TABLE S5
AVERAGED FITNESS VALUE OBTAINED BY MFEA, EBS, EEMTA, MATEA, SAEF-AKT AND EMATO-MKT OF $TASK_1$ TO $TASK_{50}$ ON CEC19-SOMATP1 AND CEC19-SOMATP2 AFTER 30 INDEPENDENT RUNS, WHERE THE BOLD IS THE BEST RESULT OF ALL ALGORITHMS.

	CEC19-SOMATP1						CEC19-SOMATP2					
task	MFEA	EBS	EEMTA	MaTEA	SaEF-AKT	EMaTO-MKT	MFEA	EBS	EEMTA	MaTEA	SaEF-AKT	EMaTO-MKT
T_1	1.02E+04	3.33E+03	1.08E+04	3.90E+02	1.02E+03	**4.72E+01**	1.56E+00	3.30E+00	1.23E-01	7.64E+00	4.44E-01	**3.37E-13**
T_2	1.18E+04	2.41E+03	5.29E+03	5.41E+02	2.38E+02	**4.77E+01**	1.46E+00	3.26E+00	2.21E-02	8.14E+00	4.11E-01	**1.77E-05**
T_3	1.06E+04	1.95E+03	8.81E+02	3.76E+02	7.66E+02	**8.55E+01**	1.46E+00	3.23E+00	7.60E-02	7.90E+00	4.36E-01	**3.72E-13**
T_4	7.00E+03	4.59E+03	1.44E+04	3.58E+02	2.40E+02	**4.73E+01**	1.48E+00	3.26E+00	1.27E-02	7.74E+00	4.22E-01	**1.56E-09**
T_5	9.99E+03	4.62E+03	2.47E+04	3.71E+02	2.38E+02	**5.73E+01**	1.63E+00	3.29E+00	1.11E-02	7.62E+00	4.57E-01	**3.26E-13**
T_6	9.17E+03	4.72E+03	2.84E+04	3.90E+02	2.31E+02	**4.76E+01**	1.57E+00	3.31E+00	1.02E-01	7.32E+00	4.47E-01	**2.93E-13**
T_7	8.31E+03	1.78E+03	1.13E+02	3.99E+02	2.94E+02	**4.65E+01**	1.51E+00	3.26E+00	**8.19E-03**	7.65E+00	4.37E-01	6.63E+00
T_8	1.05E+04	2.21E+03	**1.36E+02**	3.25E+02	2.44E+02	6.34E+02	1.44E+00	3.28E+00	1.68E-02	7.57E+00	4.31E-01	**3.28E-13**
T_9	7.12E+03	2.06E+03	9.23E+01	3.74E+02	2.62E+02	**4.73E+01**	1.49E+00	3.21E+00	**1.08E-02**	7.65E+00	4.49E-01	3.30E+00
T_{10}	1.07E+04	2.52E+03	8.04E+03	4.60E+02	1.05E+03	**5.41E+01**	1.49E+00	3.28E+00	5.58E-03	7.62E+00	4.72E-01	**4.31E-13**
T_{11}	1.11E+04	2.21E+03	4.79E+03	5.85E+02	2.67E+02	**4.75E+01**	1.54E+00	3.26E+00	9.61E-02	7.55E+00	4.52E-01	**1.10E-10**
T_{12}	8.03E+03	1.92E+03	1.34E+02	4.12E+02	2.32E+02	**5.98E+01**	1.48E+00	3.26E+00	**4.25E-02**	7.63E+00	4.33E-01	3.32E+00
T_{13}	1.37E+04	3.23E+03	2.71E+02	4.78E+02	3.34E+02	**8.14E+01**	1.43E+00	3.29E+00	2.05E-02	8.16E+00	4.11E-01	**8.09E-13**
T_{14}	6.41E+03	4.38E+03	2.21E+04	2.85E+02	1.98E+02	**4.75E+01**	1.44E+00	3.26E+00	7.55E-03	7.77E+00	4.31E-01	**3.36E-13**
T_{15}	9.72E+03	2.11E+03	9.87E+02	3.47E+02	7.55E+02	**3.99E+01**	1.58E+00	3.28E+00	8.16E-03	8.11E+00	4.17E-01	**5.84E-11**
T_{16}	2.10E+04	5.33E+03	4.21E+04	4.98E+02	6.04E+02	**3.49E+01**	1.47E+00	3.27E+00	3.19E-02	7.93E+00	4.43E-01	**1.30E-07**
T_{17}	7.18E+03	1.98E+03	9.88E+01	4.10E+02	2.28E+02	**4.76E+01**	1.56E+00	3.33E+00	1.37E-02	7.10E+00	4.32E-01	**3.15E-13**
