

	INPUTS			OUTPUT
ID	X1	X2	X3	Y
id_1	-1	-1	-1	-1.32115
id_2	0	0	0	0
id_3	-0.5	0.5	-0.5	5.39119318
id_4	0.5	-0.5	0.5	8.60880682
id_5	-0.75	0.25	0.75	0.61353035
id_6	0.25	-0.75	-0.25	4.2340125
id_7	-0.25	-0.25	0.25	2.7659875
id_8	0.75	0.75	-0.75	6.38646965
id_9	-0.875	0.875	0.375	0.56872542
id_10	0.125	-0.125	-0.625	1.97660922
id_11	-0.375	0.625	0.875	-0.2243044
id_12	0.625	0.375	-0.125	6.90095039
id_13	-0.625	-0.375	-0.375	4.87302703
id_14	0.375	0.625	0.625	8.27195678
id_15	-0.125	0.125	-0.875	-1.5426574
id_16	0.875	-0.875	0.125	1.40871978
id_17	-0.9375	0.0625	-0.1875	0.06898255
id_18	0.0625	-0.9375	0.8125	1.2896995
id_19	-0.4375	-0.4375	-0.6875	3.61844996
id_20	0.5625	0.5625	0.3125	7.80547521
id_21	-0.6875	-0.6875	0.0625	4.00779882
id_22	0.3125	0.3125	-0.9375	11.9273548
id_23	-0.1875	0.8125	0.5625	1.06325077
id_24	0.8125	-0.1875	-0.4375	2.91444534
id_25	-0.8125	-0.0625	0.6875	-1.4981569
id_26	0.1875	0.9375	-0.3125	0.87360243
id_27	-0.3125	0.4375	0.1875	5.89209836
id_28	0.6875	-0.5625	-0.8125	11.0947606
id_29	-0.5625	0.6875	-0.5625	2.90215395
id_30	0.4375	-0.3125	0.4375	6.17019149
id_31	-0.0625	-0.8125	-0.0625	1.96548867
id_32	0.9375	0.1875	0.9375	3.82367893
id_33	-0.96875	0.59375	0.59375	9.90625
id_34	0.03125	-0.40625	-0.09375	6.50823454
id_35	-0.46875	-0.90625	0.40625	-0.6693726
id_36	0.53125	0.09375	-0.59375	2.78984864
id_37	-0.71875	-0.15625	-0.84375	-3.0337842
id_38	0.28125	0.84375	0.15625	2.33300276
id_39	-0.21875	0.34375	-0.34375	4.7238188
id_40	0.78125	-0.65625	0.65625	7.22502293
id_41	-0.84375	-0.53125	-0.46875	6.23965915
id_42	0.15625	0.46875	0.53125	7.76989911
id_43	-0.34375	0.96875	-0.96875	-8.380841
id_44	0.65625	-0.03125	0.03125	0.94918098
id_45	-0.59375	0.21875	0.28125	1.80191857
id_46	0.40625	-0.78125	-0.71875	6.26181147
id_47	-0.09375	-0.28125	0.78125	2.83915471
id_48	0.90625	0.71875	-0.21875	4.47957545
id_49	-0.90625	-0.46875	0.21875	6.63598916
id_50	0.09375	0.53125	-0.78125	8.2764099
id_51	-0.40625	0.03125	0.71875	-3.7737761
id_52	0.59375	-0.96875	-0.28125	1.08251682
id_53	-0.65625	0.78125	-0.03125	1.93525442
id_54	0.34375	-0.21875	0.96875	11.2652764
id_55	-0.15625	-0.71875	-0.53125	-3.3466715
id_56	0.84375	0.28125	0.46875	4.87590546
id_57	-0.78125	0.40625	-0.65625	4.62961652
id_58	0.21875	-0.59375	0.34375	7.13082065
id_59	-0.28125	-0.09375	-0.15625	-0.1876422
id_60	0.71875	0.90625	0.84375	5.17914479
id_61	-0.53125	-0.84375	0.59375	-0.6444881
id_62	0.46875	0.15625	-0.40625	2.81473315
id_63	-0.03125	0.65625	0.09375	5.34640492

THE BENCHMARK FUNCTION

$$f(x) = \sin(\pi x_1) + 7(\sin(\pi x_2))^2 + 0.1\pi^4(x_3)^4 \sin(\pi x_1). \quad (47)$$

Here $x_i, i = 1, 2, 3$ are uniformly distributed on the interval $[-1, 1]$.

Method	S_1	S_2	S_3	$\sum S_i$	S_{12}	S_{13}	S_{23}	$\sum S_i + \sum S_{ij}$
Analytical	0.3139	0.4424	0	0.7563	0	0.2437	0	1.0000

RESULTS

OCKHAM RESULT on 1000 samples

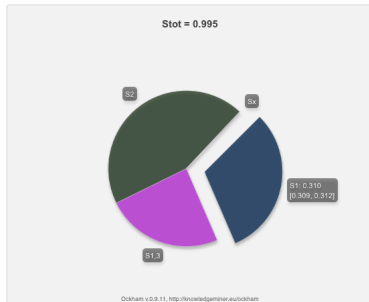
	Most Likely	Min	Max	Si Total
S1	0.31	0.309	0.312	0.552
S1,3	0.242	0.241	0.242	0
S2	0.443	0.442	0.444	0.443
S3	0	0	0	0.242
S	0.995			

Chosen Parameters:

N	1,000
Alpha	8
Beta	4

LEGEND:

- S1: X1
- S2: X2
- S3: X3



OCKHAM RESULT on 500 samples

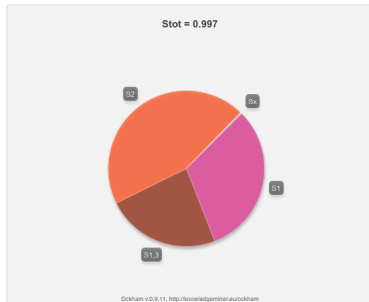
	Most Likely	Min	Max	Si Total
S1	0.316	0.314	0.317	0.552
S1,3	0.236	0.235	0.237	0
S2	0.445	0.443	0.447	0.445
S3	0	0	0	0.236
S	0.997			

Chosen Parameters:

N	500
Alpha	8
Beta	4

LEGEND:

- S1: X1
- S2: X2
- S3: X3



OCKHAM RESULT on 256 samples

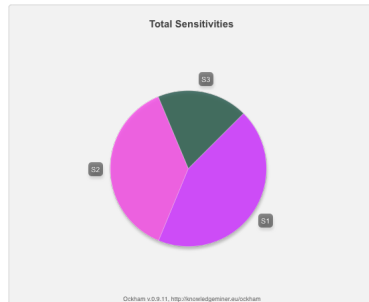
	Most Likely	Min	Max	Si Total
S1	0.303	0.301	0.305	0.531
S1,3	0.228	0.222	0.233	0
S2	0.456	0.452	0.462	0.456
S3	0	0	0	0.228
S	0.987			

Chosen Parameters:

N	256
Alpha	8
Beta	4

LEGEND:

- S1: X1
- S2: X2
- S3: X3



OCKHAM RESULT on 64 samples

	Most Likely	Min	Max	Si Total
S1	0.318	0.318	0.318	0.536
S1,3	0.218	0.218	0.218	0
S2	0.437	0.437	0.437	0.437
S3	0	0	0	0.218
S	0.973			

Chosen Parameters:

N	64
Alpha	8
Beta	3

LEGEND:

- S1: X1
- S2: X2
- S3: X3

