

Memoria Práctica 2

Grupo 1
Raúl Fernández Guardia
Antonio Cardona Costa

Ejecución representativa de cada caso

En las siguientes 3 páginas se muestra una ejecución representativa de cada caso utilizando los siguientes parámetros en todos ellos:

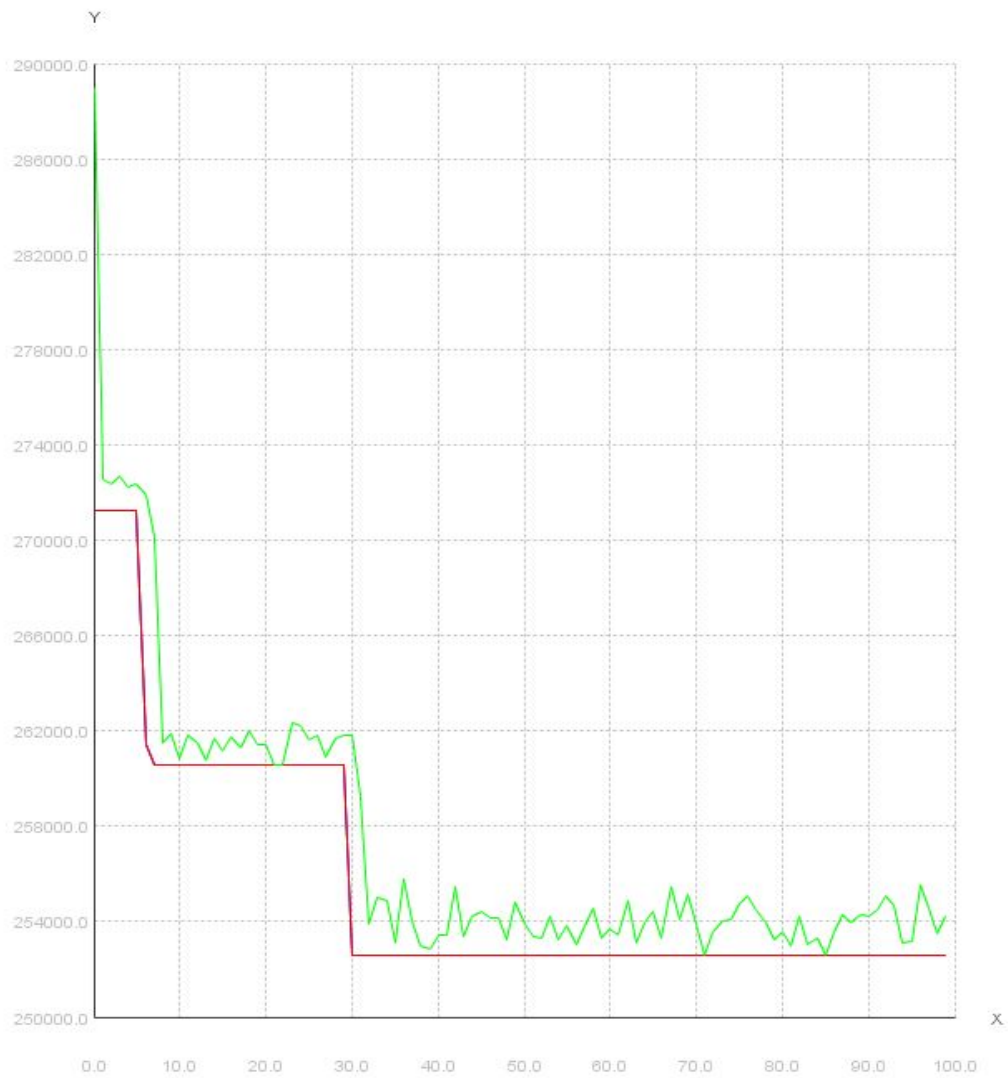
POBLACIÓN:	100
GENERACIONES:	100
PROB. CRUCE:	40%
PROB. MUTACIÓN:	3%
ELITISMO:	5%
SELECCIÓN:	RULETA
CRUCES:	OX
MUTACIÓN:	INSERCIÓN

20 ejecuciones por caso

De la página 5 en adelante se muestran tablas con los resultados de 20 ejecuciones de cada caso, mostrando el mejor cromosoma en cada ejecución. Al final se hace una media de aptitud entre los 20 casos; se muestra el mejor, peor y finalmente la desviación estándar.