T_{18}	9.12E+03	3.60E+03	1.54E+04	**4.40E+02**	4.48E+02	5.31E+02	1.50E+00	3.30E+00	**6.69E-03**	7.55E+00	4.24E-01	3.32E+00
T_{19}	1.27E+04	2.72E+03	2.31E+02	1.84E+03	9.39E+02	**7.82E+01**	1.43E+00	3.19E+00	2.81E-02	7.81E+00	4.40E-01	**3.03E-13**
T_{20}	1.29E+04	2.16E+03	2.13E+03	4.65E+02	2.71E+02	**7.49E+01**	1.57E+00	3.27E+00	1.42E-01	7.64E+00	4.45E-01	**3.14E-13**
T_{21}	1.29E+04	1.88E+03	**8.60E+00**	4.95E+02	2.44E+02	7.32E+01	1.47E+00	3.27E+00	**6.65E-03**	7.76E+00	4.28E-01	3.33E+00
T_{22}	1.01E+04	4.30E+03	3.73E+04	3.36E+02	2.49E+02	**5.55E+01**	1.53E+00	3.28E+00	3.50E-02	7.58E+00	4.29E-01	**4.80E-08**
T_{23}	1.12E+04	5.71E+03	1.68E+03	4.79E+02	3.38E+02	**4.68E+01**	1.50E+00	3.27E+00	6.30E-02	7.70E+00	4.30E-01	**3.06E-13**
T_{24}	6.58E+03	4.12E+03	2.50E+04	2.59E+02	1.89E+02	**6.70E+01**	1.46E+00	3.27E+00	8.33E-03	7.76E+00	4.59E-01	**2.19E-12**
T_{25}	8.31E+03	2.19E+03	9.24E+01	4.00E+02	1.94E+02	**6.36E+01**	1.64E+00	3.27E+00	1.39E-02	7.98E+00	4.71E-01	**1.54E-13**
T_{26}	1.05E+04	4.79E+03	1.29E+03	4.21E+02	1.89E+02	**4.72E+01**	1.58E+00	3.30E+00	1.21E-02	7.90E+00	4.51E-01	**3.63E-13**
T_{27}	2.60E+04	9.08E+03	2.19E+03	4.94E+02	5.70E+02	**5.44E+01**	1.57E+00	3.28E+00	8.10E-03	7.99E+00	4.24E-01	**2.41E-13**
T_{28}	1.02E+04	4.93E+03	9.21E+02	4.36E+02	1.88E+02	**4.74E+01**	1.54E+00	3.25E+00	9.37E-03	7.35E+00	4.24E-01	**1.92E-04**
T_{29}	8.75E+03	3.32E+03	2.13E+04	**4.09E+02**	4.56E+02	5.29E+02	1.47E+00	3.29E+00	1.03E-02	7.82E+00	4.36E-01	**1.24E-05**
T_{30}	1.50E+04	7.59E+03	1.46E+03	3.56E+02	3.01E+02	**7.08E+01**	1.53E+00	3.26E+00	4.27E-01	7.60E+00	4.44E-01	**3.40E-13**
T_{31}	6.73E+03	2.13E+03	7.85E+01	4.28E+02	2.77E+02	**5.85E+01**	1.49E+00	3.33E+00	8.96E-03	7.58E+00	4.26E-01	**2.28E-08**
T_{32}	1.38E+04	2.82E+03	4.80E+03	5.40E+02	3.01E+02	**9.84E+01**	1.63E+00	3.30E+00	1.45E-01	7.71E+00	4.39E-01	**2.65E-13**
T_{33}	1.44E+04	2.42E+03	4.64E+03	7.18E+02	3.89E+02	**1.00E+02**	1.56E+00	3.28E+00	2.93E-02	7.56E+00	4.30E-01	**1.22E-12**
T_{34}	1.23E+04	4.18E+03	1.72E+03	5.43E+02	2.91E+02	**1.13E+02**	1.46E+00	3.26E+00	5.92E-03	7.64E+00	4.33E-01	**3.30E-13**
T_{35}	9.77E+03	2.06E+03	1.71E+03	3.87E+02	8.40E+02	**4.71E+01**	1.51E+00	3.21E+00	6.87E-03	7.67E+00	4.21E-01	**2.53E-13**
T_{36}	1.38E+04	6.16E+03	2.34E+03	3.54E+02	3.30E+02	**8.24E+01**	1.60E+00	3.26E+00	8.38E-03	7.85E+00	4.61E-01	**2.50E-13**
T_{37}	1.15E+04	5.88E+03	1.38E+03	3.62E+02	3.60E+02	**4.76E+01**	1.56E+00	3.29E+00	8.24E-01	7.48E+00	4.51E-01	**3.18E-13**
T_{38}	8.56E+03	1.87E+03	7.90E+02	3.78E+02	7.48E+02	**6.16E+01**	1.48E+00	3.25E+00	3.93E-02	7.84E+00	4.11E-01	**2.09E-07**
