Supplementary Information

1. Demographic and clinical characteristics of subjects

Table I. Demographic and clinical characteristics of 10 patients with schizophrenia and 10 healthy controls

Variable	SZ	HC	t/P-value
Age	43.5 ± 8.7	40.2 ± 10.7	NS, 1.5/0.2
Percent male	80	70	NS, 0.5/0.6
NART, estimated IQ	105.3 ± 6.9	111.2 ± 8.3	NS, 1.8/0.1
PANSS			
Total	59.7 ± 17.8	NA	NA
Positive	16.2 ± 6.8	NA	NA
Negative	13.4 ± 4.4	NA	NA
Percent treated with atypical			
antipsychotic medication	100	NA	NA
Percent treated with antidepressants	40	NA	NA
Percent with some psychotic symptoms	60	NA	NA

SZ, schizophrenia; HC, healthy control; NS, non-significant; NART, national adult reading test; NA, non-applicable; Group comparisons are reported in the last column.

2. Silhouette Results in Markov Modeling Method

The average silhouette results when using different number of states for clustering of spatial connectivity are shown in Figure 1. We show two examples using the connectivity between DMN (or temporal) component and other 11 components. We can see from this figure that for these two cases, 3 clusters give the best clustering solution. Therefore, we use 3 states in Markov chain of spatial connectivity over time for these two examples.

3. Markov Modeling Results for additional networks

Besides Markov modeling results for DMN and temporal lobe connectivity, similar results for other 10 networks' connectivity are shown in this section.
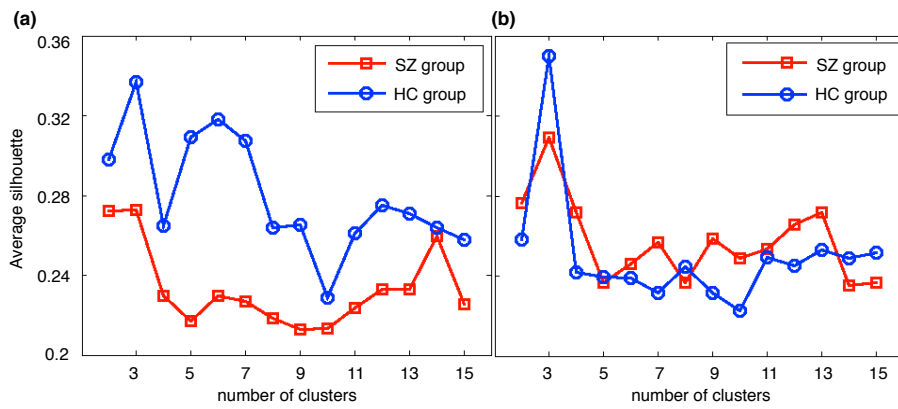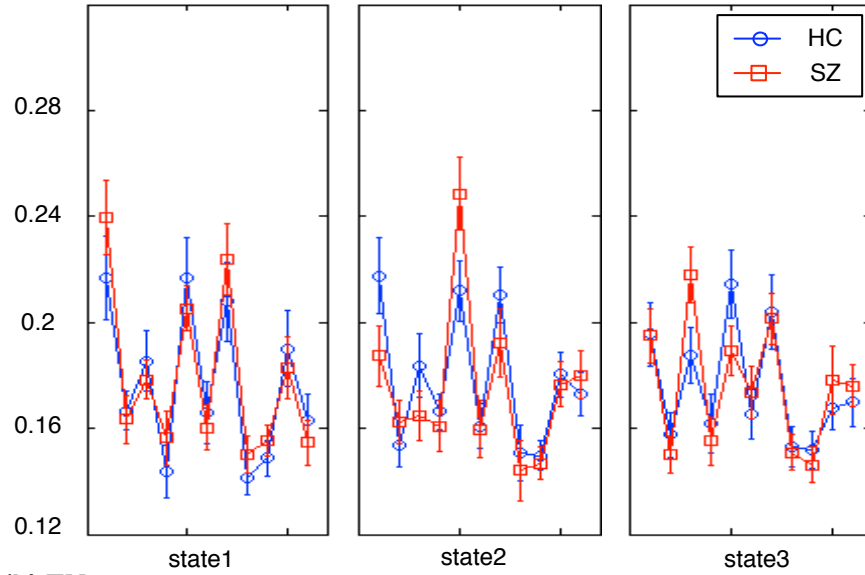
Figure 1: Average silhouette values when using different number of states for clustering of spatial connectivity between (a) DMN component and other 11 components; (b) temporal component and other 11 components.

