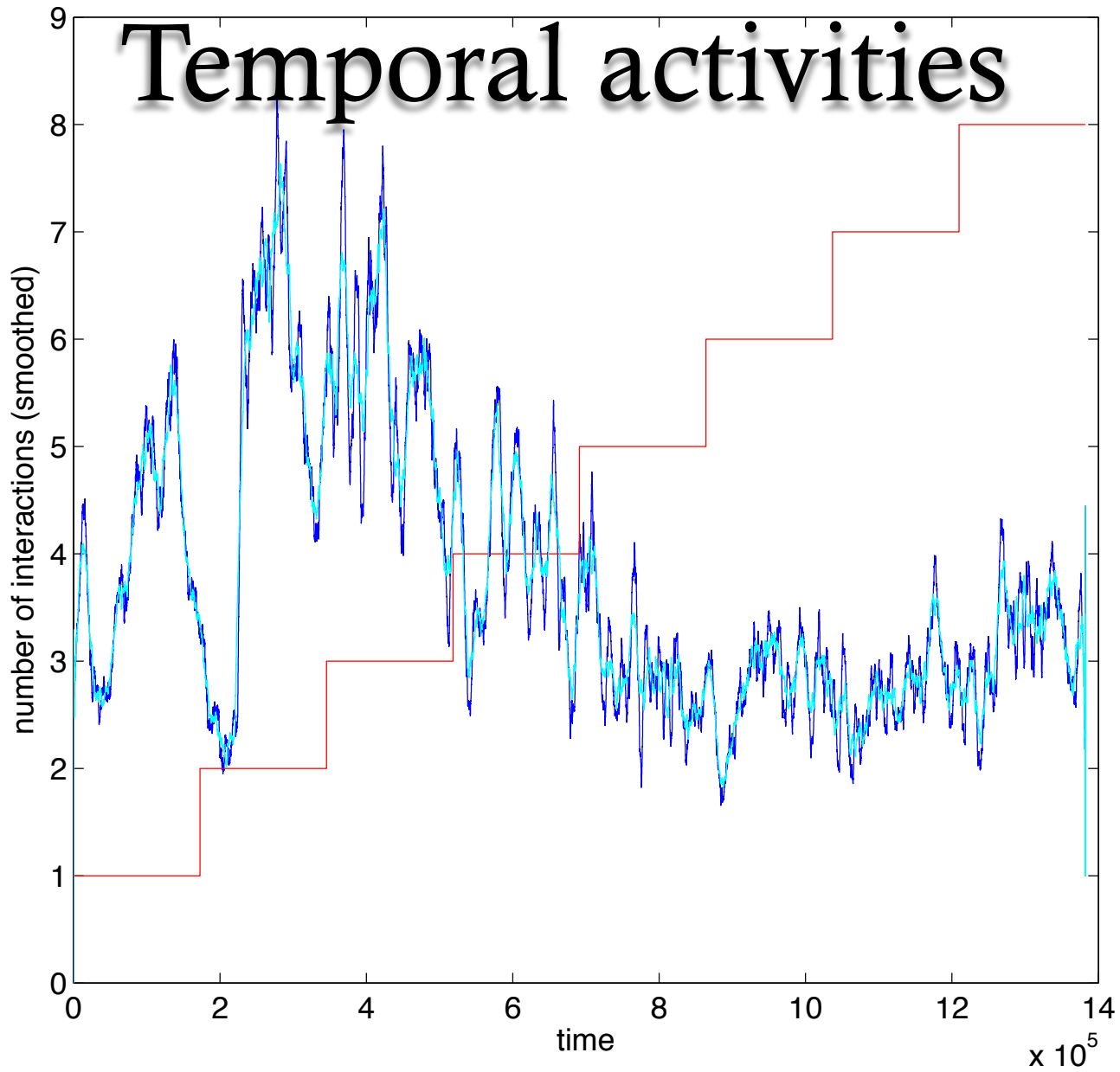
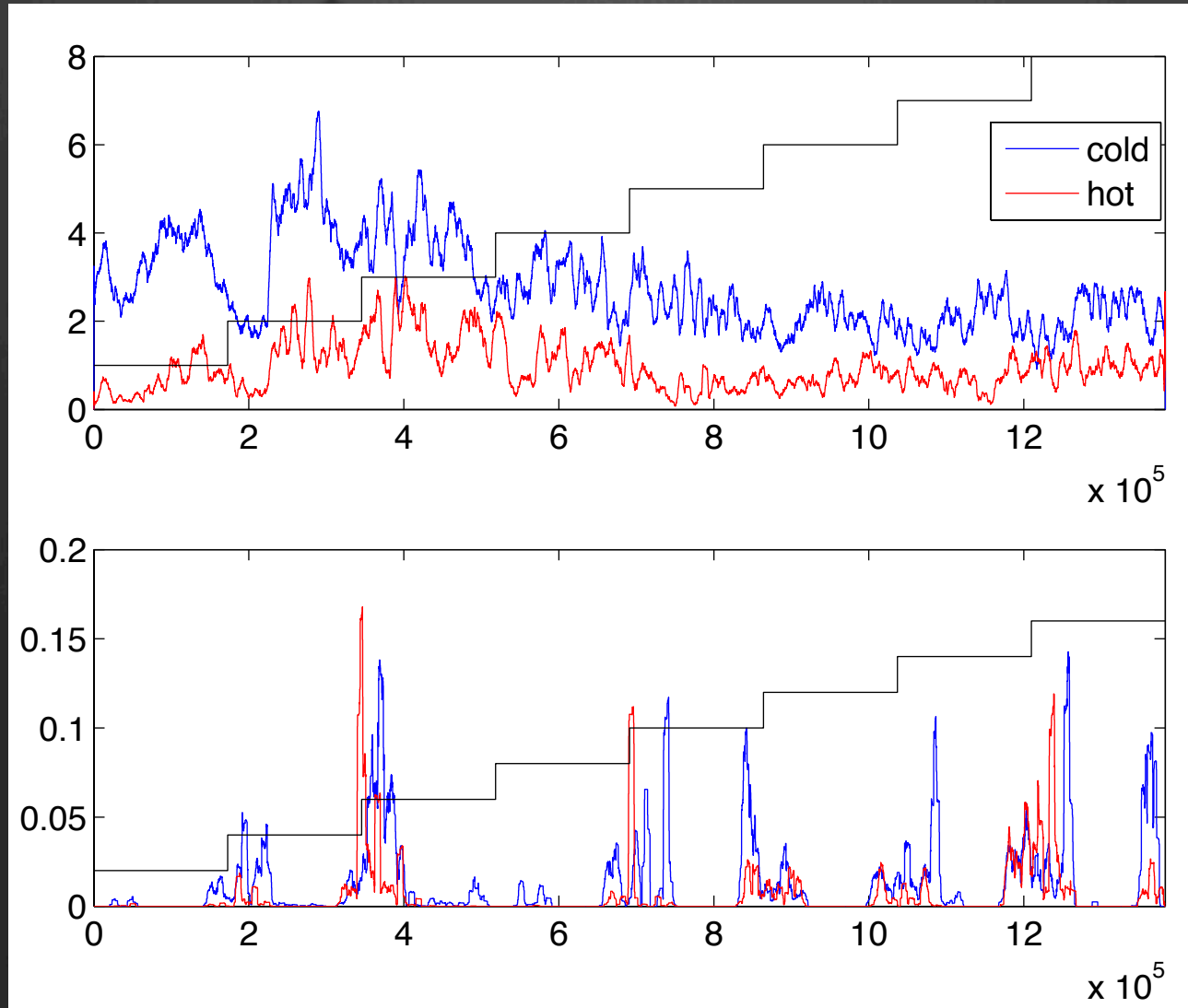


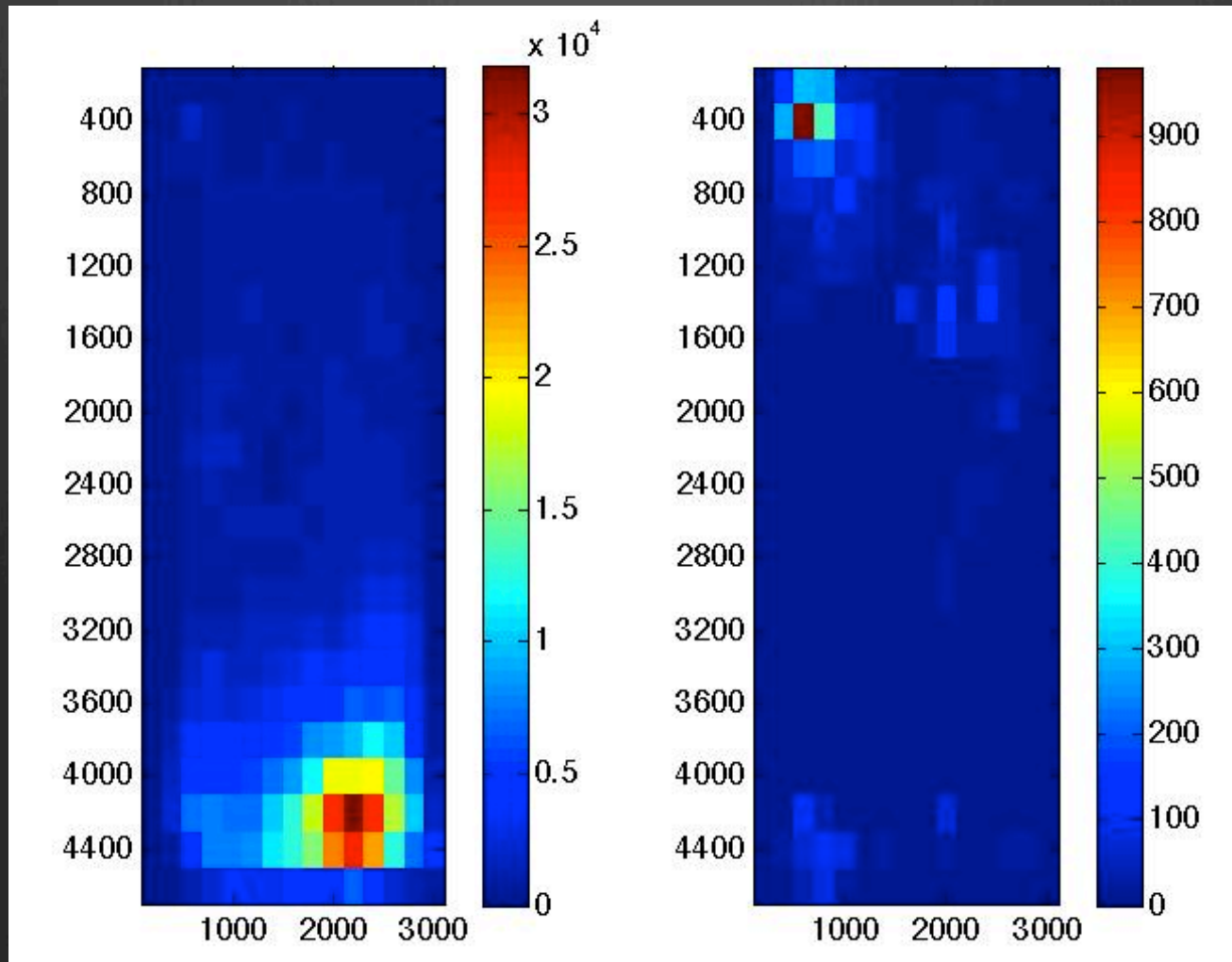
Temporal activities



Total activities with respect to space and time

