

Finer parcellation reveals intricate correlational structure of steady-state

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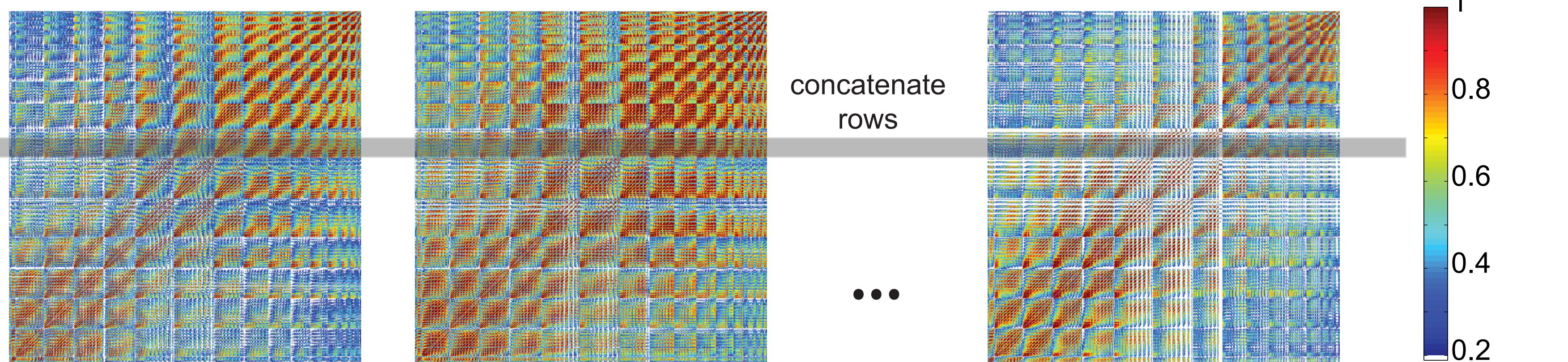
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1. Increasing LOCAL range correlations and decreasing GLOBAL ones, we improve INTEGRATION of SIMILAR brain activity and SEGREGATION of DISSIMILAR ones.
2. Reduction of REDUNDANCY while increasing the RESOLUTION, but avoiding the overwhelming computation at voxel level.

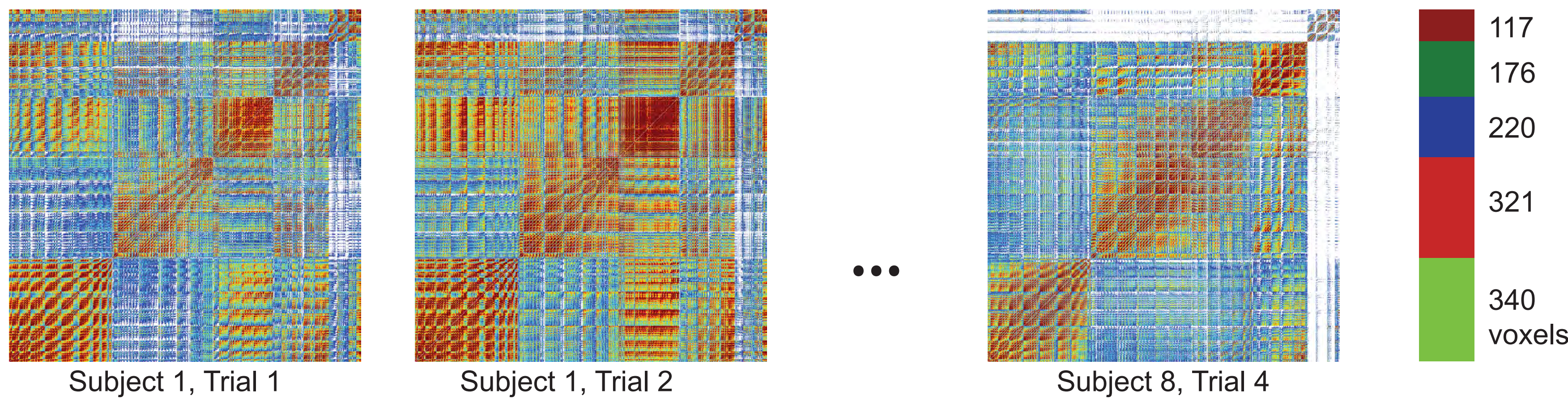


METHOD

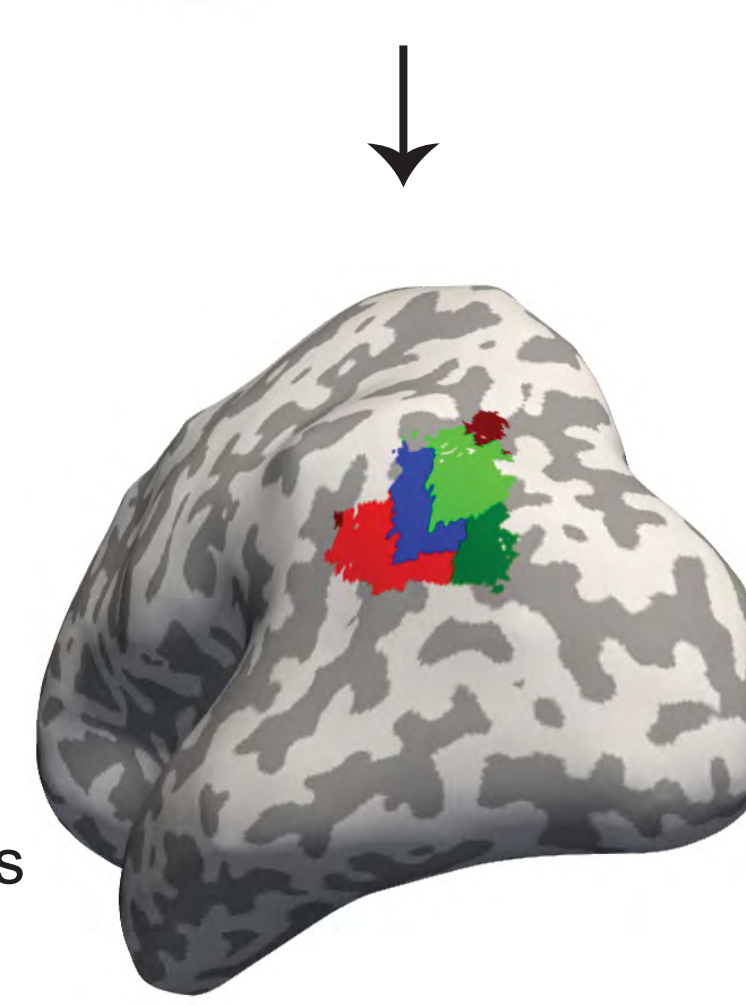
FC (native)



