

ES Logs

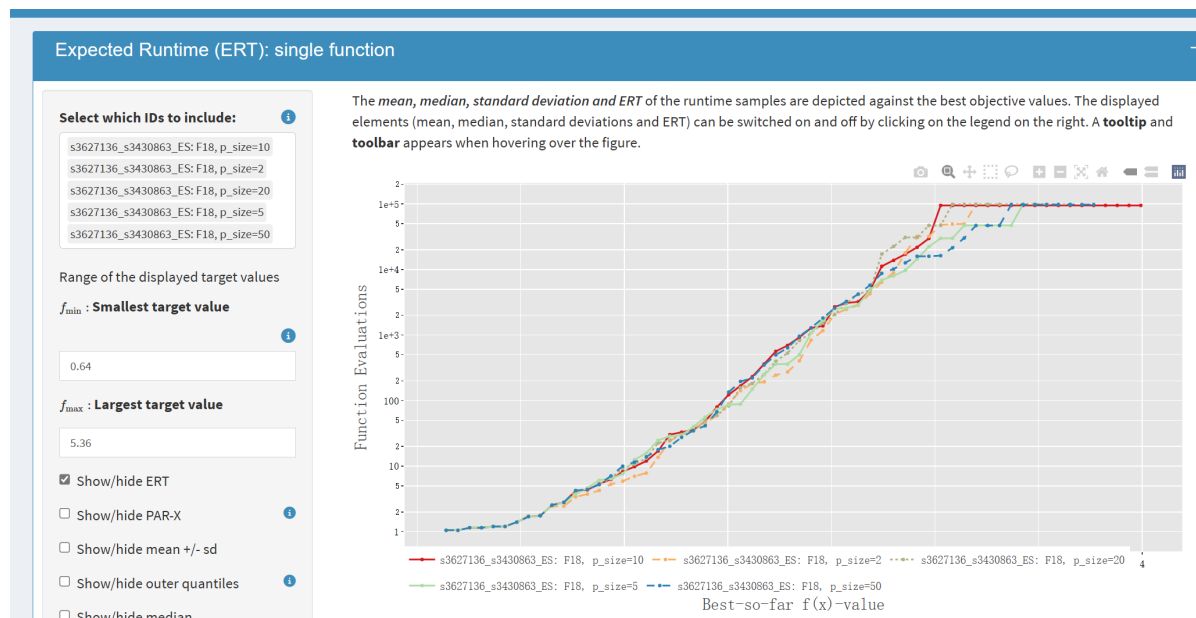
F18 Fine-tuning

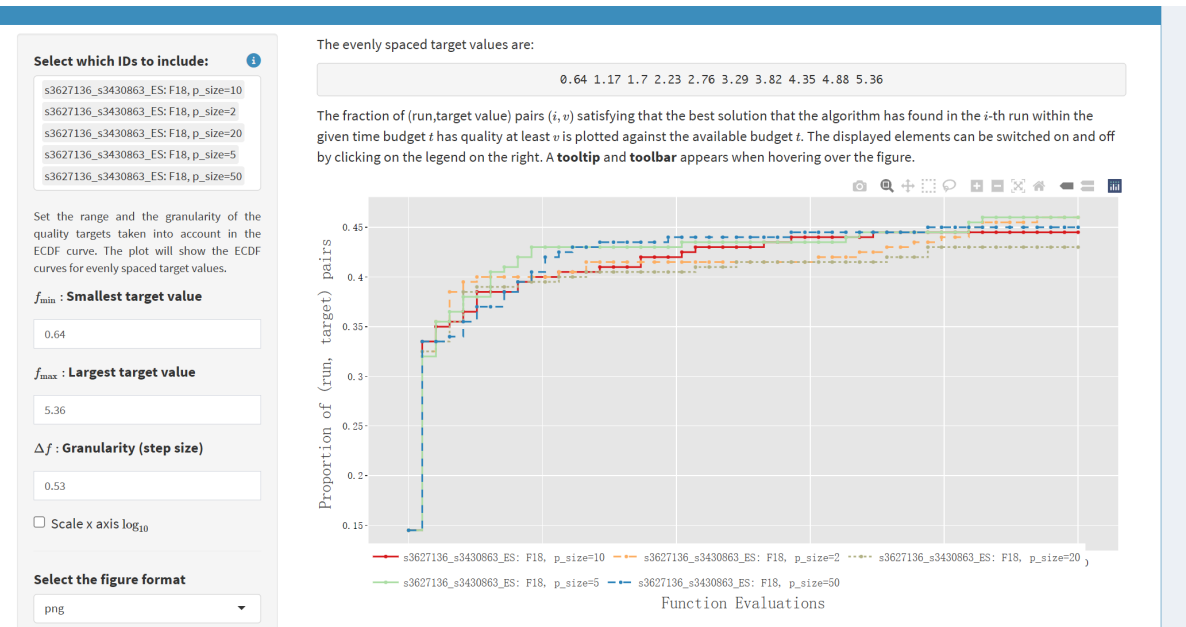
Notes

1. AUC_u represents calculating the AUC with default settings.
2. ECDF settings: **not** use "scale x axis log10".
3. ERT settings: **not** use "scale x axis log10". Use "scale y axis log10".