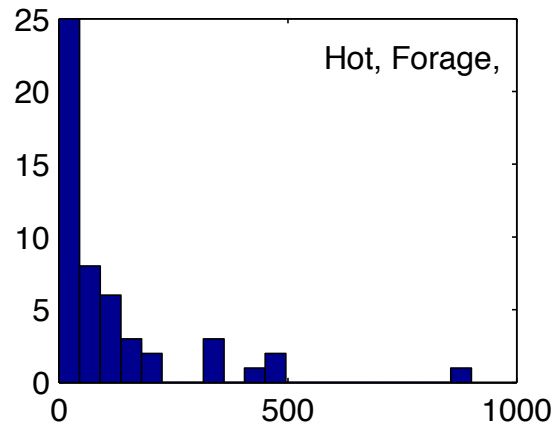
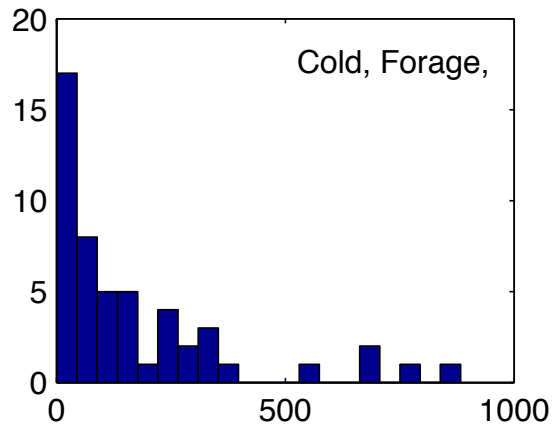
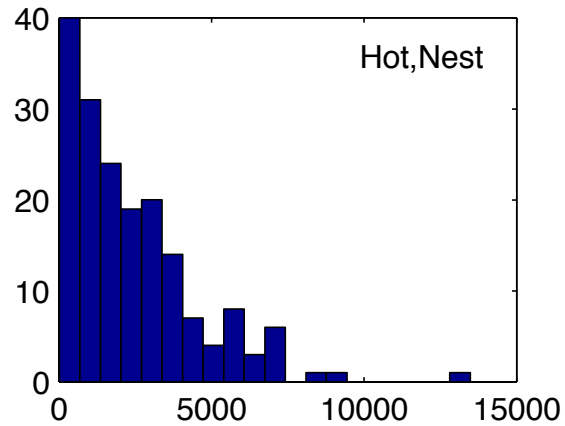
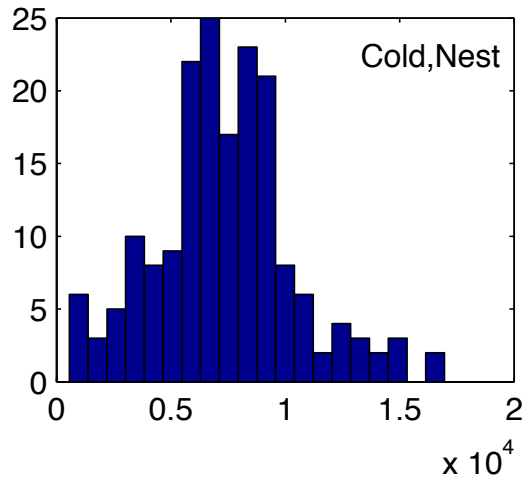


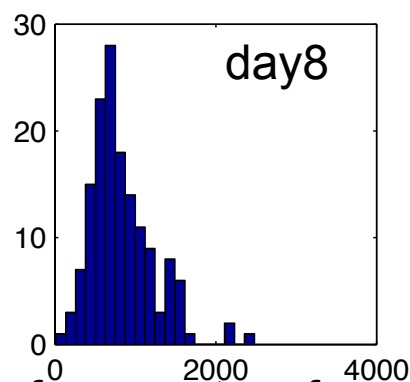