FC (clustered)

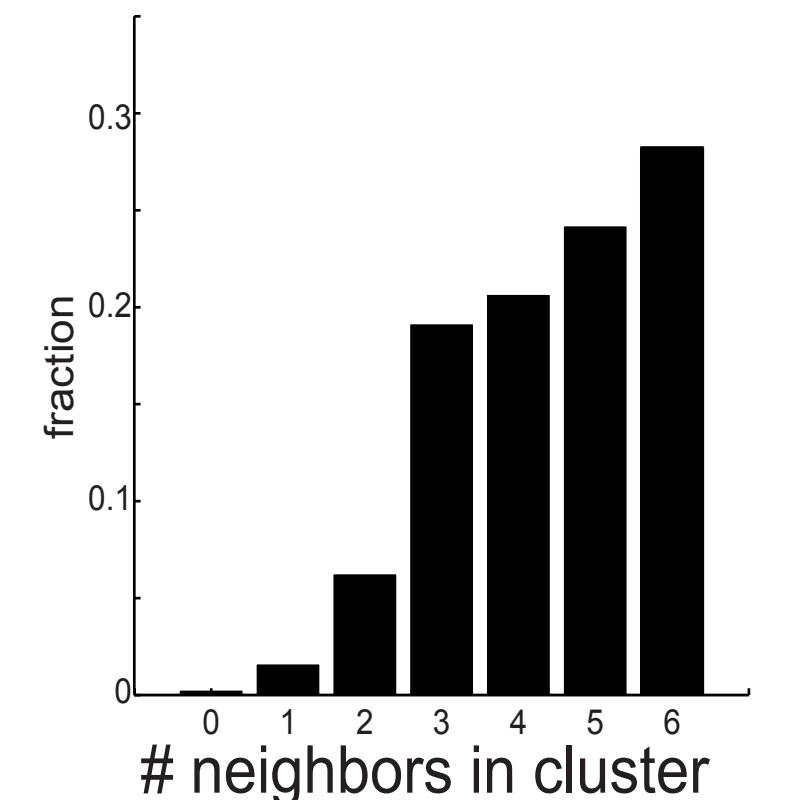
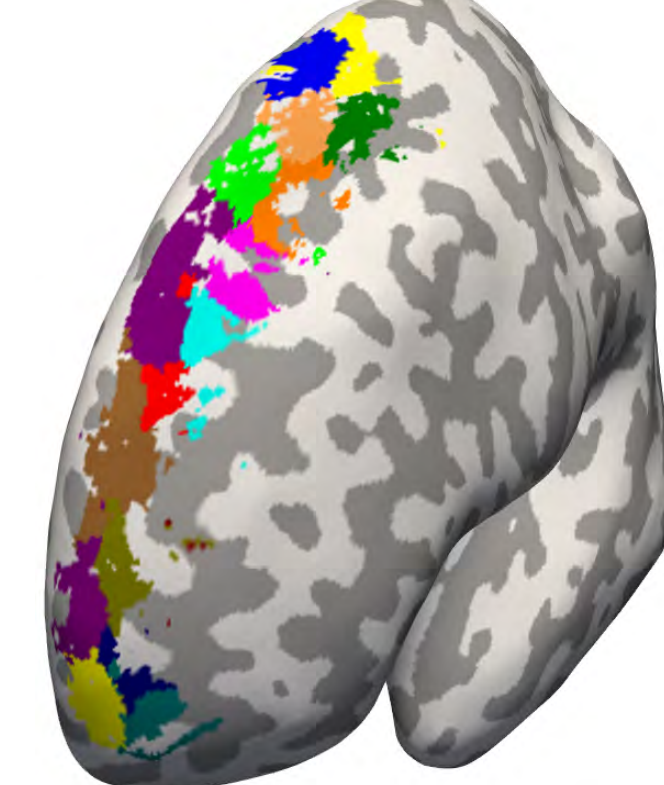


Angular-L

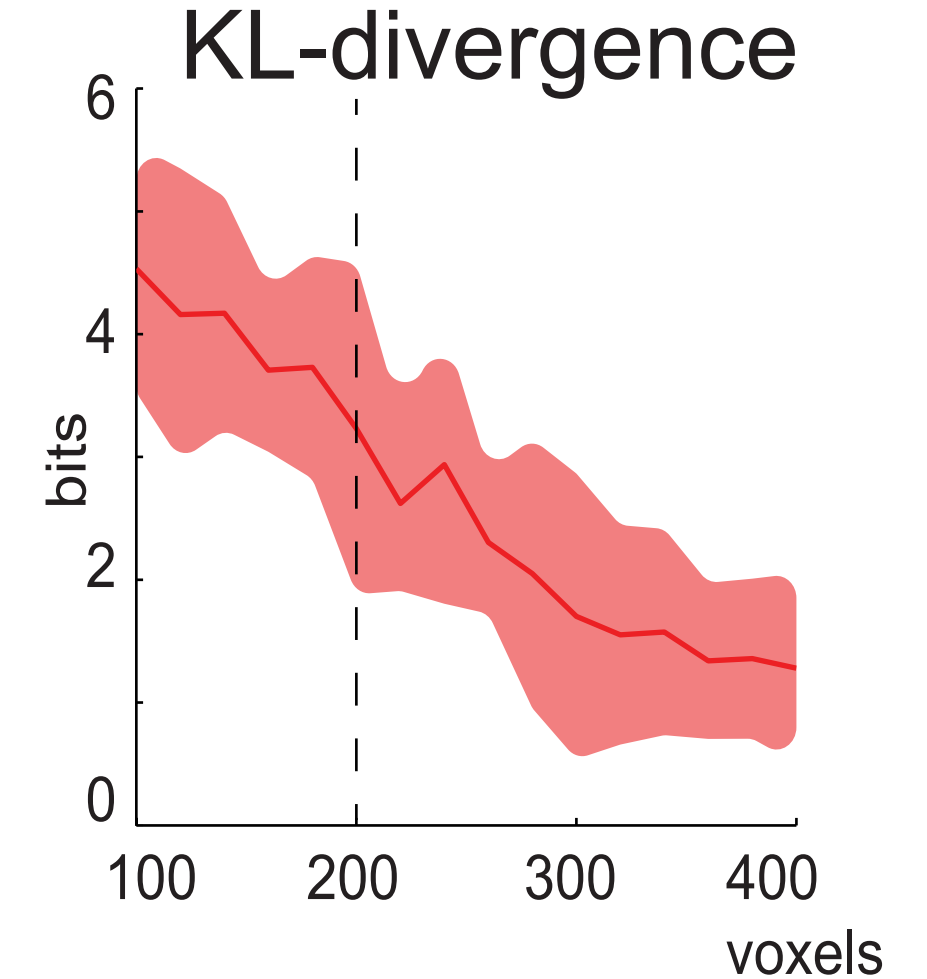
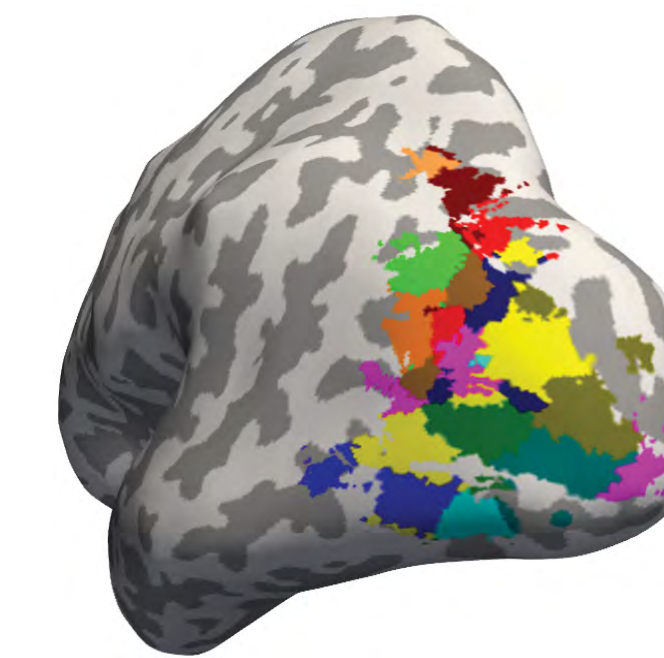


