# Results simulation 1: Random Fields

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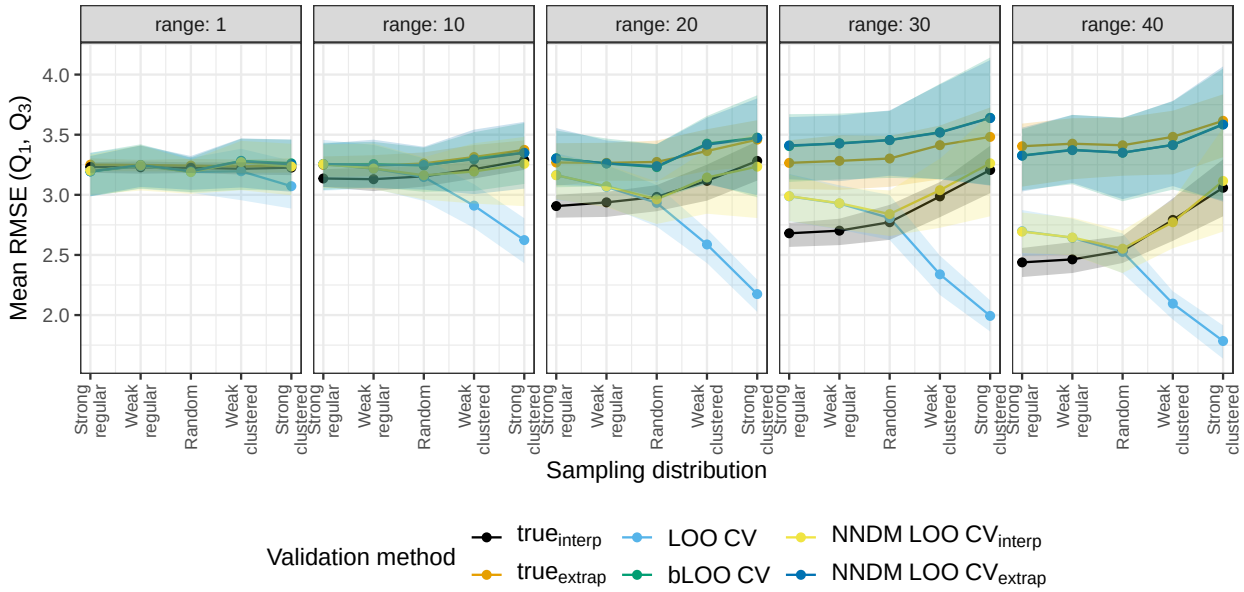
This document contains the code to obtain the figures included in section 3.1, where results of simulation 1 are presented, as well as results figures from simulation 1 included in the appendix.

