

# Information Processing and the Brain 2019/2020

## Structure

Lecturers:

Conor Houghton (9)

Rui Ponte Costa (8)

Cian O'Donnell (2)

### Neural circuits and learning (lectures 11-18)

2

CW2

- › Learning in the brain
- › The visual system
- › Convolution neural networks
- › Supervised learning
- › Unsupervised learning
- › Reinforcement learning
- › Recurrent neural networks

### Probabilities and the brain (lectures 1-9)

1

CW1

- › Introduction
- › Information theory
- › Statistical Learning
- › Probabilistic Brain

Guest lecture  
(10)

### Neural data science (lectures 19,20)

3

- › Static statistical models
- › Dynamic statistical models

— — — — — → Useful for  
————— → Leads to

CW1: Problem sheet on prob.

CW2: Coursework on learning

Lectures 21 and 22 [week 12]: Revision lectures