Estimation of parameter importance with fANOVA

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(For dataset: test4/acotsp1000-4500-01.)

1. Analysis of a single run

1.1. Dependent variable: raw performance

```
importanceTable(dataset,"perf")
```

Table 1: Importance for measure "perf" (single run)

variable	importance	std_dev
instance	0.642	0.191
dlb	0.038	0.069
nnls	0.033	0.062
localsearch	0.029	0.059
beta	0.002	0.007
rasrank	0.002	0.004
alpha	0.002	0.003
ants	0.001	0.002
rho	0.001	0.002
dummy	0.000	0.001
elitistants	0.000	0.002
algorithm	0.000	0.001
q0	0.000	0.001

1.2. Dependent variable: normalized performance

```
importanceTable(dataset,"norm")
```

1.3. Dependent variable: performance quantile

```
importanceTable(dataset,"quan")
```

1.4. Dependent variable: normalized ranking

```
importanceTable(dataset,"rank")
```

1.5. Dependent variable: normalized ranking with imputation

```
importanceTable(dataset,"irank")
```

Table 2: Importance for measure "norm" (single run)

variable	importance	std_dev
localsearch	0.246	0.323
dlb	0.188	0.292
nnls	0.163	0.285
instance	0.141	0.127
beta	0.007	0.011
alpha	0.005	0.024
rasrank	0.005	0.010
ants	0.003	0.006
elitistants	0.003	0.002
algorithm	0.002	0.008
rho	0.002	0.005
dummy	0.002	0.008
q0	0.000	0.000

Table 3: Importance for measure "quan" (single run)

variable	importance	std_dev
localsearch	0.361	0.134
nnls	0.031	0.074
dlb	0.029	0.068
elitistants	0.023	0.014
instance	0.018	0.013
alpha	0.016	0.014
rasrank	0.004	0.007
beta	0.003	0.003
ants	0.002	0.003
rho	0.002	0.002
dummy	0.001	0.003
q0	0.001	0.001
algorithm	0.001	0.001

1.6. Dependent variable: ranking quartile with imputation

```
importanceTable(dataset,"qrank")
```

2. Comparison of measures among a single run

```
bumpChartMeasures(dataset,do.rank=use.ranks)
```

Table 4: Importance for measure “rank” (single run)

variable	importance	std_dev
instance	0.448	0.075
localsearch	0.177	0.087
nnls	0.033	0.049
dlb	0.028	0.057
elitistants	0.009	0.008
ants	0.007	0.016
alpha	0.006	0.008
rasrank	0.004	0.008
beta	0.002	0.002
rho	0.001	0.003
algorithm	0.001	0.001
dummy	0.000	0.001
q0	0.000	0.000

Table 5: Importance for measure “irank” (single run)

variable	importance	std_dev
localsearch	0.058	0.024
instance	0.052	0.017
rasrank	0.009	0.012
nnls	0.006	0.007
alpha	0.005	0.004
beta	0.003	0.002
ants	0.002	0.003
rho	0.002	0.002
dlb	0.002	0.004
algorithm	0.001	0.001
dummy	0.001	0.002
elitistants	0.001	0.001
q0	0.000	0.000