4. ETV settings: use "scale x axis log10". Use "scale y axis log10".
5. Save figures: pdf and png. ECDF, ERT, ETV.

POPULATION SIZE

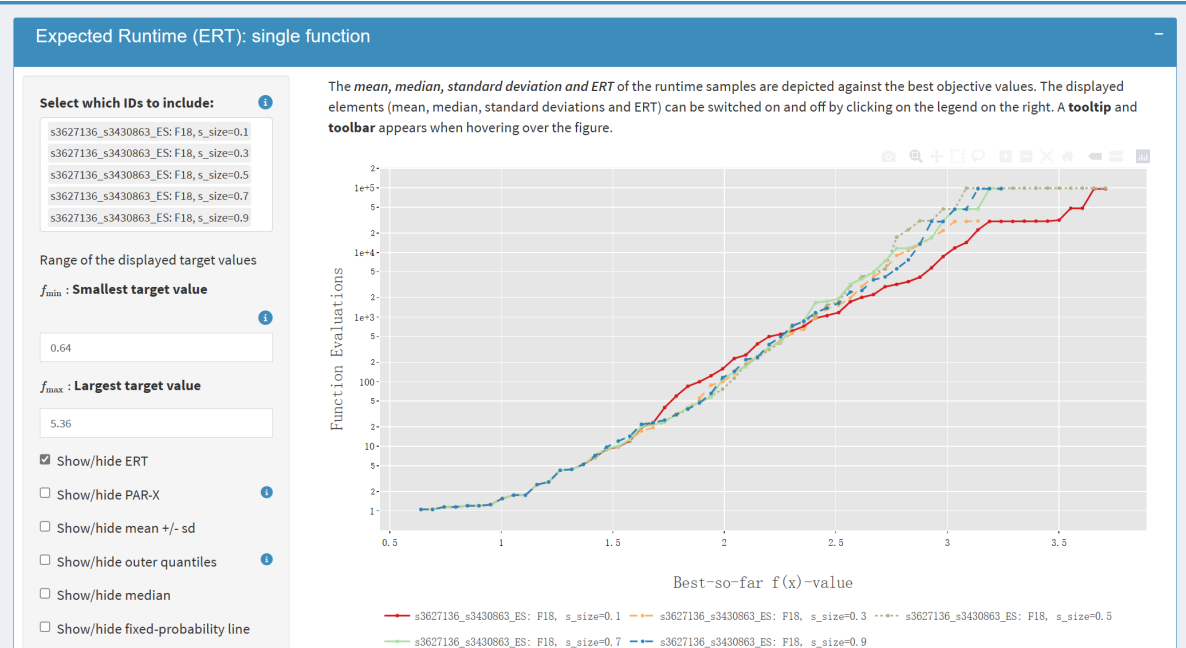
PS	AUC	avg. fitness	max	median
2	0.416192	2.81	3.25	2.78
5	0.427722	2.81	3.46	2.76
10	0.418592	2.77	3.99	2.74
20	0.40538	2.75	3.71	2.74
50	0.424969	2.81	3.8	2.69