T_{39}	6.52E+03	3.86E+03	2.57E+04	3.19E+02	1.89E+02	**4.69E+01**	1.47E+00	3.32E+00	7.42E-02	7.52E+00	4.51E-01	**2.29E-13**
T_{40}	7.06E+03	4.17E+03	1.65E+04	3.26E+02	2.15E+02	**4.69E+01**	1.45E+00	3.30E+00	4.05E-01	7.97E+00	4.18E-01	**3.61E-13**
T_{41}	7.14E+03	1.91E+03	1.68E+02	3.72E+02	2.03E+02	**4.76E+01**	1.51E+00	3.27E+00	5.50E-02	8.00E+00	4.44E-01	**3.42E-13**
T_{42}	1.10E+04	2.51E+03	**6.14E+01**	3.30E+02	2.45E+02	6.55E+02	1.59E+00	3.30E+00	8.64E-02	7.61E+00	4.64E-01	**3.47E-13**
T_{43}	3.56E+04	1.06E+04	5.11E+03	5.07E+02	**2.64E+02**	3.06E+02	1.48E+00	3.25E+00	5.24E-02	7.78E+00	4.36E-01	**3.17E-13**
T_{44}	1.19E+04	2.10E+03	1.19E+02	3.54E+02	3.78E+02	**1.01E+02**	1.52E+00	3.26E+00	8.34E-03	7.52E+00	4.31E-01	**4.11E-13**
T_{45}	7.14E+03	2.05E+03	1.86E+02	3.74E+02	2.05E+02	**4.76E+01**	1.50E+00	3.30E+00	7.55E-02	7.87E+00	4.55E-01	**3.66E-13**
T_{46}	4.02E+04	1.32E+04	4.98E+03	5.34E+02	2.69E+02	**6.10E+01**	1.57E+00	3.25E+00	4.78E-02	7.75E+00	4.41E-01	**3.06E-13**
T_{47}	1.10E+04	4.93E+03	1.06E+03	3.41E+02	1.89E+02	**4.72E+01**	1.56E+00	3.29E+00	9.87E-03	7.69E+00	4.40E-01	**2.67E-13**
T_{48}	9.85E+03	2.14E+03	5.41E+01	3.34E+02	2.49E+02	**4.74E+01**	1.50E+00	3.28E+00	5.98E-03	7.62E+00	4.29E-01	**3.60E-13**
T_{49}	6.49E+03	4.36E+03	2.63E+04	3.71E+02	2.00E+02	**4.76E+01**	1.43E+00	3.30E+00	1.26E-02	7.47E+00	4.38E-01	**3.81E-13**
T_{50}	6.60E+03	4.28E+03	2.49E+04	2.76E+02	1.98E+02	**4.75E+01**	1.45E+00	3.30E+00	**1.21E-02**	8.40E+00	4.26E-01	3.30E+00

TABLE S6
AVERAGED FITNESS VALUE OBTAINED BY MFEA, EBS, EEMTA, MATEA, SAEF-AKT AND EMATO-MKT OF TASK_1 TO TASK_{50} ON CEC19-SOMATP3 AND CEC19-SOMATP4 AFTER 30 INDEPENDENT RUNS, WHERE THE BOLD IS THE BEST RESULT OF ALL ALGORITHMS.

	CEC19-SOMATP3						CEC19-SOMATP4					
task	MFEA	EBS	EEMTA	MaTEA	SaEF-AKT	EMaTO-MKT	MFEA	EBS	EEMTA	MaTEA	SaEF-AKT	EMaTO-MKT
T_1	5.50E+02	7.70E+02	6.84E+02	1.64E+02	5.50E+01	**3.20E+01**	1.10E+00	1.10E+00	4.15E-01	1.86E-01	2.53E-02	**0.00E+00**
T_2	2.48E+02	8.22E+02	3.66E+02	1.11E+02	3.35E+01	**2.55E+01**	9.31E-01	1.05E+00	3.50E-01	8.74E-02	1.47E-02	**0.00E+00**
T_3	2.57E+02	3.79E+02	1.50E+02	1.10E+02	3.83E+01	**2.28E+01**	9.32E-01	9.57E-01	1.20E-02	7.30E-02	1.74E-02	**0.00E+00**
T_4	6.13E+02	6.37E+02	6.29E+02	1.82E+02	7.43E+01	**4.07E+01**	9.11E-01	9.78E-01	1.16E-01	7.07E-02	1.37E-02	**0.00E+00**
T_5	1.34E+02	2.80E+02	1.30E+02	1.12E+02	2.27E+01	**1.63E+01**	8.34E-01	8.14E-01	8.11E-02	3.74E-02	8.35E-03	**0.00E+00**