CONTIGUITY & CONCENTRATION

Frontal Sup L (17)



Occipital Mid L (16)

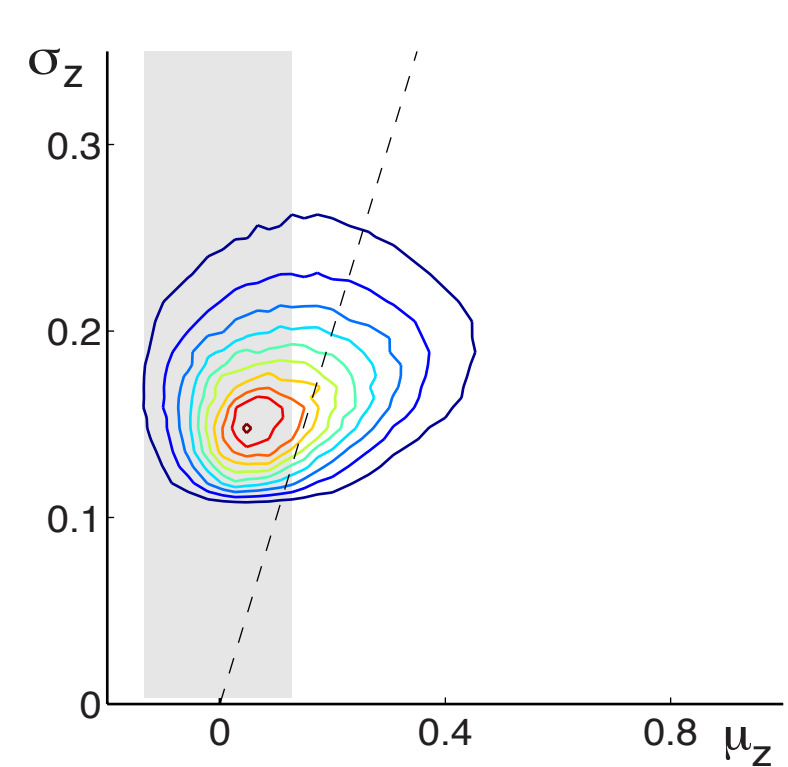
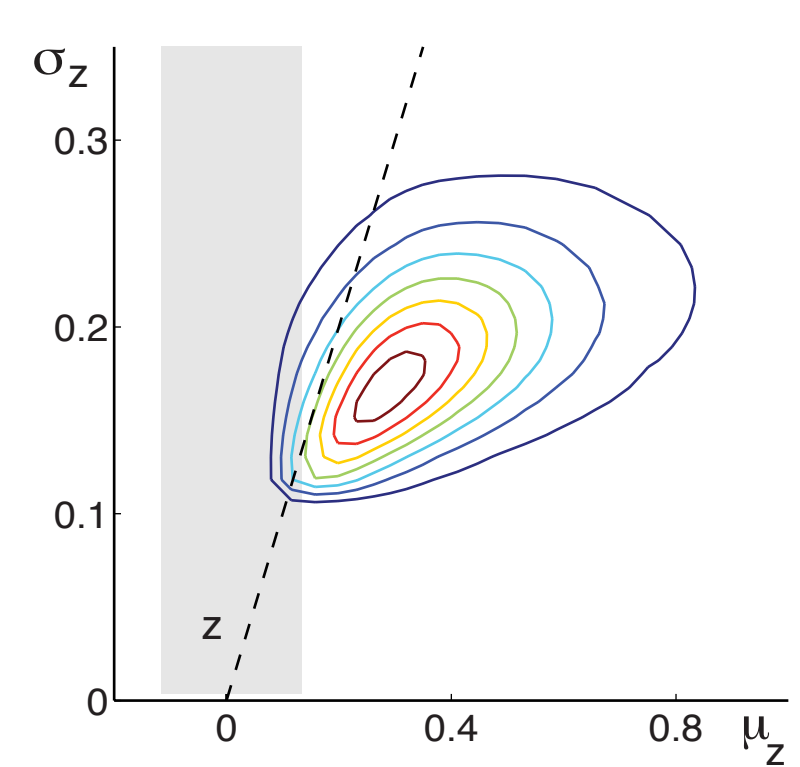
