

Oct 29 2010

Effects of fitness selection strategies

Raw Fitness		Roulette Wheel				Sigma scaling		Boltzman				
A (gen=0) B (gen=50)		$f(x) = x^2$		$f(x) = x^2$		A, B	%	T=1	T=2			
		A	A	B	B			A, B	%	A, B	%	
1	9	99	41%	57%	26%	27%	1.764	44%	3.78	94%	2.95	74%
2	6	96	27%	25%	25%	25%	1.109	28%	0.19	5%	0.66	16%
3	4	94	18%	11%	25%	24%	0.672	17%	0.03	1%	0.24	6%
4	3	93	14%	6%	24%	24%	0.454	11%	0.01	0%	0.15	4%
avg=5.5		avg=95.5										

Raw Fitness		Ranked				Tournament			
A (gen=0) B (gen=50)		Rank	Min=1, Max=4	Min=0, Max=2	Min=1, Max=3	tsize=2	tsize=3		
			%	A, B	A, B	A, B	A, B		
1	9	99	4	40%	2	3	50%	75%	
2	6	96	3	30%	1.33	2.33	33%	25%	
3	4	94	2	20%	0.67	1.67	17%	0%	
4	3	93	1	10%	0	1	0%	0%	
avg=5.5		avg=95.5	avg=25						

Note:
 % is percentage of Roulette Wheel.
 Tournament % is an approximation.