T_6	1.72E+02	7.24E+02	2.58E+02	9.63E+01	2.96E+01	**2.06E+01**	9.94E-01	1.06E+00	3.02E-01	1.54E-01	2.39E-02	**0.00E+00**
T_7	2.83E+02	1.30E+03	4.65E+02	1.58E+02	**9.67E+01**	1.01E+02	8.12E-01	1.90E+00	2.42E-01	2.49E-02	2.82E-03	**0.00E+00**
T_8	3.30E+02	3.70E+02	1.33E+02	9.36E+01	4.41E+01	**2.85E+01**	3.04E-01	1.95E-01	1.49E-02	5.18E-03	7.40E-04	**0.00E+00**
T_9	2.24E+02	3.14E+02	7.30E+01	9.72E+01	3.53E+01	**2.01E+01**	1.25E+00	1.18E+00	3.24E-01	3.06E-01	4.37E-02	**0.00E+00**
T_{10}	2.09E+02	1.03E+03	4.19E+02	8.78E+01	2.98E+01	**2.38E+01**	7.27E-01	6.40E-01	9.19E-03	2.54E-02	9.38E-03	**0.00E+00**
T_{11}	2.70E+02	5.63E+02	2.34E+02	1.07E+02	3.51E+01	**2.43E+01**	1.06E+00	1.12E+00	3.23E-01	1.74E-01	1.76E-02	**1.64E-03**
T_{12}	4.03E+03	4.07E+03	4.03E+03	4.03E+03	4.03E+03	**4.03E+03**	8.62E-01	1.50E+00	2.99E-01	2.36E-02	2.97E-03	**0.00E+00**
T_{13}	3.14E+02	4.20E+02	8.68E+01	1.48E+02	4.71E+01	**2.81E+01**	9.81E-01	1.05E+00	2.23E-01	1.09E-01	1.80E-02	**0.00E+00**
T_{14}	1.79E+02	8.95E+02	3.02E+02	8.25E+01	3.20E+01	**2.64E+01**	9.20E-01	9.66E-01	7.11E-02	3.79E-02	1.25E-02	**0.00E+00**
T_{15}	1.08E+02	1.99E+02	8.69E+01	5.74E+01	2.36E+01	**1.76E+01**	9.26E-01	1.21E+00	3.64E-01	5.85E-02	9.83E-03	**0.00E+00**
T_{16}	4.87E+02	7.46E+02	3.75E+02	1.69E+02	5.91E+01	**3.28E+01**	9.37E-01	9.99E-01	1.14E-01	9.60E-02	1.72E-02	**0.00E+00**
T_{17}	5.04E+02	4.46E+02	3.07E+02	1.66E+02	6.62E+01	**3.76E+01**	4.59E-01	3.82E-01	1.36E-02	7.28E-03	8.03E-03	**0.00E+00**
T_{18}	2.47E+02	3.36E+02	4.42E+01	9.17E+01	3.85E+01	**2.41E+01**	8.49E-01	3.48E+00	3.01E-01	7.28E-02	**1.07E-03**	2.87E-03
T_{19}	1.48E+02	4.80E+02	1.83E+02	9.36E+01	2.62E+01	**2.22E+01**	9.62E-01	1.00E+00	1.37E-02	6.36E-02	1.22E-02	**0.00E+00**
T_{20}	4.03E+02	4.66E+02	8.28E+01	1.48E+02	6.59E+01	**3.42E+01**	9.66E-01	1.02E+00	2.75E-01	9.48E-02	1.68E-02	**0.00E+00**
T_{21}	3.84E+02	3.78E+02	7.24E+01	1.42E+02	5.04E+01	**3.38E+01**	7.74E-01	7.53E-01	2.60E-02	3.08E-02	9.47E-03	**0.00E+00**
T_{22}	1.99E+02	3.86E+02	1.43E+02	1.02E+02	3.33E+01	**1.85E+01**	9.76E-01	1.08E+00	4.19E-01	7.21E-02	4.63E-03	**0.00E+00**
T_{23}	4.11E+02	2.00E+03	7.87E+02	1.30E+02	4.36E+01	**3.72E+01**	8.86E-01	1.75E+00	3.36E-01	3.47E-02	3.66E-03	**1.64E-03**
T_{24}	4.12E+02	9.09E+02	4.51E+02	1.55E+02	5.53E+01	**2.96E+01**	9.09E-01	1.14E+00	3.68E-01	4.64E-02	9.98E-03	**5.09E-03**
T_{25}	4.35E+02	1.61E+03	5.76E+02	1.33E+02	4.57E+01	**3.26E+01**	1.03E+00	1.06E+00	1.47E-01	1.69E-01	3.60E-02	**0.00E+00**