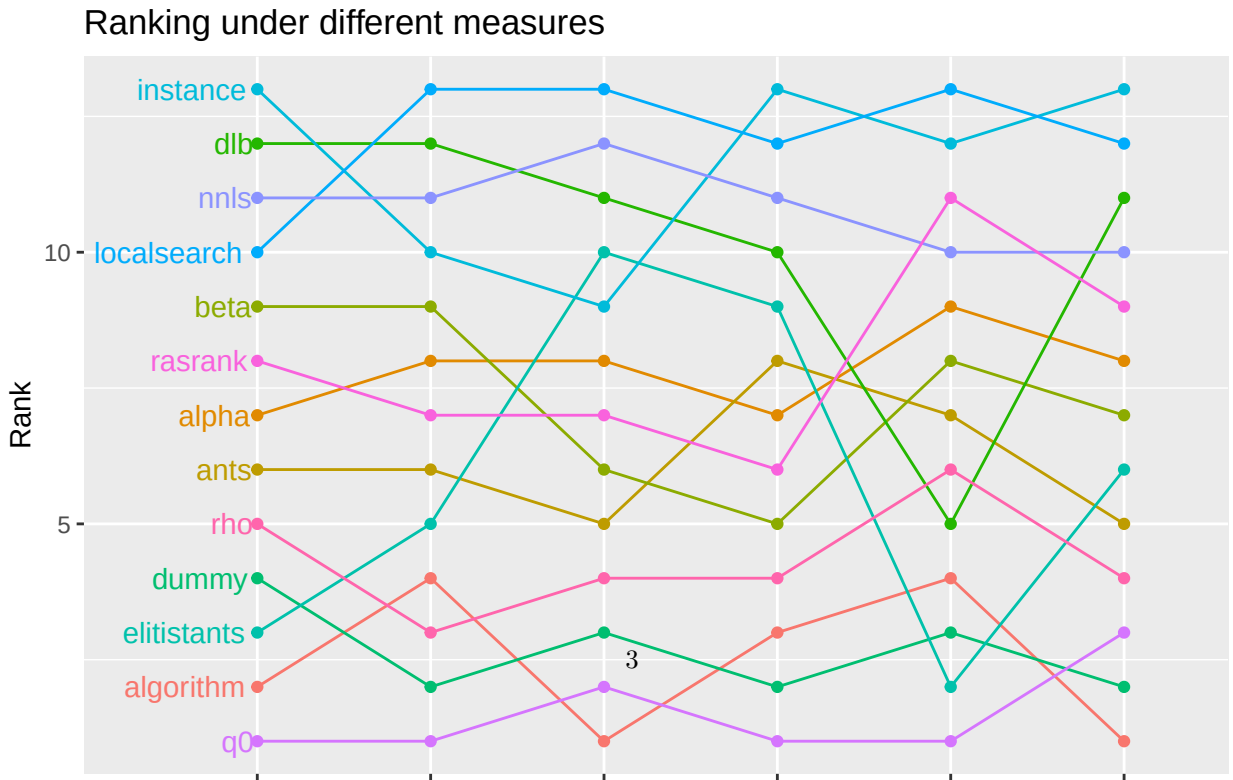


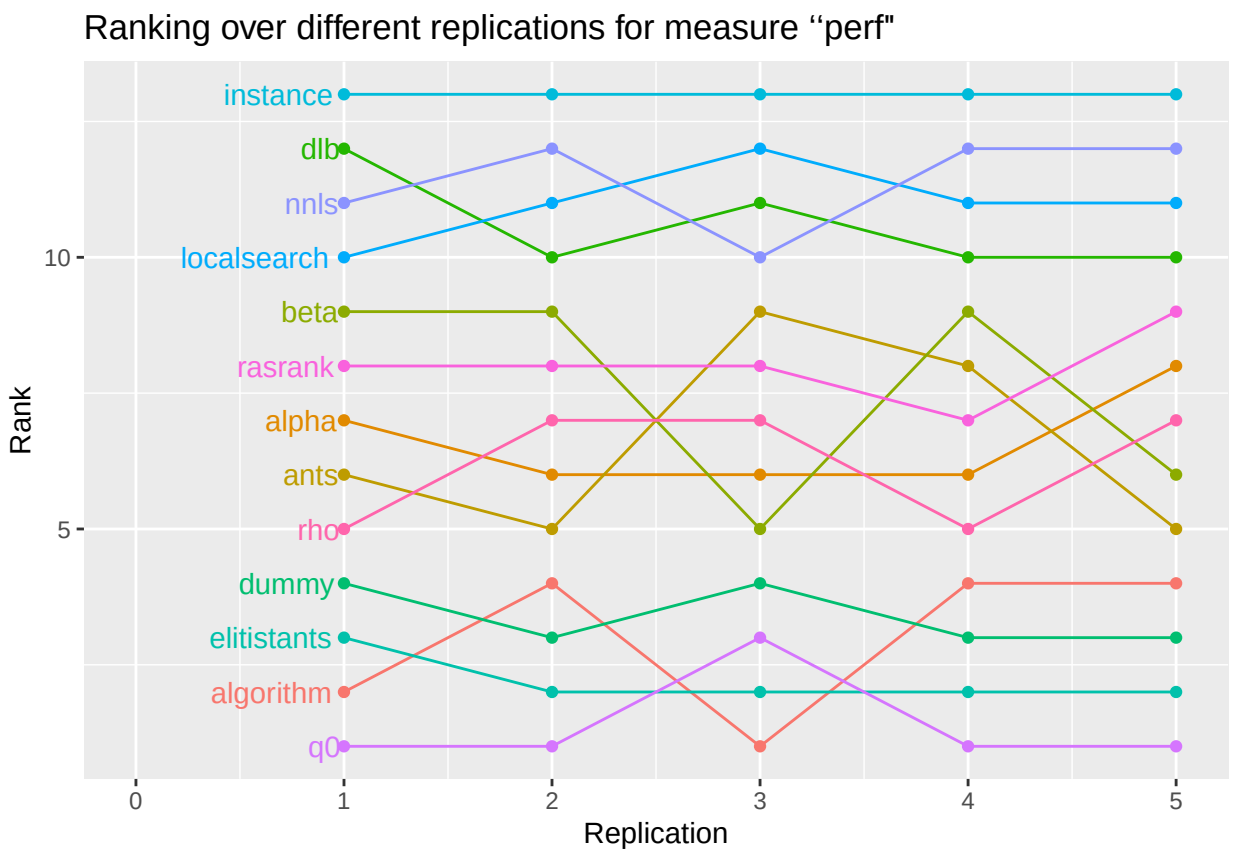
Table 6: Importance for measure "qrank" (single run)

