Title: Producing large sets of neural data with an eye towards sharing

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Collecting data to answer a set of well defined, a priori scientific questions is difficult to do correctly and takes considerable planning but is standard practice in academia. How to collect data to share that it is useful to answer some potential as yet unknown questions is not well understood. For neural data this becomes especially challenging because there are critical trade-offs between the potentially enormous amount of data that is generated during an experiment and storage capacity with a relevant database. As an example, increasingly, epilepsy clinics are recording local field potentials with high frequency sampling in order to study changes in single neuron activity in the minutes leading up to the onset of a seizure. The amount of data generated prohibits storage of all the data and different clinics choose to save different pieces of the data depending on their primary interests. This ad hoc practice makes the sharing of data sets among investigators, who might want to test novel seizure detection algorithms, for example, impossible. Therefore, a valuable resource (e.g. continuous high sample-rate data from subjects undergoing spontaneous seizures) is forever lost, despite the fact that the data were initially recorded. Dr. Moxon will address some of the challenges underlying recording and sharing large sets of neural data.