T_{26}	3.44E+02	3.62E+02	5.78E+01	1.14E+02	4.45E+01	**2.99E+01**	4.10E-01	4.27E-01	3.83E-02	1.03E-02	7.28E-03	**0.00E+00**
T_{27}	3.35E+02	4.37E+02	1.00E+02	1.40E+02	5.82E+01	**3.04E+01**	9.26E-01	9.89E-01	2.95E-01	4.90E-02	1.00E-02	**0.00E+00**
T_{28}	4.84E+02	4.25E+02	7.50E+01	1.22E+02	6.32E+01	**3.84E+01**	1.05E+00	1.27E+00	4.76E-01	1.25E-01	1.59E-02	**0.00E+00**
T_{29}	2.99E+02	1.58E+03	5.83E+02	1.25E+02	3.72E+01	**2.91E+01**	7.86E-01	1.44E+00	2.99E-01	1.81E-02	4.00E-03	**0.00E+00**
T_{30}	4.44E+02	4.21E+02	4.31E+01	1.40E+02	4.98E+01	**3.80E+01**	9.29E-01	9.99E-01	5.79E-03	7.41E-02	2.07E-02	**1.23E-03**
T_{31}	3.67E+02	4.32E+02	2.71E+02	1.10E+02	4.63E+01	**3.10E+01**	8.20E-01	9.13E-01	1.66E-01	3.45E-02	1.21E-02	**0.00E+00**
T_{32}	2.09E+02	9.25E+02	3.71E+02	1.01E+02	2.95E+01	**2.29E+01**	1.11E+00	1.17E+00	6.46E-01	1.97E-01	3.36E-02	**0.00E+00**
T_{33}	2.40E+02	1.02E+03	2.59E+02	1.05E+02	3.61E+01	**2.29E+01**	2.81E-01	2.06E-01	8.91E-03	5.99E-03	4.90E-03	**0.00E+00**
T_{34}	6.69E+02	1.25E+03	8.04E+02	5.65E+02	**4.83E+02**	4.99E+02	7.59E-01	6.07E-01	8.90E-03	1.70E-02	7.10E-03	**1.23E-03**
T_{35}	3.69E+02	3.70E+02	4.14E+01	1.41E+02	4.90E+01	**3.23E+01**	8.47E-01	7.73E-01	9.81E-02	3.86E-02	1.16E-02	**0.00E+00**
T_{36}	4.79E+02	5.36E+03	9.01E+02	1.24E+02	4.85E+01	**2.60E+01**	9.32E-01	9.79E-01	1.60E-02	8.06E-02	2.18E-02	**1.23E-03**
T_{37}	3.42E+02	6.54E+02	3.07E+02	1.25E+02	4.56E+01	**2.69E+01**	2.80E-01	3.13E-01	4.16E-02	4.32E-03	2.04E-04	**0.00E+00**
T_{38}	3.86E+02	4.48E+02	7.77E+01	1.58E+02	6.06E+01	**2.69E+01**	2.60E-01	1.95E-01	9.21E-03	4.72E-03	4.29E-03	**0.00E+00**
T_{39}	2.60E+02	3.07E+02	4.52E+01	1.23E+02	3.93E+01	**2.45E+01**	8.30E-01	7.55E-01	1.11E-02	3.03E-02	9.55E-03	**0.00E+00**
T_{40}	2.35E+02	3.41E+02	1.11E+02	1.11E+02	3.64E+01	**2.09E+01**	1.01E+00	1.04E+00	8.79E-02	1.60E-01	2.80E-02	**0.00E+00**
T_{41}	2.87E+02	3.48E+02	4.62E+01	1.11E+02	4.75E+01	**2.36E+01**	7.67E-01	7.08E-01	4.10E-02	3.71E-02	7.96E-03	**0.00E+00**
T_{42}	6.31E+02	9.43E+02	5.45E+02	1.89E+02	7.92E+01	**3.58E+01**	2.59E-01	1.03E+00	3.89E-02	2.84E-03	6.74E-03	**0.00E+00**
T_{43}	2.84E+02	3.50E+02	4.34E+01	1.07E+02	4.55E+01	**2.19E+01**	8.41E-01	1.02E+00	2.38E-01	2.76E-02	6.72E-03	**0.00E+00**
T_{44}	1.69E+02	7.56E+02	2.81E+02	1.05E+02	2.91E+01	**1.56E+01**	2.35E-01	1.15E+00	7.76E-02	1.05E-02	**3.40E-03**	5.34E-03
T_{45}	2.95E+02	3.26E+02	7.13E+01	1.03E+02	5.16E+01	**2.46E+01**	9.11E-01	9.47E-01	1.95E-01	5.71E-02	1.09E-02	**0.00E+00**