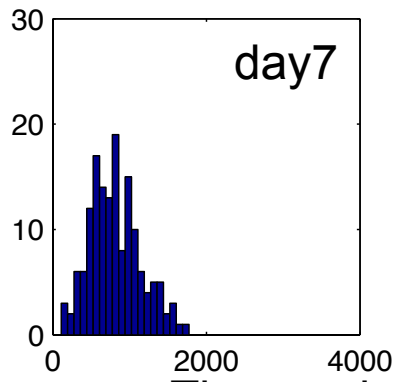
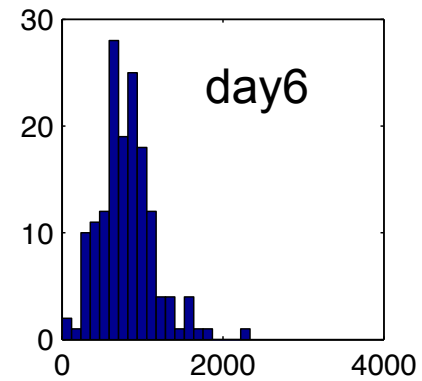
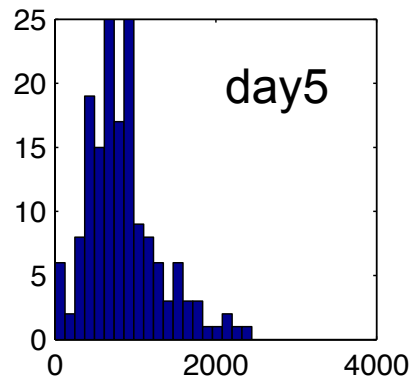
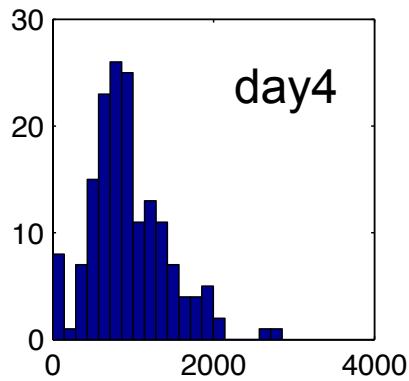
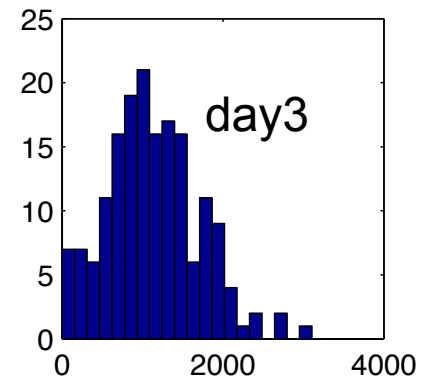