variable	importance	std_dev
instance	0.760	0.039
localsearch	0.010	0.007
dlb	0.002	0.005
nnls	0.002	0.004
rasrank	0.000	0.001
alpha	0.000	0.000
beta	0.000	0.000
elitistants	0.000	0.001
ants	0.000	0.000
rho	0.000	0.000
q0	0.000	0.000
dummy	0.000	0.000
algorithm	0.000	0.000

3. Comparison of five replications

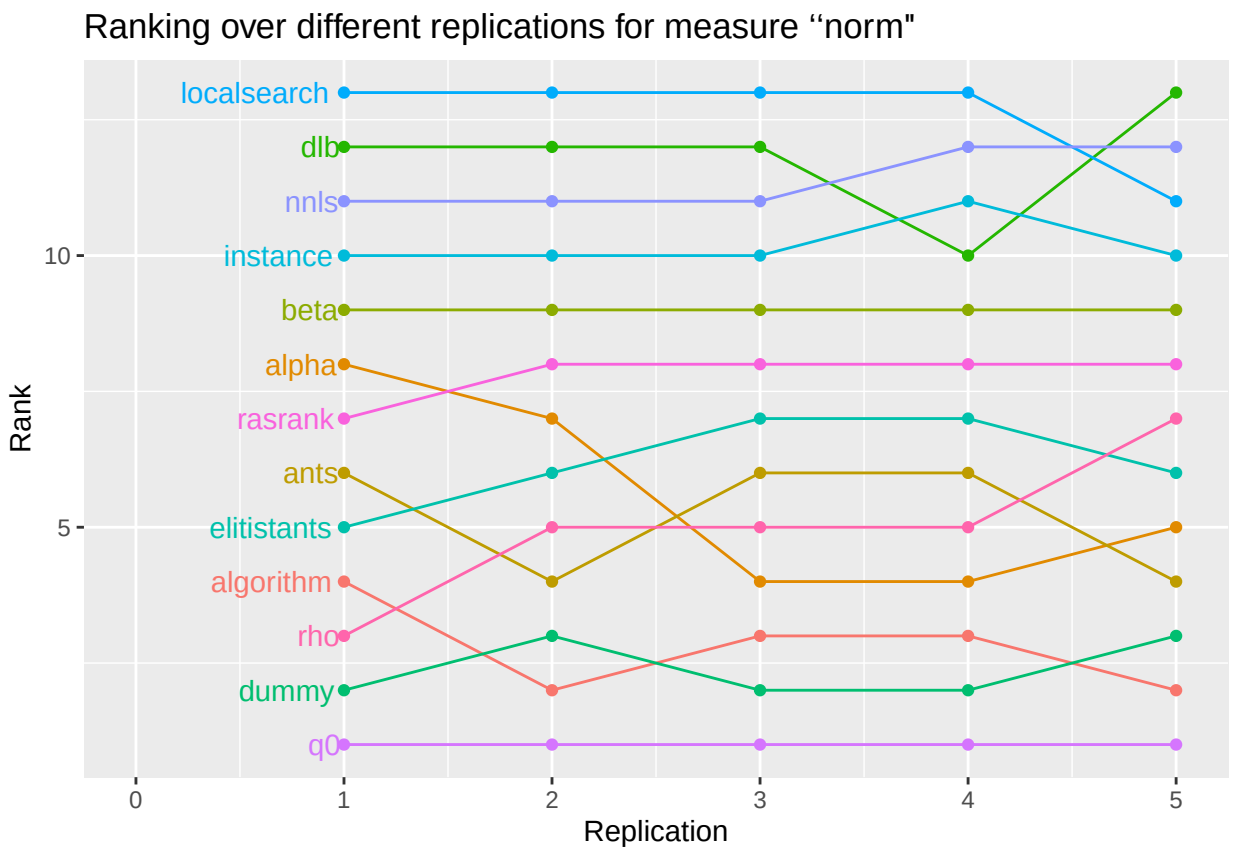
3.1. Dependent variable: raw performance

```
bumpChartReplications(dataset,"perf",do.rank=use.ranks)
```



