

Projekt zaliczeniowy

Algorytmy: PRS, MS

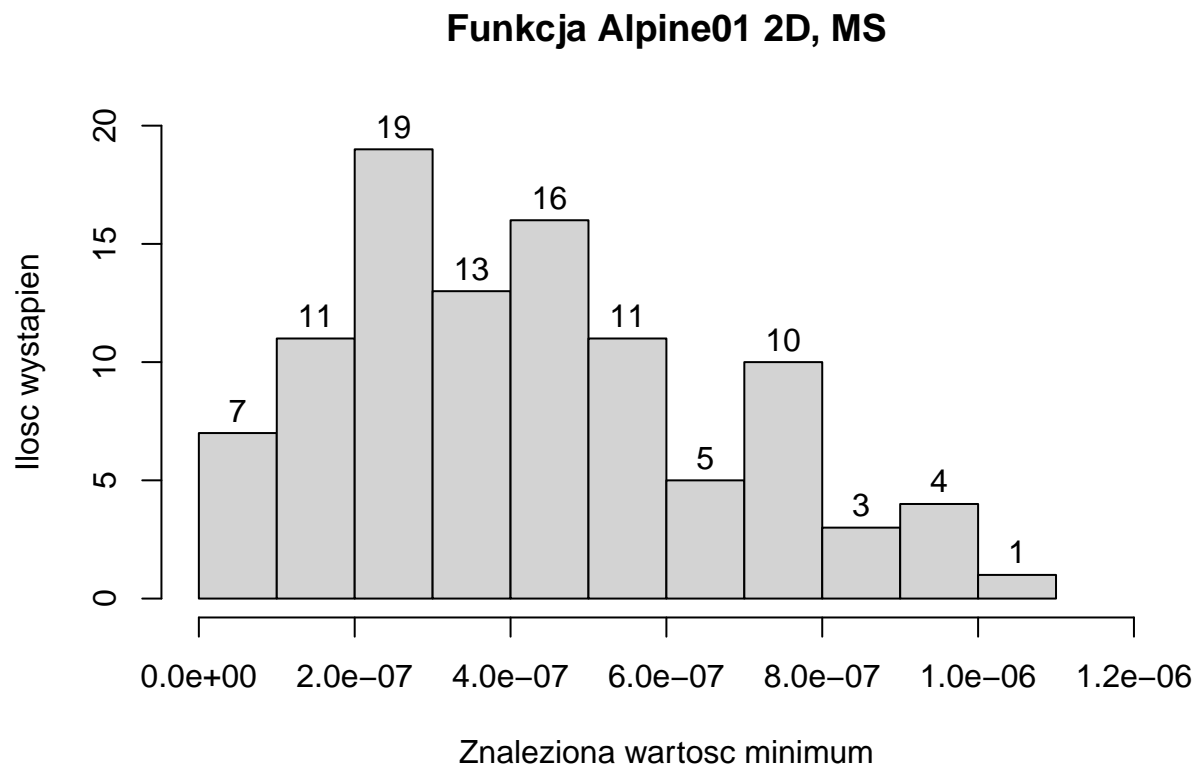
Funkcje: Alpine01, Rosenbrock

Autorzy: Aleksander Grzybek, Wiktor Kostka

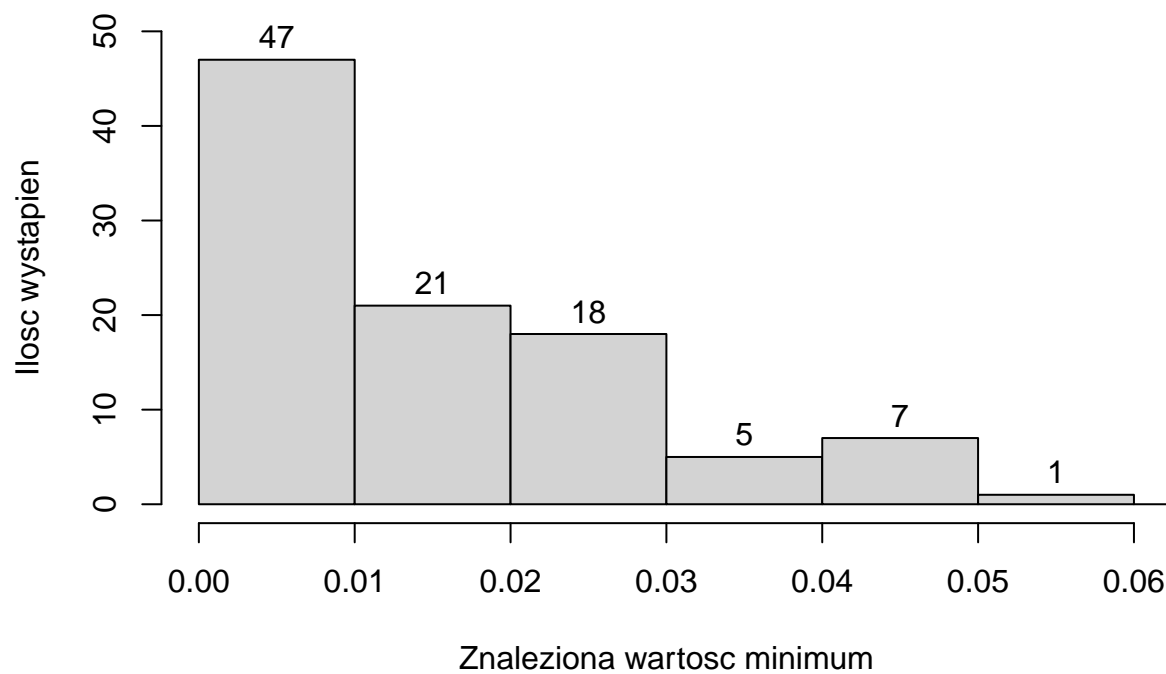
Wyniki

Funkcja Alpine01, 2D

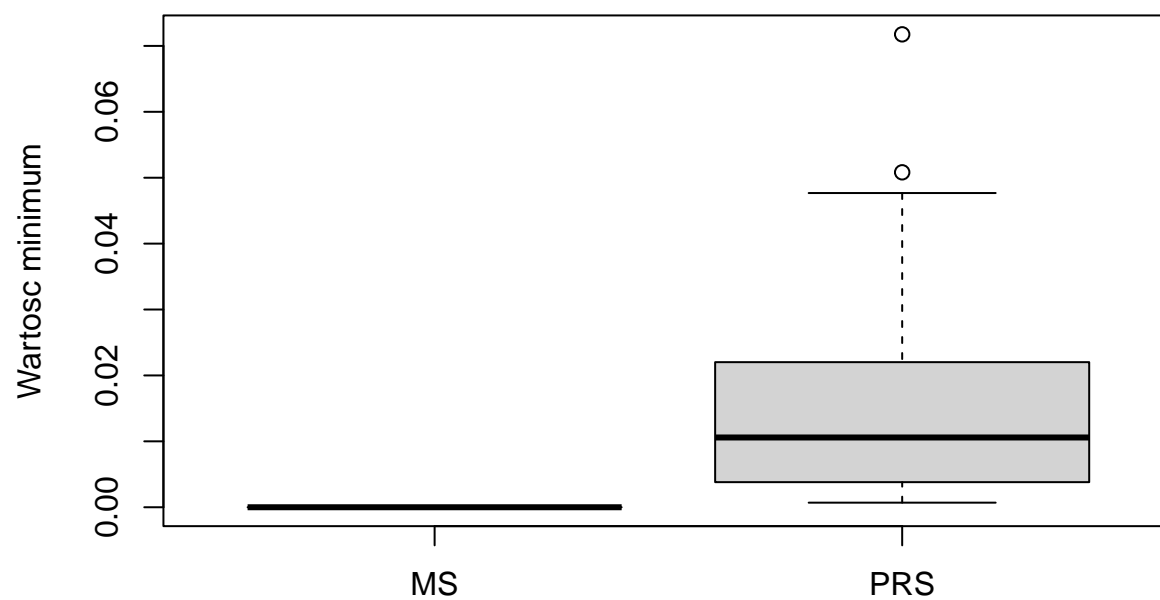
Algorytm	Średnia	Min	Max	Mediana	Dolny kwartył	Górny kwartył
MS	0.0000004	0.0000001	0.0000010	0.0000004	0.0000003	0.0000006
PRS	0.0154350	0.0006965	0.0717541	0.0105830	0.0038492	0.0219486