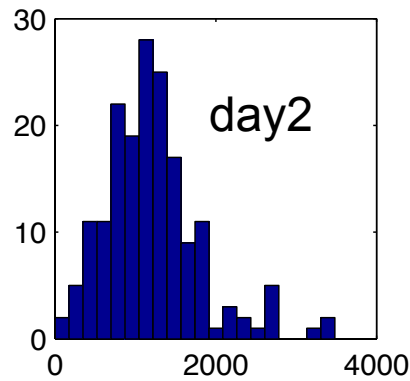
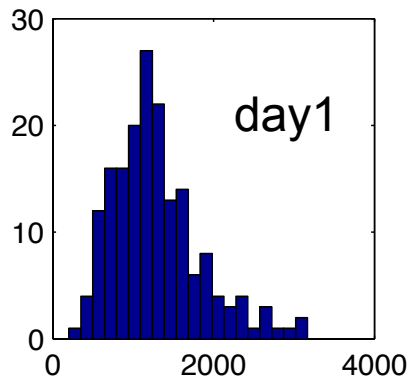
Spatial distribution of interactions



Networks in Hot and Cold regions

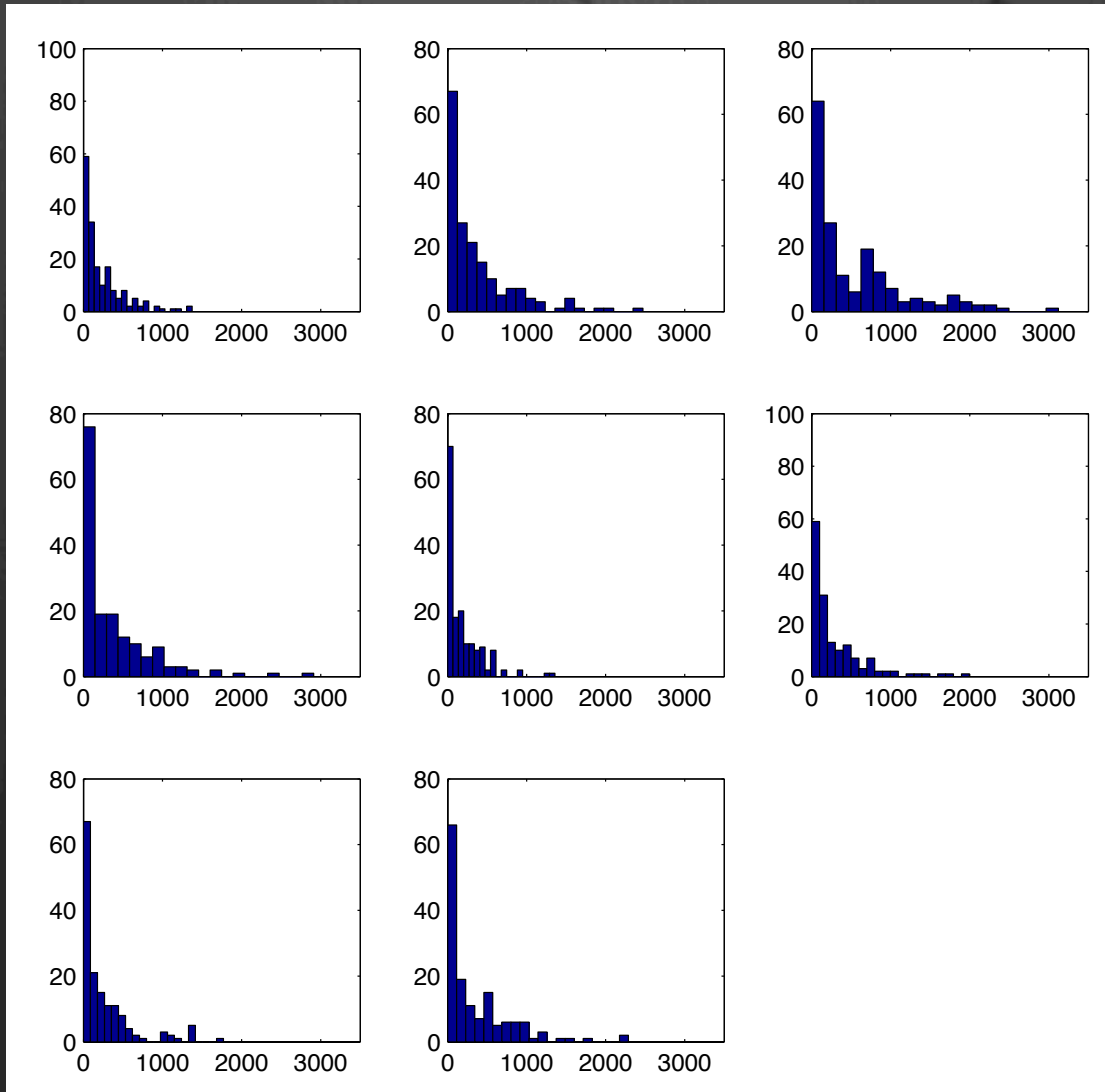
