

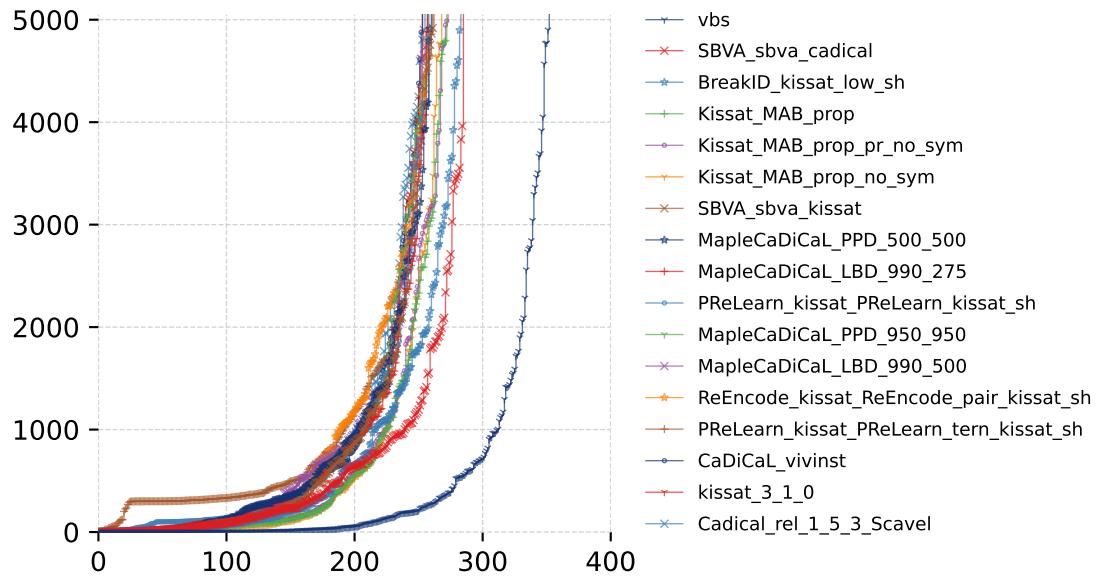
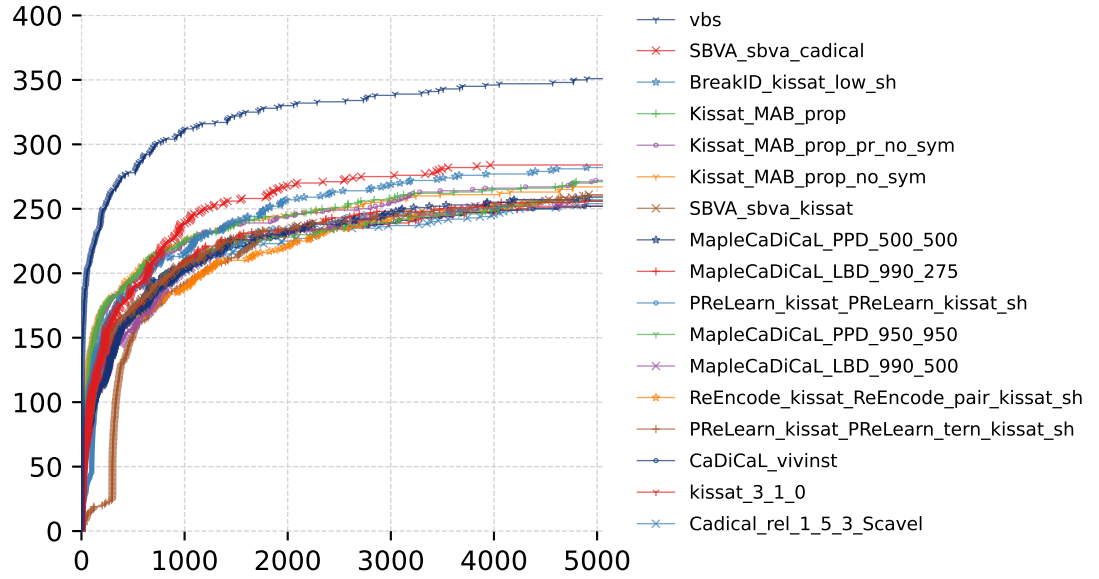
SAT Competition 2023

Markus Iser

Evaluation is based on solver runtimes in SAT Competition 2023 without the checker-timeout penalty in order to compare the pure proof-production performance of solvers.