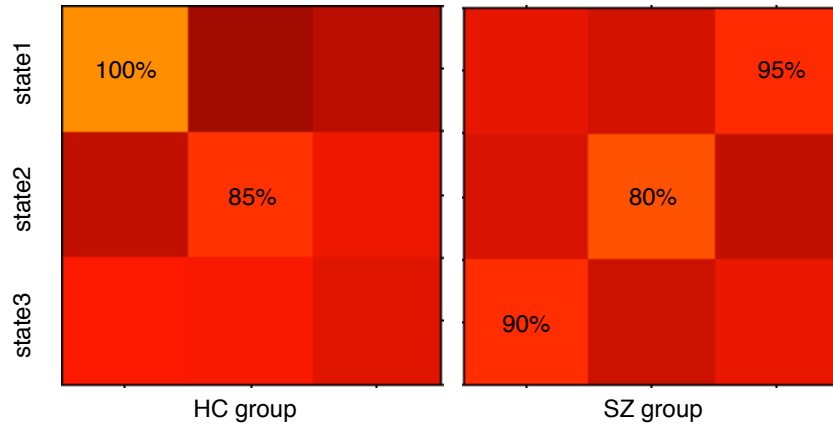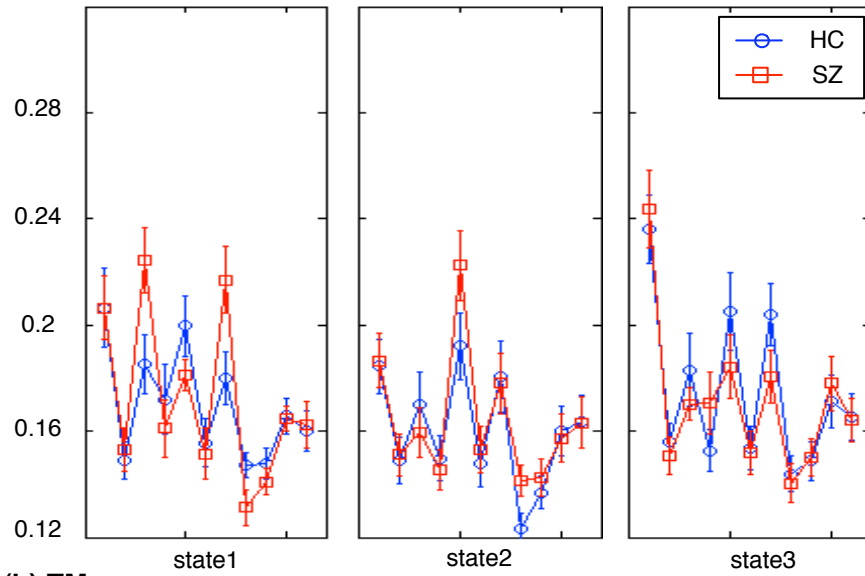**(a) Average FC within state**

