Results

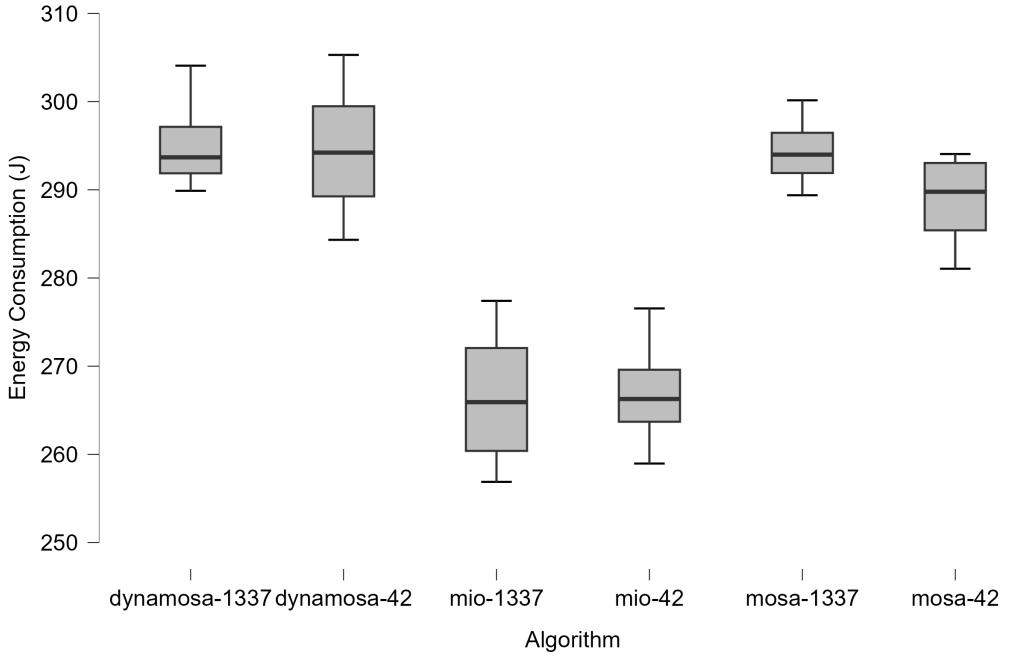
Descriptive Statistics

Descriptive Statistics

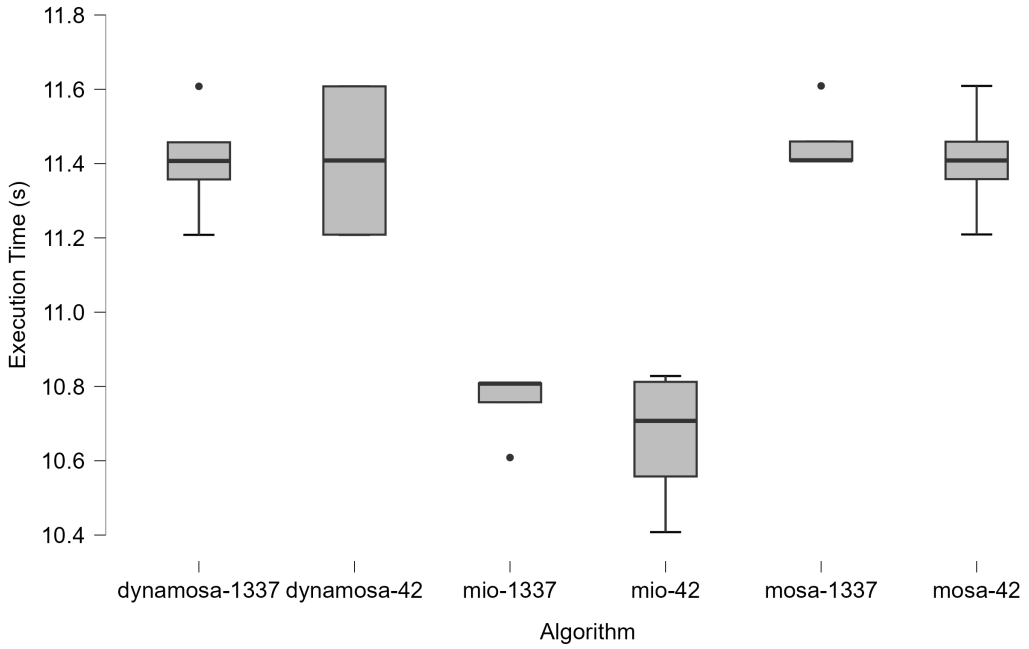
	Energy Consumption (J)						Execution Time (s)						
	dynamosa-1337	dynamosa-42	mio-1337	mio-42	mosa-1337	mosa-42	dynamosa-1337	dynamosa-42	mio-1337	mio-42	mosa-1337	mosa-42	dynamosa-1
Valid	4	4	4	4	4	4	4	4	4	4	4	4	
Mean	295.332	294.515	266.531	267.015	294.379	288.667	11.408	11.408	10.758	10.663	11.459	11.409	25.8
Std. Deviation	6.170	8.986	9.131	7.277	4.534	5.963	0.163	0.231	0.100	0.197	0.100	0.163	0.5
Variance	38.069	80.742	83.372	52.960	20.556	35.554	0.027	0.053	0.010	0.039	0.010	0.027	0.2
Range	14.191	20.969	20.526	17.590	10.766	13.009	0.400	0.400	0.200	0.420	0.201	0.400	1.2
Minimum	289.886	284.328	256.880	258.958	289.385	281.050	11.208	11.208	10.609	10.408	11.408	11.209	25.3
Maximum	304.077	305.297	277.406	276.548	300.151	294.059	11.608	11.608	10.809	10.828	11.609	11.609	26.6
Sum	1181.328	1178.061	1066.123	1068.062	1177.516	1154.666	45.630	45.633	43.033	42.651	45.835	45.635	103.5