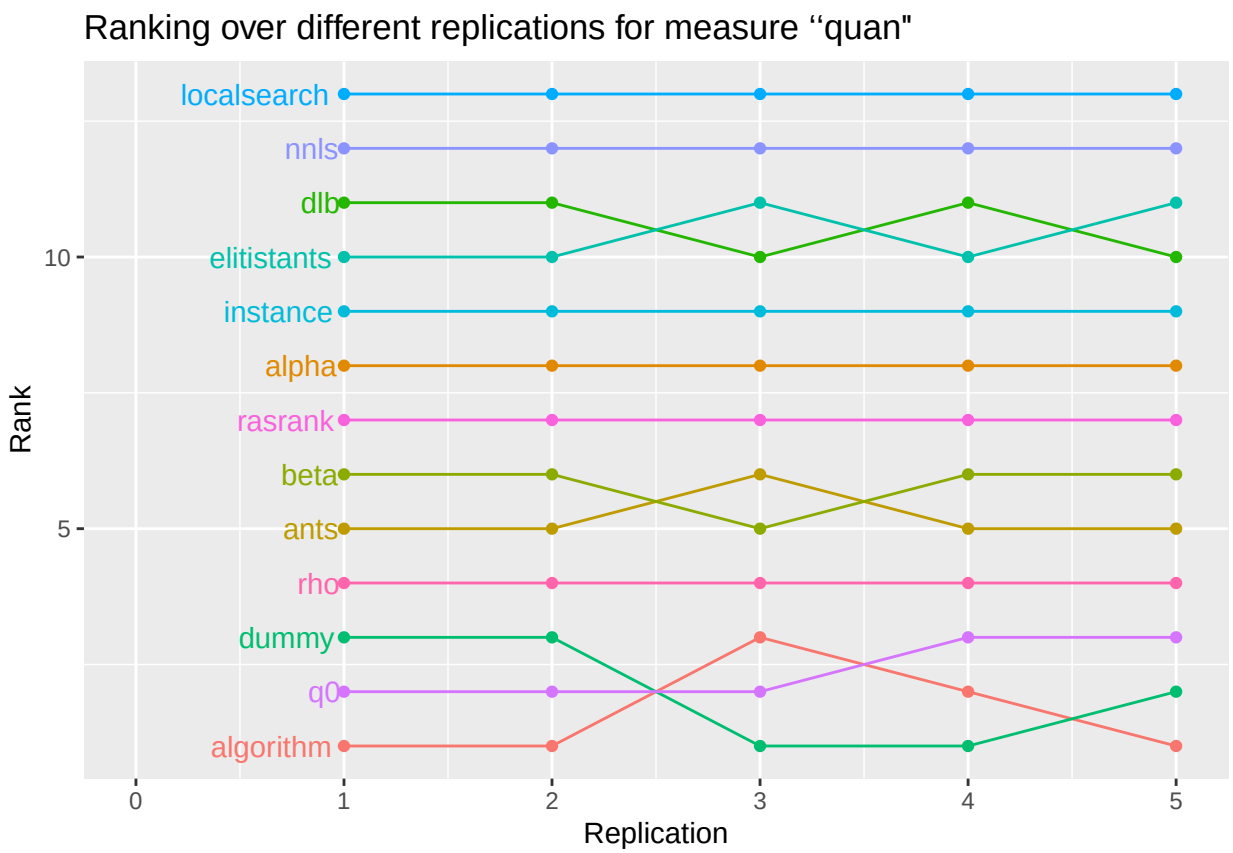
3.2. Dependent variable: normalized performance

```
bumpChartReplications(dataset,"norm",do.rank=use.ranks)
```



