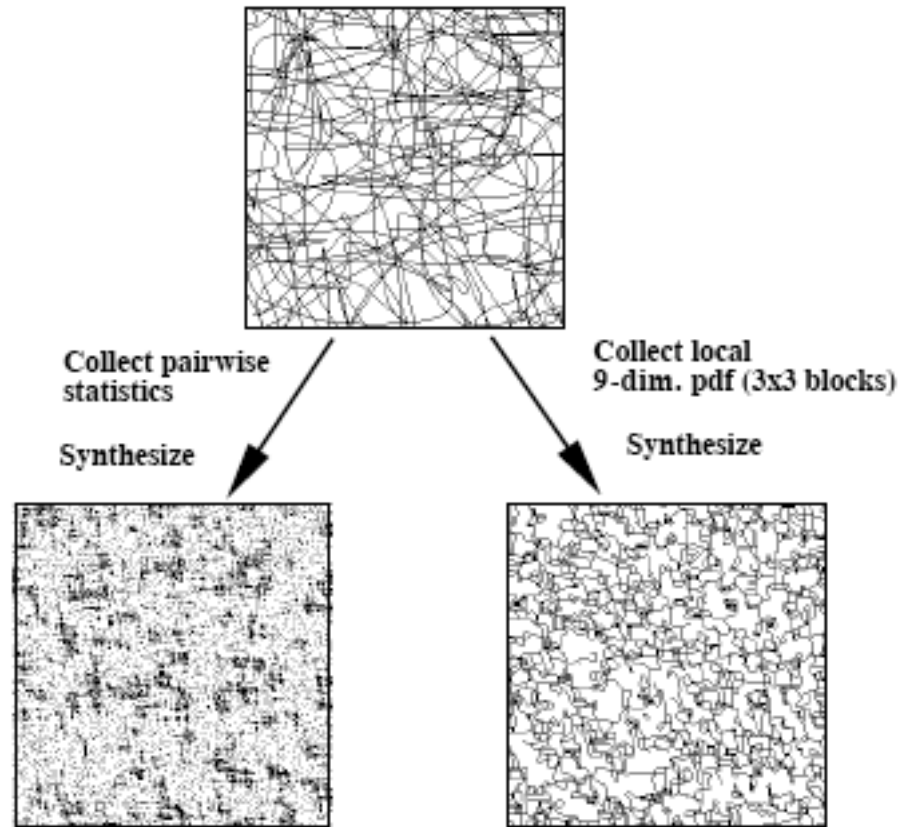
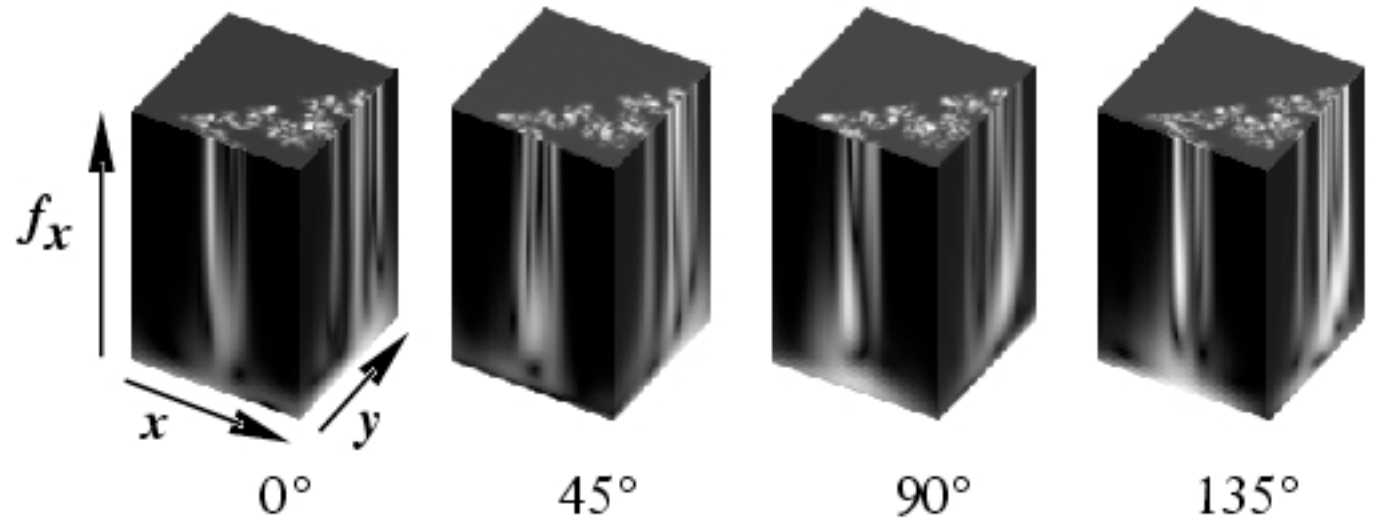
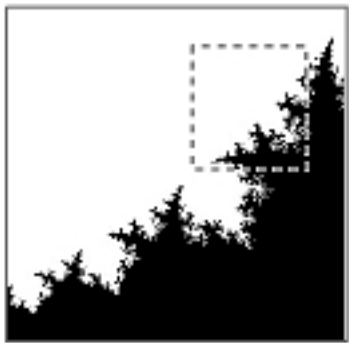