Funkcja Alpine01 2D, PRS



Funkcja Alpine01, 2D



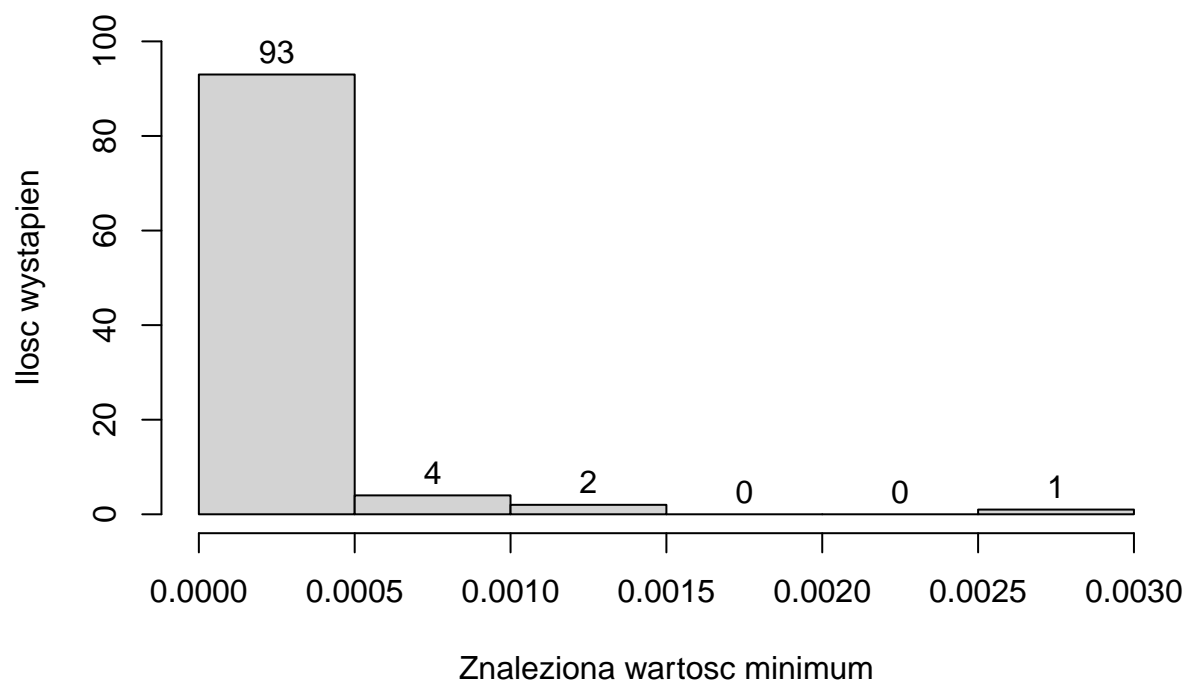
Test T:

```
##  
## Paired t-test  
##  
## data: aprs2 and ams2  
## t = 10.97, df = 99, p-value < 2.2e-16  
## alternative hypothesis: true mean difference is not equal to 0  
## 95 percent confidence interval:  
## 0.01264296 0.01822626  
## sample estimates:  
## mean difference  
## 0.01543461
```