(b) TM
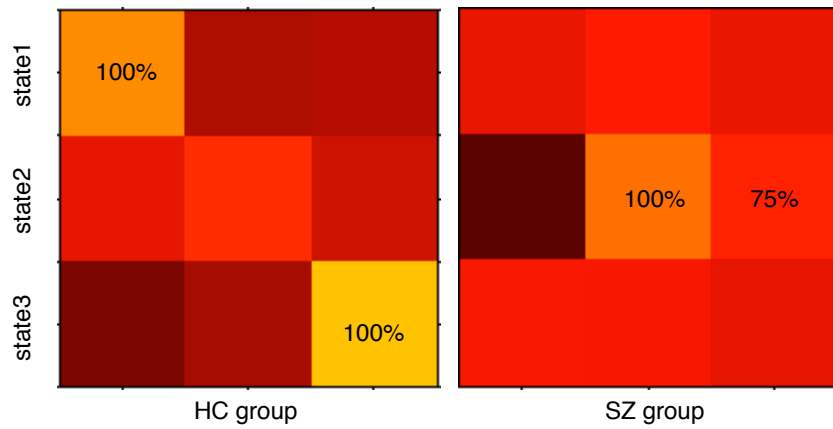

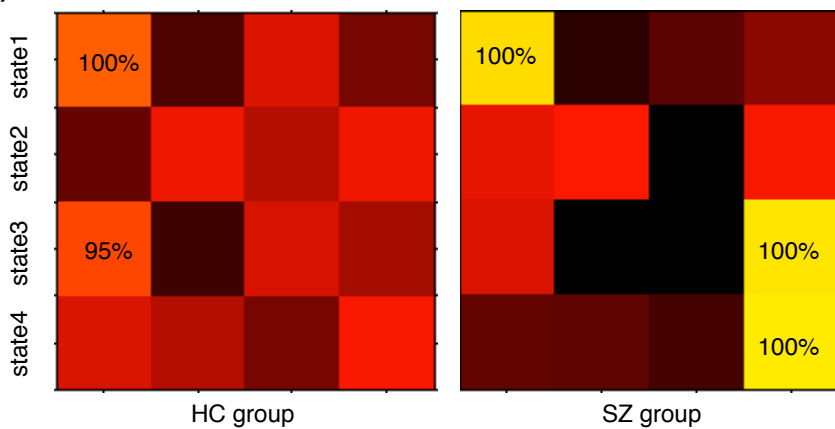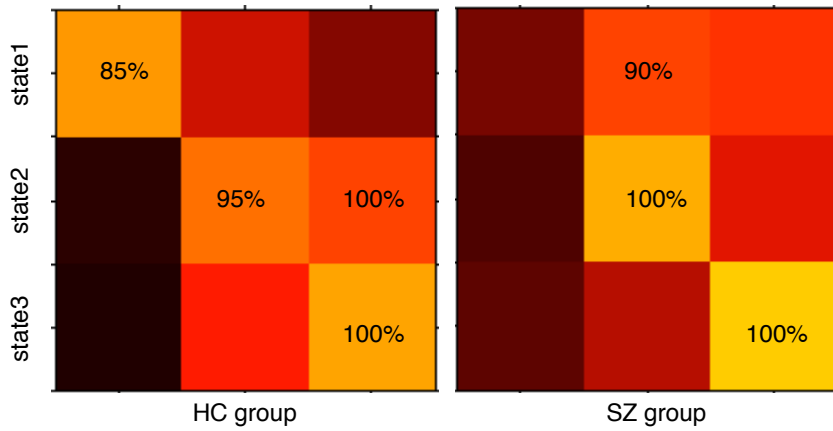Figure 2: Markov modeling results for connectivity between IC1 and other 11 components: (a) average connectivity values within each state for two groups; (b) the transition matrix for each group, where color represents the transition probability value and the percentage value is the occurrence of significant transition probability in 20 trials of random subject selection.