Boxplots

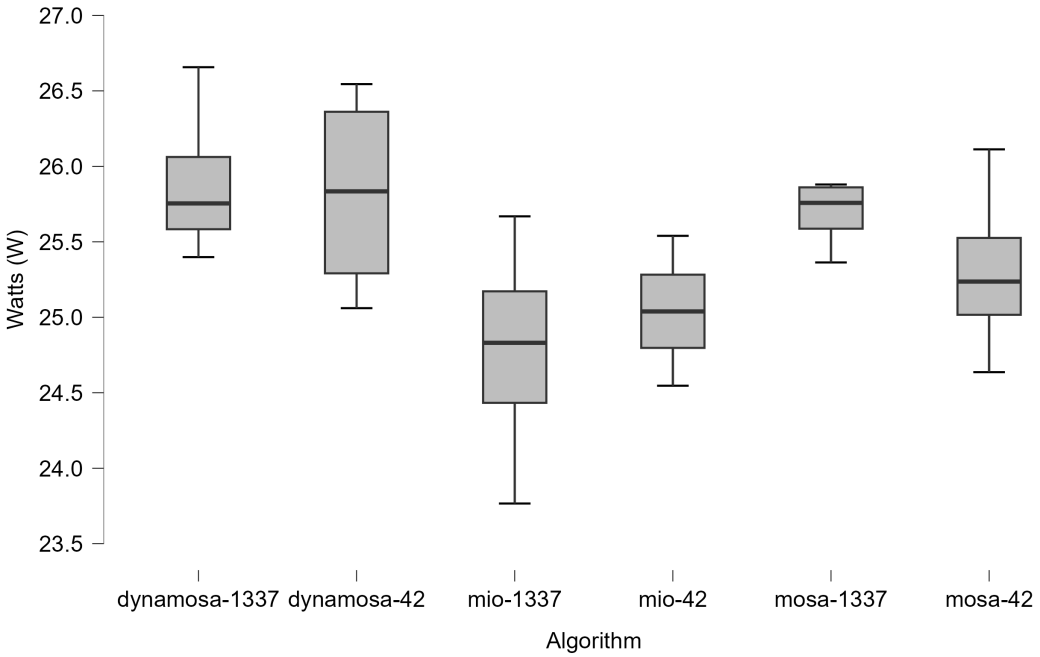
Energy Consumption (J)



Execution Time (s)



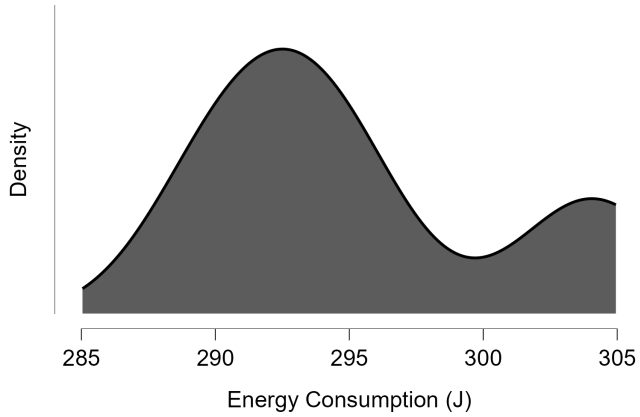
Watts (W)


27.0
26.5
26.0
25.5
25.0
24.5
24.0
23.5
Watts (W)
dynamosa-1337
dynamosa-42
mio-1337
mio-42
mosa-1337
mosa-42
Algorithm

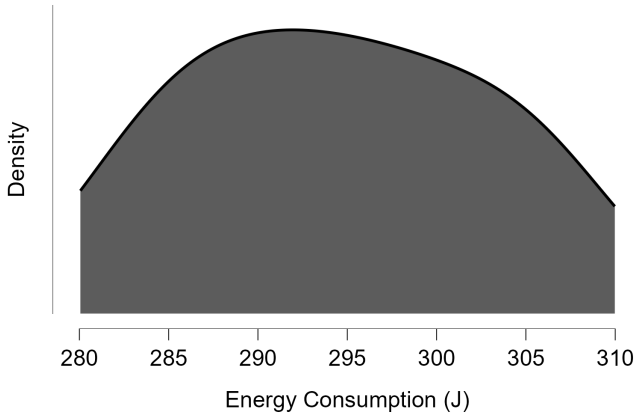
Density Plots

Energy Consumption (J)