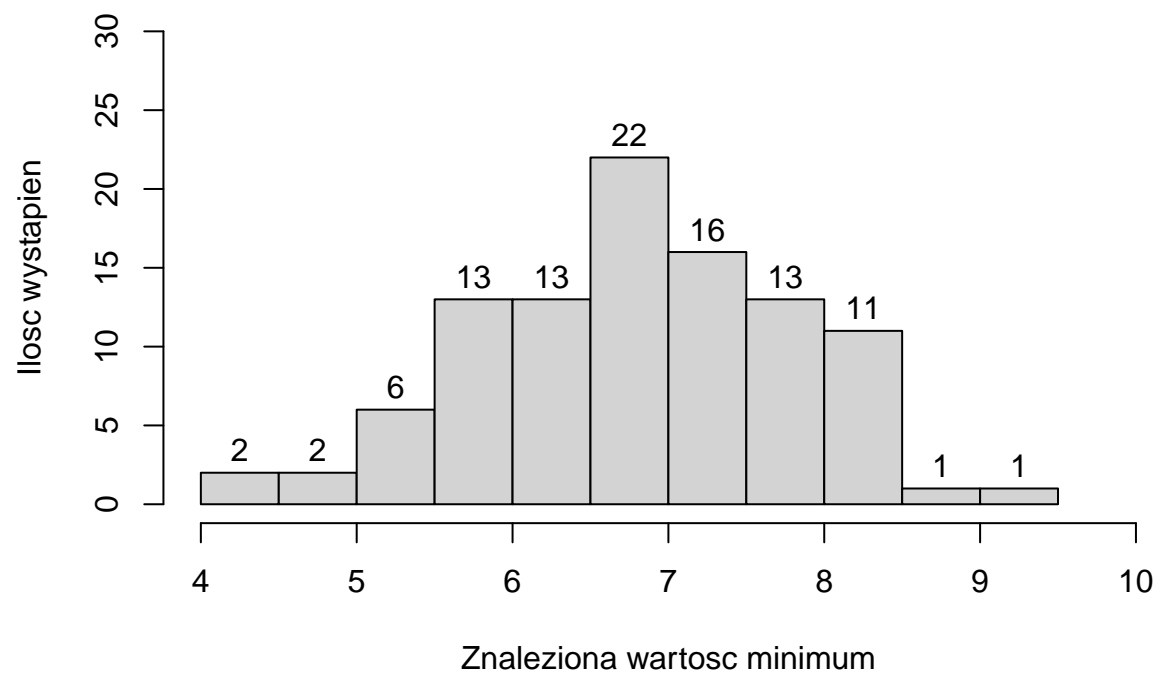
Funkcja Alpine01, 10D

Algorytm	Średnia	Min	Max	Mediana	Dolny kwartyl	Górny kwartyl
MS	0.0000945	0.0000059	0.0026423	0.000009	0.0000082	0.0000101
PRS	6.7787630	4.1477179	9.0517009	6.790239	6.1702988	7.5161204

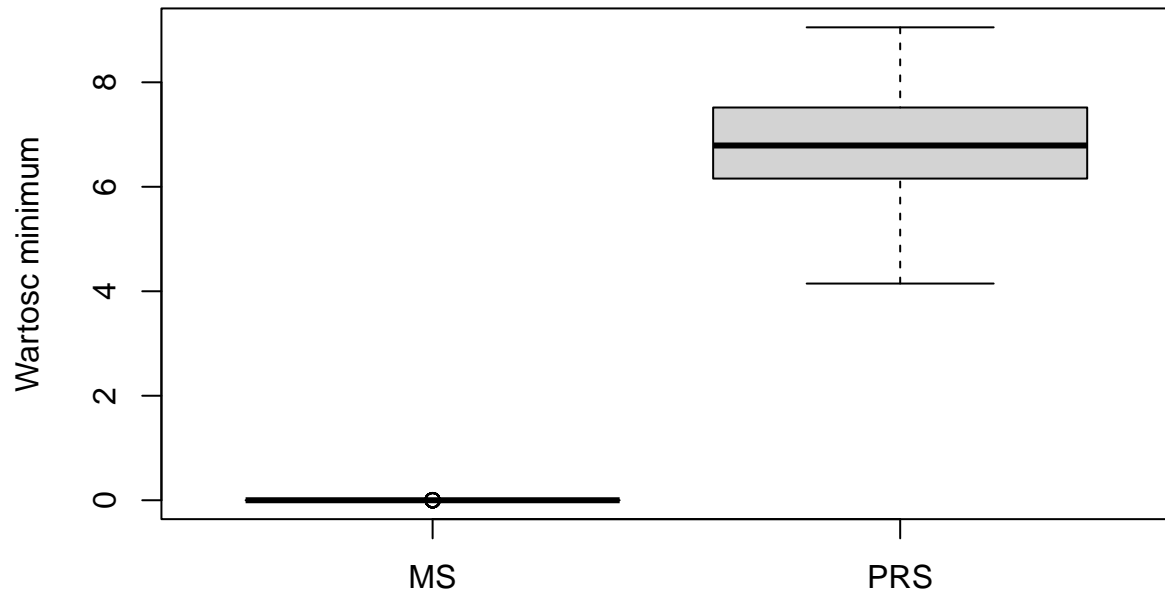
Funkcja Alpine01 10D, MS



Funkcja Alpine01 10D, PRS



Funkcja Alpine01, 10D



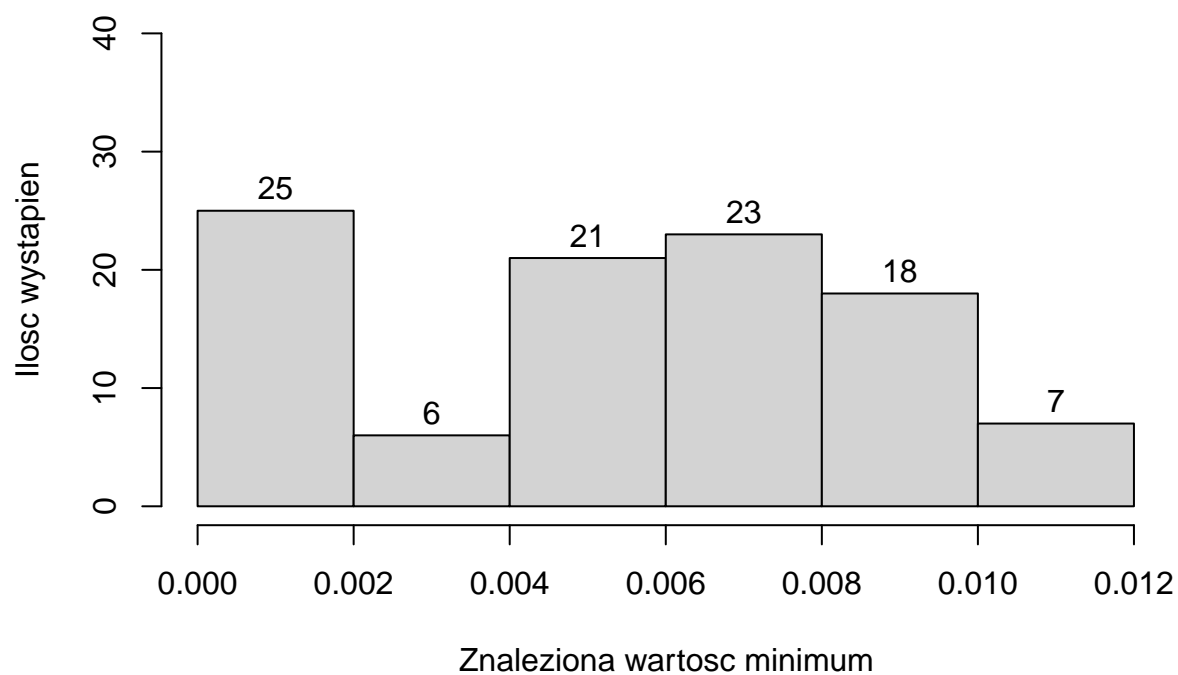
Test T:

```
##
## Paired t-test
##
## data: aprs10 and ams10
## t = 68.603, df = 99, p-value < 2.2e-16
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
##  6.582609 6.974728
## sample estimates:
## mean difference
##      6.778668
```