(a) Average FC within state

(b) TM

Figure 3: Markov modeling results for connectivity between IC2 and other 11 components.
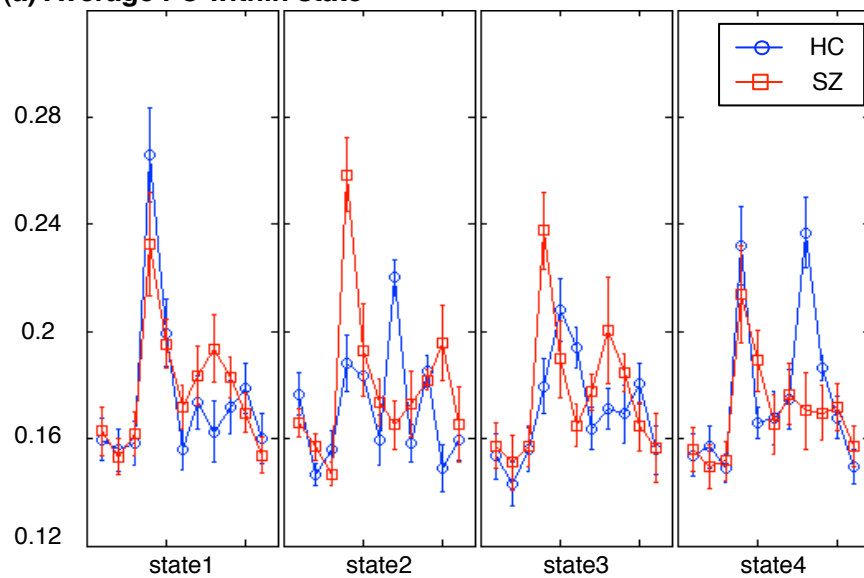
Figure 4: Markov modeling results for connectivity between IC3 and other 11 components.