Degree (weighted) distribution





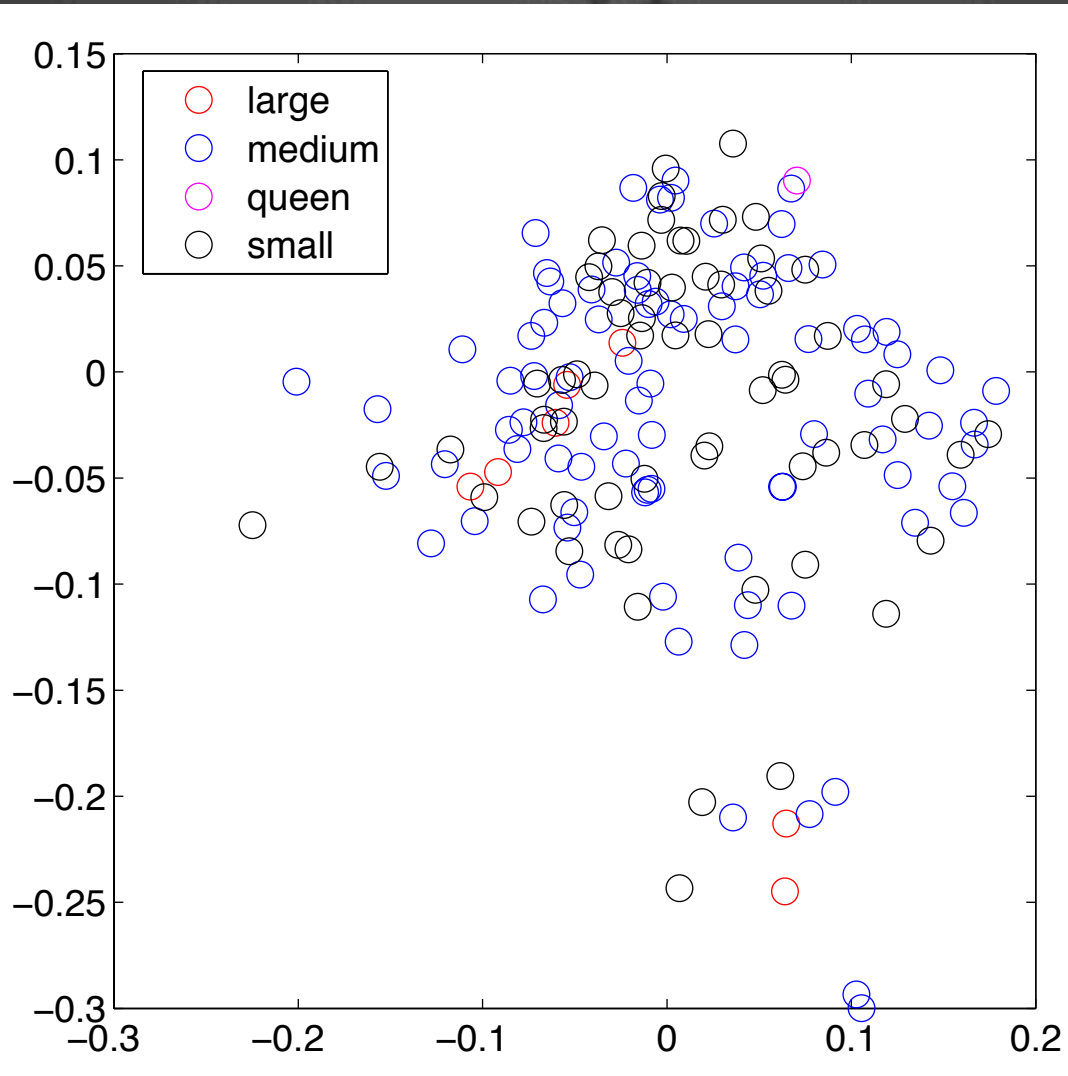
The number of encounters for ants in nest (cold)

The number of encounters for ants in nest (the hotspot)