Datos 12

Mejor Individuo	Aptitud	Peor Individuo	Aptitud	Cruces	Mutaciones
[10, 5, 3, 7, 9, 11, 1, 0, 8, 4, 6, 2,]	252560	[4, 2, 3, 5, 8, 10, 1, 11, 6, 9, 7, 0,]	356710	1954	3



Datos 15

Mejor Individuo	Aptitud	Peor Individuo	Aptitud	Cruces	Mutaciones
[3, 4, 0, 11, 8, 5, 1, 2, 9, 6, 13, 14, 7, 12, 10,]	422264	[3, 9, 10, 14, 0, 6, 13, 12, 1, 7, 8, 11, 4, 5, 2,]	539402	1981	5



Datos 30

Mejor Individuo	Aptitud	Peor Individuo	Aptitud	Cruces	Mutaciones
[21, 1, 16, 3, 28, 25, 6, 0, 22, 12, 2, 19, 9, 24, 17, 5, 18, 7, 15, 29, 14, 27, 11, 26, 20, 8, 13, 23, 10, 4,]	2062184	[4, 19, 18, 0, 25, 26, 12, 14, 20, 29, 23, 5, 3, 9, 21, 1, 10, 15, 11, 17, 28, 2, 16, 7, 13, 8, 24, 22, 6, 27,]	2292310	1940	4



Datos 12 (20 ejecuciones)

	Ejecuciones con datos 12	
	Mejor Cromosoma	Aptitud
1	[10, 11, 7, 0, 5, 9, 1, 8, 3, 2, 4, 6,]	249772
2	[8, 1, 3, 11, 4, 5, 9, 0, 10, 7, 2, 6,]	269284
3	[6, 8, 4, 11, 7, 10, 9, 2, 3, 5, 0, 1,]	263958
4	[3, 6, 2, 0, 1, 11, 5, 8, 10, 7, 9, 4,]	265502
5	[7, 4, 6, 11, 8, 2, 1, 0, 9, 5, 3, 10,]	261182
6	[4, 10, 1, 0, 8, 2, 5, 11, 6, 9, 7, 3,]	263228
7	[6, 9, 11, 0, 1, 4, 7, 5, 2, 3, 8, 10,]	248446
8	[10, 7, 6, 0, 5, 9, 2, 3, 1, 4, 11, 8,]	265034
9	[6, 9, 4, 0, 11, 2, 3, 5, 1, 7, 8, 10,]	255524
10	[6, 2, 1, 11, 4, 8, 7, 5, 9, 10, 0, 3,]	265346
11	[6, 5, 1, 11, 8, 7, 9, 0, 3, 10, 4, 2,]	265548
12	[2, 7, 4, 3, 10, 8, 6, 9, 5, 11, 0, 1,]	265592
13	[2, 10, 9, 11, 3, 6, 8, 7, 1, 0, 4, 5,]	266216
14	[8, 3, 10, 0, 2, 5, 9, 1, 6, 4, 11, 7,]	269564
15	[8, 2, 5, 11, 7, 1, 6, 3, 9, 4, 0, 10,]	261906
16	[10, 11, 7, 3, 6, 9, 2, 8, 0, 4, 5, 1,]	241814
17	[2, 7, 5, 3, 8, 4, 0, 11, 6, 1, 9, 10,]	255872
18	[9, 11, 10, 4, 2, 5, 8, 3, 1, 7, 0, 6,]	255014
19	[10, 9, 1, 0, 5, 2, 8, 11, 6, 3, 7, 4,]	255464
20	[4, 11, 8, 0, 9, 10, 3, 5, 1, 2, 7, 6,]	245684
	Aptitud Media	259497,5
	Mejor	241814
	Peor	269564
	Desviación Estándar	8094,5