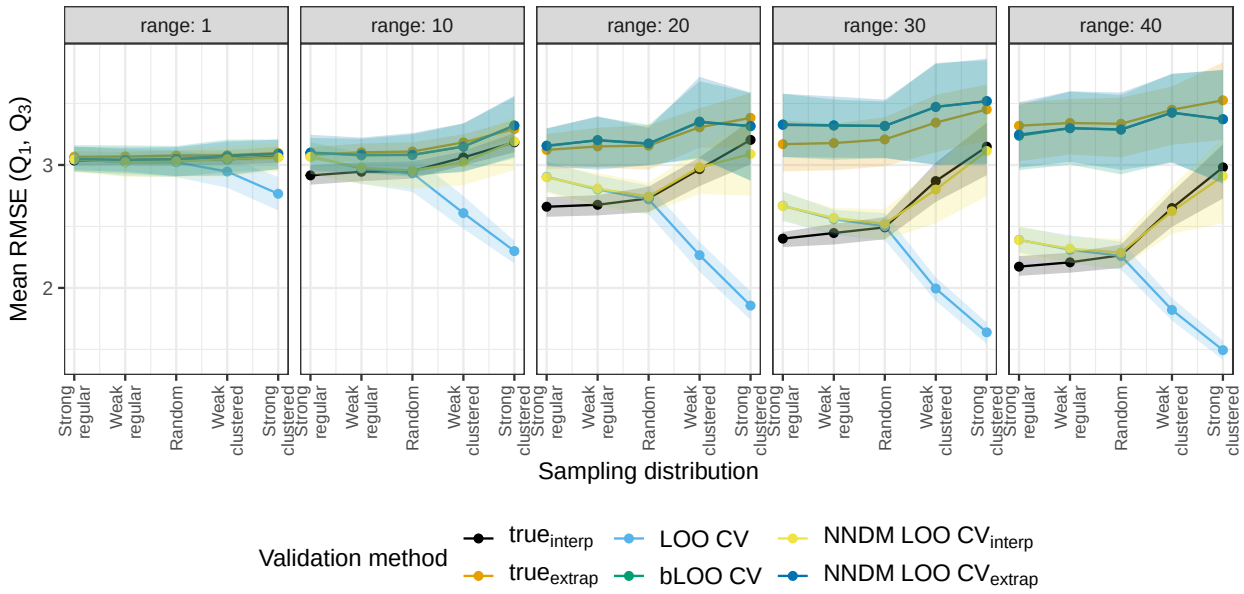
## Profile format

### RMSE

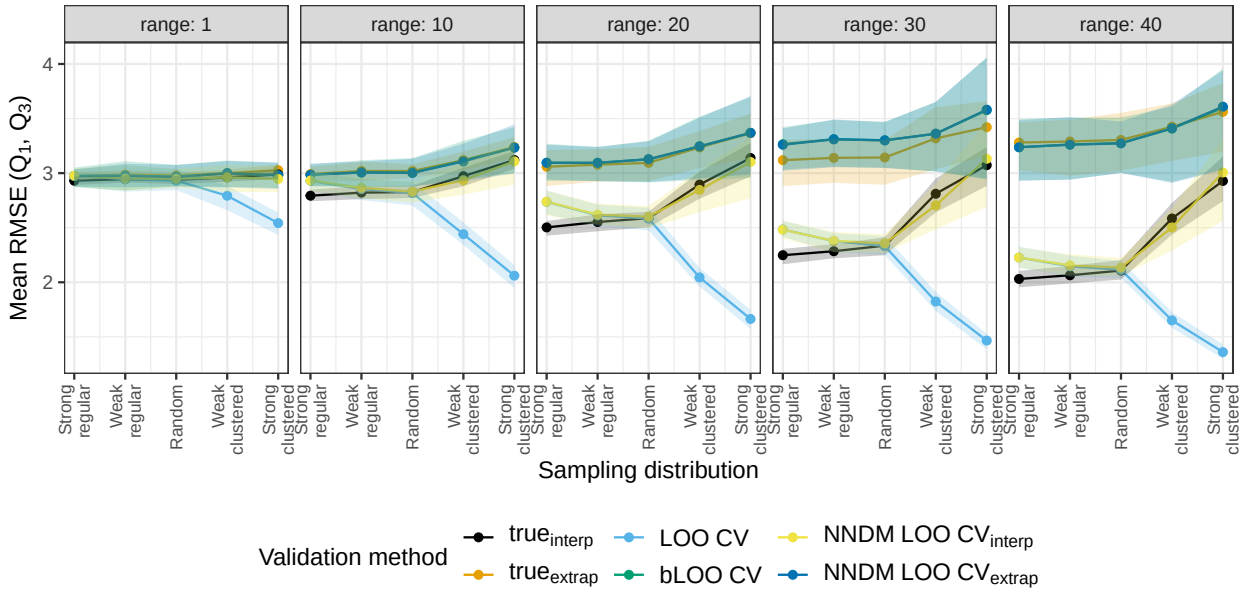
#### N=100



**N=200**

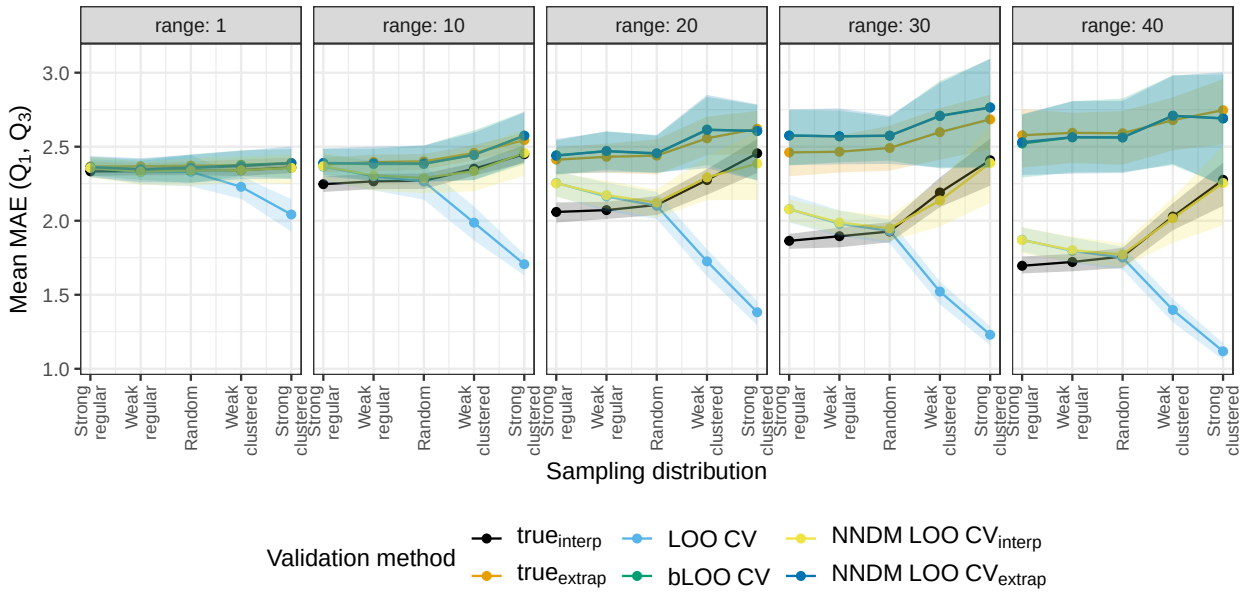

range: 1
range: 10
range: 20
range: 30
range: 40
Mean RMSE (Q1, Q3)
2
3
Strong regular
Weak regular
Random
Weak clustered
Strong clustered
Sampling distribution
Validation method
true interp
true extrap
LOO CV
bLOO CV
NNDM LOO CV interp
NNDM LOO CV extrap

**N=300**


range: 1
range: 10
range: 20
range: 30
range: 40
Mean RMSE (Q1, Q3)
2
3
4
Strong regular
Weak regular
Random
Weak clustered
Strong clustered
Sampling distribution
Validation method
true interp
true extrap
LOO CV
bLOO CV
NNDM LOO CV interp
NNDM LOO CV extrap