Orientation requires higher-order (more than pairwise) statistics to characterize

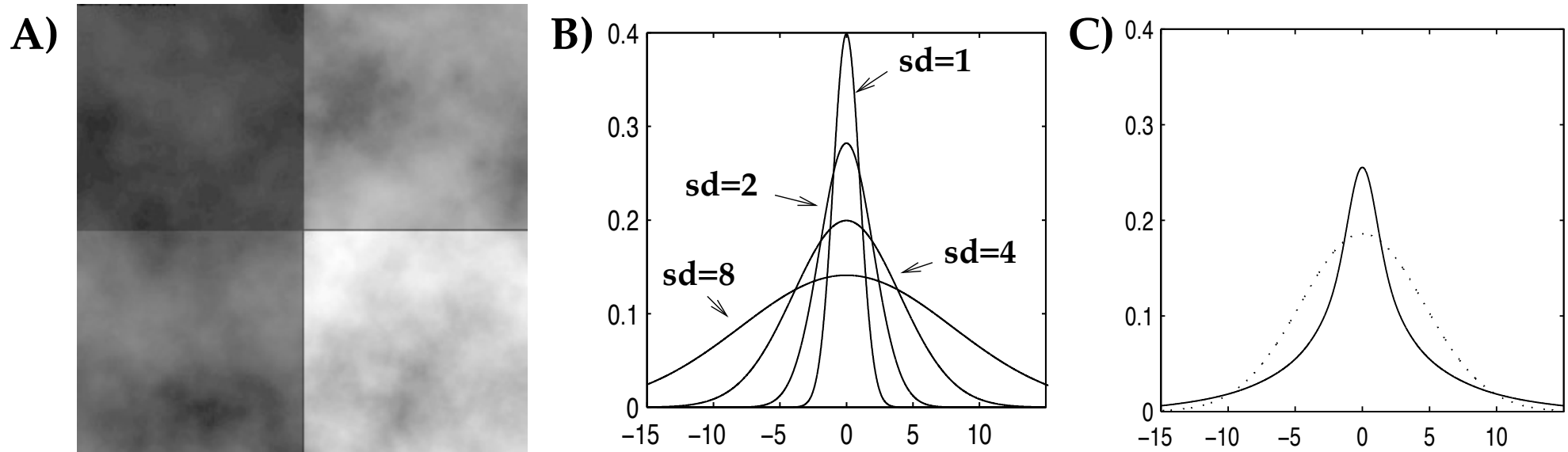


Scale-space depiction of a 2D contour

