

Supplement Fig. 1: Sensitivity analysis of the Simulation study presented in Section 3.1

To investigate the dependence of the results of the simulation study on the parameter grid for θ and λ we repeat the study with 29×29 parameter (841 parameter combinations) and the larger parameter ranges $[\theta/4, 4\theta]$ and $[\lambda/4, 4\lambda]$. The results in the following Figure look similar to the one in Fig. 2 and indicate that they do not depend on the choice of the parameter grid.

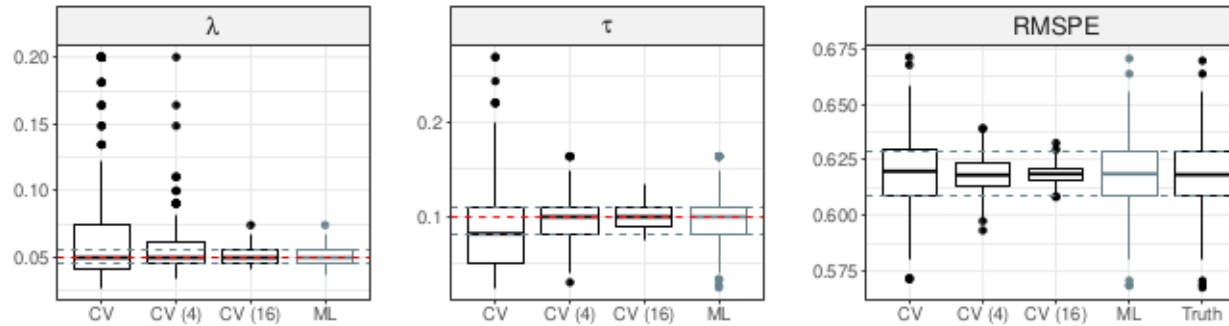
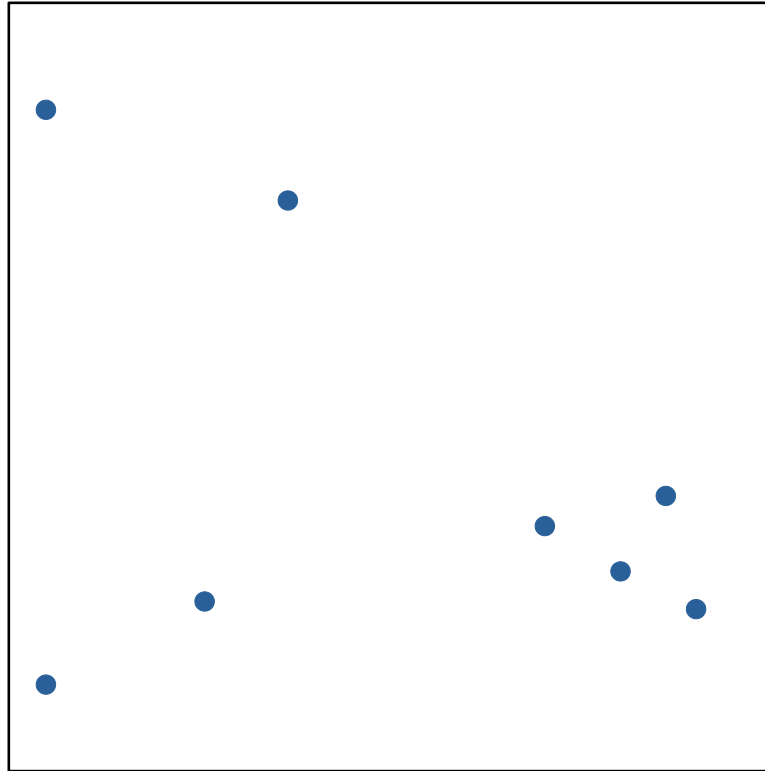


Illustration of the division of the data into subsets introduced in Section 2.4

With the following configuration the division into four subsets leads to unbalanced number of points per subset:

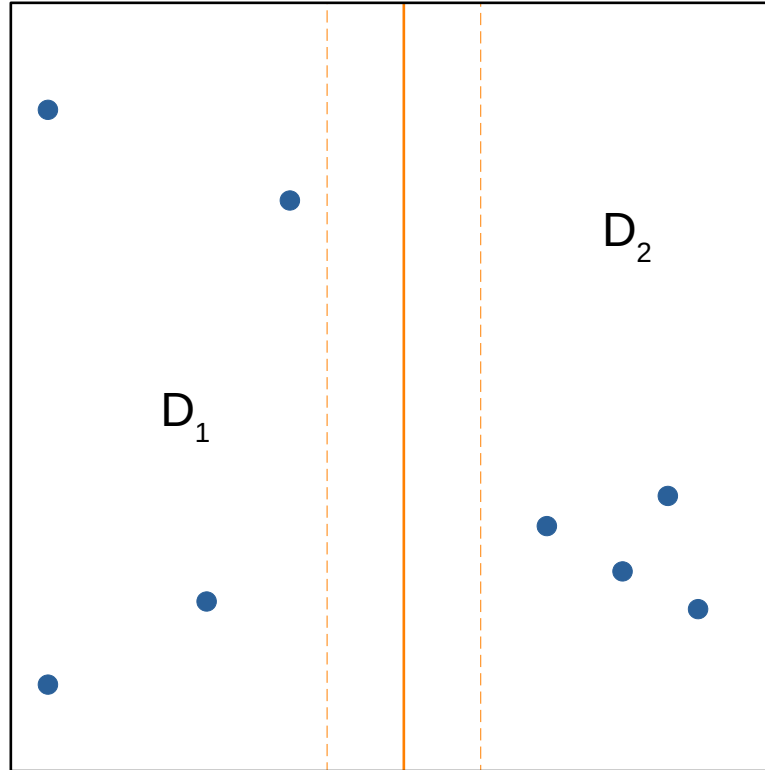
- 8 points in the $D = [0,1] \times [0,1]$
- Boundary width = 0.1



Recursion 1:

Split the domain into 2 subsets such that $D_1 \cup \partial D_1$ and $D_2 \cup \partial D_2$ contain the same number of points.

- $D_1 \cup \partial D_1$ and $D_2 \cup \partial D_2$ both contain 4 points
- No points are in the boundary regions



Recursion 2:

Split the 2 subsets from the previous recursion into 2 subsets each.

- $D'_1 \cup \partial D'_1$ and $D'_2 \cup \partial D'_2$ contain 2 points. No points are in the boundary regions.
 - $D'_3 \cup \partial D'_3$ and $D'_4 \cup \partial D'_4$ contain 4 points. 2 points are in each boundary region.
- Subsets have an unbalanced number of points.