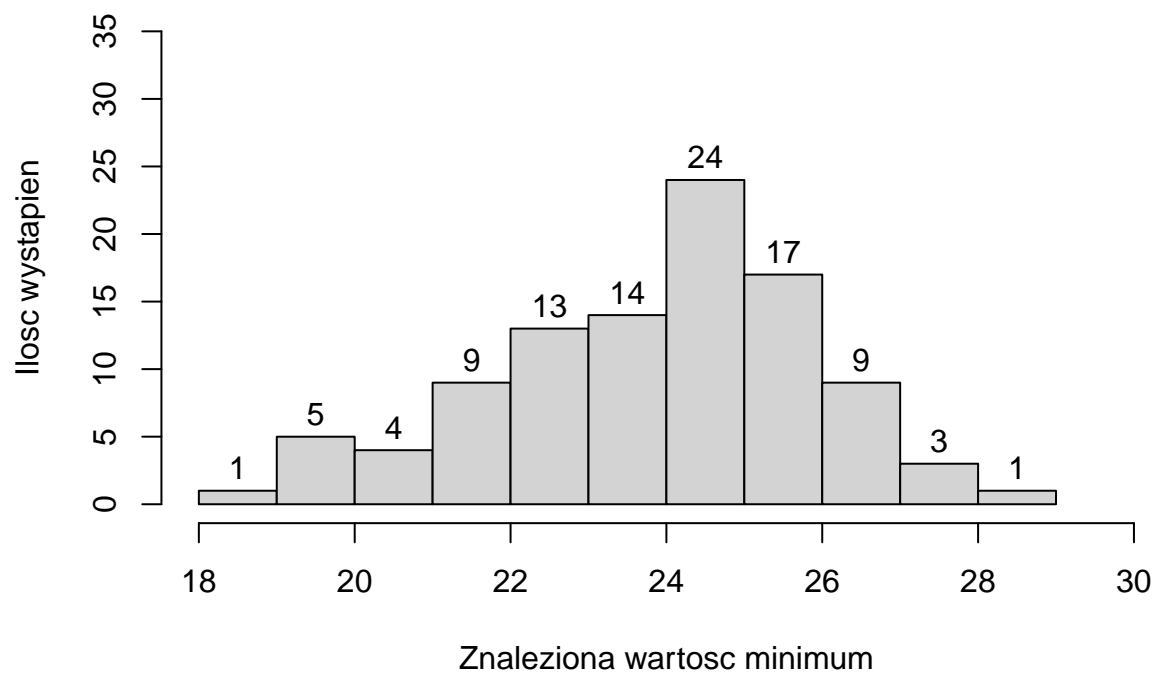
Funkcja Alpine01, 20D

Algorytm	Średnia	Min	Max	Mediana	Dolny kwartył	Górny kwartył
MS	0.0054153	0.0000145	0.0117775	0.0057188	0.0021506	0.0079002
PRS	23.8281509	18.5433643	28.2218315	24.0914563	22.3176595	25.4244955