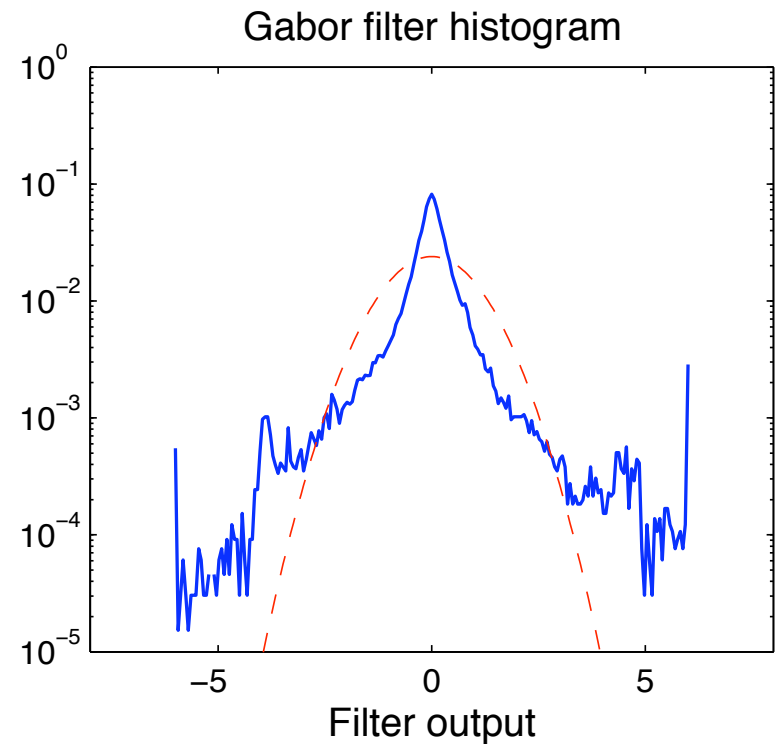
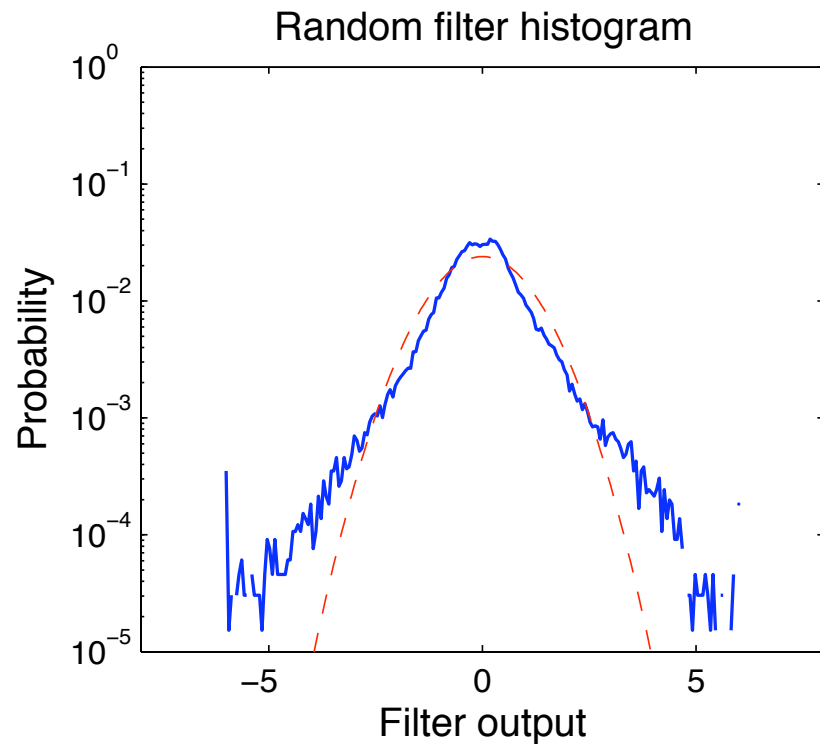


Searching for filters with 'interesting' output distributions: an uninteresting direction to explore?