T_{46}	3.26E+02	3.99E+02	5.87E+01	1.22E+02	4.36E+01	**3.02E+01**	8.92E-01	9.09E-01	2.85E-02	5.38E-02	1.59E-02	**0.00E+00**
T_{47}	1.87E+02	3.43E+02	6.16E+01	6.44E+01	3.08E+01	**1.67E+01**	2.08E-01	1.54E-01	3.84E-03	3.54E-03	4.19E-03	**0.00E+00**
T_{48}	2.71E+02	1.34E+03	5.37E+02	1.01E+02	3.31E+01	**2.75E+01**	7.85E-01	7.20E-01	1.06E-01	3.29E-02	5.91E-03	**0.00E+00**
T_{49}	7.34E+03	9.56E+03	7.42E+03	7.35E+03	7.16E+03	**7.16E+03**	1.15E+00	1.12E+00	3.85E-01	2.62E-01	3.03E-02	**1.23E-03**
T_{50}	6.67E+02	6.73E+02	1.29E+02	1.95E+02	8.37E+01	**4.64E+01**	8.25E-01	1.07E+00	2.34E-01	2.44E-02	9.89E-03	**0.00E+00**

TABLE S7
AVERAGED FITNESS VALUE OBTAINED BY MFEA, EBS, EEMTA, MATEA, SAEF-AKT AND EMATO-MKT OF TASK_1 TO TASK_{50} ON CEC19-SOMATP5 AND CEC19-SOMATP6 AFTER 30 INDEPENDENT RUNS, WHERE THE BOLD IS THE BEST RESULT OF ALL ALGORITHMS.

	CEC19-SOMATP5						CEC19-SOMATP6					
task	MFEA	EBS	EEMTA	MaTEA	SaEF-AKT	EMaTO-MKT	MFEA	EBS	EEMTA	MaTEA	SaEF-AKT	EMaTO-MKT
T_1	1.00E+01	9.71E+00	9.66E-01	1.58E+00	8.10E-01	**1.83E-08**	6.08E+03	1.76E+04	7.48E+03	**1.02E+01**	1.84E+03	2.94E+03
T_2	9.71E+00	8.50E+00	7.59E-01	1.65E+00	8.36E-01	**1.46E-06**	4.19E+03	1.77E+04	7.31E+03	**5.94E+00**	1.76E+03	3.13E+03
T_3	1.11E+01	1.25E+01	7.01E-01	1.69E+00	7.35E-01	**1.55E-08**	5.16E+03	1.81E+04	7.04E+03	**1.40E+01**	1.94E+03	2.90E+03
T_4	1.04E+01	9.47E+00	6.20E-01	1.53E+00	8.81E-01	**1.59E-08**	4.41E+03	1.72E+04	6.37E+03	**4.73E+00**	1.79E+03	2.92E+03
T_5	9.13E+00	8.47E+00	2.35E+00	1.53E+00	7.67E-01	**1.02E-08**	3.73E+03	1.66E+04	1.43E+03	**6.16E+01**	9.55E+02	1.46E+03
T_6	1.15E+01	1.39E+01	6.91E-01	1.60E+00	8.04E-01	**8.07E-09**	4.55E+03	1.79E+04	6.97E+03	**6.96E+00**	1.76E+03	3.03E+03
T_7	9.64E+00	8.98E+00	5.84E-01	1.60E+00	8.11E-01	**3.01E-04**	3.73E+03	1.72E+04	2.45E+03	**2.58E+01**	1.57E+03	2.72E+03
T_8	1.01E+01	1.01E+01	6.95E-01	1.63E+00	8.76E-01	**1.27E-08**	5.44E+03	1.77E+04	7.28E+03	**1.90E+01**	1.96E+03	2.63E+03
T_9	9.40E+00	8.89E+00	9.79E-01	1.66E+00	8.42E-01	**9.00E-09**	5.25E+03	1.76E+04	7.39E+03	**1.17E+01**	1.85E+03	2.58E+03
T_{10}	9.32E+00	8.66E+00	5.81E-01	1.60E+00	9.22E-01	**3.39E-08**	6.31E+03	1.79E+04	7.60E+03	**5.20E+01**	2.01E+03	2.64E+03
T_{11}	9.19E+00	9.16E+00	8.30E+00	1.48E+00	8.26E-01	**7.05E-09**	5.95E+03	1.74E+04	7.46E+03	**1.58E+01**	1.95E+03	2.68E+03
T_{12}	9.53E+00	1.01E+01	9.03E+00	1.40E+00	9.02E-01	**8.68E-09**	5.19E+03	1.78E+04	6.95E+03	**7.83E+00**	1.77E+03	3.05E+03
T_{13}	9.85E+00	9.24E+00	8.89E-01	1.50E+00	8.09E-01	**1.02E-07**	5.31E+03	1.76E+04	7.22E+03	**5.99E+00**	1.76E+03	2.89E+03