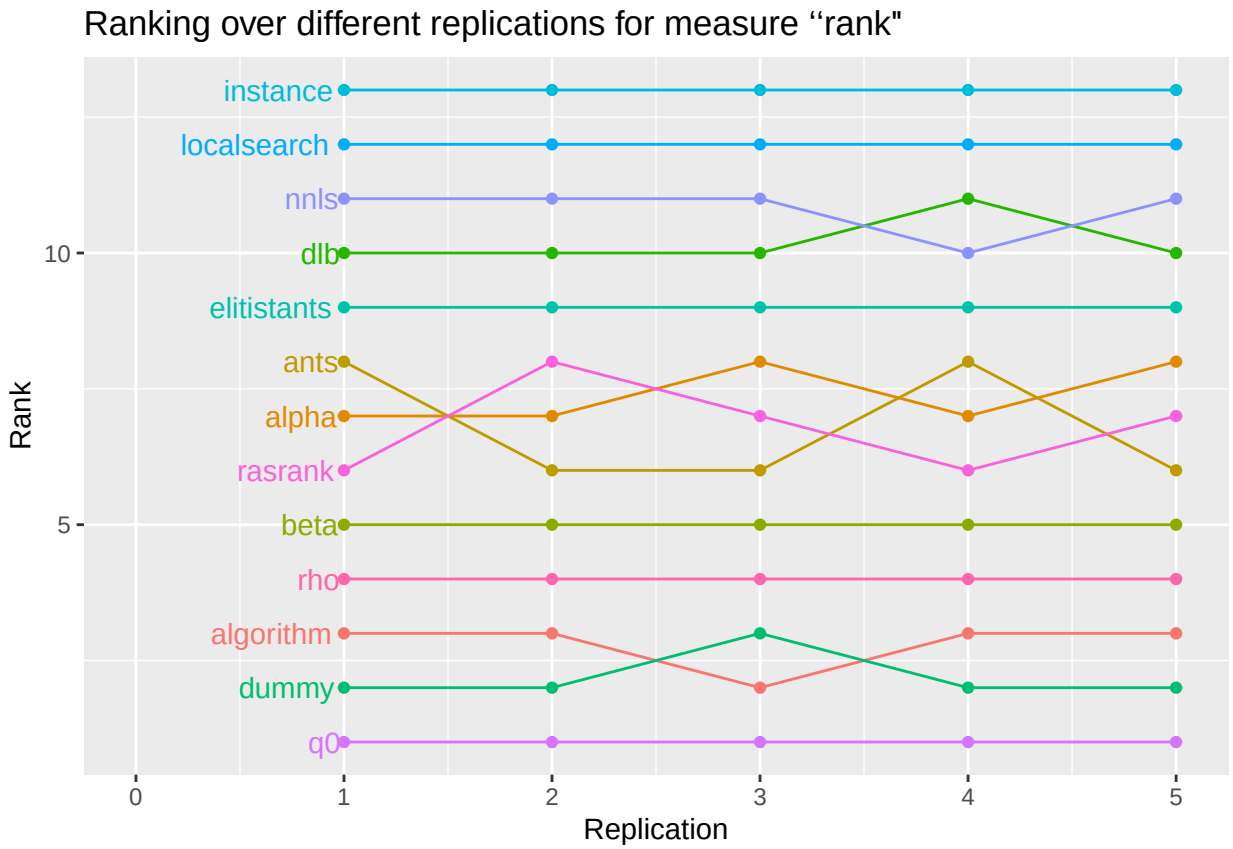
3.3. Dependent variable: performance quantile

```
bumpChartReplications(dataset,"quan",do.rank=use.ranks)
```