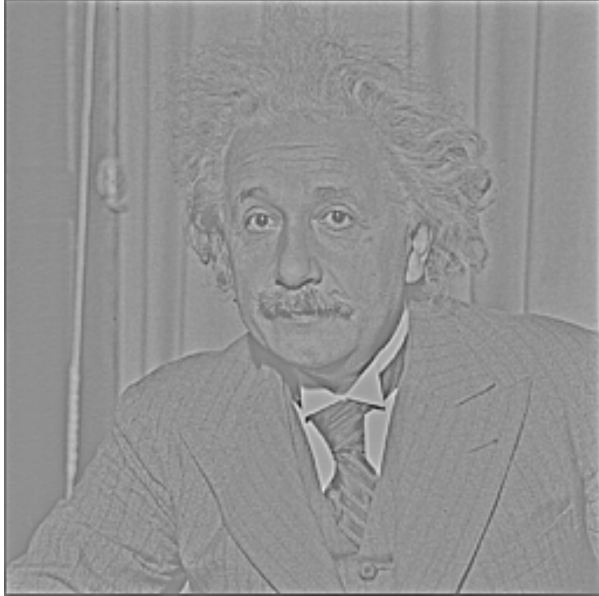
Baddeley (1996) Network 7, 409-421



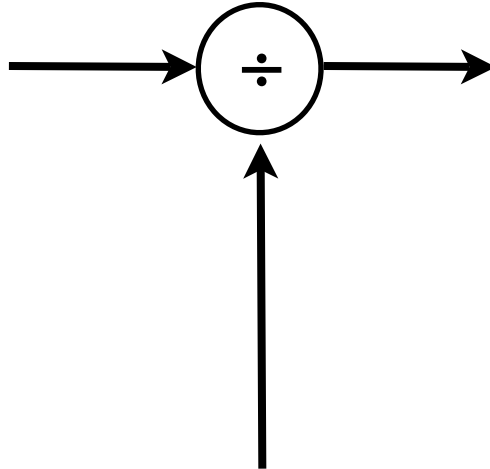
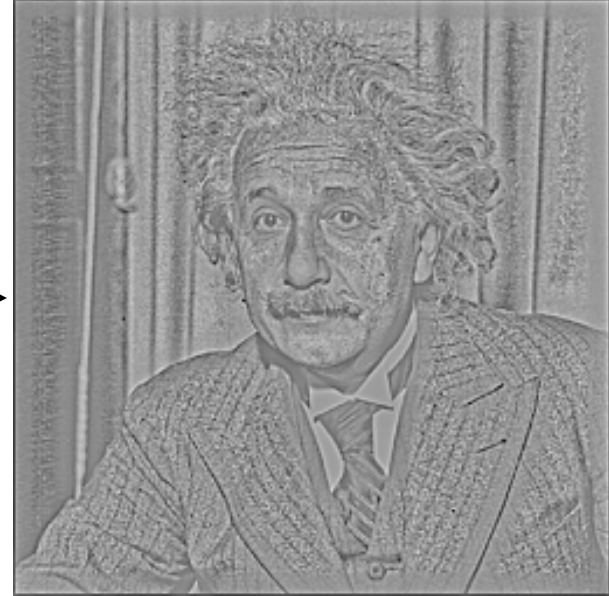
Filter response histograms for a whitened image