Datos 15 (20 ejecuciones)

	Ejecuciones con datos 15	
	Mejor Cromosoma	Aptitud
1	[5, 6, 8, 4, 9, 1, 13, 0, 2, 14, 7, 11, 10, 12, 3,]	439450
2	[8, 10, 9, 7, 12, 6, 4, 2, 0, 1, 5, 14, 13, 3, 11,]	426874
3	[7, 10, 12, 5, 11, 9, 4, 0, 1, 14, 13, 8, 2, 3, 6,]	432400
4	[7, 1, 14, 5, 8, 3, 10, 4, 11, 0, 2, 9, 6, 13, 12,]	420836
5	[11, 7, 5, 14, 13, 6, 1, 9, 8, 12, 0, 4, 10, 2, 3,]	444108
6	[8, 2, 3, 12, 7, 1, 5, 10, 14, 6, 9, 13, 0, 11, 4,]	444154
7	[0, 5, 1, 10, 14, 3, 11, 9, 13, 12, 4, 6, 2, 7, 8,]	427328
8	[8, 9, 14, 10, 4, 1, 11, 7, 2, 5, 12, 13, 6, 0, 3,]	435478
9	[10, 6, 7, 14, 11, 0, 8, 4, 2, 9, 13, 5, 1, 3, 12,]	422694
10	[12, 3, 10, 0, 7, 4, 1, 9, 14, 11, 13, 2, 8, 5, 6,]	431404
11	[6, 1, 11, 9, 4, 8, 7, 14, 13, 0, 3, 10, 5, 12, 2,]	423176
12	[11, 1, 13, 10, 12, 2, 6, 7, 5, 0, 14, 9, 8, 4, 3,]	430840
13	[2, 13, 7, 9, 1, 12, 5, 6, 3, 10, 11, 0, 14, 8, 4,]	431226
14	[0, 13, 1, 6, 8, 4, 5, 2, 7, 14, 3, 11, 9, 12, 10,]	433838
15	[14, 8, 5, 11, 9, 6, 3, 10, 12, 4, 13, 1, 2, 7, 0,]	447266
16	[13, 6, 0, 5, 14, 9, 8, 3, 10, 11, 1, 4, 2, 12, 7,]	429974
17	[5, 0, 12, 2, 4, 14, 9, 13, 8, 6, 7, 1, 3, 10, 11,]	425044
18	[3, 5, 12, 11, 7, 4, 6, 0, 13, 9, 14, 8, 2, 1, 10,]	417776
19	[3, 9, 0, 7, 12, 1, 4, 11, 6, 14, 2, 13, 5, 8, 10,]	428594
20	[4, 14, 11, 6, 7, 12, 5, 1, 2, 13, 9, 3, 8, 10, 0,]	446630
	Aptitud Media	431954,5
	Mejor	420836
	Peor	447266
	Desviación Estándar	8640,2

Datos 30 (20 ejecuciones)