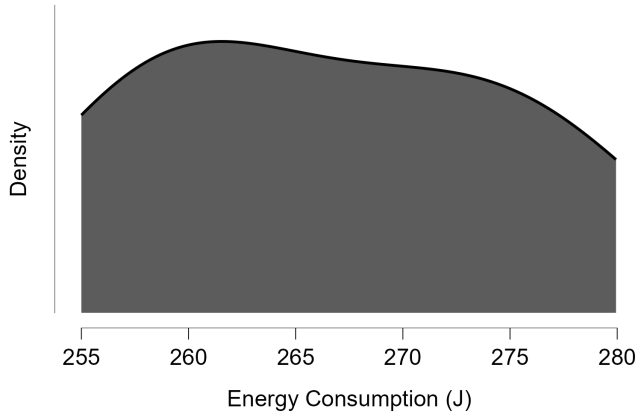
dynamosa-1337



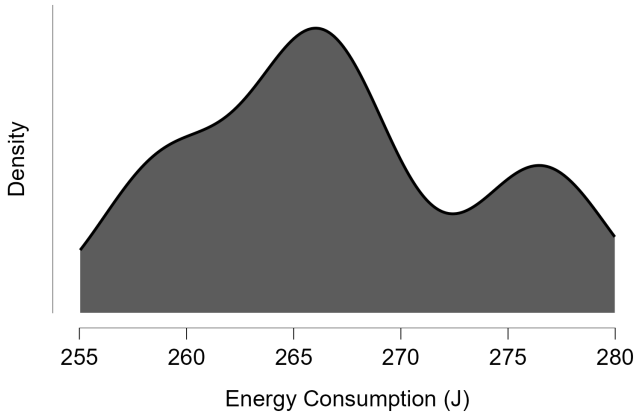
dynamosa-42



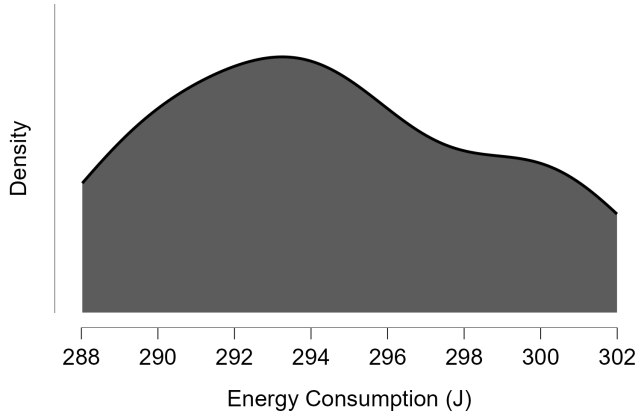
mio-1337



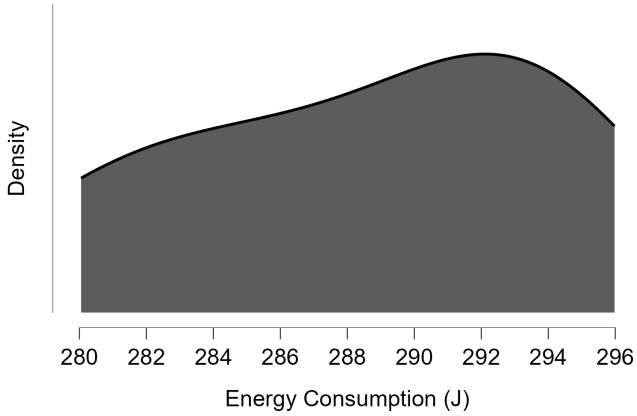
mio-42



mosa-1337

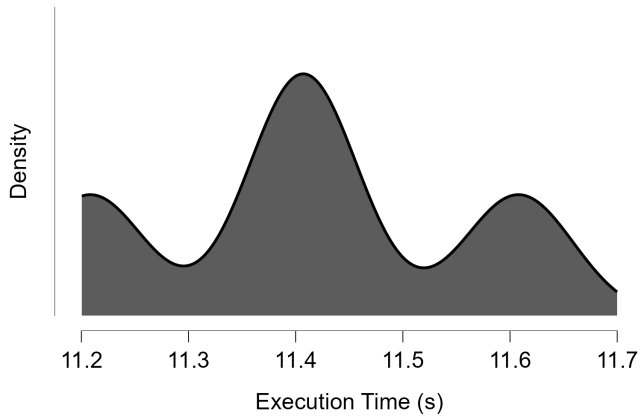


mosa-42

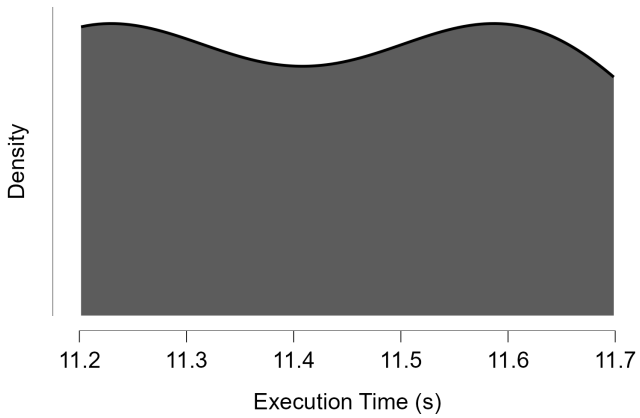


Execution Time (s)