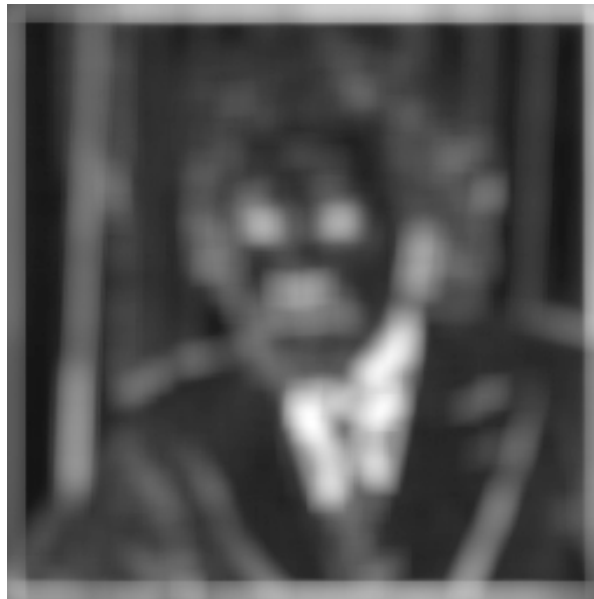
whitened image



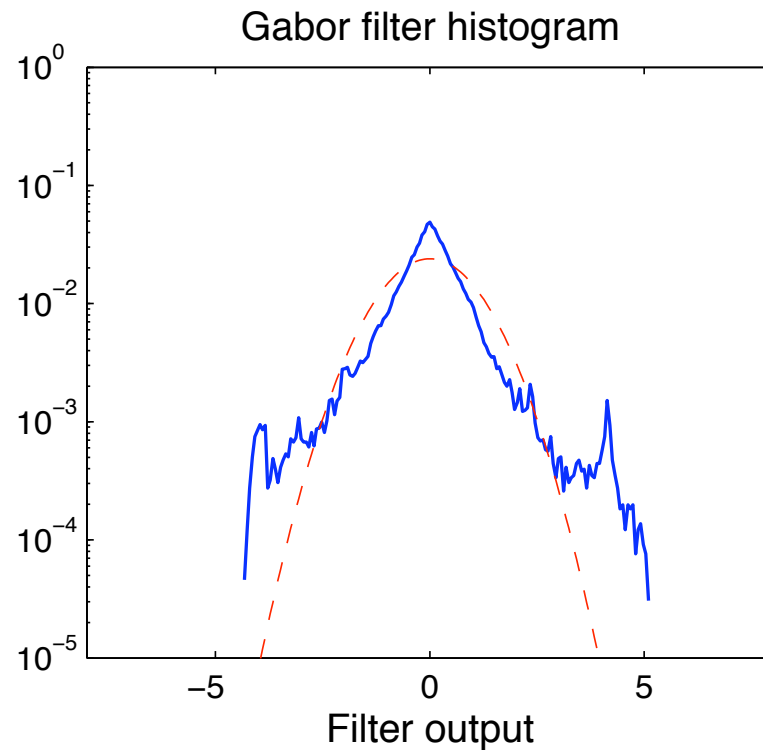
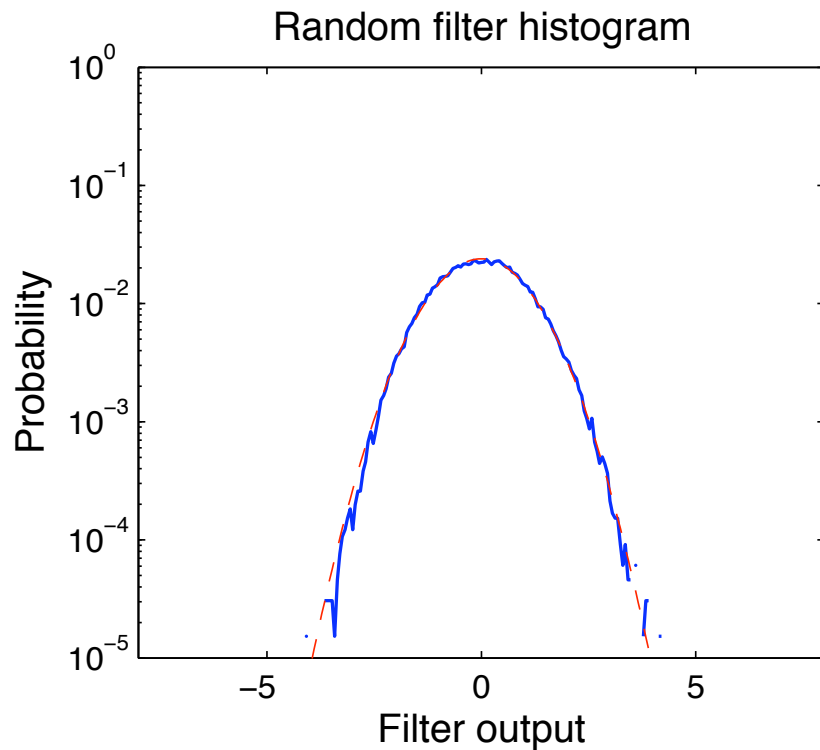
contrast normalized
image