STEP SIZE

SS	AUC	avg. fitness	max	median
0.1	0.442211	3.02	3.71	2.94
0.3	0.4177255	2.78	3.18	2.74
0.5	0.40538	2.75	3.71	2.74
0.7	0.4092055	2.76	3.25	2.71
0.9	0.4271635	2.78	3.25	2.78



Select which IDs to include:

s3627136_s3430863_ES: F18, s_size=0.1
 s3627136_s3430863_ES: F18, s_size=0.3
 s3627136_s3430863_ES: F18, s_size=0.5
 s3627136_s3430863_ES: F18, s_size=0.7
 s3627136_s3430863_ES: F18, s_size=0.9

Set the range and the granularity of the quality targets taken into account in the ECDF curve. The plot will show the ECDF curves for evenly spaced target values.

f_{\min} : Smallest target value

0.64

f_{\max} : Largest target value

5.36

Δf : Granularity (step size)

0.53

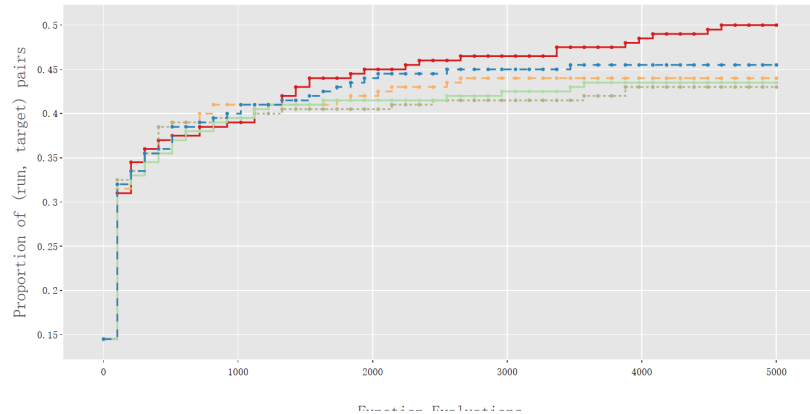
☐ Scale x axis \log_{10}

Select the figure format

The evenly spaced target values are:

0.64 1.17 1.7 2.23 2.76 3.29 3.82 4.35 4.88 5.36

The fraction of (run,target value) pairs (i, v) satisfying that the best solution that the algorithm has found in the i -th run within the given time budget t has quality at least v is plotted against the available budget t . The displayed elements can be switched on and off by clicking on the legend on the right. A **tooltip** and **toolbar** appears when hovering over the figure.



OFFSPRING SIZE

OS	AUC	avg. fitness	max	median
20	0.4061185	2.75	3.71	2.74
40	0.417048	2.8	3.71	2.71
60	0.4330125	2.85	3.54	2.81
80	0.4202155	2.76	3.25	2.74
100	0.4289375	2.812.81	3.32	2.78

Expected Runtime (ERT): single function

Select which IDs to include:

s3627136_s3430863_ES: F18, o_size=100
 s3627136_s3430863_ES: F18, o_size=20
 s3627136_s3430863_ES: F18, o_size=40
 s3627136_s3430863_ES: F18, o_size=60
 s3627136_s3430863_ES: F18, o_size=80