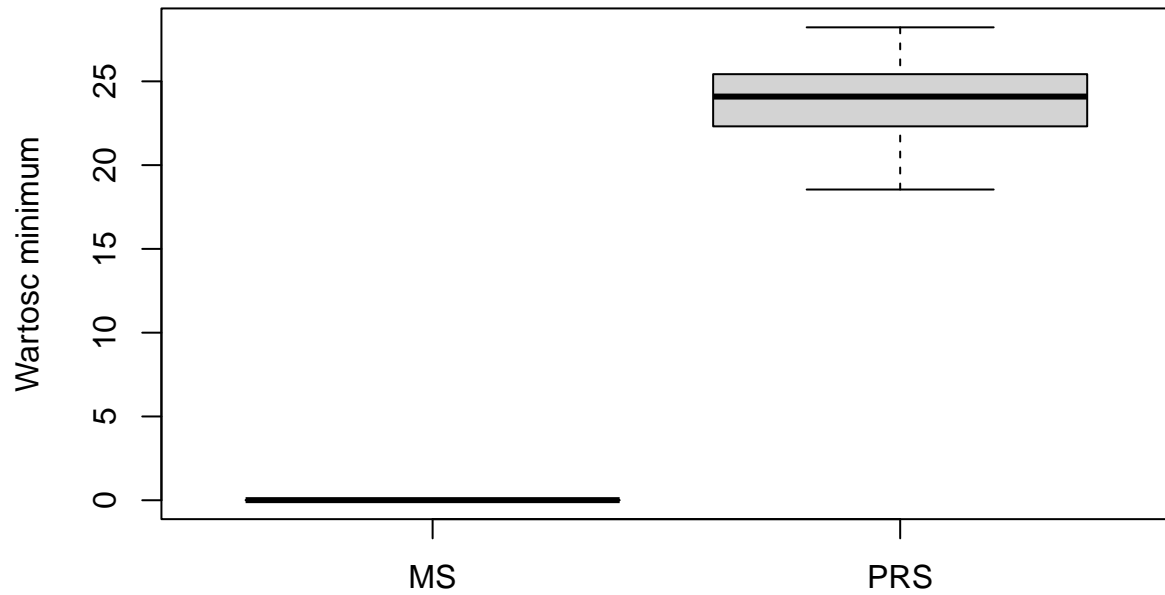
Funkcja Alpine01 20D, MS



Funkcja Alpine01 20D, PRS



Funkcja Alpine01, 20D



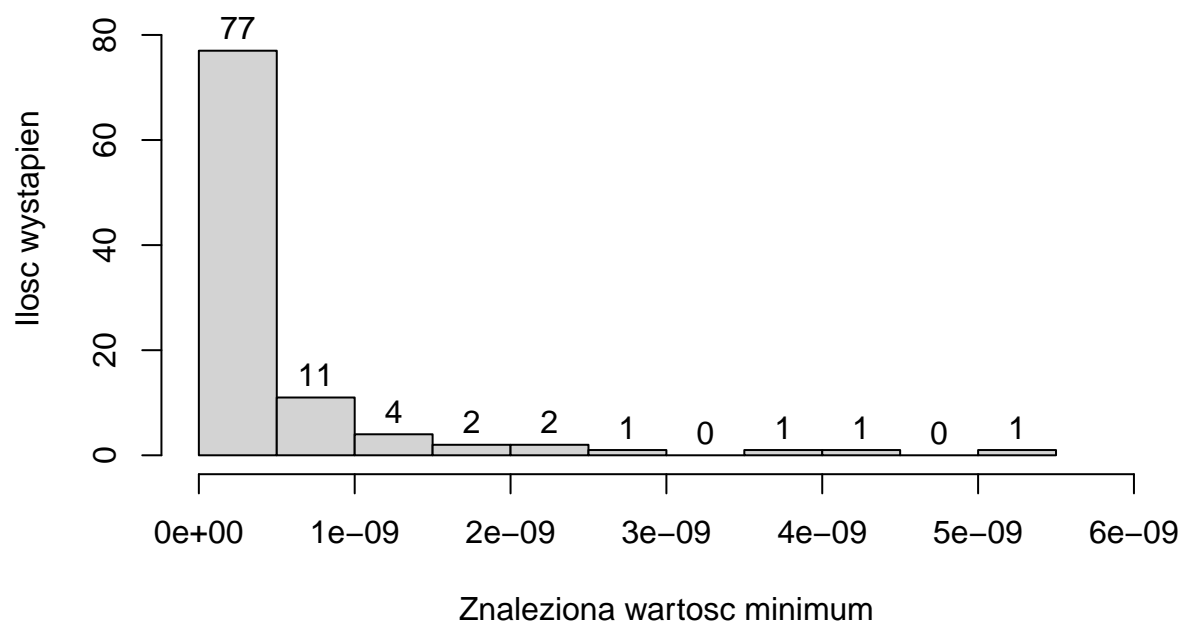
Test T:

```
##
## Paired t-test
##
## data: aprs20 and ams20
## t = 115.21, df = 99, p-value < 2.2e-16
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
## 23.41246 24.23301
## sample estimates:
## mean difference
## 23.82274
```

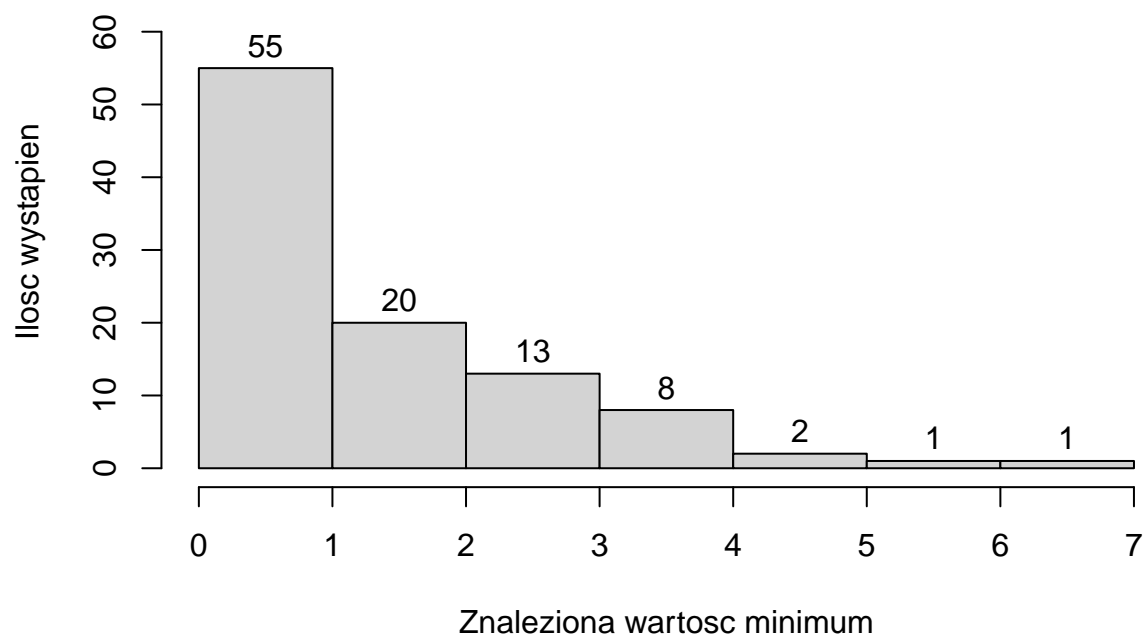
Funkcja Rosenbrocka, 2D

Algorytm	Średnia	Min	Max	Mediana	Dolny kwartył	Górny kwartył
MS	0.000000	0.0000000	0.000000	0.0000000	0.0000000	0.000000
PRS	1.296956	0.0007317	6.031112	0.7748083	0.2958671	1.960348

