Sample Raw output

# Output of running DP

Parameters:

* Iteration = 15
* M=7
* N=30
* r=0.3

the output from iteration 4 to 14 is shown:

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| [0.66294679 0.67203553 0.68252557 0.85536673 0.88279131 0.89810011  0.88925398 0.8883711 0.8894478 0.88427799]]  best solution from iter 4: [0.0103728]  This solution used u values: [0.66294679 0.67203553 0.68252557 0.85536673 0.88279131 0.89810011  0.88925398 0.8883711 0.8894478 0.88427799]  r: 0.05042099999999999  best solution from iter 5: [0.01051864]  This solution used u values: [0.66228536 0.66778949 0.68356734 0.86539098 0.89520399 0.873182  0.89762906 0.89992597 0.89981139 0.89538533]  r: 0.03529469999999999  best solution from iter 6: [0.01057424]  This solution used u values: [0.6674962 0.67445634 0.68944337 0.87030356 0.89324381 0.8851376  0.89930488 0.8966627 0.89838128 0.89954059]  r: 0.024706289999999992  best solution from iter 7: [0.01062256]  This solution used u values: [0.66854017 0.67826833 0.68366202 0.88131315 0.89456032 0.89118877  0.89701462 0.89497172 0.89707367 0.89680369]  r: 0.017294402999999993  best solution from iter 8: [0.01065161]  This solution used u values: [0.66869532 0.67888048 0.68267104 0.88325124 0.89928588 0.89905256  0.89581115 0.89311428 0.89160961 0.89898159]  r: 0.012106082099999995  best solution from iter 9: [0.01068147]  This solution used u values: [0.66593645 0.68135624 0.68353633 0.88592189 0.89758014 0.89782253  0.89676613 0.89544147 0.8970911 0.89890637]  best solution from iter 10: [0.01072904]  This solution used u values: [0.66392099 0.68071567 0.68329735 0.8887182 0.89968995 0.89945618  0.89872728 0.89751962 0.89979174 0.89827971]  r: 0.005931980228999997  best solution from iter 11: [0.01072907]  This solution used u values: [0.66415094 0.68011449 0.68473077 0.89137311 0.89845049 0.89720139  0.89889629 0.89811924 0.8988438 0.89958442]  r: 0.004152386160299997  best solution from iter 12: [0.01075838]  This solution used u values: [0.66322937 0.68028284 0.68370667 0.89334974 0.89973596 0.89883292  0.89989053 0.89888267 0.89992054 0.89973558]  r: 0.002906670312209998  best solution from iter 13: [0.01076436]  This solution used u values: [0.66404294 0.68006387 0.68383626 0.89451896 0.89988201 0.89956099  0.89921344 0.8996761 0.89956645 0.89954795]  r: 0.0020346692185469984  best solution from iter 14: [0.01077282]  This solution used u values: [0.66365801 0.68009955 0.68362714 0.89549726 0.89985661 0.89991729  0.89927994 0.89980769 0.90000847 0.89992845]    Dynamic Programming execution time: 5,177.91535125351 |

# Output of running Deterministic Crowding

Parameters are:

* Initial population = 50
* Iteration = 30
* Crossover rate = 0.75
* Mutation rate = 0.2

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| Iteration 0: Best Fitness = 0.00866432449145566  Iteration 1: Best Fitness = 0.009020089420007935  Iteration 2: Best Fitness = 0.00917244882083019  Iteration 3: Best Fitness = 0.009439916321561267  Iteration 4: Best Fitness = 0.009439916321561267  Iteration 5: Best Fitness = 0.009439916321561267  Iteration 6: Best Fitness = 0.009622532242280489  Iteration 7: Best Fitness = 0.009622532242280489  Iteration 8: Best Fitness = 0.009626386305849317  Iteration 9: Best Fitness = 0.009679298219513705  Iteration 10: Best Fitness = 0.00972546095456284  Iteration 11: Best Fitness = 0.009869747266387943  Iteration 12: Best Fitness = 0.009869747266387943  Iteration 13: Best Fitness = 0.009944193596515856  Iteration 14: Best Fitness = 0.010029902999854592  Iteration 15: Best Fitness = 0.010119116911202807  Iteration 16: Best Fitness = 0.01015780060354191  Iteration 17: Best Fitness = 0.01015780060354191  Iteration 18: Best Fitness = 0.01015780060354191  Iteration 19: Best Fitness = 0.010248042368218722  Iteration 20: Best Fitness = 0.010248042368218722  Iteration 21: Best Fitness = 0.010248042368218722  Iteration 22: Best Fitness = 0.010248042368218722  Iteration 23: Best Fitness = 0.010248620564080659  Iteration 24: Best Fitness = 0.010248620564080659  Iteration 25: Best Fitness = 0.010448452288545806  Iteration 26: Best Fitness = 0.010658224857330529  Iteration 27: Best Fitness = 0.010658224857330608  Iteration 28: Best Fitness = 0.010663211243237642  Iteration 29: Best Fitness = 0.010681561222239408  Deterministic Crowding execution time: 1211.3484711647034 |