Range of the displayed target values

f_{\min} : Smallest target value

0.64

f_{\max} : Largest target value

5.36

☒ Show/hide ERT

☐ Show/hide PAR-X

☐ Show/hide mean +/- sd

☐ Show/hide outer quantiles

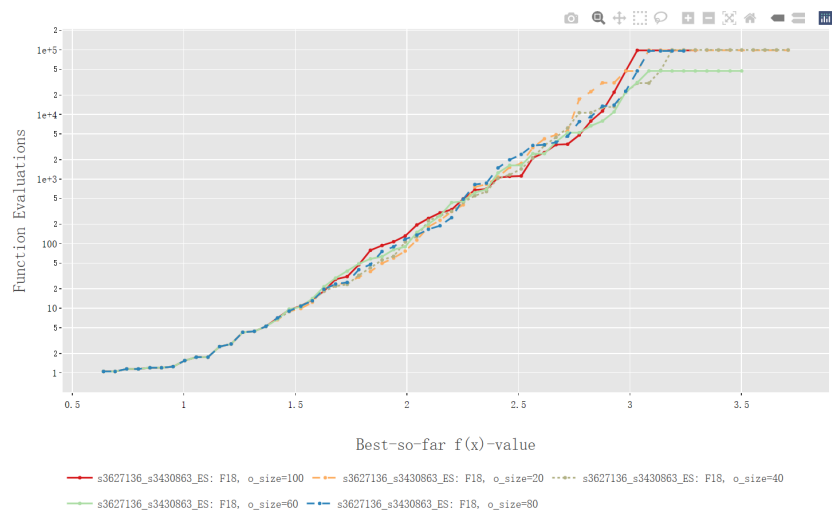
☐ Show/hide median

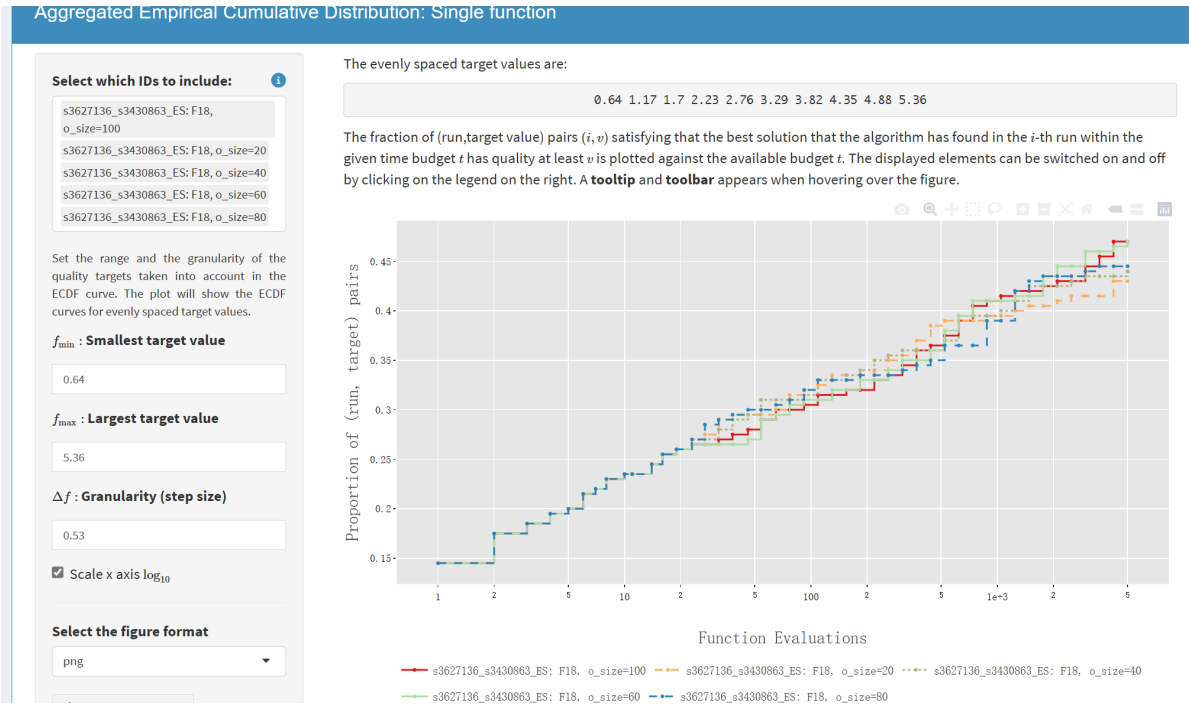
☐ Show/hide fixed-probability line

☐ Scale x axis \log_{10}

☒ Scale y axis log

The *mean*, *median*, *standard deviation* and *ERT* of the runtime samples are depicted against the best objective values. The displayed elements (mean, median, standard deviations and ERT) can be switched on and off by clicking on the legend on the right. A **tooltip** and **toolbar** appears when hovering over the figure.