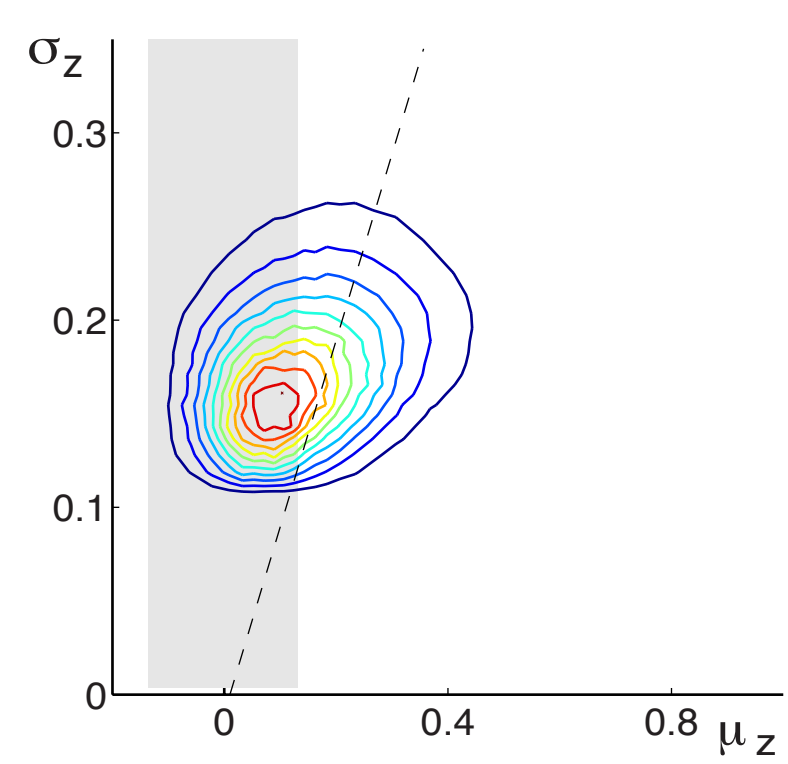
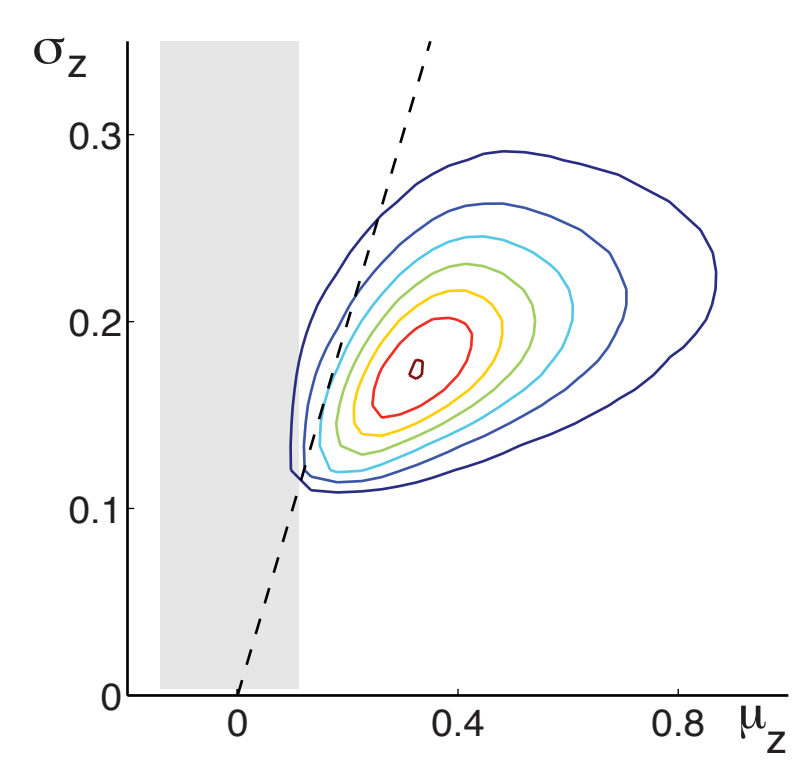
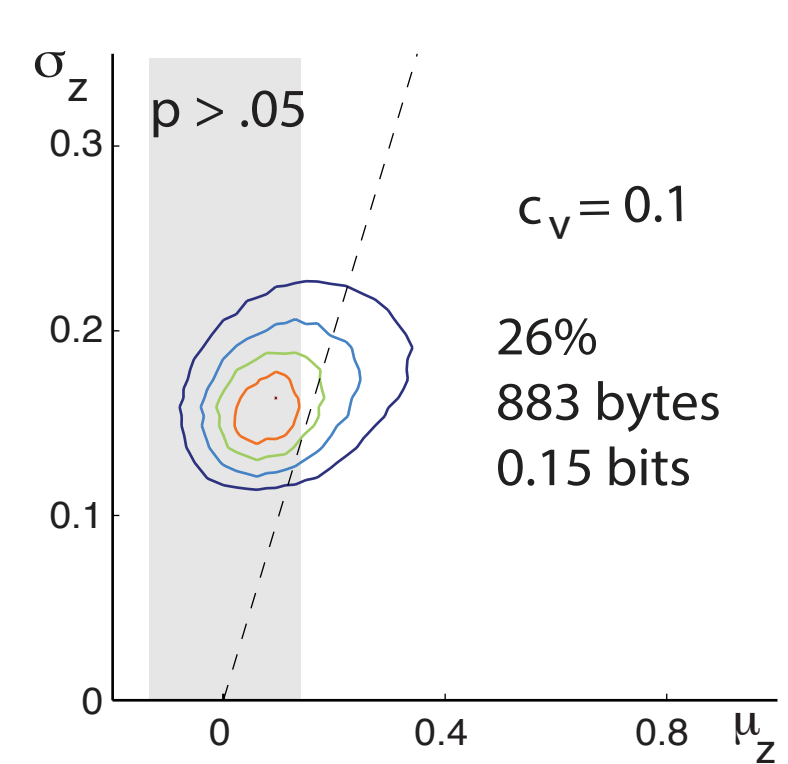
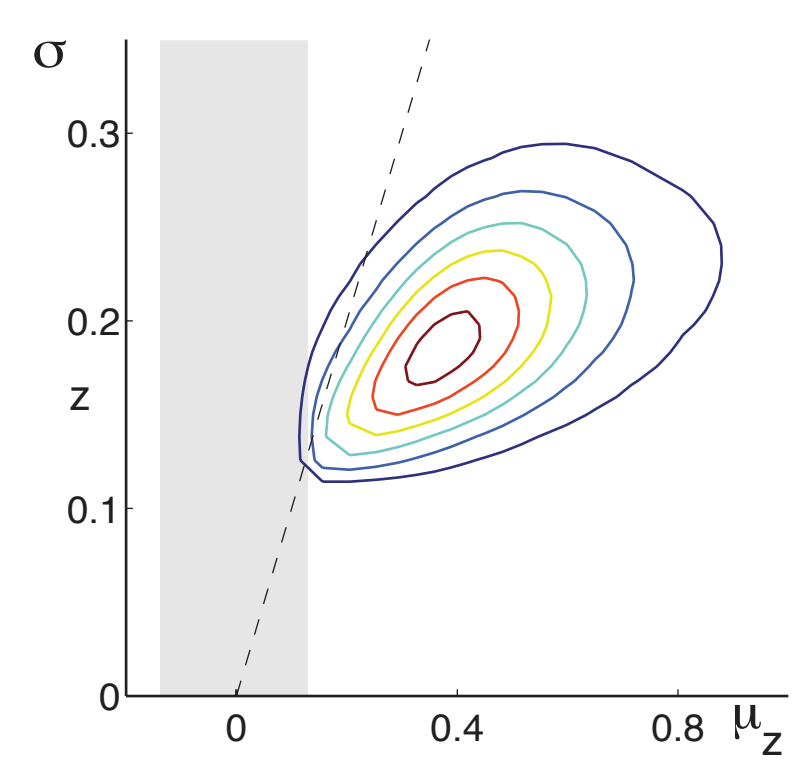