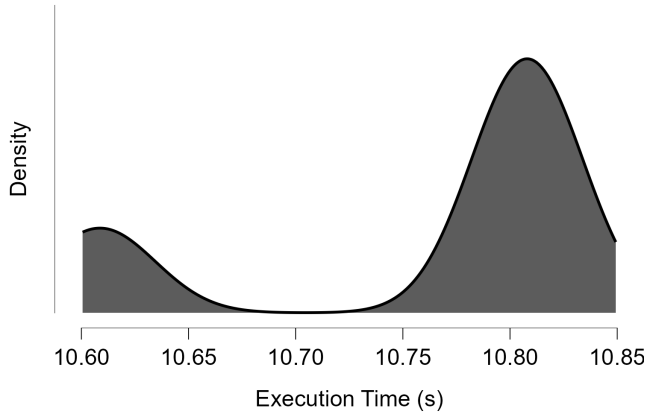
dynamosa-1337



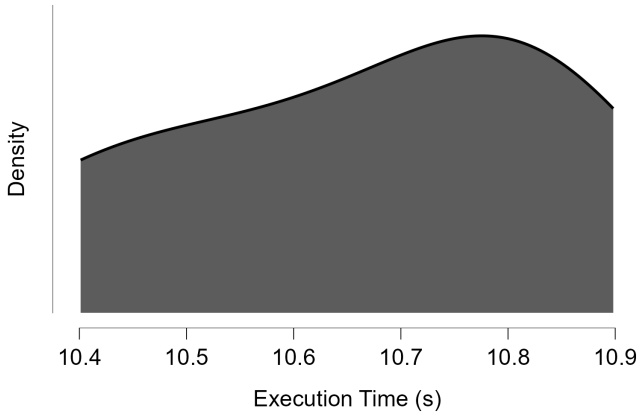
dynamosa-42



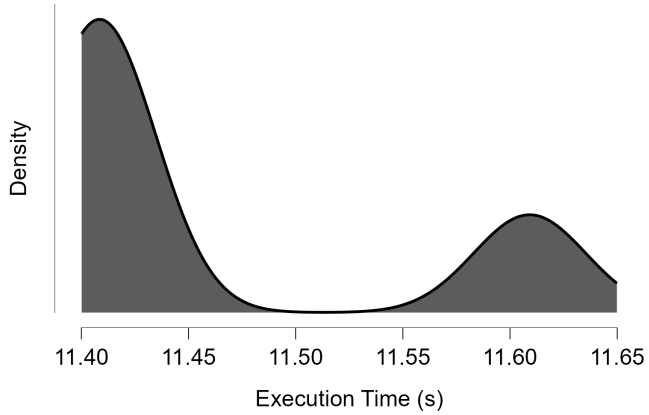
mio-1337



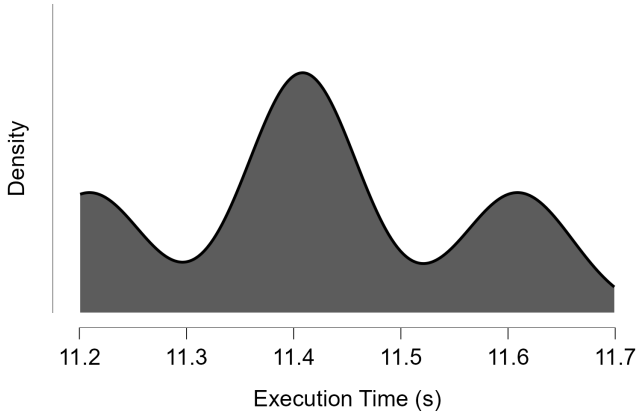
mio-42



mosa-1337

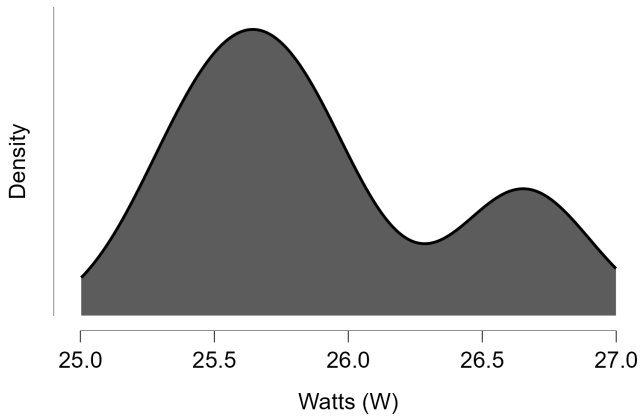


mosa-42

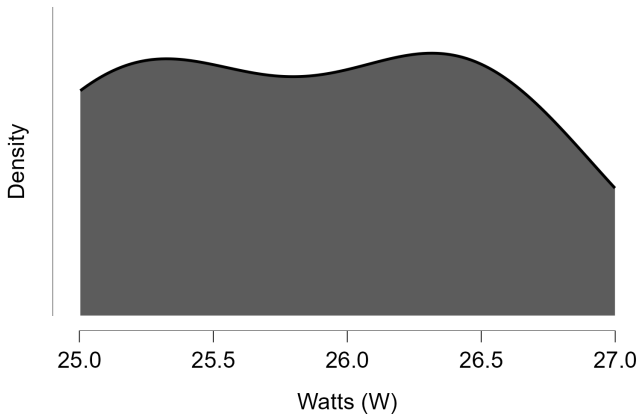


Watts (W)