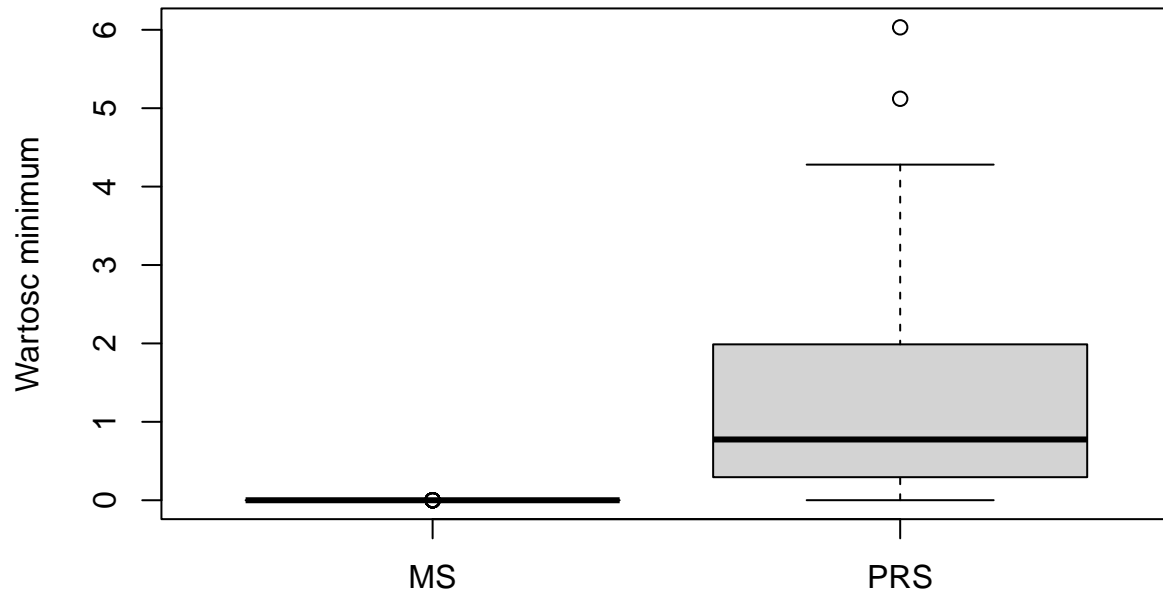
Funkcja Rosenbrocka 2D, MS



Funkcja Rosenbrocka 2D, PRS



Funkcja Rosenbrocka, 2D



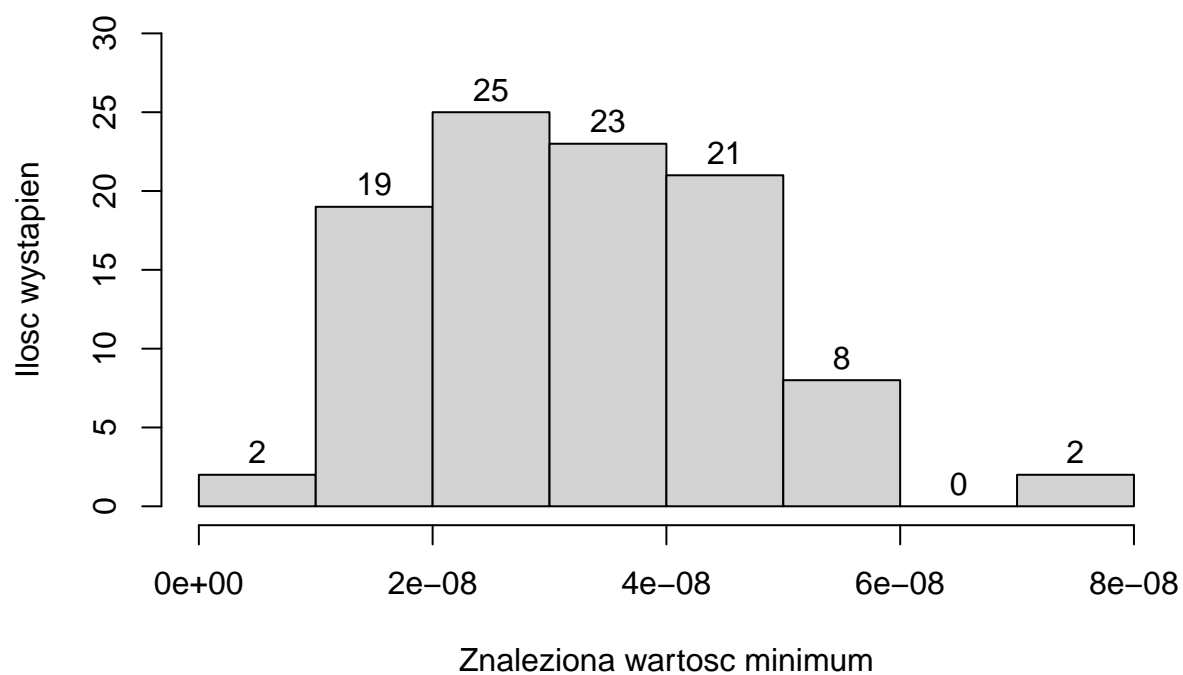
Test T:

```
##
## Paired t-test
##
## data: rprs2 and rms2
## t = 10.109, df = 99, p-value < 2.2e-16
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
##  1.042388 1.551524
## sample estimates:
## mean difference
##      1.296956
```