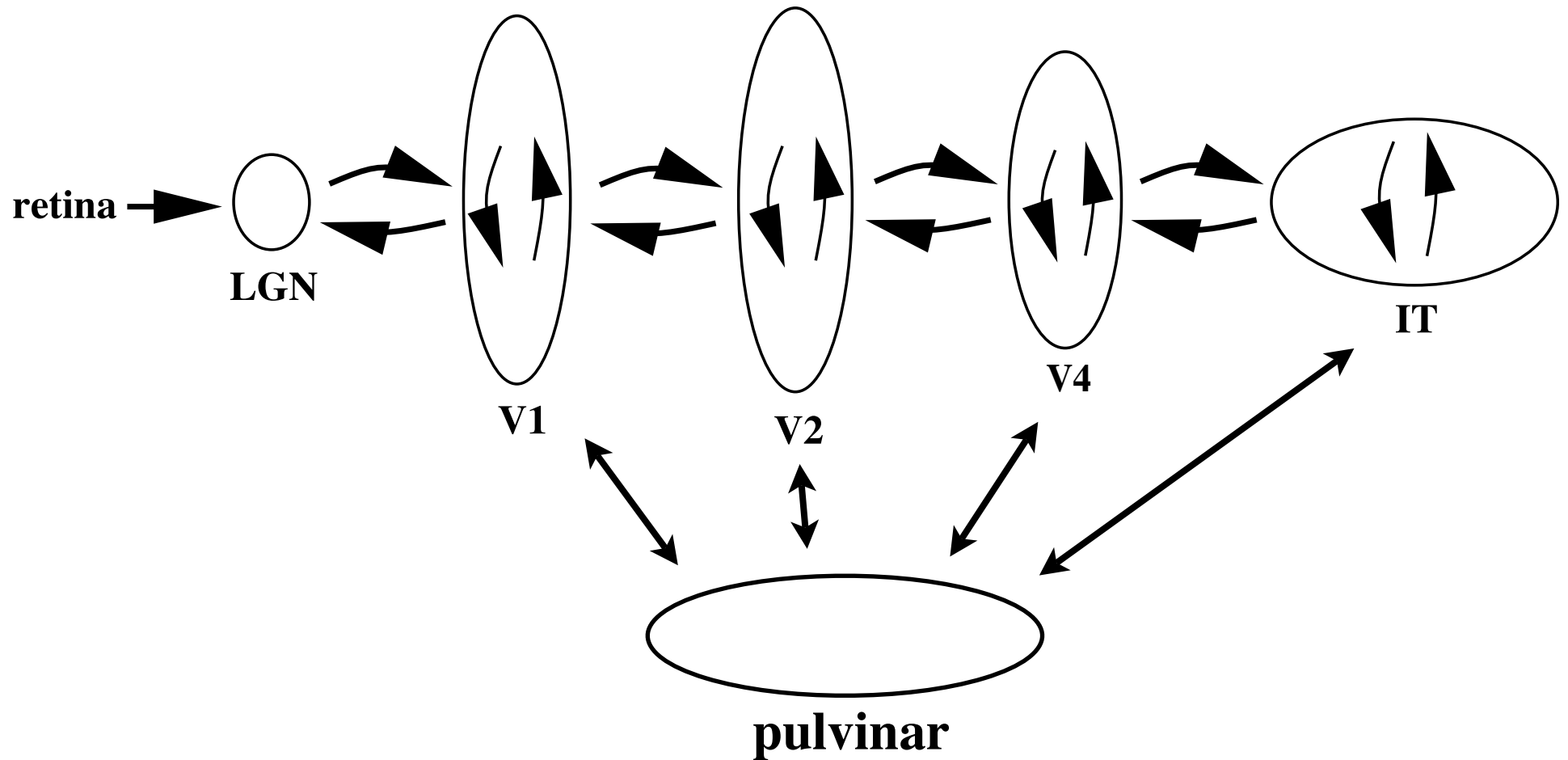
local rms
contrast



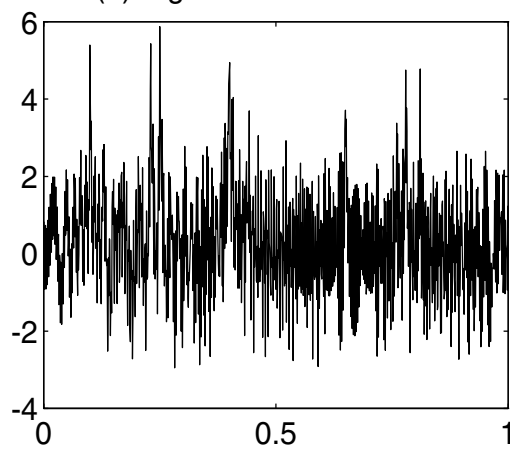
Filter response histograms for a contrast normalized image



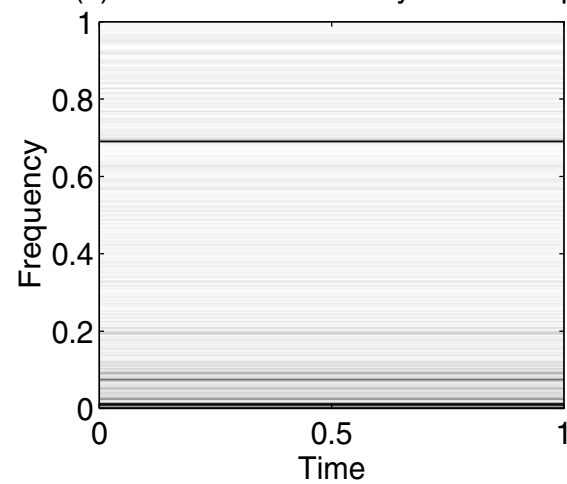
Recurrent computation is pervasive throughout cortex