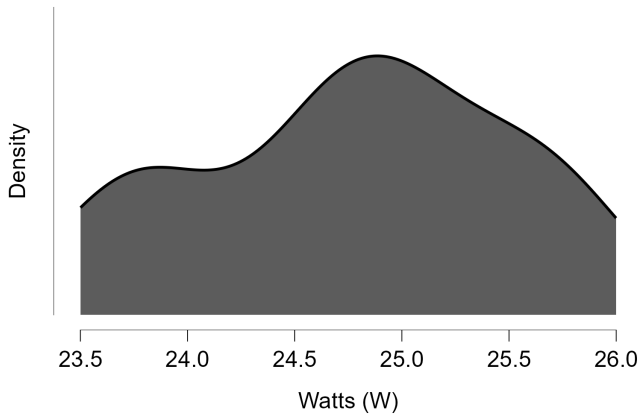
dynamosa-1337



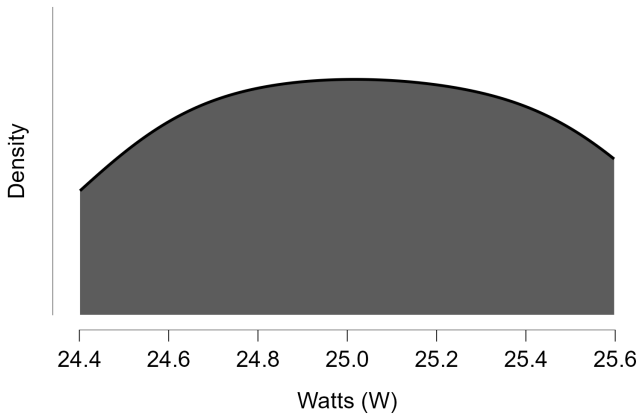
dynamosa-42



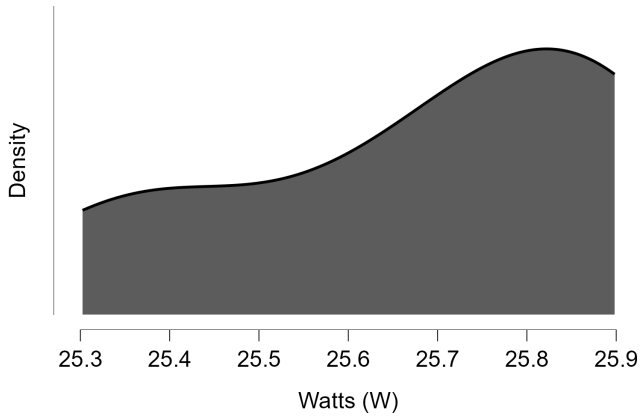
mio-1337



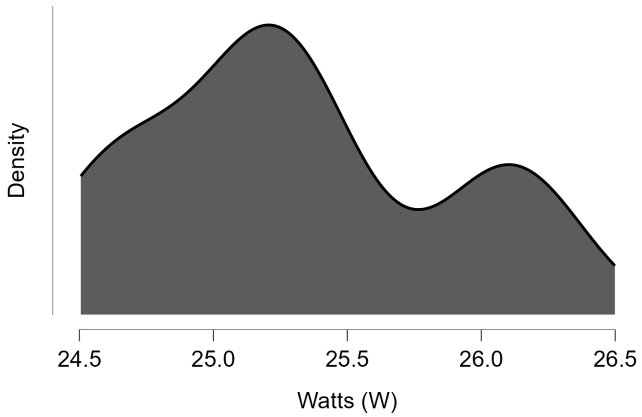
mio-42



mosa-1337



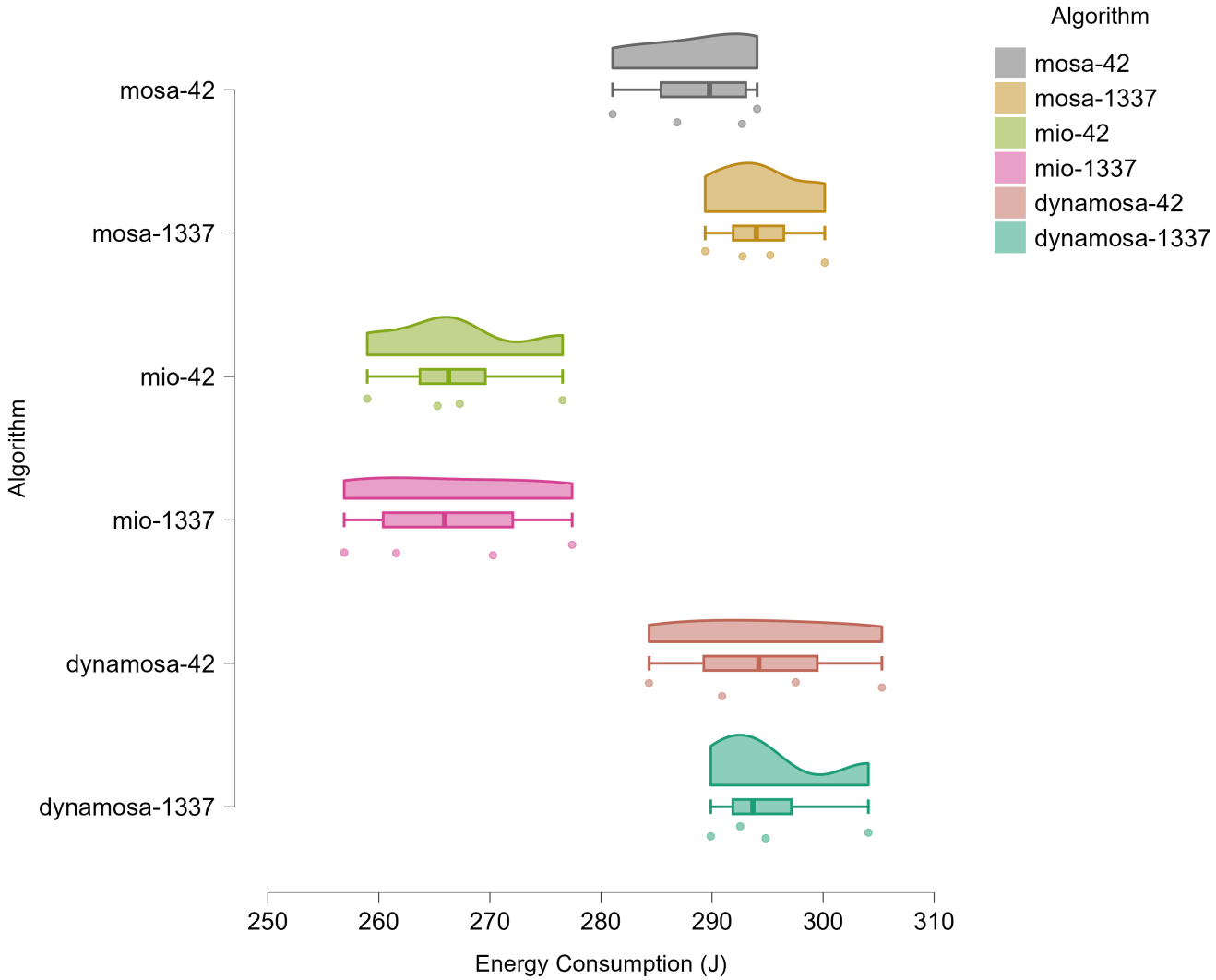
mosa-42



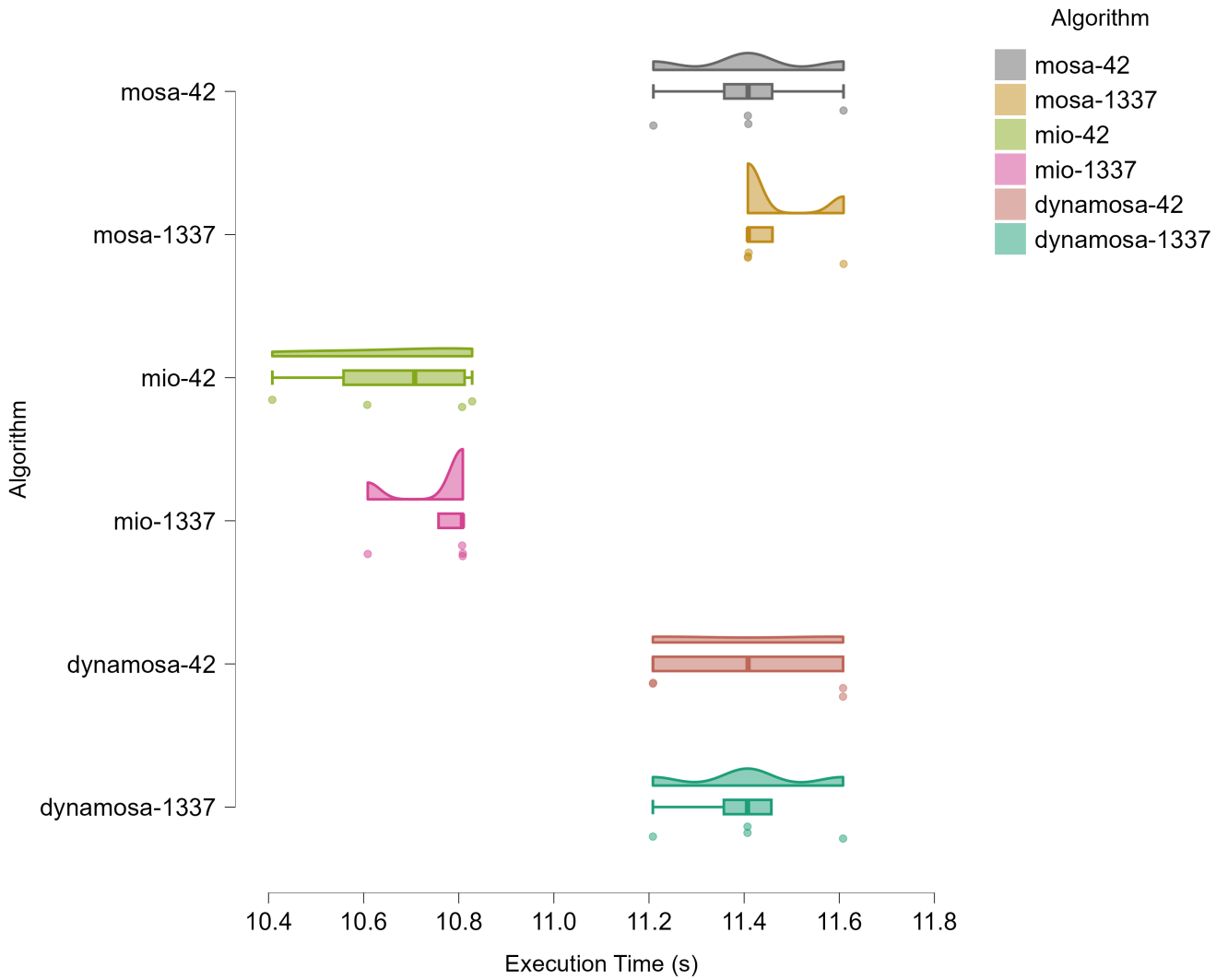
Raincloud Plots