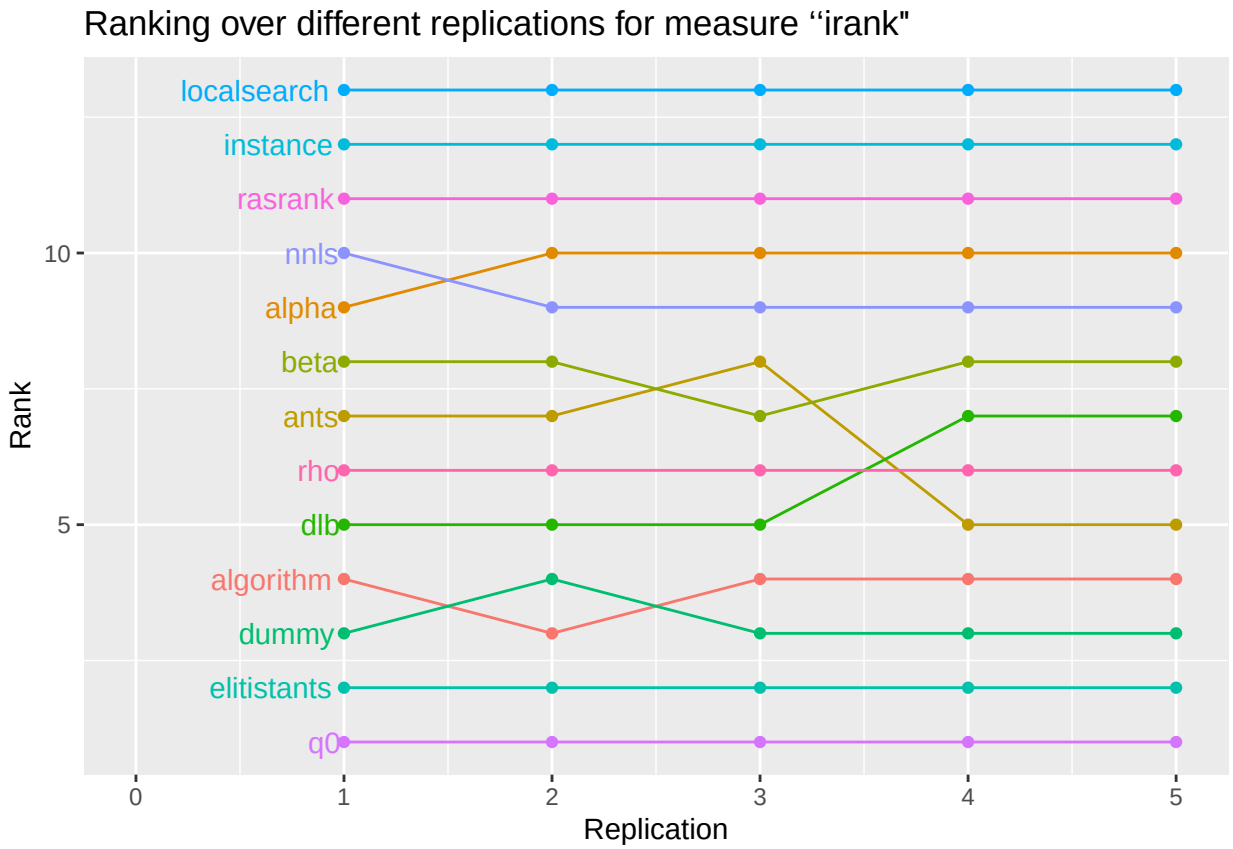
3.4. Dependent variable: normalized ranking

```
bumpChartReplications(dataset,"rank",do.rank=use.ranks)
```