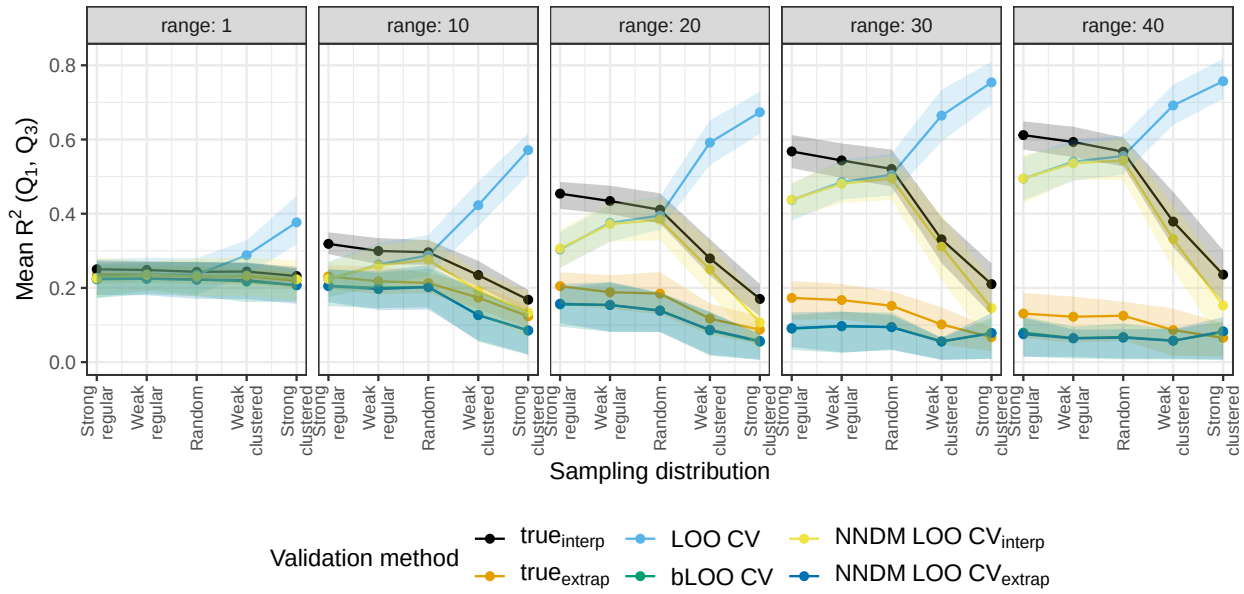
## MAE

### N=200




## R2

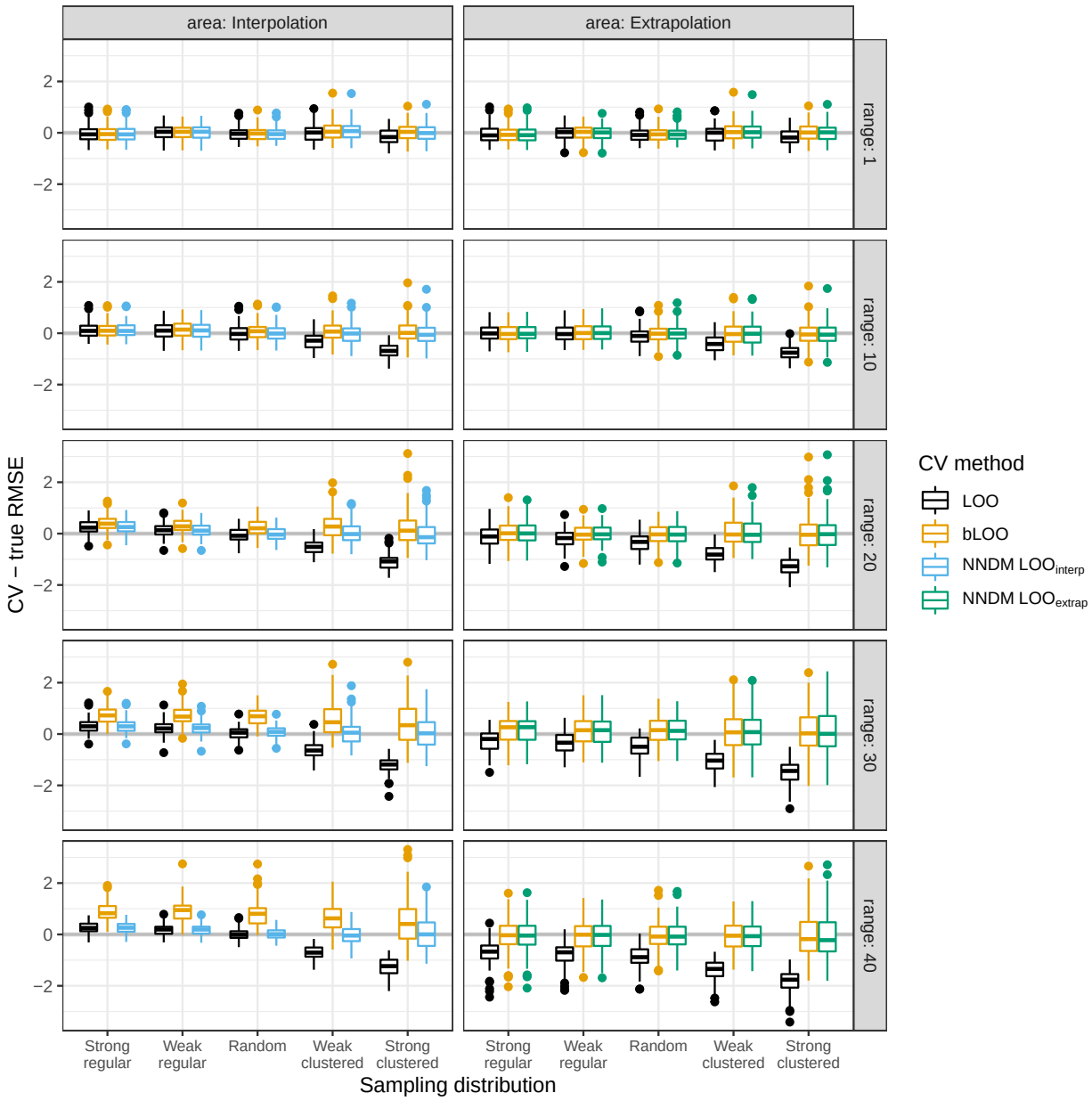
### N=200



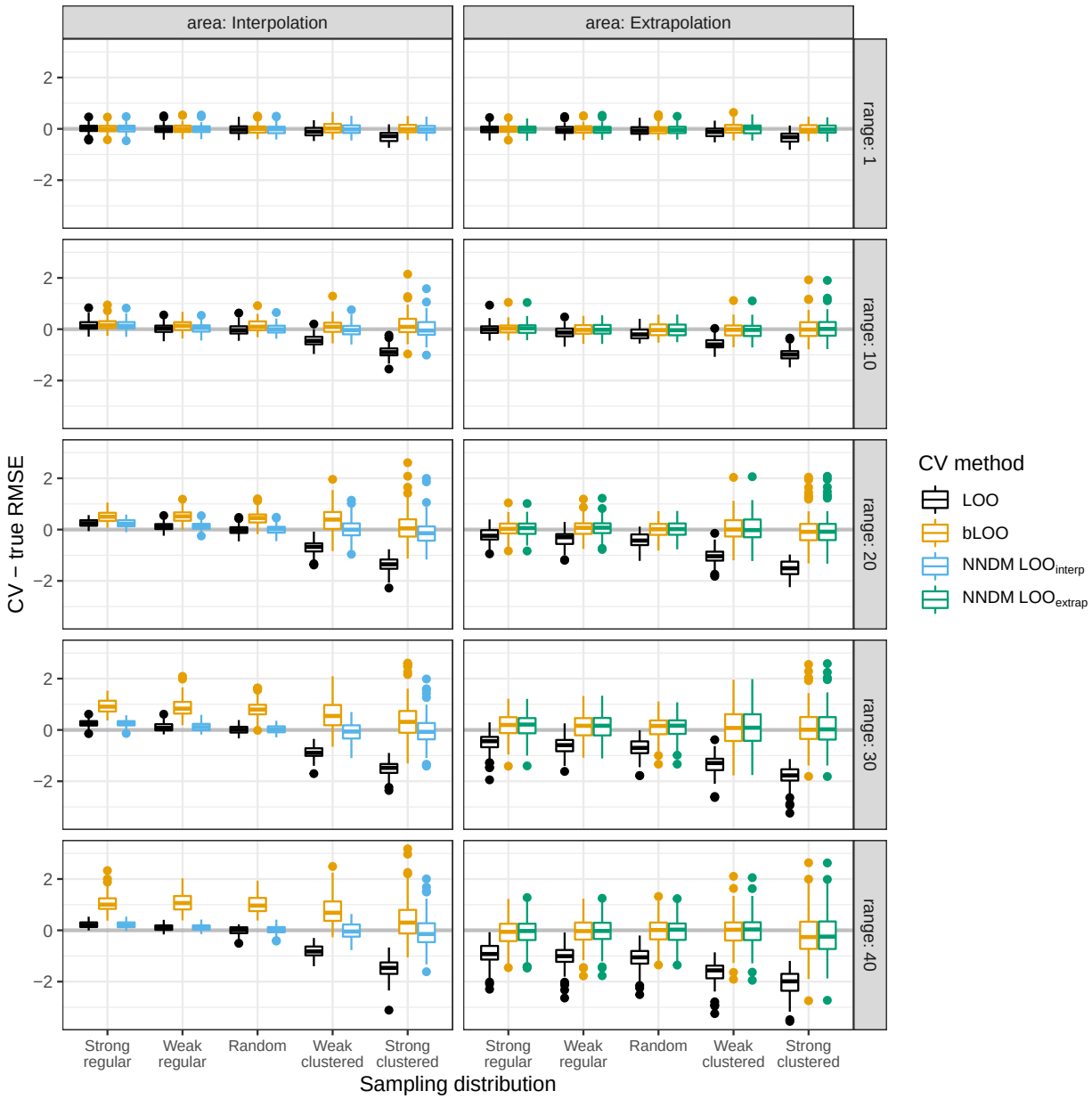
# Boxplot format

## RMSE

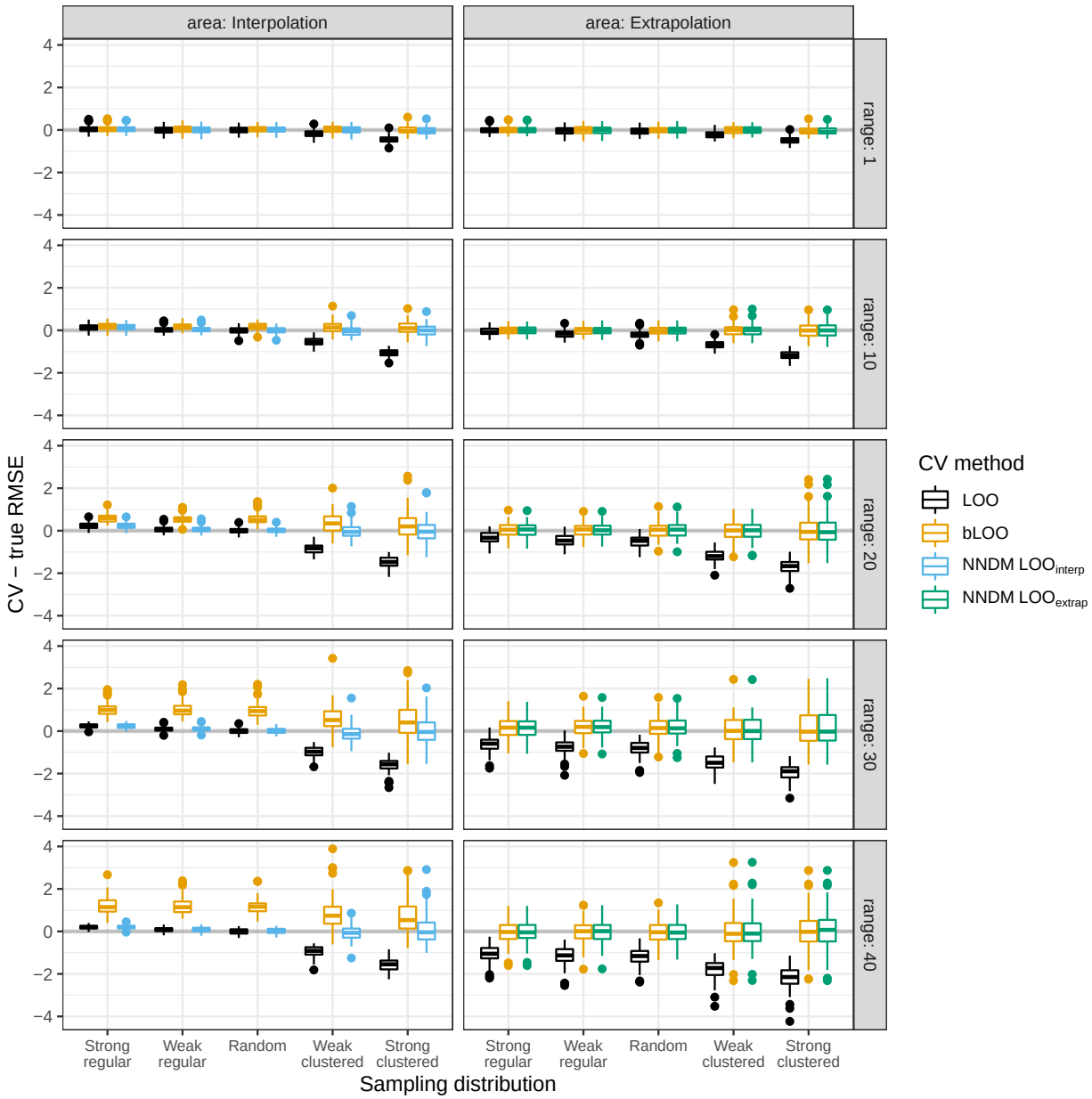