Expected Runtime (ERT): single function

Select which IDs to include:

s3627136_s3430863_ES: F19, p_size=10
s3627136_s3430863_ES: F19, p_size=2
s3627136_s3430863_ES: F19, p_size=20
s3627136_s3430863_ES: F19, p_size=5
s3627136_s3430863_ES: F19, p_size=50

Range of the displayed target values

f_{\min} : Smallest target value

18

f_{\max} : Largest target value

50

☒ Show/hide ERT

☐ Show/hide PAR-X

☐ Show/hide mean +/- sd

☐ Show/hide outer quantiles

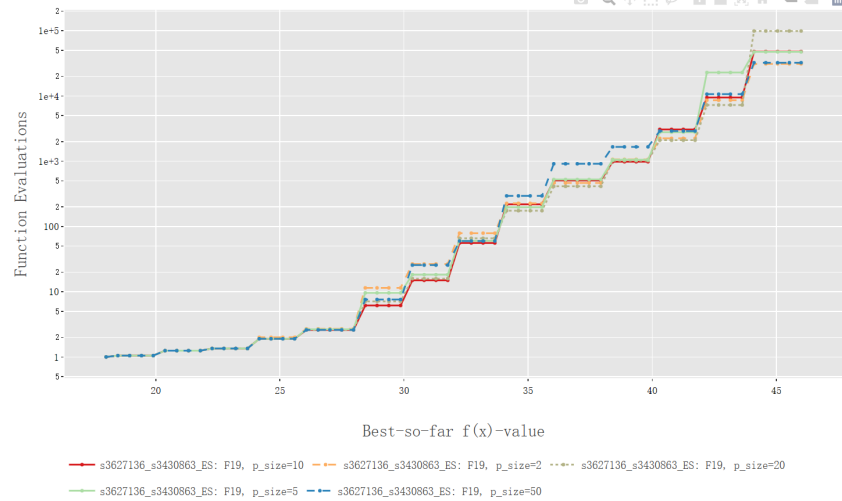
☐ Show/hide median

☐ Show/hide fixed-probability line

☐ Scale x axis \log_{10}

☒ Scale y axis \log_{10}

The *mean*, *median*, *standard deviation* and *ERT* of the runtime samples are depicted against the best objective values. The displayed elements (mean, median, standard deviations and ERT) can be switched on and off by clicking on the legend on the right. A **tooltip** and **toolbar** appears when hovering over the figure.



Select which IDs to include:

s3627136_s3430863_ES: F19, p_size=10
s3627136_s3430863_ES: F19, p_size=2
s3627136_s3430863_ES: F19, p_size=20
s3627136_s3430863_ES: F19, p_size=5
s3627136_s3430863_ES: F19, p_size=50

Set the range and the granularity of the quality targets taken into account in the ECDF curve. The plot will show the ECDF curves for evenly spaced target values.

f_{\min} : Smallest target value

18

f_{\max} : Largest target value

50

Δf : Granularity (step size)