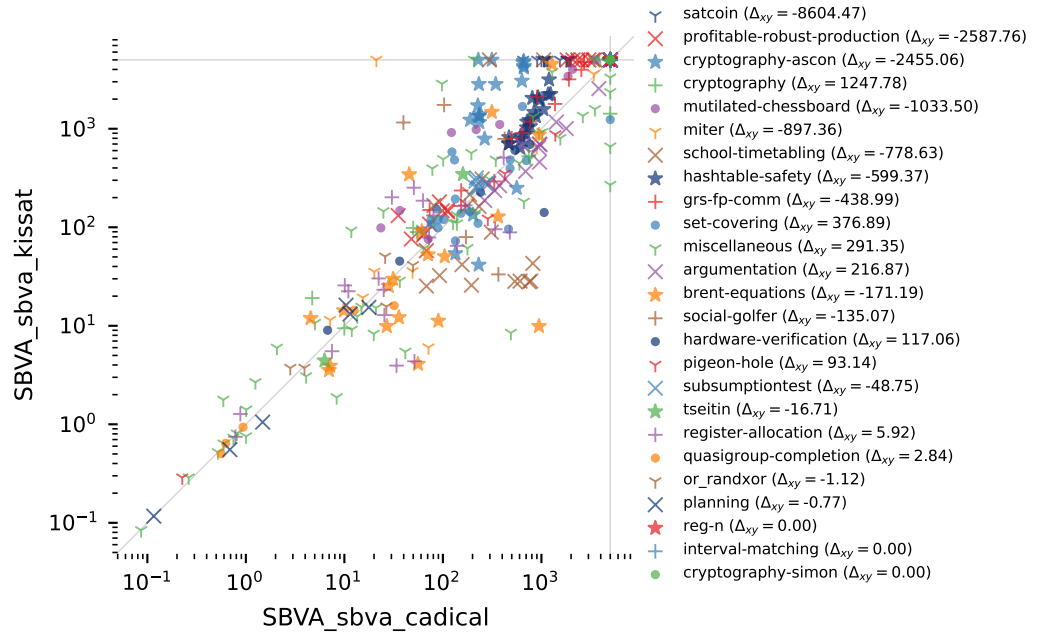
At the same time, this is a sample document for testing and showing how to use the evaluation functions in this repository.

