



Figure: Illustration of the model's fits to a variety of tuning curves from the electrophysiology literature: (A) Effect of directing attention inside (blue curve) versus outside (red curve) the receptive field on the directional tuning curve (compare to Figure 1.B in [2]). (B) Speed-tuning of an MT neuron at low (red curve) and high (blue curve) contrasts (compare to Figure 1.C in [3]). (C, D) Evolution of direction tuning for three oriented moving bars (i.e. 45°, 90°, and 135° angle-difference between the major axis of the moving bar and the direction of motion in blue, red, and green respectively). Direction tuning is represented in polar coordinates. (C) Earliest direction-tuned response for a single MT neuron. (D) Direction tuning for the same MT cell averaged over the last 1,500ms of the stimulus presentation (compare to Figure 2.A,B in [4]). All the results shown in this figure belong to the simulations where we drove our model with laboratory stimuli (e.g. moving bars and random dots) so that we could fit our model to existing tuning curves in the literature. However, we also used natural stereo videos from the computer vision community (i.e. KITTI Dataset) to drive our model.