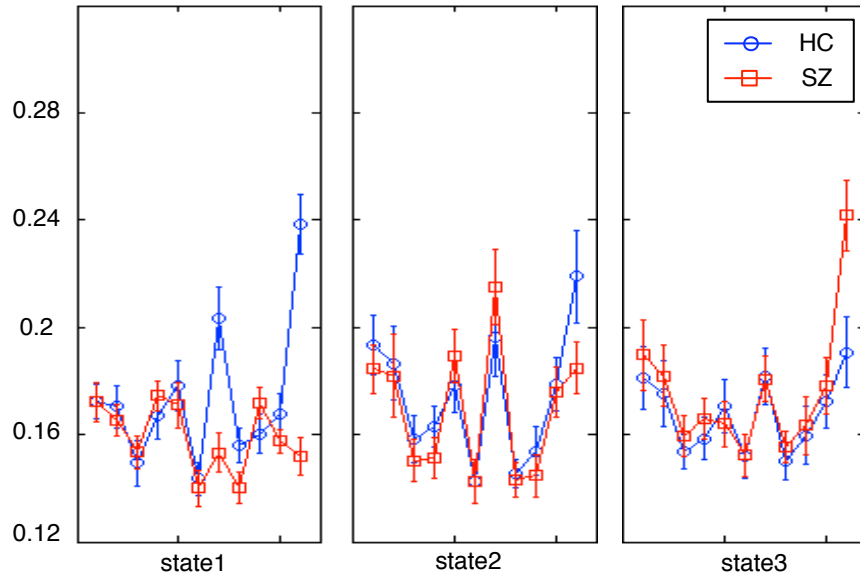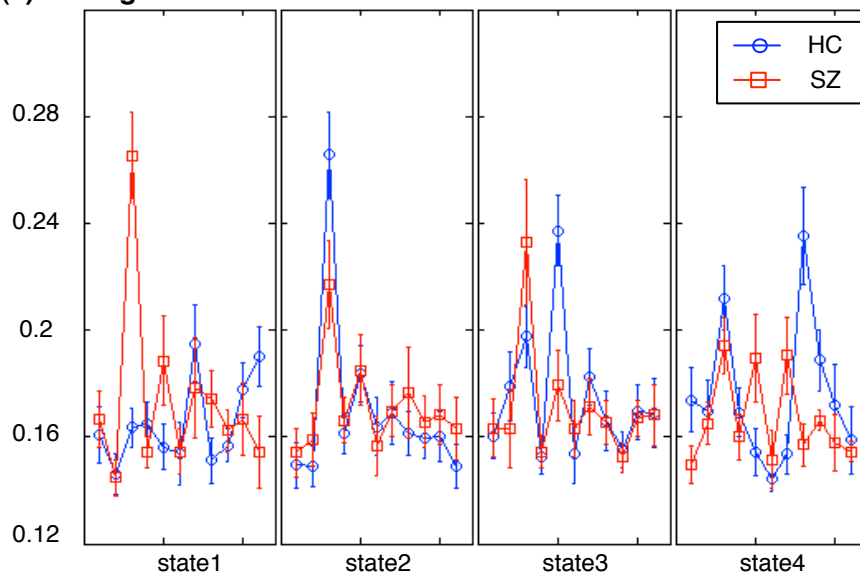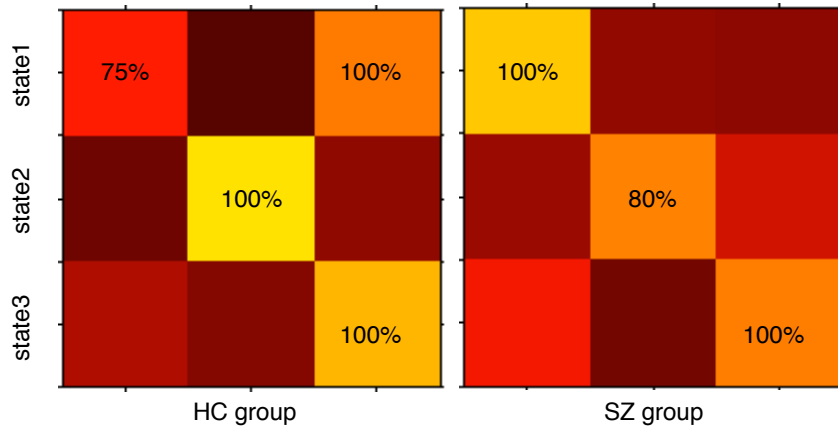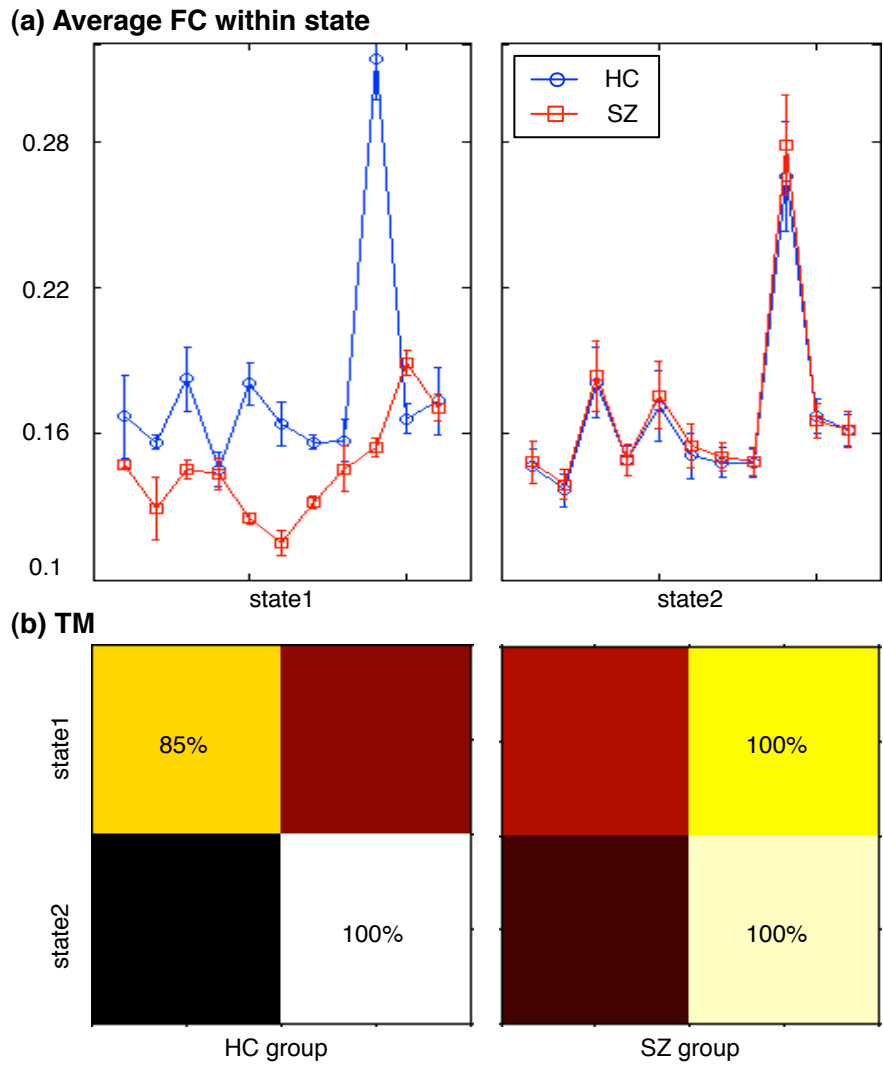
Figure 5: Markov modeling results for connectivity between IC4 and other 11 components.
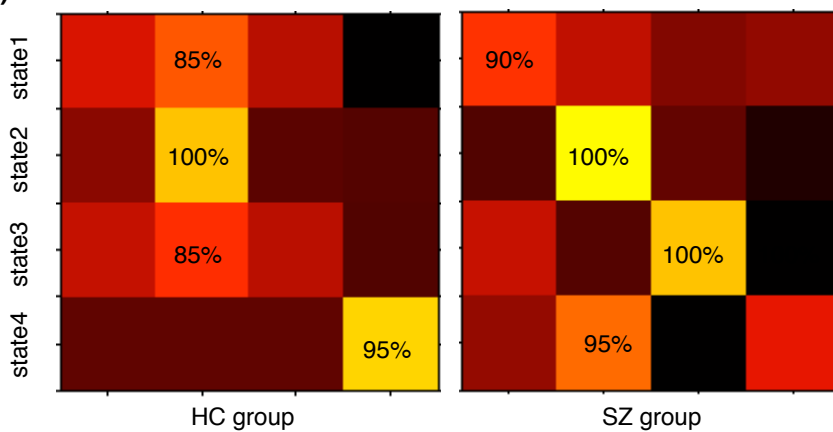