### N=100



**N=200**

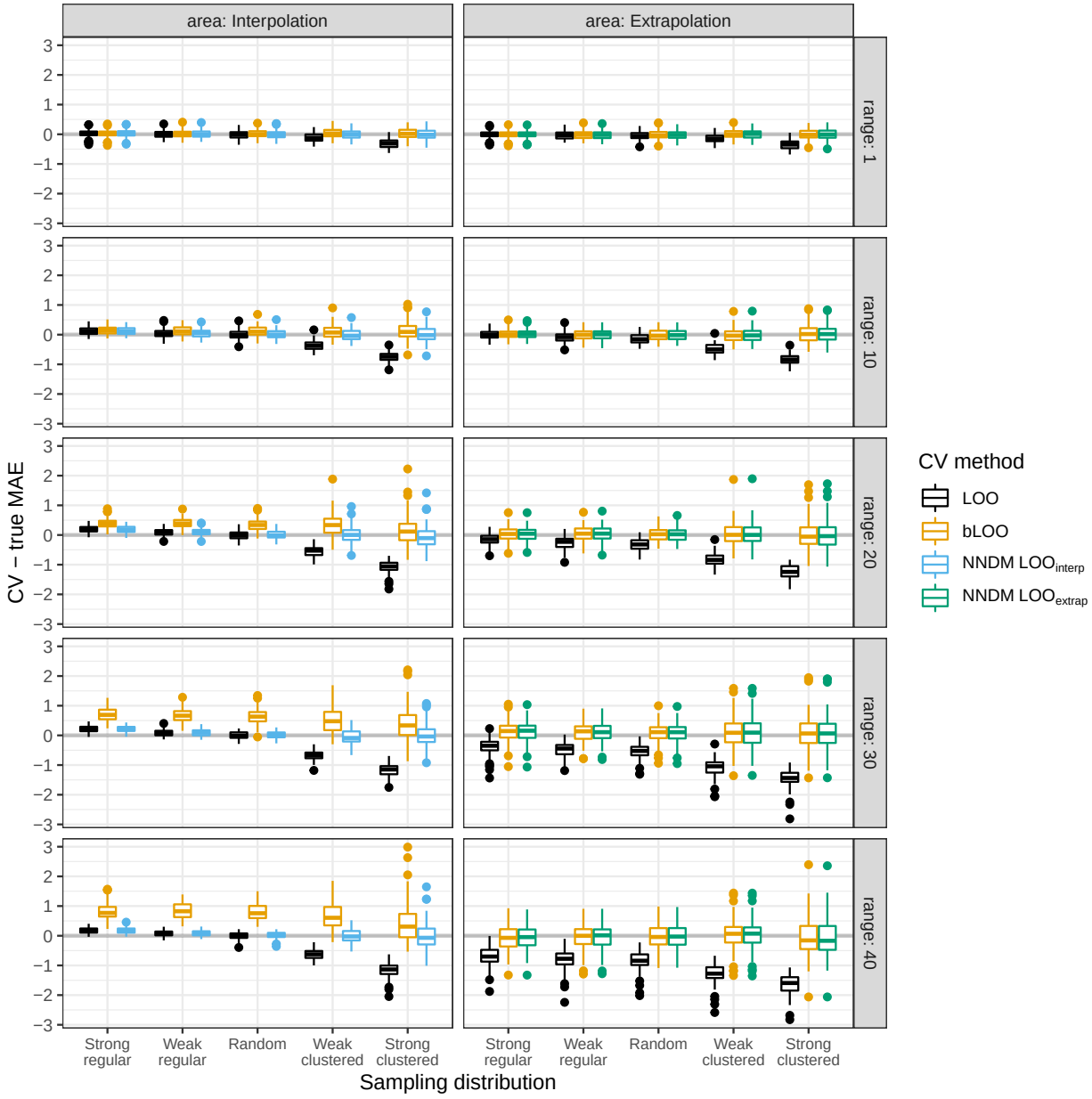

area: Interpolation
area: Extrapolation
range: 1
range: 10
range: 20
range: 30
range: 40
CV − true RMSE
2
0
−2
Strong regular
Weak regular
Random
Weak clustered
Strong clustered
Sampling distribution
CV method
LOO
bLOO
NNDM LOO$_{interp}$
NNDM LOO$_{extrap}$

**N=300**


area: Interpolation
area: Extrapolation
range: 1
range: 10
range: 20
range: 30
range: 40
CV − true RMSE
Strong regular
Weak regular
Random
Weak clustered
Strong clustered
Sampling distribution
CV method
LOO
bLOO
NNDM LOO$_{interp}$
NNDM LOO$_{extrap}$