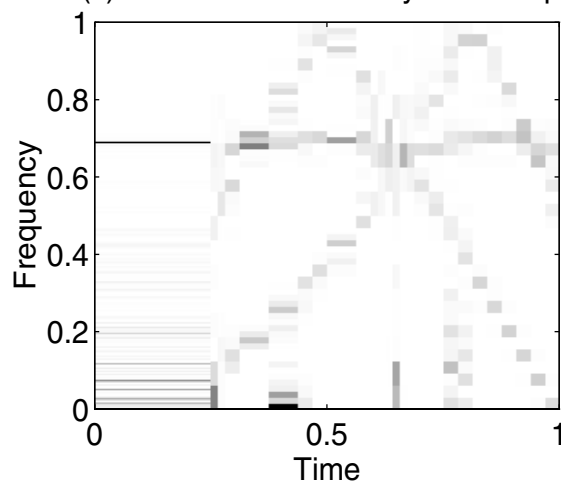
(a) Signal: Werner Sorrows



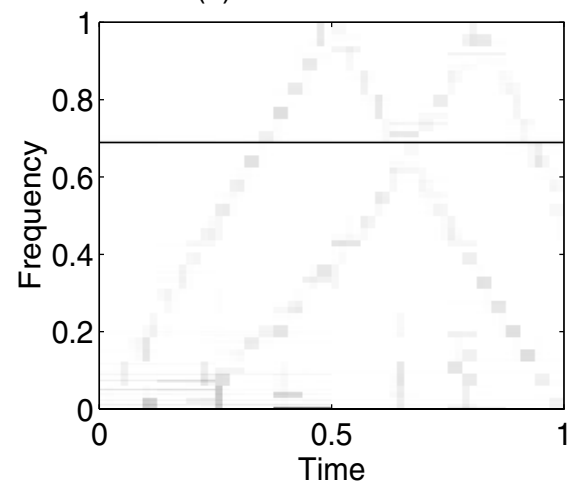
(b) Phase Plane: BOB by C-W Entropy



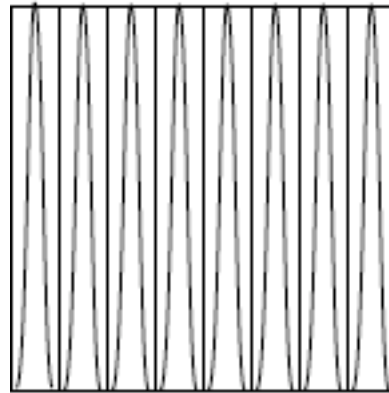
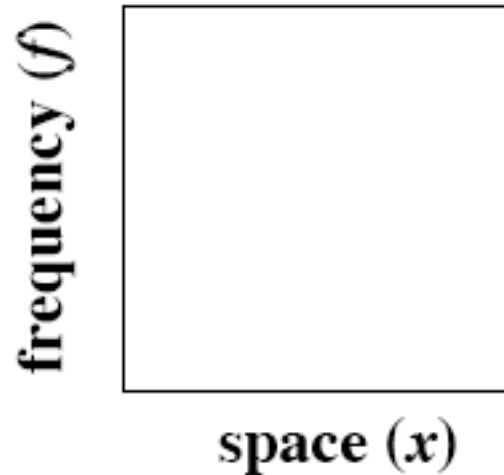
(c) Phase Plane: BOB by ℓ^1 Entropy



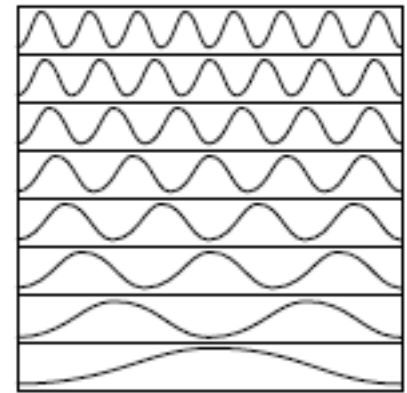
(d) Phase Plane: BP



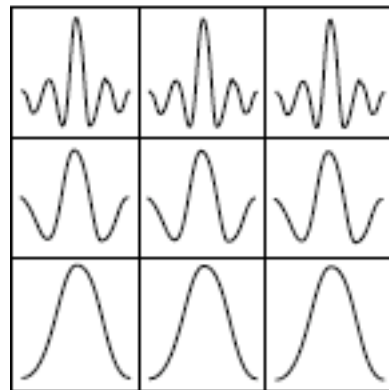
Scale space (or “phase space”)