1 CDF and Cactus Plots



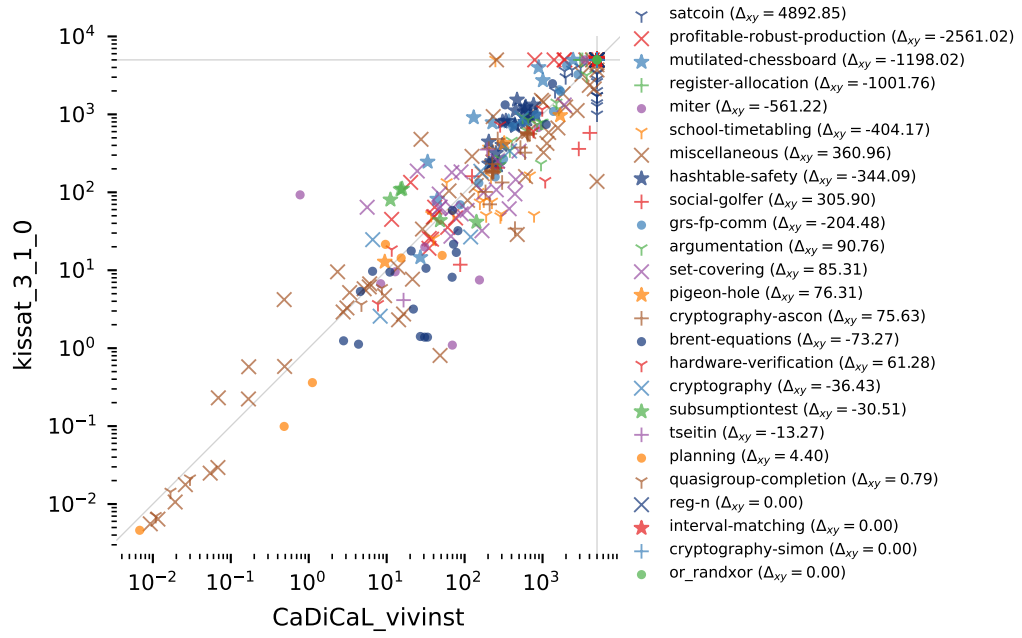
2 SBVA-CaDiCaL vs. SBVA-Kissat

Family	Count	SBVA CaDiCaL	SBVA Kissat	VBS
Miscellaneous	70	3071.07	2779.72	2356.70
Argumentation	20	3693.93	3477.05	3475.19
Profitable-Robust-Production	20	2470.42	5058.18	2469.91
Social-Golfer	20	7555.16	7690.23	7533.95
Cryptography-Ascon	20	356.82	2811.89	324.37
Set-Covering	20	722.01	345.13	238.27
Hashtable-Safety	20	797.46	1396.84	797.46
Interval-Matching	20	10000.00	10000.00	10000.00
Register-Allocation	20	101.20	95.28	61.05
School-Timetabling	19	1399.65	2178.28	1187.72
Brent-Equations	19	232.86	404.04	153.79
Cryptography-Simon	17	10000.00	10000.00	10000.00
Grs-Fp-Comm	17	3649.90	4088.89	3647.53
Satcoin	15	1395.53	10000.00	1395.53
Mutilated-Chessboard	12	3194.54	4228.03	3194.54
Tseitin	11	8196.91	8213.62	8196.74
Miter	11	3134.91	4032.27	3105.64
Pigeon-Hole	8	5261.85	5168.71	5168.70
Hardware-Verification	8	2832.05	2714.99	2705.49
Cryptography	7	1578.46	330.68	316.73
Planning	6	6.97	7.75	6.49
Quasigroup-Completion	5	9.33	6.49	6.12
Reg-N	5	10000.00	10000.00	10000.00
Subsumptiontest	5	230.22	278.97	230.22
Or_Randxor	5	21.82	22.94	17.87
All	400	3257.62	3882.65	3051.46