3.56

☐ Scale x axis \log_{10}

Select the figure format

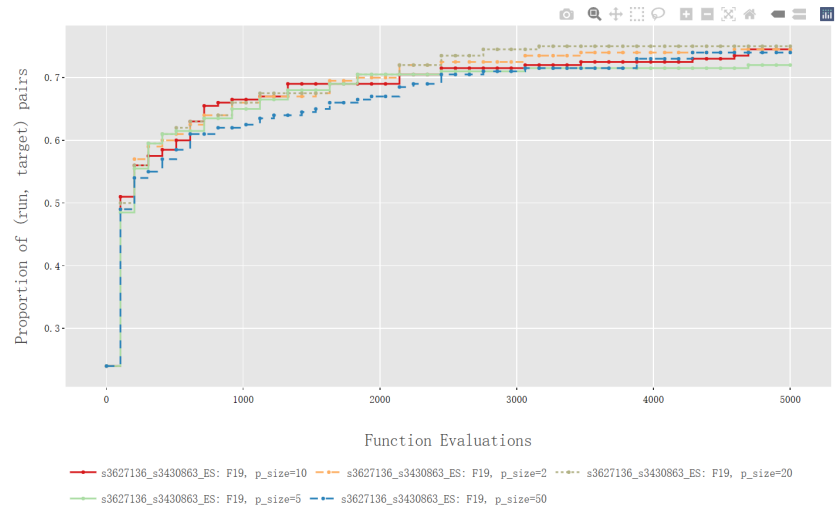
png

download the figure

The evenly spaced target values are:

18 21.56 25.12 28.68 32.24 35.8 39.36 42.92 46.48 50

The fraction of (run, target value) pairs (i, v) satisfying that the best solution that the algorithm has found in the i -th run within the given time budget t has quality at least v is plotted against the available budget t . The displayed elements can be switched on and off by clicking on the legend on the right. A **tooltip** and **toolbar** appears when hovering over the figure.



The approximated Area Under the Curve of this displayed single-function ECDF is:

STEP SIZE

SS	AUC	avg. fitness	max	median
0.1	0.653649	40.8	44	42
0.3	0.68339	42.4	44	42
0.5	0.700275	43	46	43
0.7	0.694355	43.3	46	44
0.9	0.690528	43	46	44

Select which IDs to include:

s3627136_s3430863_ES: F19, s_size=0.1
 s3627136_s3430863_ES: F19, s_size=0.3
 s3627136_s3430863_ES: F19, s_size=0.5
 s3627136_s3430863_ES: F19, s_size=0.7
 s3627136_s3430863_ES: F19, s_size=0.9

Range of the displayed target values

 f_{\min} : Smallest target value

18

 f_{\max} : Largest target value

50

☒ Show/hide ERT☐ Show/hide PAR-X☐ Show/hide mean +/- sd☐ Show/hide outer quantiles☐ Show/hide median

Select which IDs to include:

s3627136_s3430863_ES: F19, s_size=0.1
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 s3627136_s3430863_ES: F19, s_size=0.5
 s3627136_s3430863_ES: F19, s_size=0.7
 s3627136_s3430863_ES: F19, s_size=0.9

Set the range and the granularity of the quality targets taken into account in the ECDF curve. The plot will show the ECDF curves for evenly spaced target values.

 f_{\min} : Smallest target value

18

 f_{\max} : Largest target value

50

 Δf : Granularity (step size)