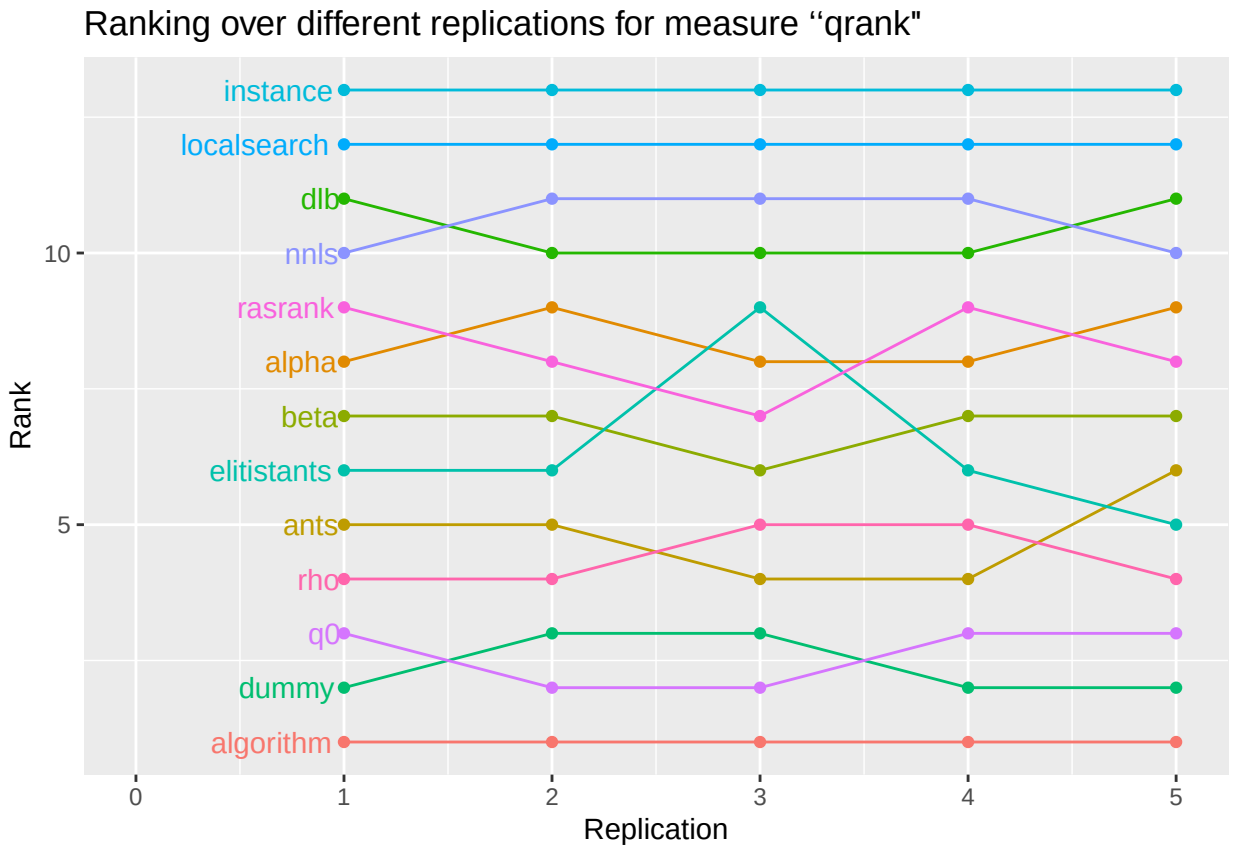
3.5. Dependent variable: normalized ranking with imputation

```
bumpChartReplications(dataset,"irank",do.rank=use.ranks)
```



3.6. Dependent variable: ranking quartile with imputation

```
bumpChartReplications(dataset,"qrank",do.rank=use.ranks)
```


Ranking over different replications for measure ‘‘qrank"
instance
localsearch
dlb
nnls
rasrank
alpha
beta
elitistants
ants
rho
q0
dummy
algorithm
10
5
Rank
0
1
2
3
4
5
Replication