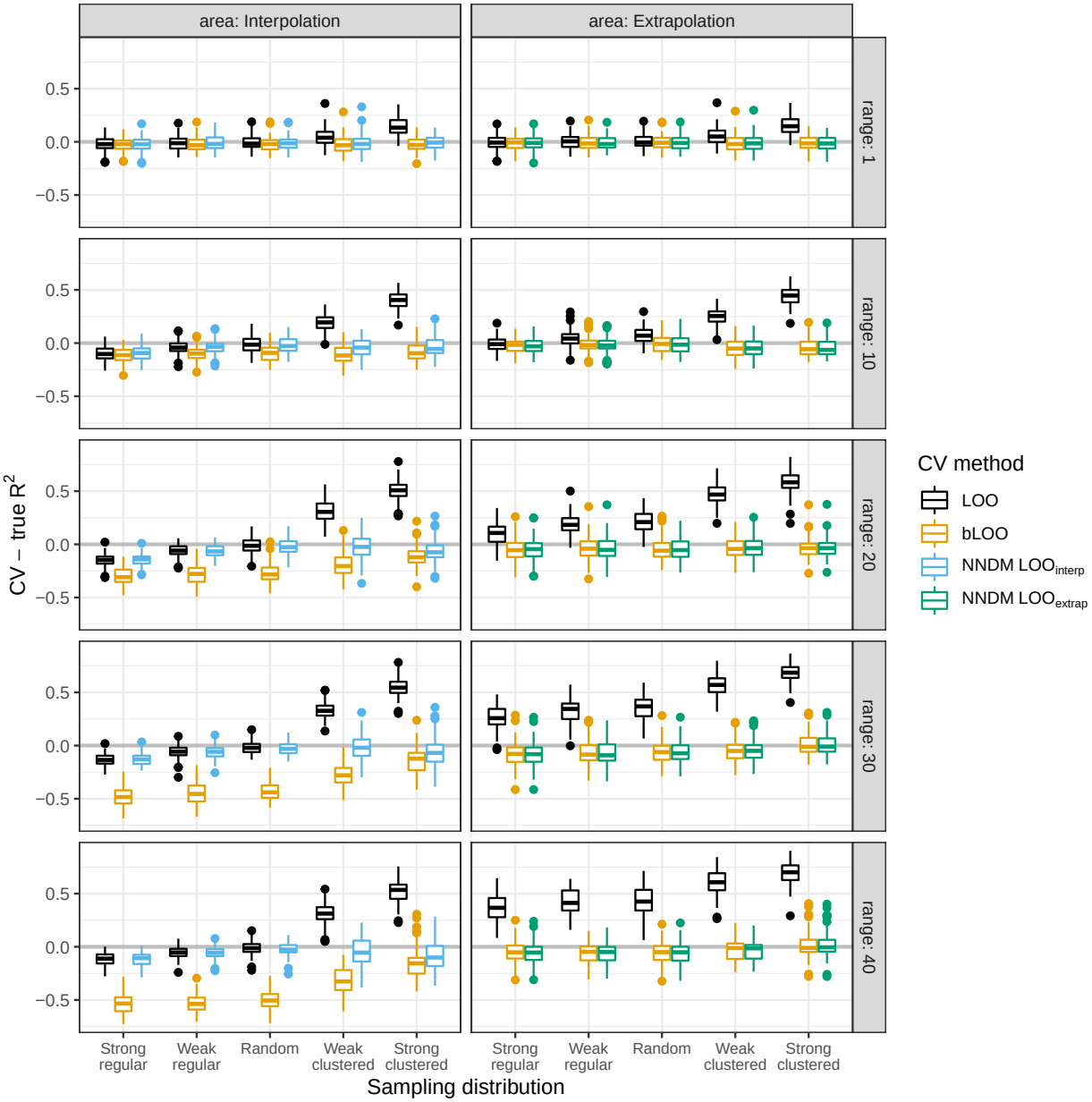
## MAE

### N=200


area: Interpolation
area: Extrapolation
range: 1
range: 10
range: 20
range: 30
range: 40
CV – true MAE
Strong regular
Weak regular
Random
Weak clustered
Strong clustered
Sampling distribution
CV method
LOO
bLOO
NNDM LOO$_{interp}$
NNDM LOO$_{extrap}$

## R2

### N=200


area: Interpolation
area: Extrapolation
range: 1
range: 10
range: 20
range: 30
range: 40
CV – true $R^2$
0.5
0.0
−0.5
Strong regular
Weak regular
Random
Weak clustered
Strong clustered
Sampling distribution
CV method
LOO
bLOO
NNDM $LOO_{interp}$
NNDM $LOO_{extrap}$