3.56

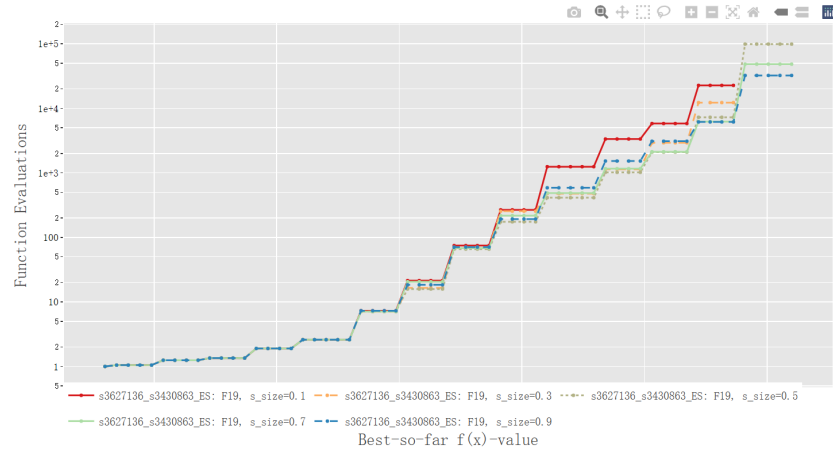
☐ Scale x axis \log_{10}

Select the figure format

png

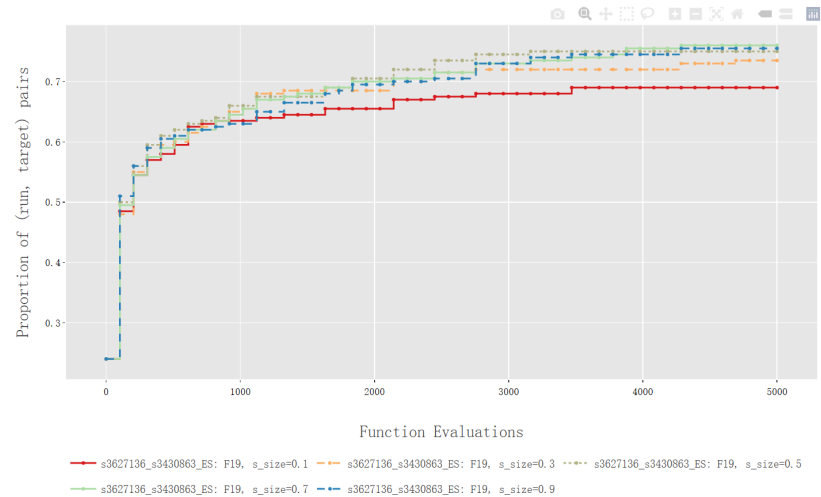
[download the figure](#)

The *mean*, *median*, *standard deviation* and *ERT* of the runtime samples are depicted against the best objective values. The displayed elements (mean, median, standard deviations and ERT) can be switched on and off by clicking on the legend on the right. A **tooltip** and **toolbar** appears when hovering over the figure.