T_{14}	9.28E+00	1.07E+01	8.40E+00	1.52E+00	8.36E-01	**9.94E-09**	4.56E+03	1.74E+04	6.55E+03	**6.39E+00**	1.76E+03	3.14E+03
T_{15}	9.43E+00	8.61E+00	7.13E+00	1.71E+00	8.41E-01	**7.15E-09**	5.09E+03	1.77E+04	7.59E+03	**9.78E+00**	1.84E+03	3.28E+03
T_{16}	1.08E+01	1.11E+01	6.74E-01	1.78E+00	8.92E-01	**6.81E-07**	4.90E+03	1.73E+04	6.02E+03	**6.40E+00**	1.80E+03	3.41E+03
T_{17}	9.02E+00	8.40E+00	3.52E+00	1.46E+00	7.45E-01	**2.53E-08**	3.53E+03	1.70E+04	2.77E+03	**2.93E+01**	1.36E+03	2.14E+03
T_{18}	9.01E+00	8.36E+00	2.79E+00	1.46E+00	8.15E-01	**1.22E-08**	5.55E+03	1.75E+04	7.39E+03	**1.03E+01**	1.80E+03	3.11E+03
T_{19}	8.94E+00	8.88E+00	6.64E+00	1.44E+00	8.16E-01	**2.58E-08**	5.78E+03	1.80E+04	7.94E+03	**5.76E+01**	2.02E+03	2.76E+03
T_{20}	1.01E+01	9.24E+00	5.83E-01	1.45E+00	8.33E-01	**4.58E-08**	4.52E+03	1.73E+04	7.01E+03	**4.24E+00**	1.78E+03	3.45E+03
T_{21}	9.44E+00	1.08E+01	7.56E+00	1.58E+00	8.14E-01	**3.71E-08**	5.96E+03	1.78E+04	7.83E+03	**3.49E+01**	1.99E+03	3.04E+03
T_{22}	8.91E+00	9.44E+00	5.39E+00	1.14E+00	7.29E-01	**4.82E-03**	5.23E+03	1.75E+04	7.62E+03	**1.12E+01**	1.81E+03	2.86E+03
T_{23}	1.02E+01	1.01E+01	6.39E-01	1.57E+00	8.53E-01	**1.93E-08**	4.36E+03	1.74E+04	6.77E+03	**6.02E+00**	1.77E+03	3.17E+03
T_{24}	9.23E+00	1.09E+01	8.42E+00	1.72E+00	7.72E-01	**4.95E-07**	5.26E+03	1.81E+04	7.11E+03	**1.19E+01**	1.90E+03	2.74E+03
T_{25}	1.12E+01	1.27E+01	7.06E-01	1.62E+00	8.37E-01	**8.58E-05**	4.30E+03	1.77E+04	6.82E+03	**4.22E+00**	1.79E+03	3.39E+03
T_{26}	1.21E+01	1.38E+01	7.53E-01	1.70E+00	7.97E-01	**1.44E-08**	5.47E+03	1.72E+04	7.31E+03	**6.45E+00**	1.76E+03	3.16E+03
T_{27}	1.03E+01	1.08E+01	7.08E-01	1.81E+00	8.54E-01	**5.59E-07**	4.46E+03	1.72E+04	6.51E+03	**4.45E+00**	1.77E+03	3.14E+03
T_{28}	9.05E+00	9.43E+00	6.87E+00	1.33E+00	7.93E-01	**4.53E-08**	5.19E+03	1.76E+04	7.59E+03	**6.23E+00**	1.76E+03	3.15E+03
T_{29}	9.30E+00	8.48E+00	1.98E+00	1.56E+00	8.11E-01	**1.71E-08**	6.01E+03	1.79E+04	7.18E+03	**1.51E+01**	1.96E+03	2.69E+03
T_{30}	9.81E+00	8.65E+00	4.83E-01	1.58E+00	8.33E-01	**6.03E-04**	5.28E+03	1.77E+04	7.40E+03	**5.71E+00**	1.77E+03	3.19E+03
T_{31}	1.01E+01	1.11E+01	7.39E-01	1.52E+00	7.82E-01	**5.12E-03**	6.39E+03	1.81E+04	7.22E+03	**1.35E+01**	1.94E+03	2.92E+03
T_{32}	1.01E+01	1.08E+01	7.40E-01	1.59E+00	8.39E-01	**1.84E-08**	5.91E+03	1.77E+04	7.61E+03	**1.05E+01**	1.86E+03	2.49E+03
T_{33}	9.92E+00	9.75E+00	9.29E-01	1.68E+00	8.60E-01	**6.12E-08**	4.44E+03	1.71E+04	6.42E+03	**3.74E+00**	1.79E+03	3.02E+03