Raincloud Plots

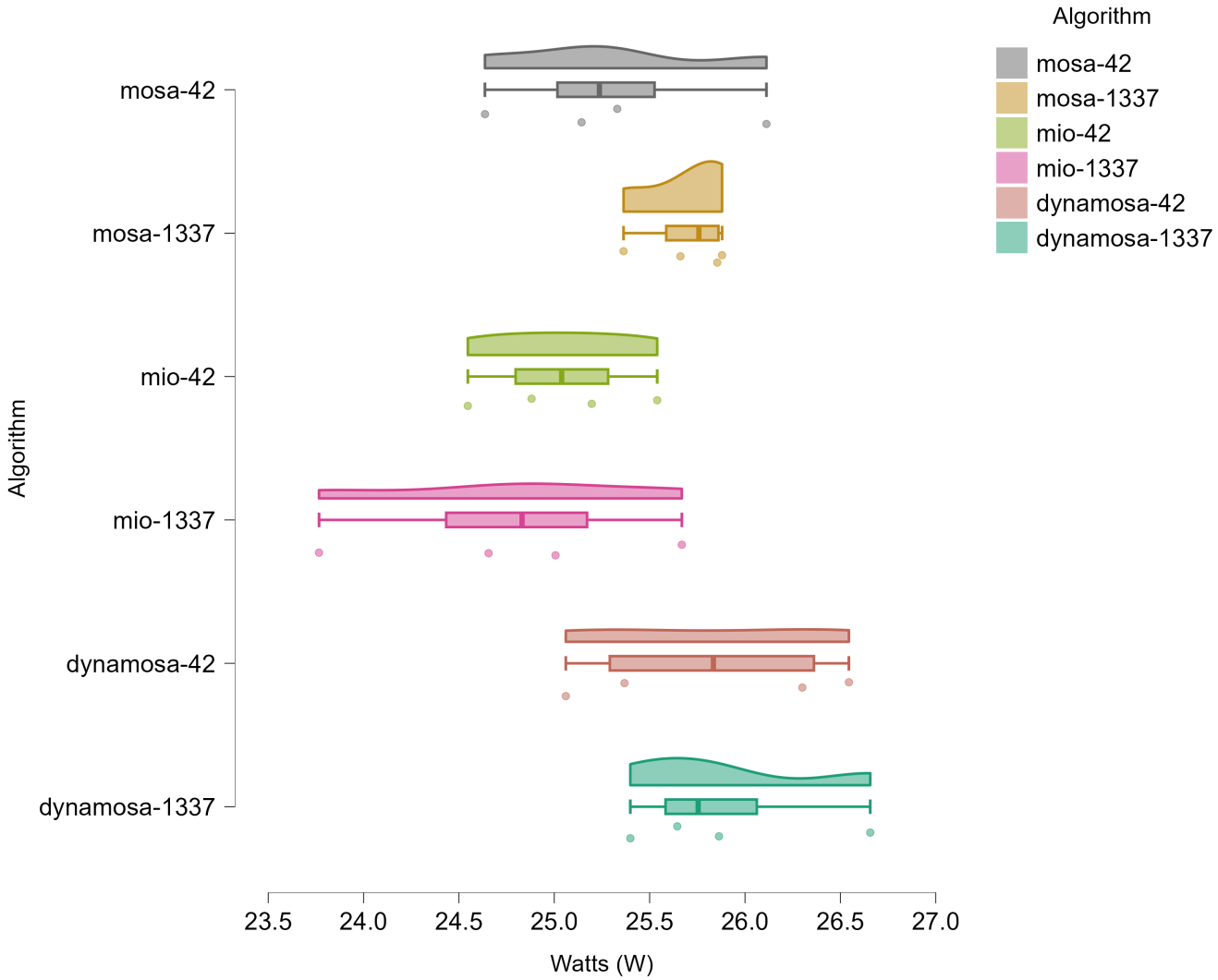
Energy Consumption (J)



Execution Time (s)



Watts (W)


Algorithm
mosa-42
mosa-1337
mio-42
mio-1337
dynamosa-42
dynamosa-1337
Algorithm
23.5
24.0
24.5
25.0
25.5
26.0
26.5
27.0
Watts (W)

Statistics

Energy Consumption (J)

Primary Factor	*N*	Lower Whisker	25th Percentile	Median	75th Percentile	Upper Whisker
dynamosa-1337	4	289.886	291.873	293.682	297.141	304.077
dynamosa-42	4	284.328	289.257	294.218	299.476	305.297
mio-1337	4	256.880	260.392	265.919	272.058	277.406
mio-42	4	258.958	263.698	266.278	269.595	276.548
mosa-1337	4	289.385	291.903	293.990	296.466	300.151
mosa-42	4	281.050	285.404	289.779	293.041	294.059

Note. N_{Total} = 24.

