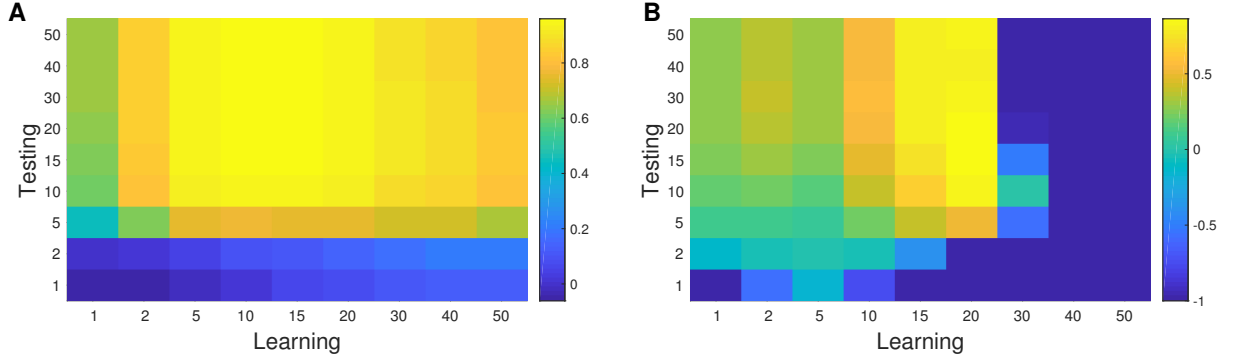


S3. Supplementary information: time-bin dependence

Here we study the performance of the Gumbel copula model depending on both the time-bin used for learning and testing. Specifically, we first learn the copula model from the responses to checkerboard stimulation binned at the “learning time-bin”. Then we test it by predicting the noise correlation in responses to the full-field stimulation binned at the “testing time-bin”. As it can be seen from the plot, the model performance is high and robust in the whole range 10-20ms. This result both validates our choice of $16.7ms$ (corresponding to 60Hz) and shows that the model is robust against changes of the working time-bin.



Performance of the model as a function of the time-bin used for learning the copula parameters on checkerboard stimulation and that used for testing on fullfield stimulation. A) Pearson correlation. B) Coefficient of determination (values smaller than -1 are set to -1 for readability purposes)