MD758

Functional clusters

Short-range FC
(voxel pairs, within parcels)

Long-range FC
(parcel pairs)

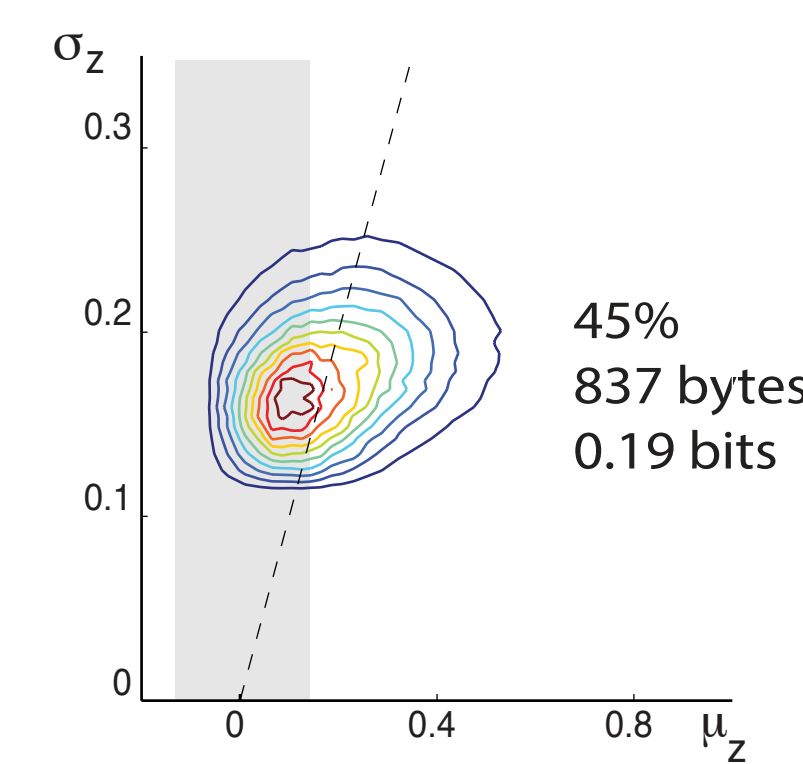
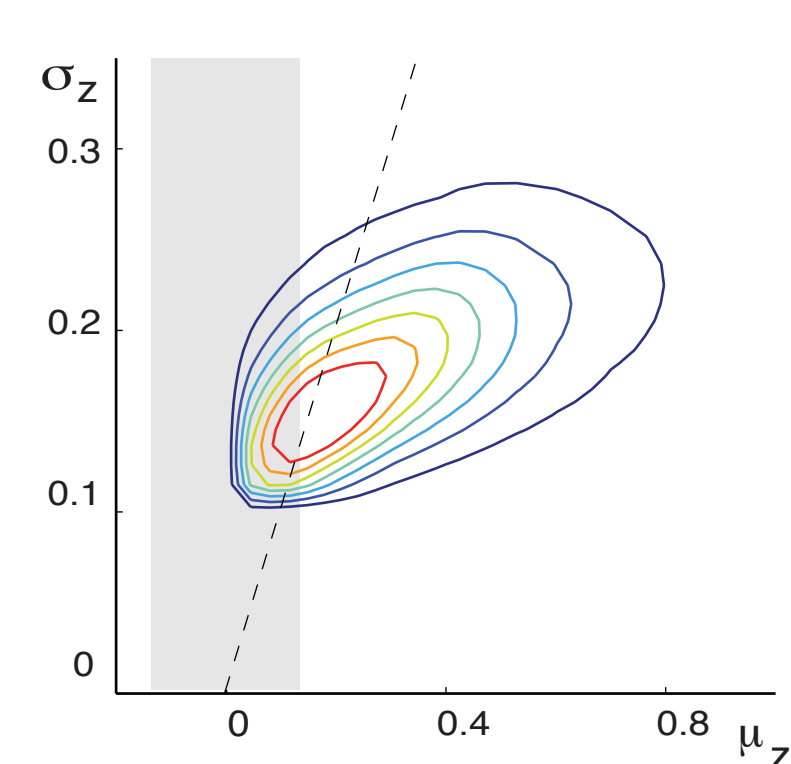