Figure 6: Markov modeling results for connectivity between IC5 and other 11 components.
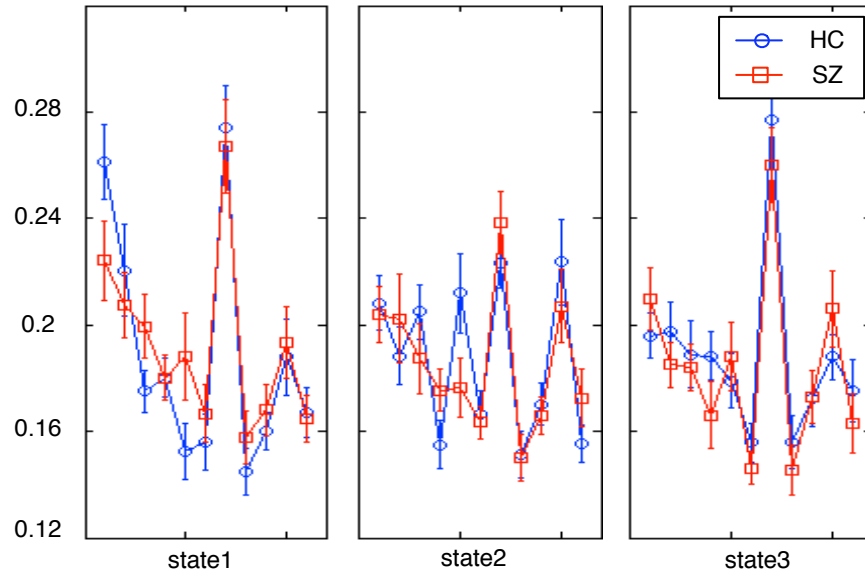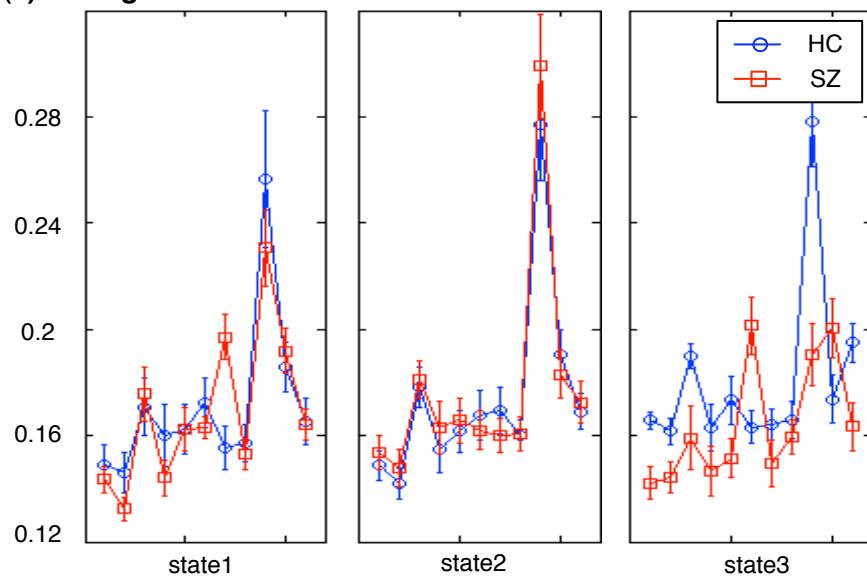
Figure 7: Markov modeling results for connectivity between IC6 and other 11 components.

