

ERRATA for the paper: “Tables of Linear Congruential Generators of Different Sizes and Good Lattice Structure”, *Mathematics of Computation*, **68**, 225 (1999), 249–260.

Due to programming errors by the person who helped doing the computations, there are several errors in the tables of this paper. I sincerely apologize for this.

In Table 2 of the paper there are two cases with erroneous values. Table 2 below shows the corrected values for the two cases.

In Tables 4 and 5 of the paper, many values of the figure of merit, the ones that are not the best, are incorrect due to a programming error. However, all the best values (the ones with a *) in the original tables are correct. In Table 5, the values of the a^* were not the inverse mod m of a , as advertized in the paper.

We reproduce below the corrected Tables 4 and 5 with the correct values.

Pierre L’Ecuyer, July 2005

TABLE 2. LCGs with Good Figures of Merit

m	a, a^*	$M_8(m, a)$	$M_{16}(m, a)$	$M_{32}(m, a)$
$2^{10} - 3 = 1021$	65, 377	0.69069*	0.66317*	0.61872*
	644, 956	0.69069*	0.66317*	0.61872*
$2^{12} - 3 = 4093$	209, 3858	0.67296*	0.60649	0.60649
	235, 3884	0.67296*	0.60649	0.60649
	352, 500	0.64259	0.64259*	0.64259*
	3593, 3741	0.64259	0.64259*	0.64259*

TABLE 4. LCGs with Good Figures of Merit, for $m = 2^e$ and c odd

m	a	$M_8(m, a)$	$M_{16}(m, a)$	$M_{32}(m, a)$
2^{30}	438293613	0.75107*	0.58300	0.58300
	523592853	0.70068	0.67686*	0.64694
	116646453	0.67718	0.67420	0.67107*
2^{31}	37769685	0.75896*	0.59146	0.59146
	26757677	0.68312	0.68289*	0.60858
	20501397	0.67787	0.67787	0.66548*
2^{32}	2891336453	0.75466*	0.56806	0.56806
	29943829	0.67429	0.67105*	0.58062
	32310901	0.65630	0.65336	0.65336*
2^{33}	3766383685	0.75029*	0.56952	0.56952
	32684613	0.68055	0.67255*	0.62595
	5080384621	0.66619	0.66604	0.66604*
2^{34}	52765661	0.74421*	0.54539	0.54539
	50004141	0.68442	0.67057*	0.65570
	67037349	0.69761	0.66579	0.66579*
2^{35}	22475205	0.74676*	0.51736	0.51736
	15319397	0.67472	0.66933*	0.60508
	15550228621	0.65734	0.65552	0.65552*
2^{36}	12132445	0.75179*	0.52329	0.51602
	8572309	0.66450	0.66389*	0.64445
	33690453	0.68461	0.65808	0.65760*
2^{40}	330169576829	0.75723*	0.46879	0.46879
	42595477	0.67959	0.66436*	0.63832
	33261733	0.65941	0.65477	0.65477*
2^{48}	181465474592829	0.75812*	0.54668	0.54668
	77596615844045	0.67653	0.66906*	0.61130
	10430376854301	0.66530	0.64759	0.64759*
2^{60}	454339144066433781	0.75956*	0.57465	0.57465
	21828622668691829	0.65844	0.65566*	0.63458
	395904651965728677	0.63944	0.63944	0.63944*
2^{63}	9219741426499971445	0.73715*	0.54235	0.54235
	2806196910506780709	0.69668	0.66519*	0.60754
	3249286849523012805	0.64507	0.63523	0.63523*
2^{64}	2862933555777941757	0.75673*	0.55283	0.54445
	3202034522624059733	0.66164	0.66041*	0.60256
	3935559000370003845	0.67938	0.63763	0.63763*
2^{96}	75564983892026345434470042133	0.74760*	0.61011	0.61011
	41898663544932533964435923957	0.64460	0.64460*	0.54346
	22104684854187731770179339485	0.65329	0.63558	0.63287*
2^{128}	47026247687942121848144207491837418733	0.74763*	0.58508	0.57619
	52583122484843402430317208685168068605	0.70223	0.65994*	0.56182
	47026247687942121848144207491837523525	0.64332	0.63077	0.62853*

TABLE 5. LCGs with Good Figures of Merit, for $m = 2^e$ and $c = 0$

m	a, a^*	$M_8(m, a)$	$M_{16}(m, a)$	$M_{32}(m, a)$
2^{30}	177911525, 285808365	0.74878*	0.61693	0.61693
	156051869, 857580725	0.69501	0.67940*	0.64413
	143133861, 770767661	0.69305	0.66791	0.66791*
2^{31}	594156893, 989142773	0.75913*	0.50735	0.50735
	558177141, 1487707357	0.68978	0.68749*	0.59450
	602169653, 448899357	0.67295	0.67116	0.67116*
2^{32}	741103597, 4109213157	0.75652*	0.60751	0.60751
	1597334677, 851723965	0.70068	0.67686*	0.64694
	747796405, 3425435293	0.66893	0.66001	0.66001*
2^{33}	2185253333, 173170557	0.75896*	0.59146	0.59146
	2174241325, 3554448805	0.68312	0.68289*	0.60858
	2167985045, 8162762685	0.67787	0.67787	0.66548*
2^{34}	11481271045, 16579283405	0.75466*	0.56806	0.56806
	4324911125, 14504929085	0.67429	0.67105*	0.58062
	4327278197, 7881103837	0.65630	0.65336	0.65336*
2^{35}	8670442045, 10790122773	0.75818*	0.52727	0.52727
	8622619205, 31842912397	0.68055	0.67255*	0.62595
	22260253805, 7113024869	0.66619	0.66604	0.66604*
2^{36}	4092856269, 31404866821	0.75662*	0.50169	0.50169
	17229873325, 35216319269	0.68442	0.67057*	0.65570
	17246906533, 12512050989	0.69761	0.66579	0.66579*
2^{48}	49402601338917, 75935939978157	0.75801*	0.55089	0.55089
	70189847242853, 209773542181229	0.67618	0.66857*	0.63609
	21749276838573, 136842555189541	0.65702	0.64692	0.64692*
2^{60}	276137484736346373, 672857982035536845	0.75277*	0.48916	0.48916
	150878991426218621, 1108456478704721621	0.65527	0.65510*	0.59498
	271413322654087621, 111008605039107341	0.64851	0.64851	0.64435*
2^{63}	3512401965023503517, 3753721746144068021	0.74926*	0.50092	0.50092
	2444805353187672469, 2079243811257762237	0.70937	0.66091*	0.61403
	1987591058829310733, 4007969225820588997	0.64490	0.64060	0.63994*
2^{64}	1181783497276652981, 13515856136758413469	0.76039*	0.42672	0.42672
	7664345821815920749, 1865811235122147685	0.67778	0.66115*	0.54884
	2685821657736338717, 6415128727920758069	0.65961	0.63932	0.63932*
2^{128}	25096281518912105342191851917838718629, 310852368452748150078297415926143836461	0.76598*	0.55122	0.54891
	23766634975743270097972271989927654085, 67836365537811707609274168323887561741	0.65708	0.65708*	0.55662
	92563704562804186071655587898373606109, 297407245016942170064352095129111993717	0.63462	0.63462	0.63405*