RESTING STATE

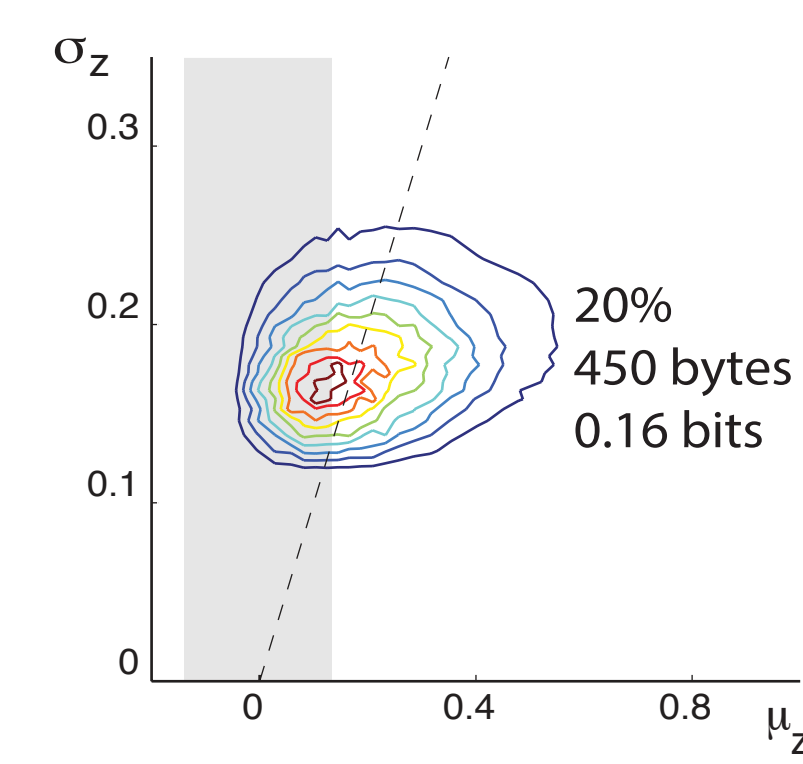
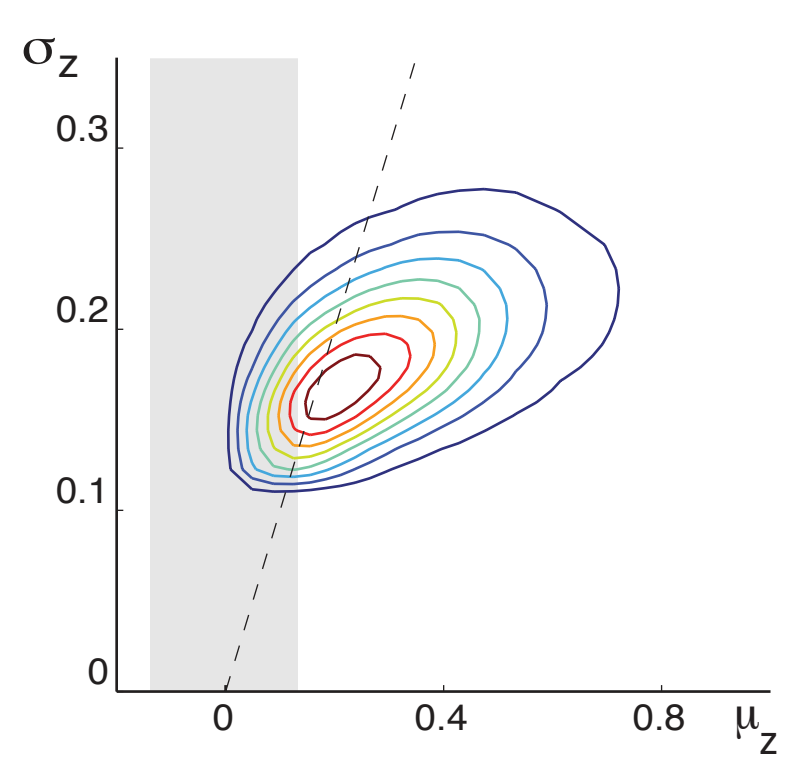
Short-range FC
(voxel pairs, within parcels)

Long-range FC
(parcel pairs)

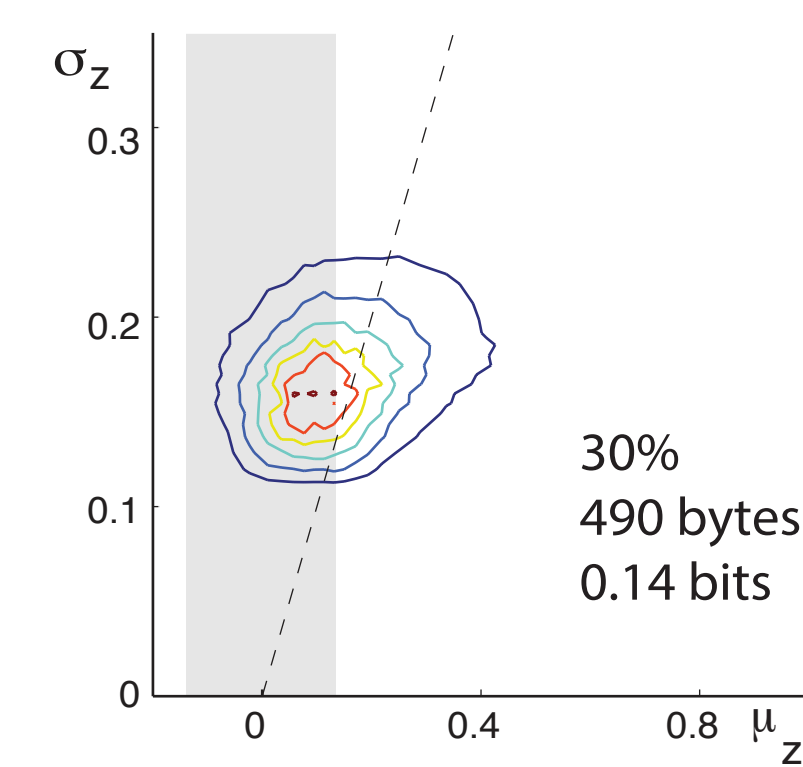
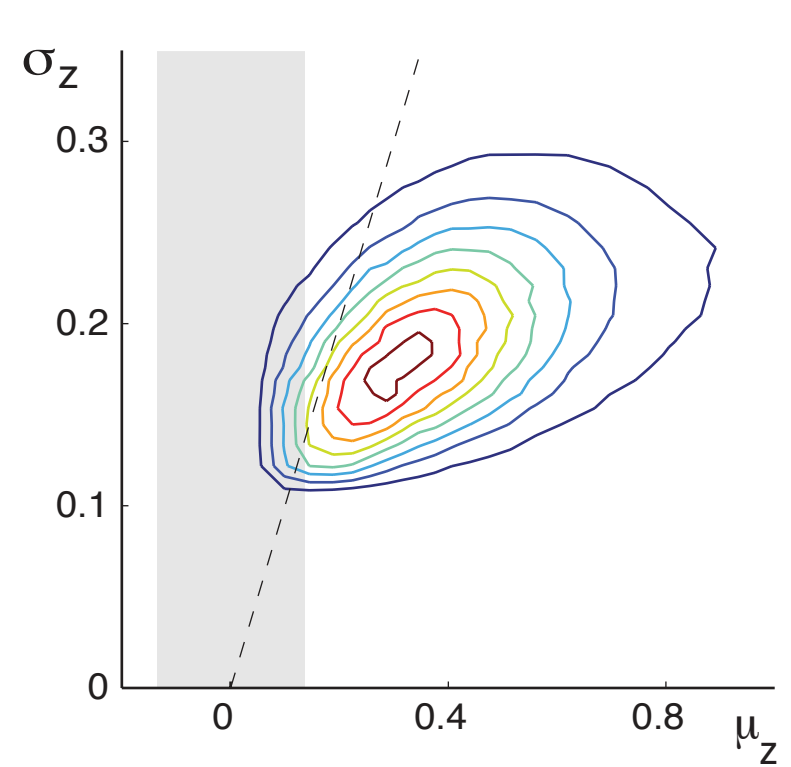
SP758
Spatial Clusters