	Ejecuciones con datos 30	
	Mejor Cromosoma	Aptitud
1	[14, 23, 15, 3, 17, 7, 21, 8, 5, 28, 1, 2, 16, 9, 18, 6, 11, 22, 0, 25, 27, 19, 12, 13, 4, 10, 29, 24, 20, 26,]	2063204
2	[13, 14, 5, 6, 22, 28, 24, 11, 7, 21, 0, 17, 15, 3, 18, 4, 27, 9, 26, 10, 8, 12, 23, 29, 19, 2, 1, 20, 16, 25,]	2070048
3	[6, 15, 0, 19, 11, 12, 28, 1, 24, 22, 9, 25, 8, 3, 20, 14, 5, 27, 13, 7, 21, 26, 29, 16, 18, 4, 10, 17, 23, 2,]	2078356
4	[8, 28, 15, 4, 17, 3, 21, 2, 5, 12, 9, 14, 0, 27, 26, 16, 18, 23, 20, 25, 1, 11, 22, 10, 6, 7, 24, 13, 19, 29,]	2059440
5	[3, 28, 25, 2, 24, 27, 13, 1, 22, 8, 15, 4, 26, 7, 0, 16, 23, 29, 9, 10, 21, 17, 20, 11, 12, 14, 19, 18, 6, 5,]	2046886
6	[1, 25, 8, 5, 26, 19, 4, 3, 22, 29, 9, 13, 15, 21, 24, 11, 20, 17, 12, 10, 2, 16, 23, 27, 28, 0, 18, 6, 14, 7,]	2049006
7	[25, 7, 14, 8, 2, 12, 4, 0, 22, 18, 15, 20, 9, 10, 29, 28, 13, 19, 23, 21, 24, 1, 3, 26, 27, 16, 5, 11, 17, 6,]	2029306
8	[10, 21, 18, 24, 11, 22, 29, 17, 9, 12, 0, 2, 13, 14, 20, 26, 23, 15, 5, 25, 8, 27, 16, 19, 28, 3, 6, 4, 1, 7,]	2026220
9	[1, 14, 18, 28, 9, 25, 17, 7, 16, 22, 0, 5, 4, 15, 24, 2, 10, 13, 26, 27, 20, 21, 8, 19, 11, 29, 23, 6, 12, 3,]	2064428
10	[10, 17, 7, 19, 25, 0, 1, 16, 8, 23, 9, 2, 27, 20, 3, 14, 18, 26, 15, 11, 4, 28, 29, 22, 5, 12, 24, 6, 13, 21,]	2038478
11	[24, 19, 6, 28, 2, 18, 15, 4, 1, 14, 3, 17, 26, 0, 25, 10, 9, 13, 29, 16, 22, 8, 23, 27, 12, 11, 21, 5, 7, 20,]	2047010
12	[25, 4, 0, 15, 6, 13, 22, 18, 7, 3, 8, 29, 5, 16, 21, 20, 27, 24, 23, 11, 1, 19, 14, 9, 17, 26, 12, 2, 10, 28,]	2084618
13	[18, 1, 2, 0, 22, 25, 3, 23, 4, 24, 8, 13, 28, 16, 17, 14, 12, 19, 7, 11, 6, 26, 9, 5, 29, 20, 27, 10, 15, 21,]	2068542
14	[2, 18, 23, 7, 22, 19, 29, 17, 25, 13, 24, 10, 4, 6, 0, 1, 3, 11, 15, 12, 20, 8, 21, 5, 9, 14, 27, 16, 28, 26,]	2067974
15	[1, 27, 25, 29, 9, 5, 4, 8, 2, 18, 6, 22, 23, 7, 16, 17, 21, 0, 26, 28, 10, 15, 12, 11, 14, 13, 20, 3, 19, 24,]	2066410
16	[22, 27, 2, 16, 20, 9, 18, 23, 28, 19, 21, 15, 7, 4, 17, 25, 1, 13, 6, 26, 8, 5, 10, 24, 29, 3, 14, 11, 0, 12,]	2074984
17	[17, 13, 10, 25, 21, 6, 5, 23, 18, 3, 15, 11, 8, 0, 7, 9, 22, 19, 2, 14, 16, 28, 1, 27, 26, 29, 20, 24, 4, 12,]	2076100
18	[24, 25, 10, 18, 28, 27, 21, 0, 6, 13, 19, 22, 16, 4, 2, 7, 23, 1, 17, 3, 15, 12, 9, 26, 29, 20, 5, 14, 8, 11,]	2044678
19	[3, 26, 13, 12, 2, 0, 6, 11, 1, 14, 23, 18, 24, 28, 20, 22, 19, 9, 5, 27, 17, 29, 15, 7, 10, 21, 4, 8, 25, 16,]	2050662
20	[3, 7, 11, 27, 29, 4, 22, 5, 17, 23, 9, 10, 14, 21, 13, 8, 18, 12, 15, 16, 24, 2, 25, 1, 6, 19, 20, 28, 26, 0,]	2046680
	Aptitud Media	2057652
	Mejor	2026220
	Peor	2084618
	Desviación Estándar	16435,8