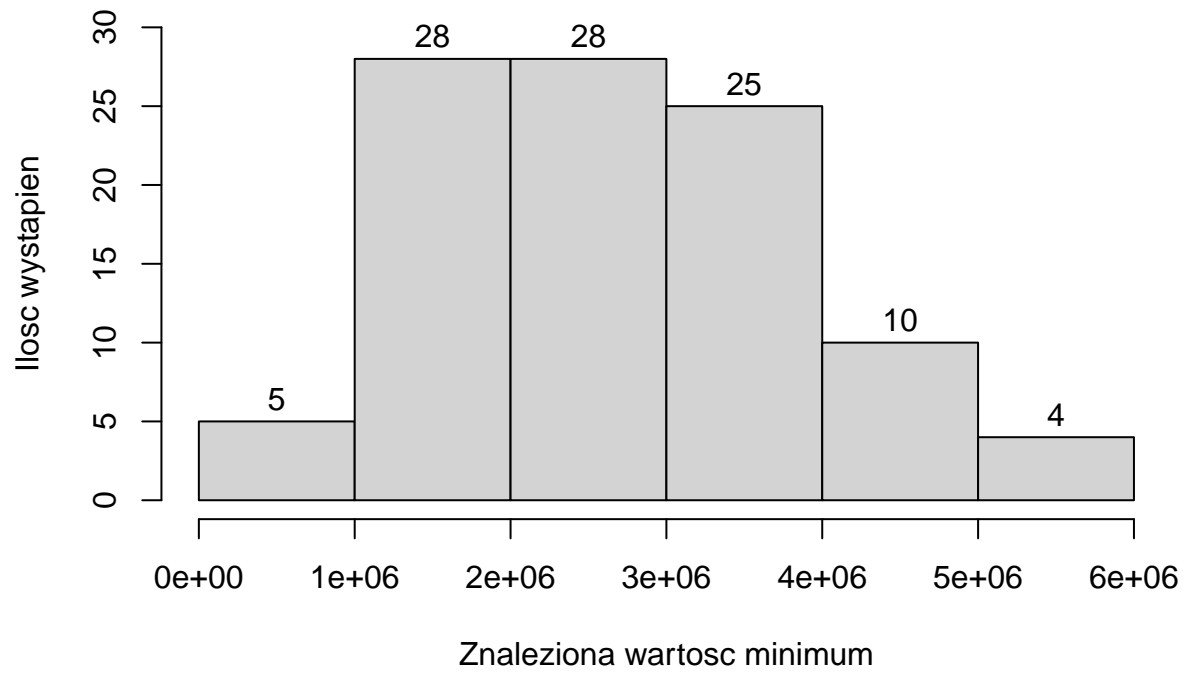
Funkcja Rosenbrocka, 10D

Algorytm	Średnia	Min	Max	Mediana	Dolny kwartyl	Górny kwartyl
MS	0	0.0	1.000000e-07	0	0	0
PRS	2653244	257390.1	5.927707e+06	2549070	1748374	3390151

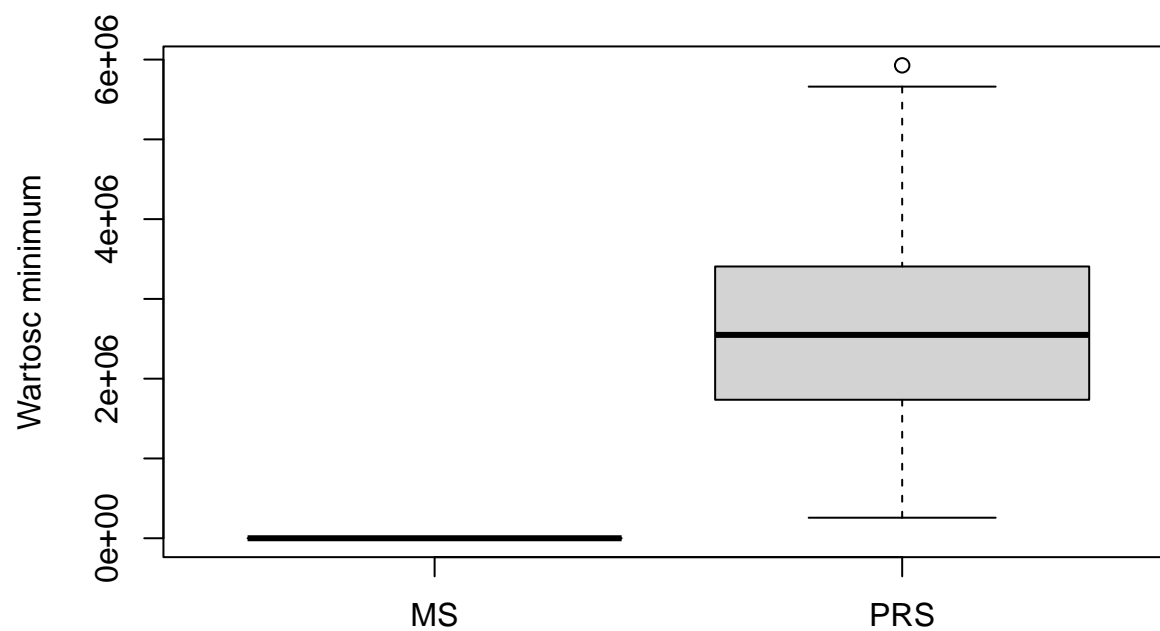
Funkcja Rosenbrocka 10D, MS



Funkcja Rosenbrocka 10D, PRS



Funkcja Rosenbrocka, 10D



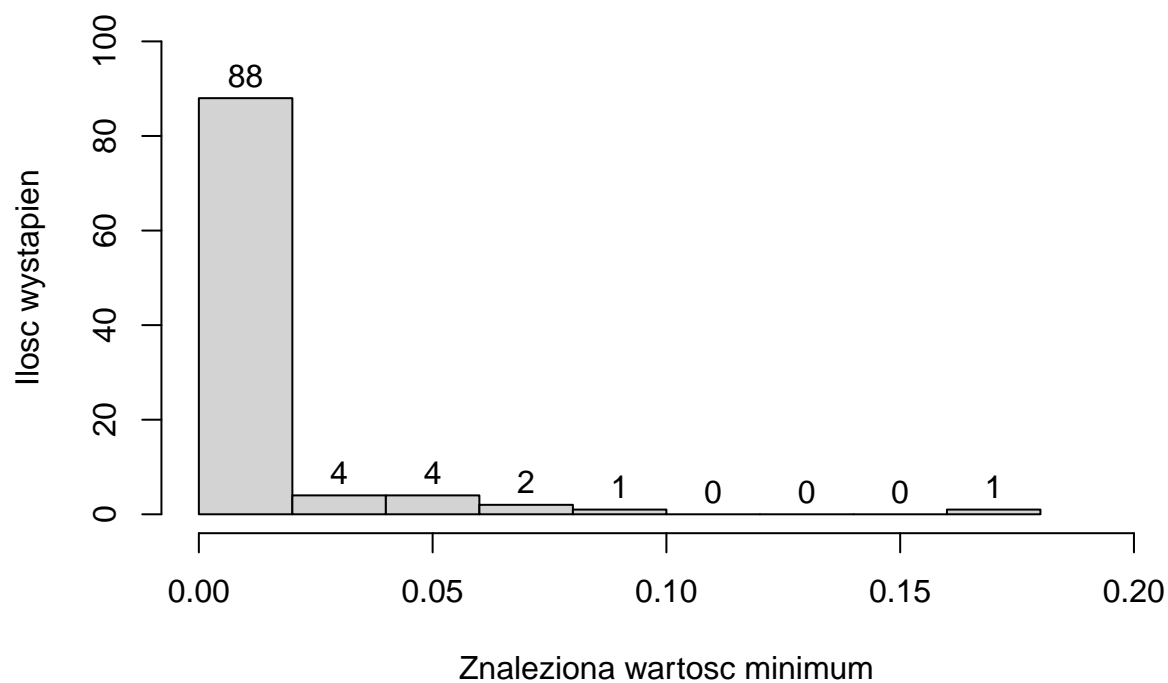
Test T:

```
##
## Paired t-test
##
## data: rprs10 and rms10
## t = 21.835, df = 99, p-value < 2.2e-16
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
##  2412133 2894354
## sample estimates:
## mean difference
##      2653244
```