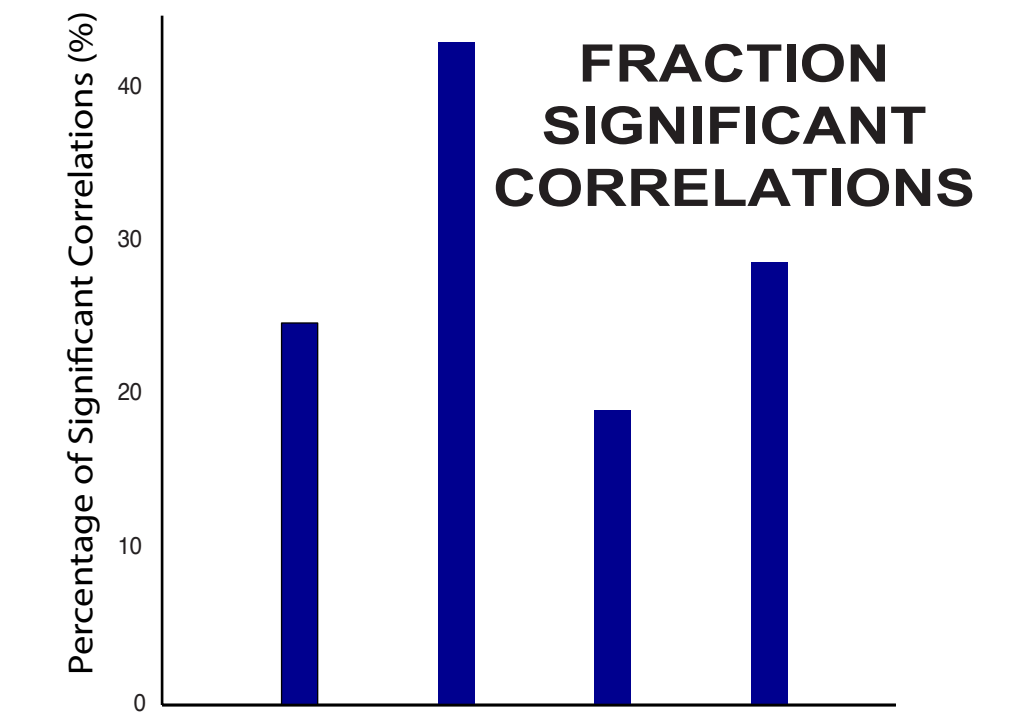
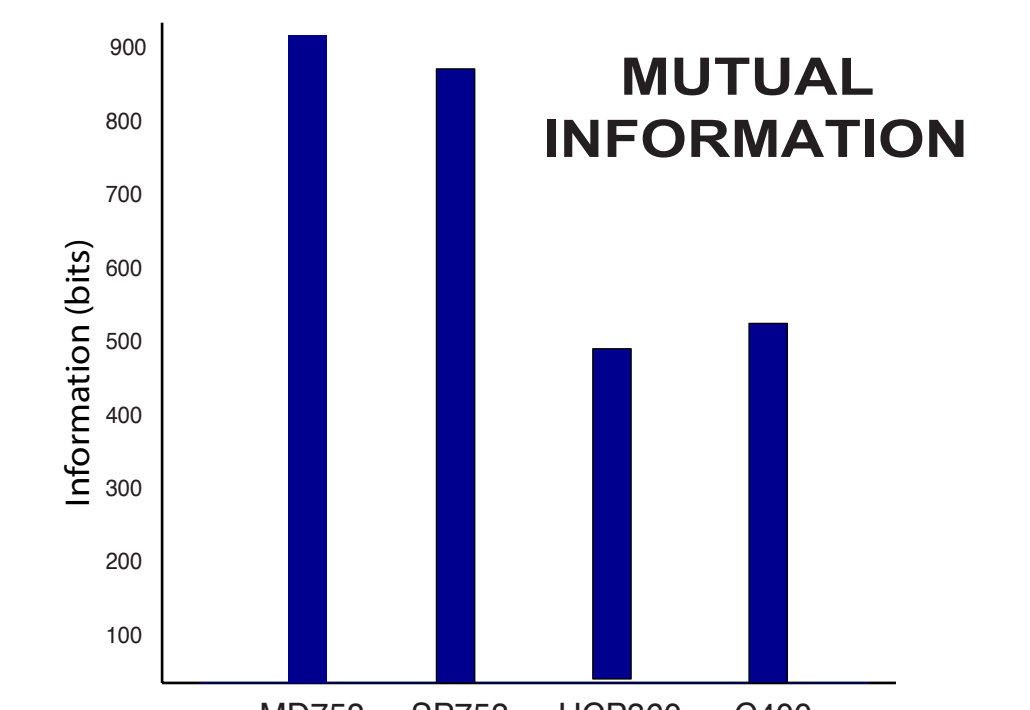
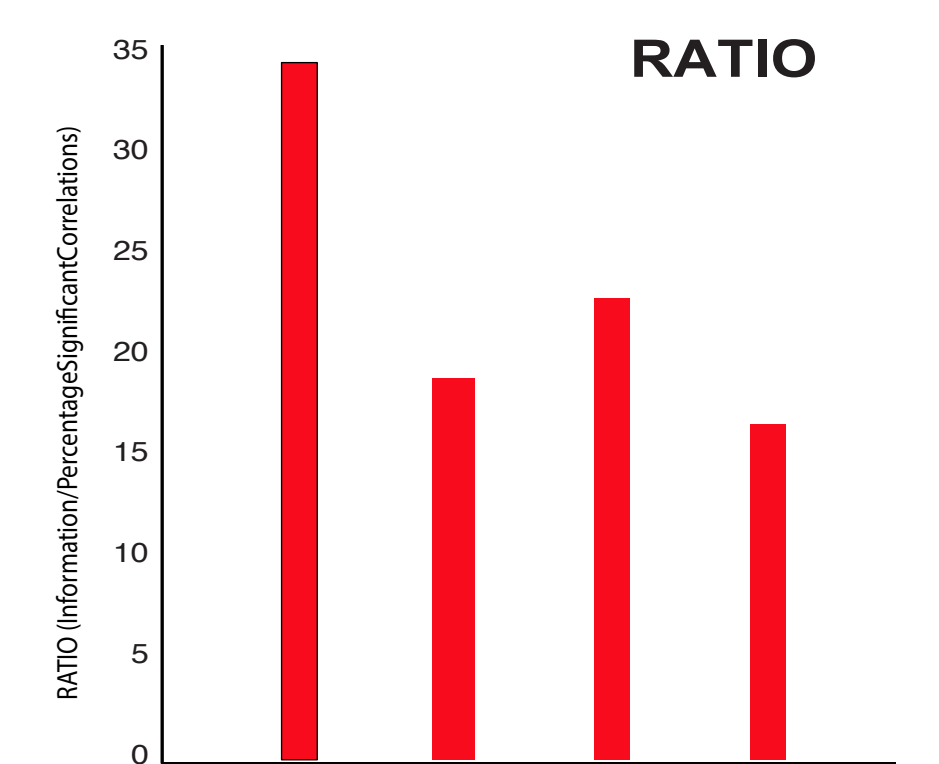
HCP360
Glasser et al. (2016)



