

## Explanations

Each row of the following pages shows the results of one experimental set up. The first diagram shows the number of false negatives in the exact sense, that is, in what fraction of the 1000 runs that were executed for each parameter combination exactly the injected assembly was returned. The second to fourth diagram show the fraction of runs in which a superset, a subset (with at least neurons) or an overlap pattern (sharing at least two neurons with the injected assembly), respectively, were returned. The fifth diagram shows the fraction of runs in which an unrelated pattern (at most one neuron in common with the injected assembly) was returned. Finally, the last diagram shows the fraction of runs in which the result was empty, that is, no pattern was returned.

The parameter list defining the set up is shown at top left of each diagram. The first parameter is the number of coincident firing events in which each neuron does *not* participate (missing occurrences). The second parameter is the equivalent number of surrogate data sets for the pattern spectrum filtering that is carried out before the reduction sequence of the neurons is constructed. The third parameter indicates the method for measuring the strength of connection of a neuron in the hypergraph defined by the (remaining) patterns. Here “p” stands for the pattern-based method. The letters “i” and “s” distinguish between the two instance-based methods that refer to overlaps of instances: “i” stands for the intersection-based overlap measure and “s” for the synchrony-based overlap measure. Finally, the fourth and last parameter states the value of the parameter  $r$  occurring in the formulas for the measures.











