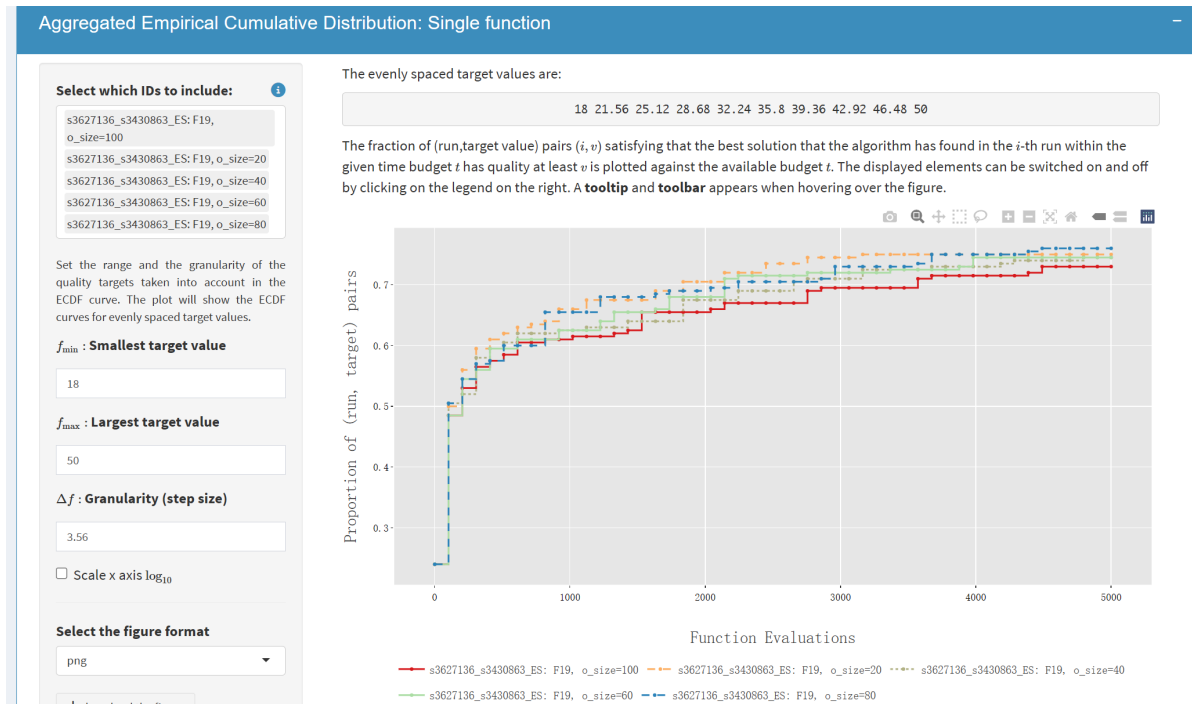
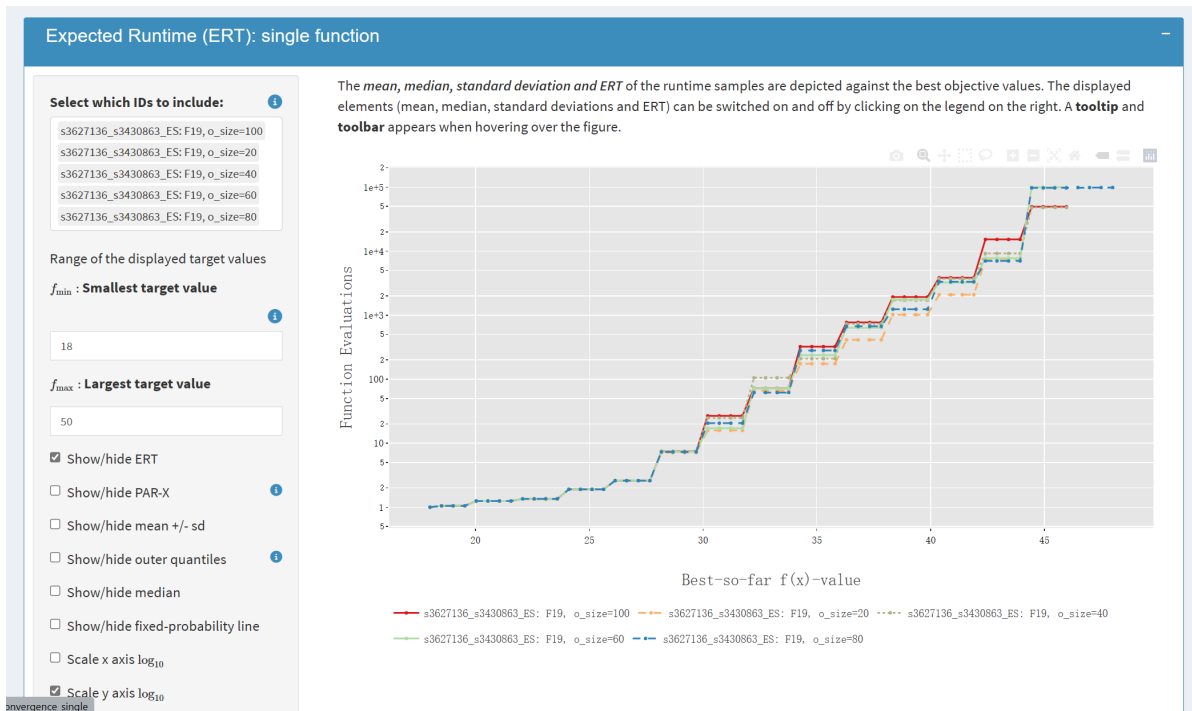
18 21.56 25.12 28.68 32.24 35.8 39.36 42.92 46.48 50

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OFFSPRING SIZE

OS	AUC	avg. fitness	max	median
20	0.700275	43	46	43
40	0.674613	42.7	46	42
60	0.680942	42.7	46	43
80	0.690477	43	48	44
100	0.65987	42.4	46	42



Final Results

AUC	avg. fitness	max	median