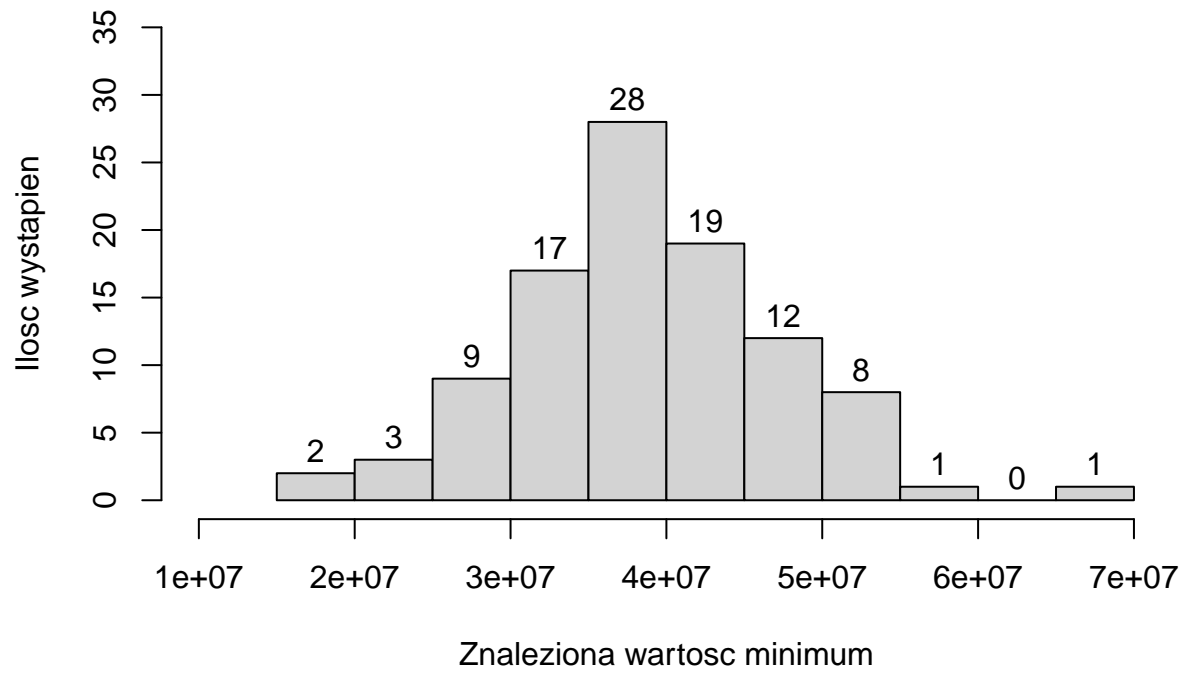
Funkcja Rosenbrocka, 20D

Algorytm	Średnia	Min	Max	Mediana	Dolny kwartył	Górny kwartył
MS	7.882000e-03	0	1.660453e-01	1.000000e-07	1.000000e-07	1.310000e-05
PRS	3.857279e+07	15158970	6.506565e+07	3.825048e+07	3.370362e+07	4.405011e+07

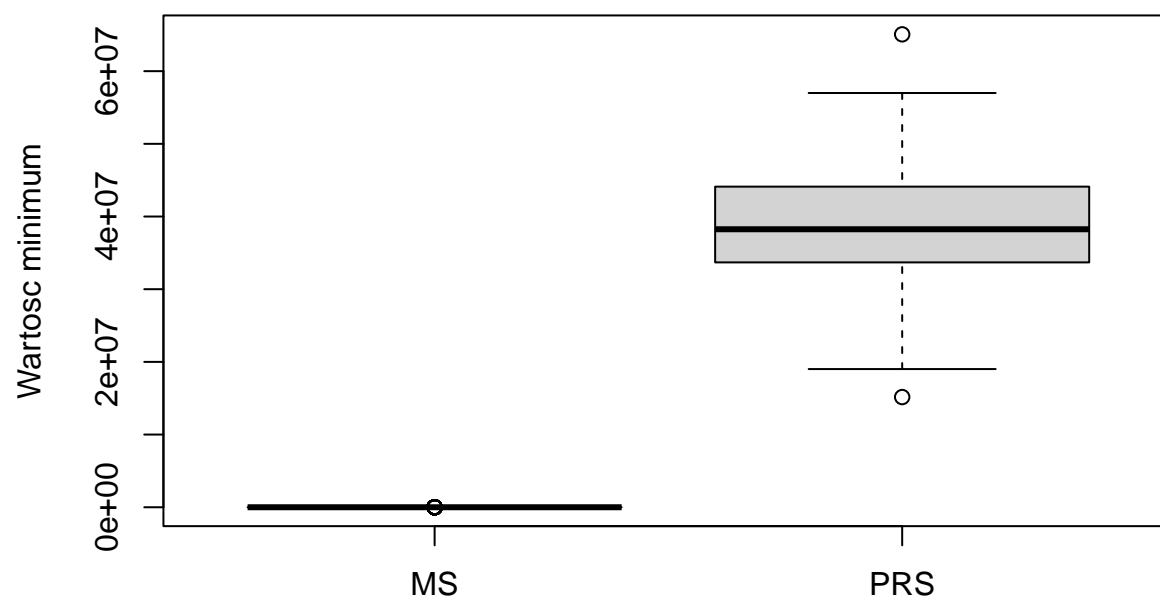
Funkcja Rosenbrocka 20D, MS



Funkcja Rosenbrocka 20D, PRS



Funkcja Rosenbrocka, 20D



Test T:

```
##
## Paired t-test
##
## data: rprs20 and rms20
## t = 44.627, df = 99, p-value < 2.2e-16
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
##  36857757 40287820
## sample estimates:
## mean difference
##      38572788
```