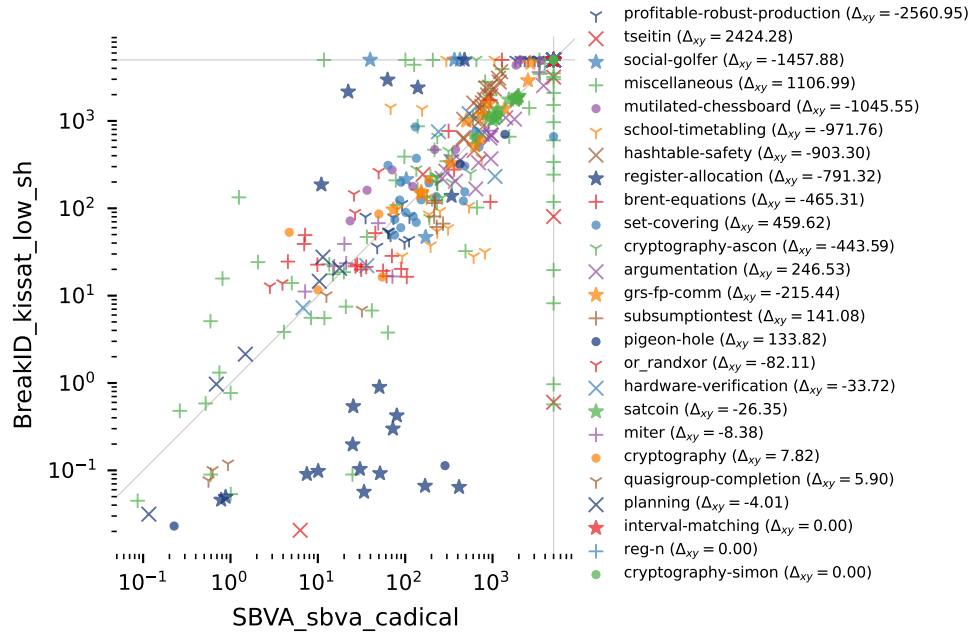
3 CaDiCaL-vivinst vs. Kissat-3.1.0

Family	Count	Cadical.Vivinst	Kissat_3.1.0	VBS
Miscellaneous	70	3140.29	2779.33	2601.18
Argumentation	20	3688.69	3597.93	3566.72
Profitable-Robust-Production	20	2463.60	5024.62	2458.96
Social-Golfer	20	7871.79	7565.89	7564.08
Cryptography-Ascon	20	378.92	303.29	284.36
Set-Covering	20	259.73	174.42	149.20
Hashtable-Safety	20	460.96	805.04	458.63
Interval-Matching	20	10000.00	10000.00	10000.00
Register-Allocation	20	8998.24	10000.00	8998.24
School-Timetabling	19	1264.86	1669.03	1141.51
Brent-Equations	19	176.54	249.81	137.45
Cryptography-Simon	17	10000.00	10000.00	10000.00
Grs-Fp-Comm	17	3659.80	3864.28	3632.29
Satcoin	15	7388.71	2495.86	2129.11
Mutilated-Chessboard	12	2933.52	4131.55	2932.48
Tseitin	11	8201.03	8214.31	8199.91
Miter	11	3149.19	3710.41	3109.62
Pigeon-Hole	8	6502.28	6425.97	6412.68
Hardware-Verification	8	2893.13	2831.85	2755.54
Cryptography	7	1602.26	1638.69	1582.76
Planning	6	13.03	8.63	6.66
Quasigroup-Completion	5	2.70	1.91	1.91
Reg-N	5	10000.00	10000.00	10000.00
Subsumptiontest	5	46.47	76.98	25.46
Or_Randxor	5	10000.00	10000.00	10000.00
All	400	4048.63	4050.74	3709.67



4 SBVA-CaDiCaL vs. BreakId

Family	Count	SBVA CaDiCaL	Breakid_Kissat_Low_Sh	VBS
Miscellaneous	70	3071.07	1964.08	1245.85
Argumentation	20	3693.93	3447.39	3446.95
Profitable-Robust-Production	20	2470.42	5031.37	2460.03
Social-Golfer	20	7555.16	9013.05	7548.93
Cryptography-Ascon	20	356.82	800.41	297.61
Set-Covering	20	722.01	262.39	188.29
Hashtable-Safety	20	797.46	1700.77	789.68
Interval-Matching	20	10000.00	10000.00	10000.00
Register-Allocation	20	101.20	892.52	42.72
School-Timetabling	19	1399.65	2371.42	1234.90
Brent-Equations	19	232.86	698.16	168.16
Cryptography-Simon	17	10000.00	10000.00	10000.00
Grs-Fp-Comm	17	3649.90	3865.34	3638.10
Satcoin	15	1395.53	1421.87	1370.56
Mutilated-Chessboard	12	3194.54	4240.09	3194.54
Tseitin	11	8196.91	5772.63	5764.96
Miter	11	3134.91	3143.29	3118.73
Pigeon-Hole	8	5261.85	5128.03	5128.03
Hardware-Verification	8	2832.05	2865.77	2717.96
Cryptography	7	1578.46	1570.64	1554.56
Planning	6	6.97	10.98	6.96
Quasigroup-Completion	5	9.33	3.43	3.43
Reg-N	5	10000.00	10000.00	10000.00
Subsumptiontest	5	230.22	89.14	89.14
Or_Randxor	5	21.82	103.93	21.82
All	400	3257.62	3376.88	2805.19



5 Family-wise CDF Plots