Figure 8: Markov modeling results for connectivity between IC9 and other 11 components.

Figure 9: Markov modeling results for connectivity between IC10 and other 11 components.

Figure 10: Markov modeling results for connectivity between IC11 and other 11 components.
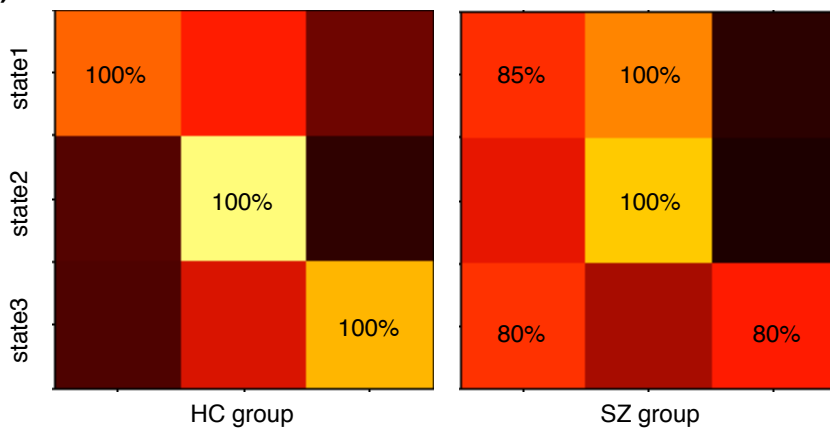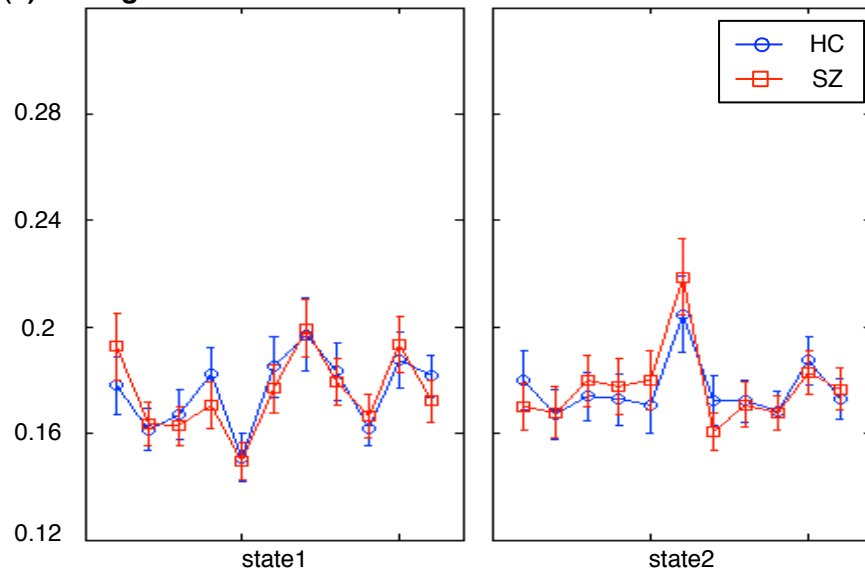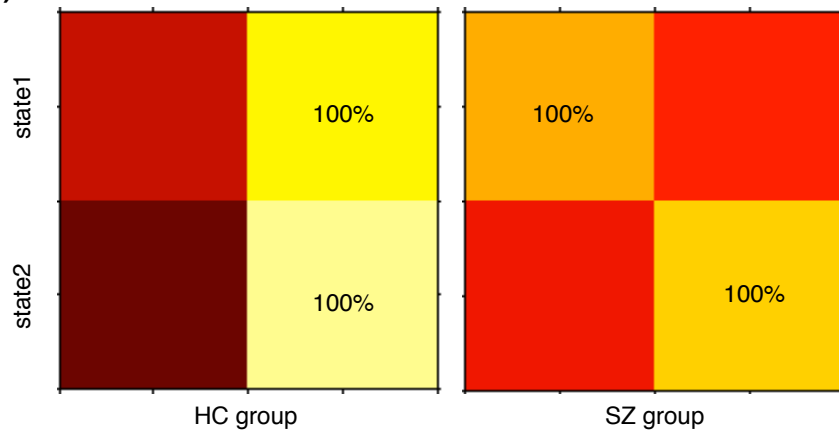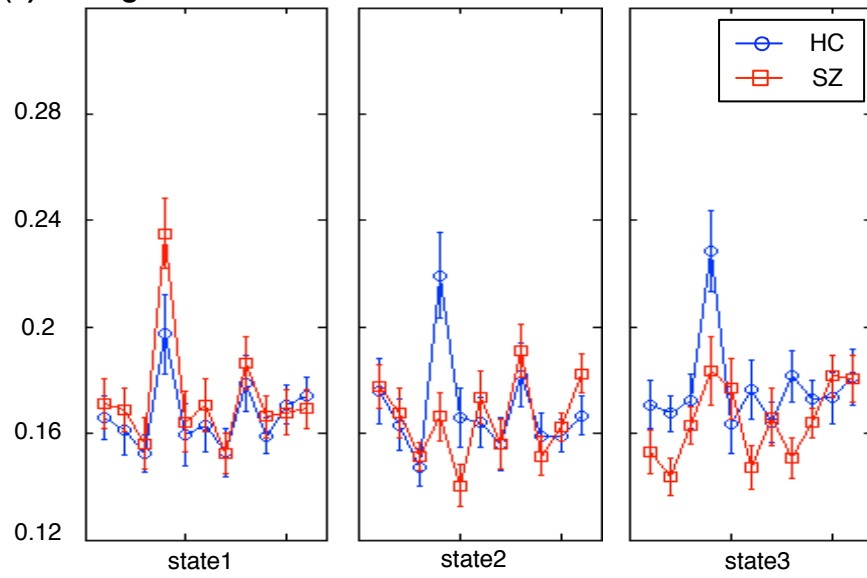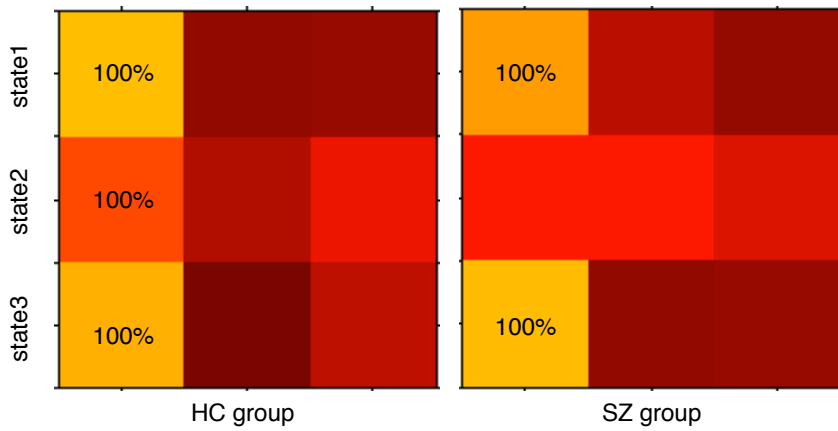
(a) Average FC within state

(b) TM

Figure 11: Markov modeling results for connectivity between IC12 and other 11 components.