T_{34}	9.87E+00	8.51E+00	5.39E+00	1.46E+00	8.29E-01	**5.80E-09**	5.19E+03	1.78E+04	7.02E+03	**6.41E+00**	1.76E+03	3.02E+03
T_{35}	9.46E+00	1.11E+01	9.59E+00	1.62E+00	8.07E-01	**3.11E-08**	3.95E+03	1.74E+04	4.88E+03	**7.08E+00**	1.81E+03	3.21E+03
T_{36}	9.82E+00	8.99E+00	6.31E-01	1.51E+00	6.85E-01	**1.29E-08**	6.17E+03	1.79E+04	8.60E+03	**1.56E+01**	1.97E+03	2.93E+03
T_{37}	9.09E+00	1.02E+01	9.80E+00	1.30E+00	6.81E-01	**3.93E-08**	4.74E+03	1.70E+04	2.58E+03	**1.99E+01**	1.70E+03	2.80E+03
T_{38}	9.40E+00	9.02E+00	7.32E+00	1.56E+00	8.19E-01	**3.91E-08**	4.44E+03	1.72E+04	6.54E+03	**4.38E+00**	1.77E+03	3.34E+03
T_{39}	9.19E+00	8.68E+00	3.27E+00	1.56E+00	8.17E-01	**5.60E-09**	5.77E+03	1.78E+04	7.64E+03	**9.21E+00**	1.85E+03	2.69E+03
T_{40}	9.34E+00	8.76E+00	5.88E+00	1.64E+00	8.33E-01	**2.63E-08**	4.21E+03	1.74E+04	4.52E+03	**5.84E+00**	1.80E+03	3.23E+03
T_{41}	9.37E+00	8.97E+00	6.81E+00	1.74E+00	7.80E-01	**1.98E-08**	5.16E+03	1.71E+04	6.71E+03	**7.60E+00**	1.77E+03	3.10E+03
T_{42}	8.85E+00	9.33E+00	6.67E+00	1.33E+00	8.15E-01	**2.28E-08**	4.92E+03	1.72E+04	7.09E+03	**6.90E+00**	1.76E+03	3.36E+03
T_{43}	9.92E+00	1.12E+01	9.45E+00	1.73E+00	7.76E-01	**2.41E-03**	4.84E+03	1.79E+04	7.44E+03	**5.21E+00**	1.79E+03	3.30E+03
T_{44}	9.07E+00	8.31E+00	2.75E+00	1.48E+00	8.00E-01	**4.23E-08**	4.00E+03	1.77E+04	6.49E+03	**3.73E+00**	1.77E+03	3.08E+03
T_{45}	8.71E+00	9.43E+00	6.46E+00	1.28E+00	7.02E-01	**2.41E-03**	4.90E+03	1.76E+04	7.13E+03	**6.98E+00**	1.76E+03	3.13E+03
T_{46}	9.82E+00	9.52E+00	7.45E+00	1.72E+00	8.32E-01	**7.95E-08**	4.85E+03	1.76E+04	7.23E+03	**6.26E+00**	1.76E+03	3.07E+03
T_{47}	9.03E+00	1.04E+01	8.40E+00	1.23E+00	6.54E-01	**4.12E-08**	3.38E+03	1.71E+04	5.00E+03	**7.37E+00**	1.81E+03	3.60E+03
T_{48}	9.20E+00	9.95E+00	8.24E+00	1.53E+00	8.25E-01	**5.05E-09**	3.71E+03	1.69E+04	6.52E+03	**3.84E+00**	1.79E+03	3.28E+03
T_{49}	9.91E+00	8.92E+00	5.83E-01	1.55E+00	7.16E-01	**5.16E-03**	3.76E+03	1.75E+04	5.98E+03	**4.83E+00**	1.79E+03	3.36E+03
T_{50}	9.53E+00	8.51E+00	3.48E+00	1.66E+00	8.09E-01	**9.92E-09**	5.04E+03	1.74E+04	5.23E+03	**6.04E+00**	1.81E+03	3.47E+03

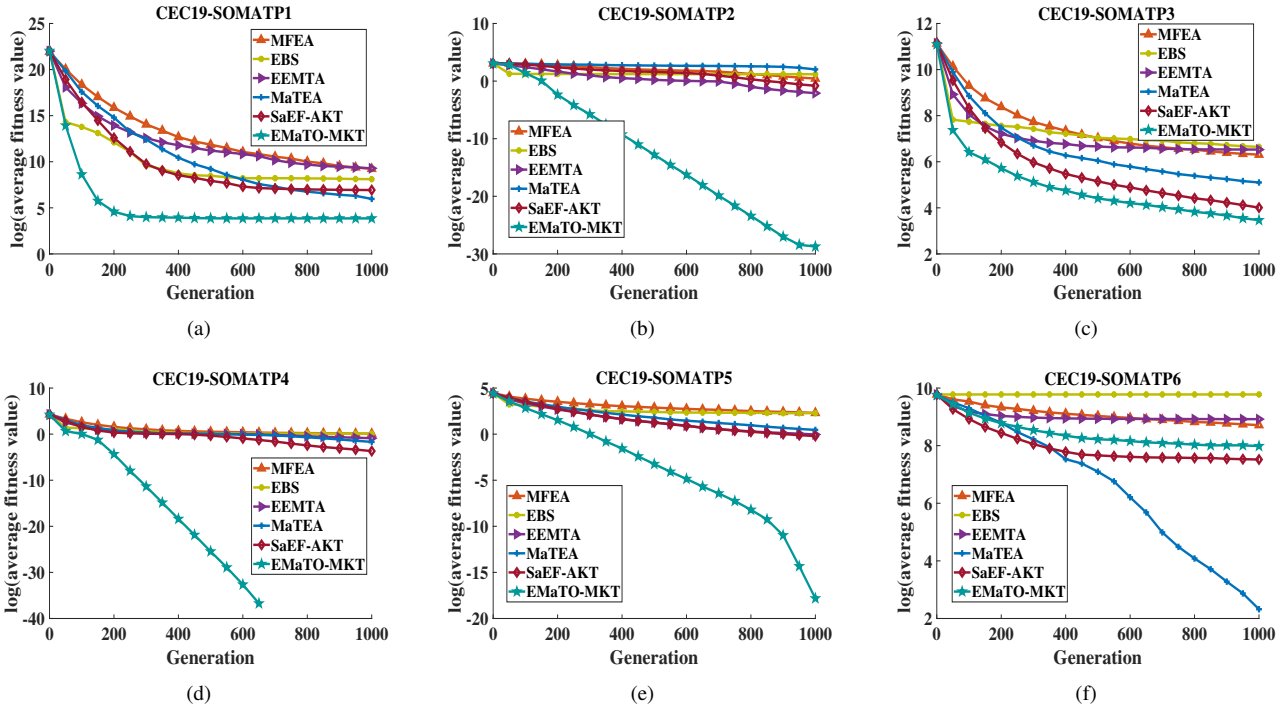

Fig. 5. The log(average fitness value) numerical curves of MFEA, EBS, EEMTA, MaTEA, SaEF-AKT and EMaTO-MKT after running 30 times independently on CEC19-SOMATP test suite.

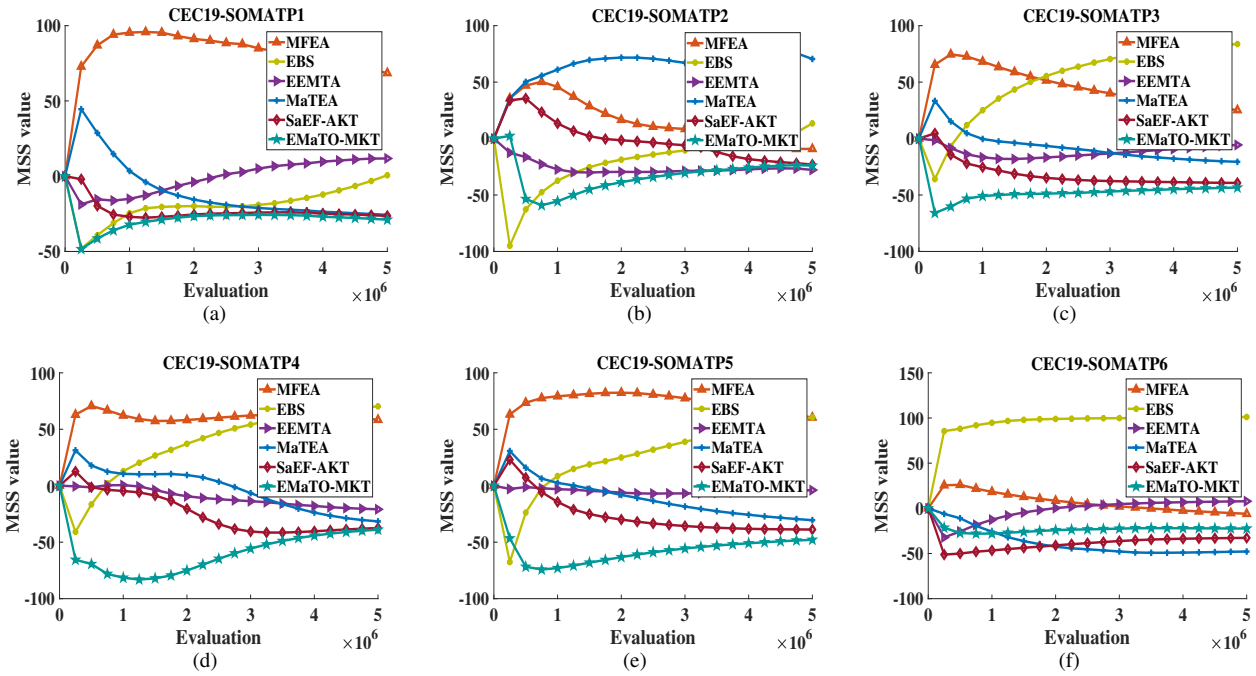

Fig. S1. The MSS value numerical curve of MFEA, EBS, EEMTA, MaTEA, SaEF-AKT and EMaTO-MKT running 30 times independently on CEC19-SOMATP test suite.