Sparse regression modelling

Interactive Session # 2, Bayesian Statistics

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Group Members

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- ...

Exercise 1

1.1 The marginal priors for β_j are reported in Figure 1

1.2

1.3 The unit balls are reported in Figure 2

Exercise 2

The best predictive performance is obtained with...

Exercise 3

The **names** of the significant variables for the different models are

- Normal prior:
  P12.A, P16.A ...
- Bayesian Lasso prior
- Spike and Slab prior
- Spike and Slab Lasso prior
- Horseshoe prior
- Regularised Horseshoe prior

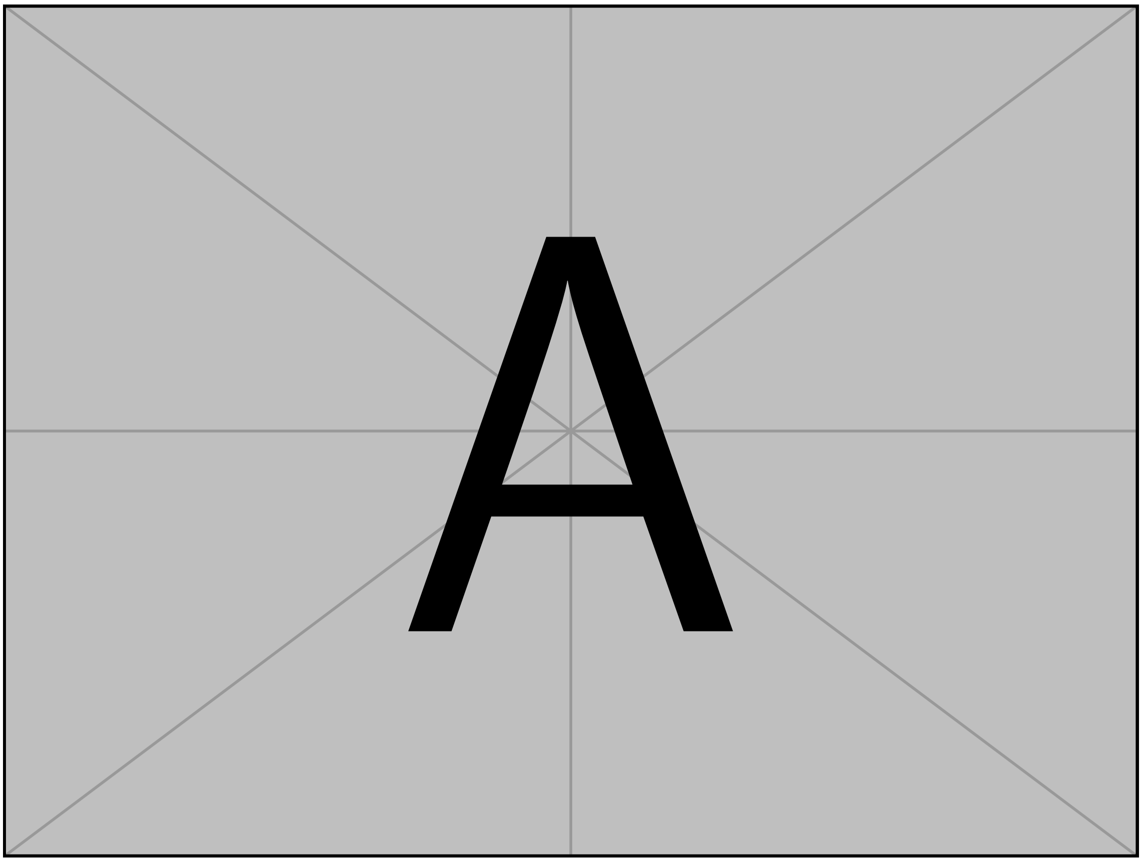

Figure 1: Each panel shows the marginal distribution of β_j for the six priors under consideration.

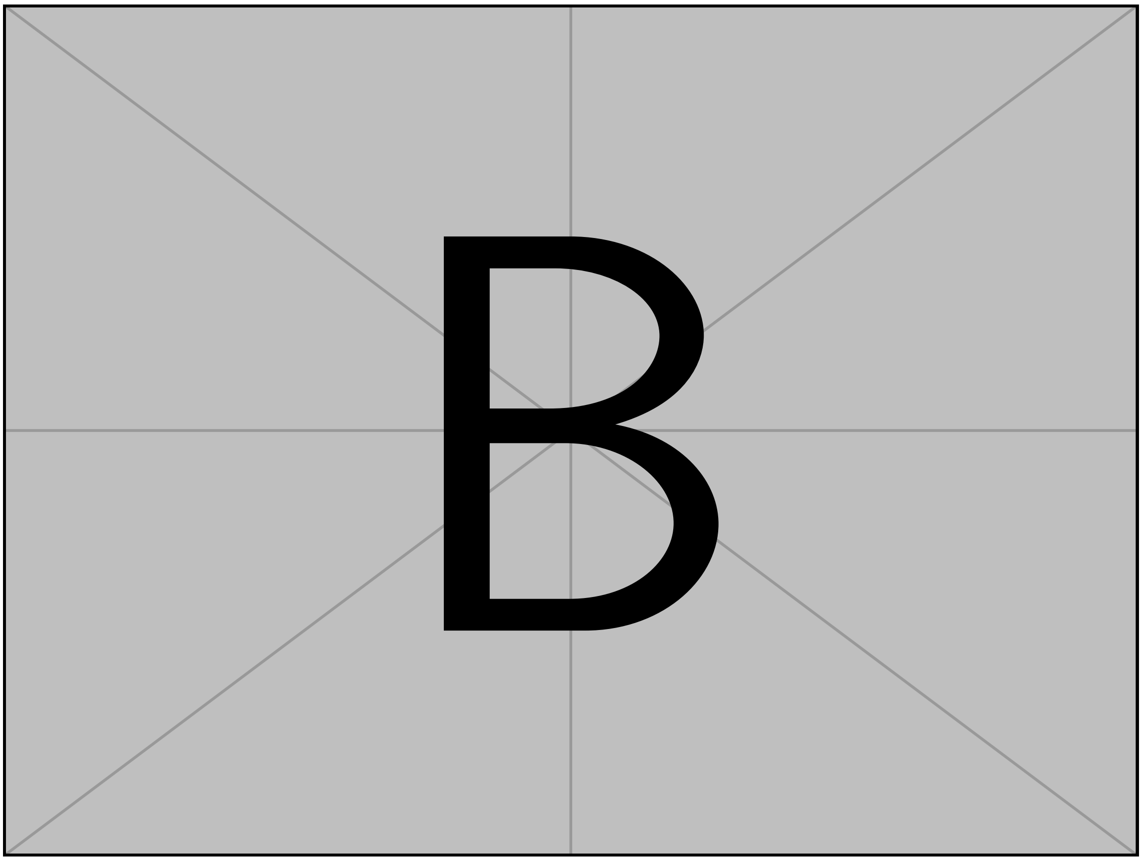

Figure 2: Unit-balls for the penalty associated to the Normal, Bayesian Lasso and Horseshoe priors. The scale parameter τ in the different priors is always set equal to 1.