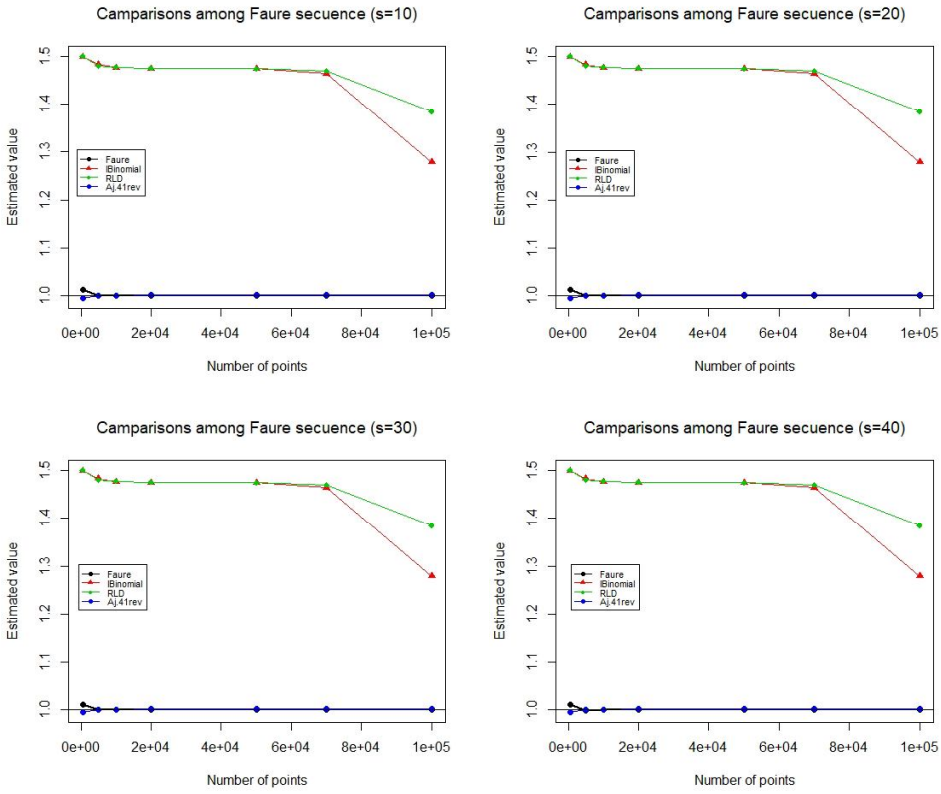

FIGURE 8. Estimates of the integral $I_2(f)$ with $a_i = i^2$ by using various Faure sequences

different bases p. As mentioned in the previous section, using this scramble leads to very small estimated relative errors that can often be ignored. In future work we will present deterministic scrambling matrices based on another irrational numbers and primitive roots.

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generator	N	s=5	s=10	s=20	s=30	s=40
Faure	500	1.2175	2.2301	13.402	2.6464	0.0001
IB	500	0.0017	0.0016	0.0014	0.0006	0.0002
RLD	500	0.0013	0.0013	0.0011	0.0006	0.0001
Aj-41rev	500	1.0392	1.0439	1.5286	0.8095	1.1542
Faure	5000	0.9803	1.0128	3.1585	0.7848	0.0314
IB	5000	0.0340	0.0397	0.0443	0.0402	0.0306
RLD	5000	0.0469	0.0475	0.0548	0.0737	0.0341
Aj-41rev	5000	1.0015	1.0154	1.0219	1.1401	0.6935
Faure	10000	0.9584	0.9445	1.9919	0.6583	0.0464
IB	10000	0.0569	0.0564	0.0593	0.0774	0.0496
RLD	10000	0.0539	0.0541	0.0566	0.0758	0.0418
Aj-41rev	10000	0.9992	0.9959	1.0182	0.8780	0.5630
Faure	20000	0.9943	1.0522	1.4909	0.5440	0.0575
IB	20000	0.0610	0.0607	0.0628	0.0791	0.0561
RLD	20000	0.0583	0.0585	0.0592	0.0670	0.0637
Aj-41rev	20000	0.9999	1.0021	1.0614	0.9301	0.7249
Faure	50000	0.9965	1.0127	0.9972	0.5159	0.0674
IB	50000	0.0617	0.0618	0.0621	0.0683	0.0628
RLD	50000	0.0604	0.0605	0.0582	0.0657	0.0587
Aj-41rev	50000	0.9984	0.9983	1.0241	0.9901	0.9173
Faure	70000	0.9964	1.0058	0.9680	0.5029	0.0669
IB	70000	0.0809	0.0806	0.0877	0.2000	2.3467
RLD	70000	0.0711	0.0713	0.0671	0.0702	0.0583
Aj-41rev	70000	0.9985	0.9954	1.0260	1.0841	0.9623
Faure	100000	1.0008	1.0248	1.0459	0.5466	0.1665
IB	100000	0.4610	0.4616	0.4667	0.4694	1.7654
RLD	100000	0.2742	0.2746	0.2772	0.2529	0.1366
Aj-41rev	100000	0.9979	1.0007	1.0215	1.1251	1.3969

TABLE 1. Estimates of $I_1(f)$ by using Faure sequences

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