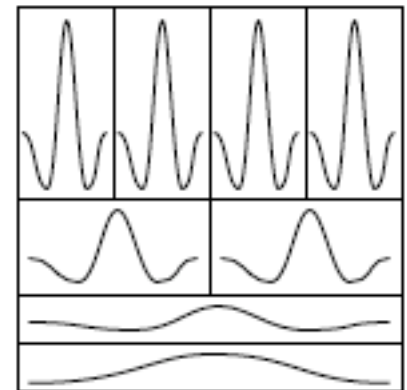
Pixel



Fourier



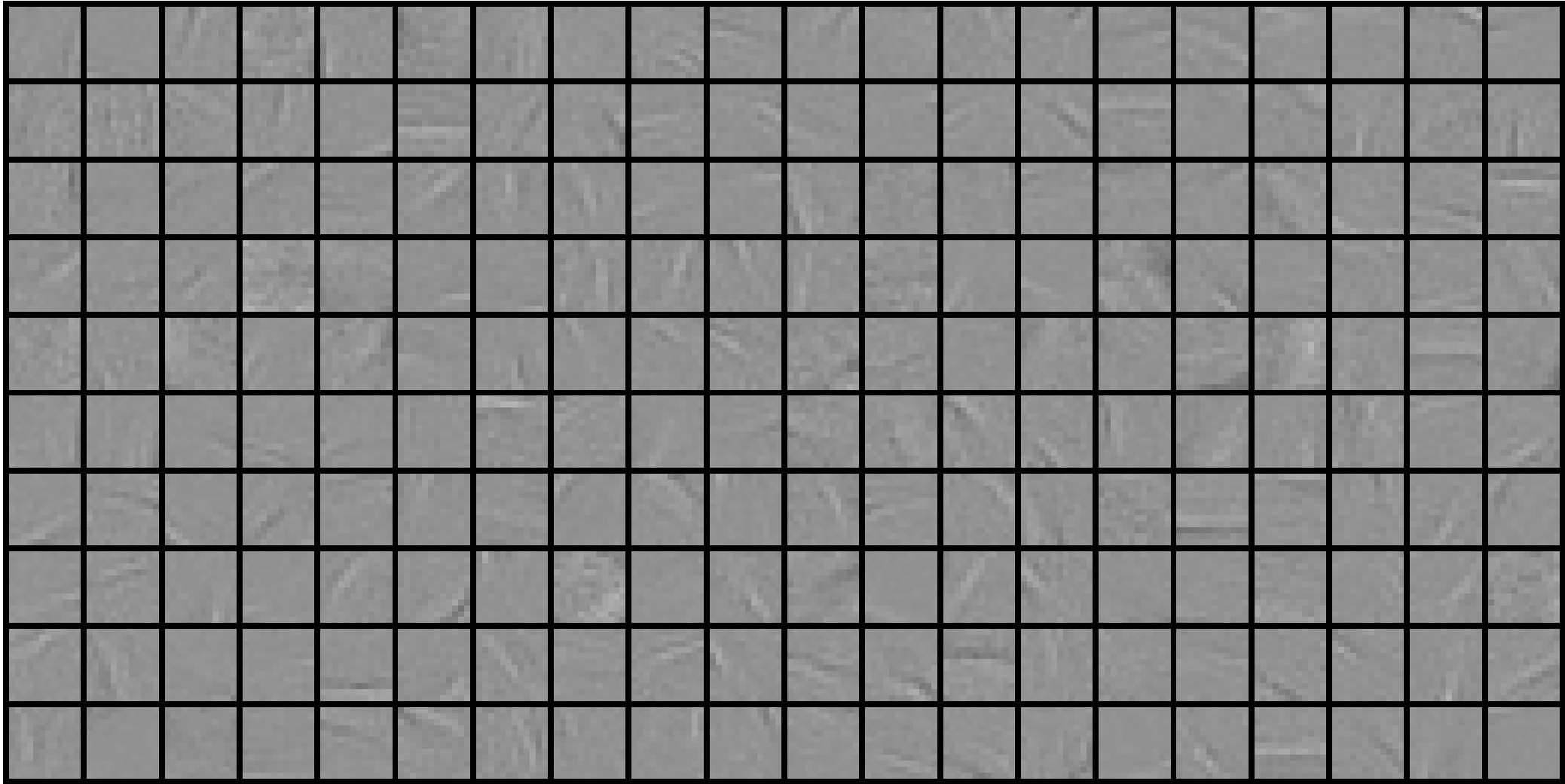
Gabor



Wavelet

Learned basis space-time basis functions

(200 bfs, 12 x 12 x 7)



Sparse coding and reconstruction