Execution Time (s)

Primary Factor	*N*	Lower Whisker	25th Percentile	Median	75th Percentile	Upper Whisker
dynamosa-1337	4	11.208	11.357	11.407	11.457	11.457
dynamosa-42	4	11.208	11.209	11.408	11.608	11.608
mio-1337	4	10.758	10.758	10.808	10.808	10.809
mio-42	4	10.408	10.558	10.707	10.812	10.828
mosa-1337	4	11.408	11.408	11.409	11.459	11.459
mosa-42	4	11.209	11.358	11.408	11.459	11.609

Note. N_{Total} = 24.

Watts (W)

Primary Factor	*N*	Lower Whisker	25th Percentile	Median	75th Percentile	Upper Whisker
dynamosa-1337	4	25.399	25.584	25.754	26.062	26.657
dynamosa-42	4	25.060	25.291	25.834	26.362	26.545
mio-1337	4	23.766	24.433	24.831	25.172	25.669
mio-42	4	24.547	24.797	25.039	25.282	25.540
mosa-1337	4	25.363	25.587	25.758	25.861	25.880
mosa-42	4	24.637	25.016	25.237	25.526	26.113

Note. N_{Total} = 24.

ANOVA

ANOVA - Energy Consumption (J)

Cases	Sum of Squares	df	Mean Square	F	p
Algorithm	3844.546	5	768.909	14.822	< .001
Residuals	933.759	18	51.875		

Note. Type III Sum of Squares

Post Hoc Tests

Standard (HSD)

Post Hoc Comparisons - Algorithm

		Mean Difference	SE	df	t	p_{tukey}
(dynamosa-1337)	(dynamosa-42)	0.817	5.093	18	0.160	1.000
	(mio-1337)	28.801	5.093	18	5.655	< .001***
	(mio-42)	28.316	5.093	18	5.560	< .001***
	(mosa-1337)	0.953	5.093	18	0.187	1.000
	(mosa-42)	6.665	5.093	18	1.309	0.777
(dynamosa-42)	(mio-1337)	27.984	5.093	18	5.495	< .001***
	(mio-42)	27.500	5.093	18	5.400	< .001***
	(mosa-1337)	0.136	5.093	18	0.027	1.000
	(mosa-42)	5.849	5.093	18	1.148	0.855
(mio-1337)	(mio-42)	−0.485	5.093	18	−0.095	1.000
	(mosa-1337)	−27.848	5.093	18	−5.468	< .001***
	(mosa-42)	−22.136	5.093	18	−4.346	0.004**
(mio-42)	(mosa-1337)	−27.364	5.093	18	−5.373	< .001***
	(mosa-42)	−21.651	5.093	18	−4.251	0.005**
(mosa-1337)	(mosa-42)	5.712	5.093	18	1.122	0.866

** p < .01, *** p < .001

Note. P-value adjusted for comparing a family of 6 estimates.

Letter-Based Grouping - Algorithm

Algorithm	Letter
dynamosa-1337	b
dynamosa-42	b
mio-1337	a
mio-42	a
mosa-1337	b
mosa-42	b

Note. If two or more means share the same grouping symbol,
then we cannot show them to be different, but we also did not show them to be the same.

ANOVA

ANOVA - Execution Time (s)

Cases	Sum of Squares	df	Mean Square	F	p
Algorithm	2.717	5	0.543	19.736	< .001
Residuals	0.496	18	0.028		

Note. Type III Sum of Squares

Post Hoc Tests

Standard (HSD)

Post Hoc Comparisons - Algorithm

		Mean Difference	SE	df	t	P_{tukey}
(dynamosa-1337)	(dynamosa-42)	-6.219×10^{-4}	0.117	18	−0.005	1.000
	(mio-1337)	0.649	0.117	18	5.535	< .001***
	(mio-42)	0.745	0.117	18	6.348	< .001***
	(mosa-1337)	−0.051	0.117	18	−0.435	0.998
	(mosa-42)	−0.001	0.117	18	−0.010	1.000
(dynamosa-42)	(mio-1337)	0.650	0.117	18	5.540	< .001***
	(mio-42)	0.745	0.117	18	6.353	< .001***
	(mosa-1337)	−0.050	0.117	18	−0.430	0.998
	(mosa-42)	-5.378×10^{-4}	0.117	18	−0.005	1.000
(mio-1337)	(mio-42)	0.095	0.117	18	0.813	0.961
	(mosa-1337)	−0.701	0.117	18	−5.970	< .001***
	(mosa-42)	−0.651	0.117	18	−5.545	< .001***
(mio-42)	(mosa-1337)	−0.796	0.117	18	−6.784	< .001***
	(mosa-42)	−0.746	0.117	18	−6.358	< .001***
(mosa-1337)	(mosa-42)	0.050	0.117	18	0.425	0.998

*** p < .001

Note. P-value adjusted for comparing a family of 6 estimates.

Letter-Based Grouping - Algorithm

Algorithm	Letter
dynamosa-1337	b
dynamosa-42	b
mio-1337	a
mio-42	a
mosa-1337	b
mosa-42	b

Note. If two or more means share the same grouping symbol, then we cannot show them to be different, but we also did not show them to be the same.

ANOVA

ANOVA - Watts (W)

Cases	Sum of Squares	df	Mean Square	F	p
Algorithm	4.109	5	0.822	2.405	0.077
Residuals	6.151	18	0.342		

Note. Type III Sum of Squares