C400
Craddock et al. (2012)



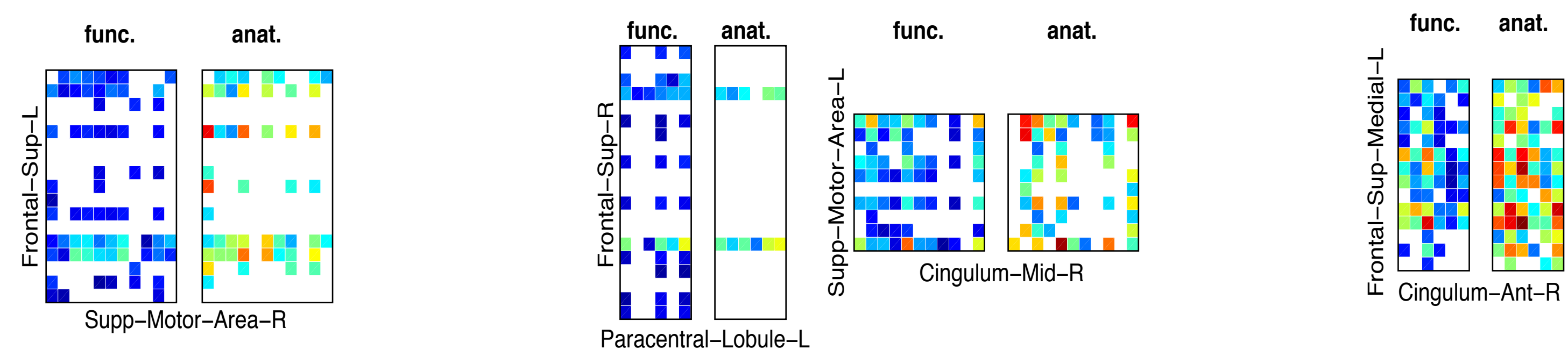
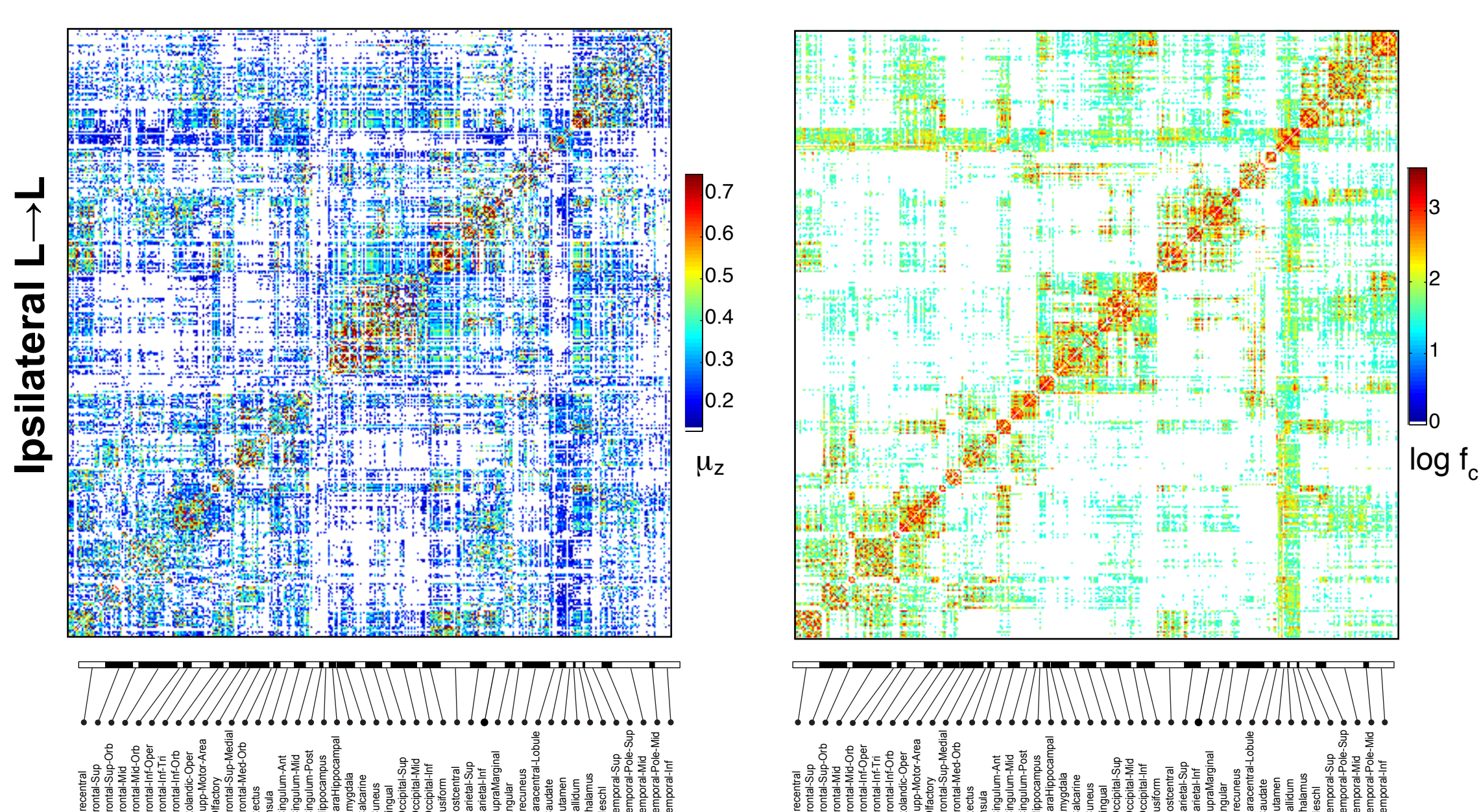
INFORMATION



FC & AC CORRESPONDENCE

Functional

Anatomical



REFERENCES

1. Tzourio-Mazoyer, N., et al. (2002). Automated anatomical labeling of activations in SPM using a macroscopic anatomical parcellation of the MNI MRI single-subject brain., 15(1), 273–289.
2. Craddock, R. C., et al. (2012). A whole brain fMRI atlas generated via spatially constrained spectral clustering. Human Brain Mapping, 33(8), 1914–1928.
3. Glasser, M. F., et al. (2016). A multi-modal parcellation of human cerebral cortex. Nature.