

Review Checklist for Quiz #2

All material for the topics below covered from 11/6 is fair game.

Connectomics

- Basic Neuroanatomy
- Segmentation Algorithms for Neural Volumes: Classical Approaches (non-learning)
- Segmentation Algorithms for Neural Volumes: Machine Learning-based Approaches

Artificial Neural Networks with Anatomical Fidelity

- Basic Principles from Graph Theory that Apply to the Brain
- Recurrent Neural Networks
- Connectivity Matrices
- Strategies for Creating Networks with Anatomical Fidelity

Artificial Neural Networks with Functional Fidelity

- Tuning Curves
- Representational Dissimilarity Matrices
- Spike Trains
- Spiking Neural Networks

Probabilistic Read-Out Layers for Artificial Neural Networks

- Probability Theory
- Bayes' Theorem
- Bayesian Hierarchical Modelling
- Bayesian Hierarchical Modelling Combined with ANNs