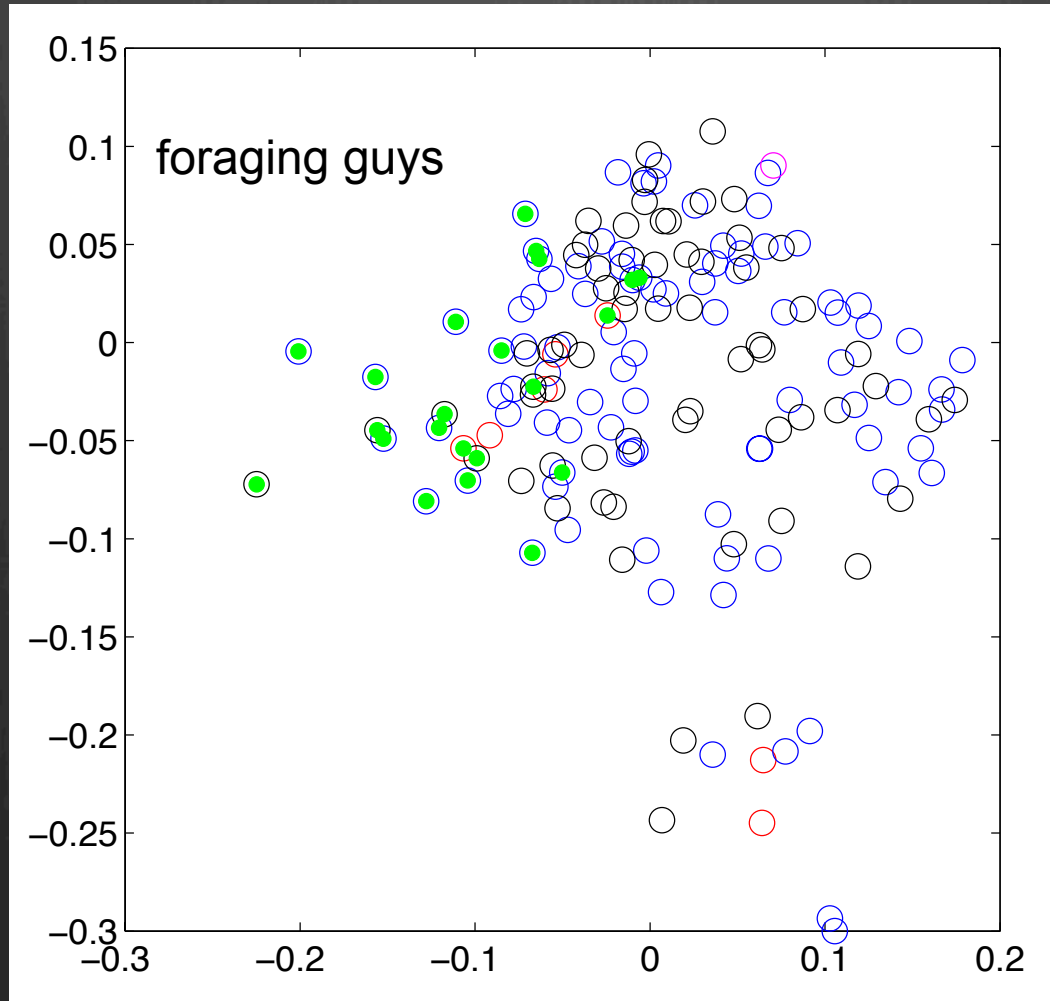


Network positions of different types of ants

Col 678, day5



Identifying functional modules



Thoughts

- ⊗ Hot region in the nest: a common area for exchange of information. In the early time, without internet, people go to the local bar to share information.
 - ⊗ Track the trajectories of ants, estimate the mean first passage time
- ⊗ Any information flow? What mechanisms?
 - ⊗ Propagation of food
 - ⊗ Circadian information
- ⊗ Key individuals?
- ⊗ Division of labor: look for functional modules , foragers, taking care of the brood, age dependence?