

Statistical Analysis of Neurophysiological Data

The statistical analysis of neuronal data in awake animals presents unique challenges. The status of tens of thousands of pre-synaptic neurons, not directly influenced by the experimental paradigm, is largely out of the control of the experimenter. Time-honored assumptions about “repeated” samples are untenable. These observations essentially preclude the gathering of statistical evidence for a *lack* of precision in the cortical micro circuitry, but do not preclude collecting statistical evidence against any given limitation on precision or repeatability. Statistical methods are being devised to support the systematic search for fine-temporal structure in stable multi-unit recordings.