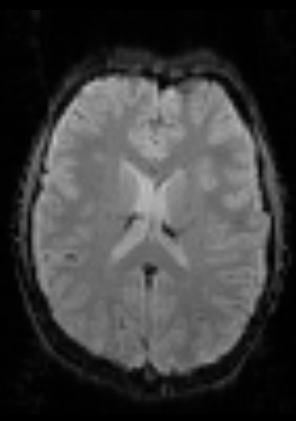
Western Science

Jörn Diedrichsen (jdiedric@uwo.ca)
Western Research Chair
Computational Motor Neuroscience

Department of Computer Science
Department of Statistics
Brain and Mind Institute

Computational Neuroscience

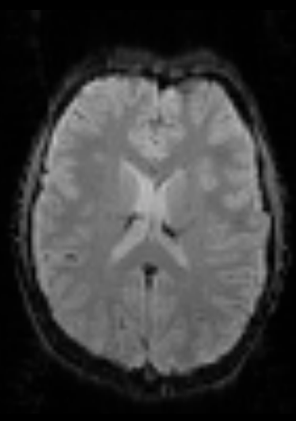


Brain data

Neuroscience

Behaviour

Computational Neuroscience



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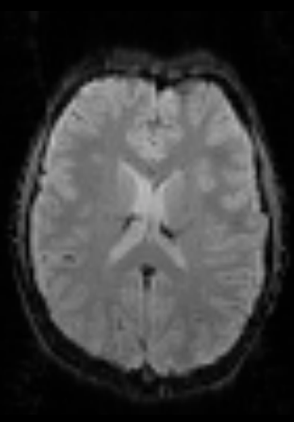

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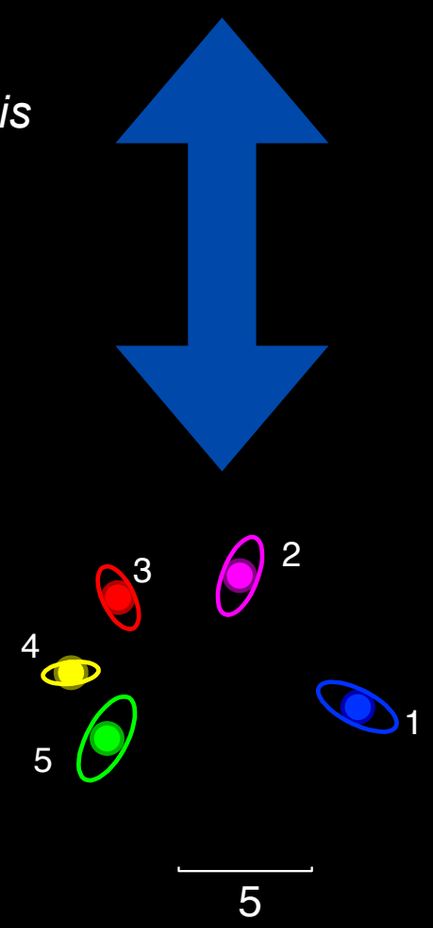
Neuroscience

Behaviour

Multivariate analysis

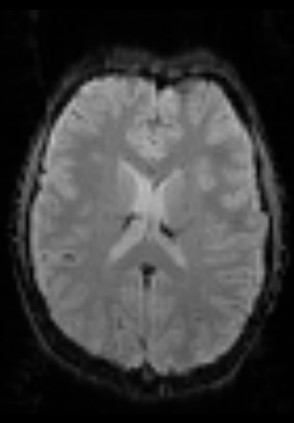
Feature extraction

Representational pattern analysis



Neural population code

Computational Neuroscience



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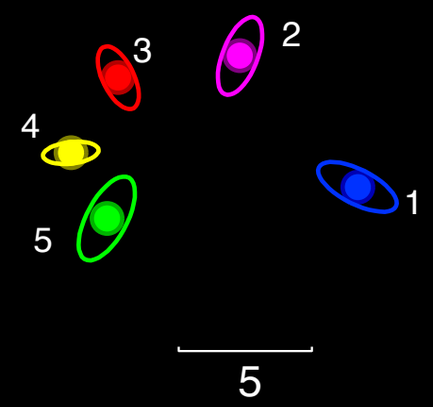
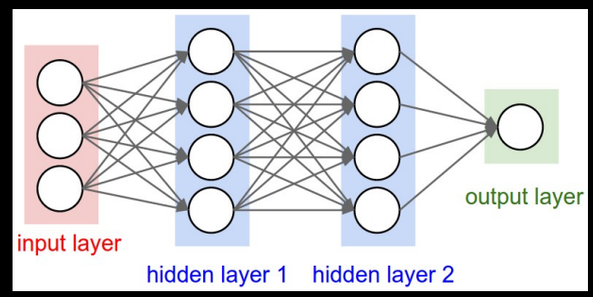


Neural population code

Representations and algorithms

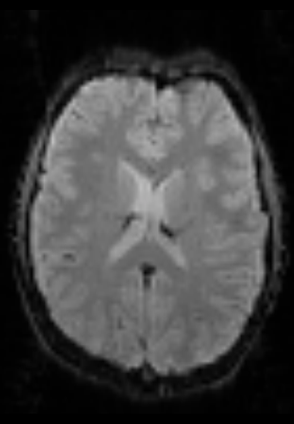
Optimal control theory

Artificial neural networks & Deep learning



Computation

Computational Neuroscience



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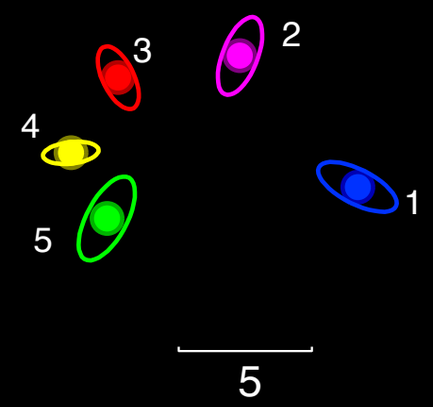

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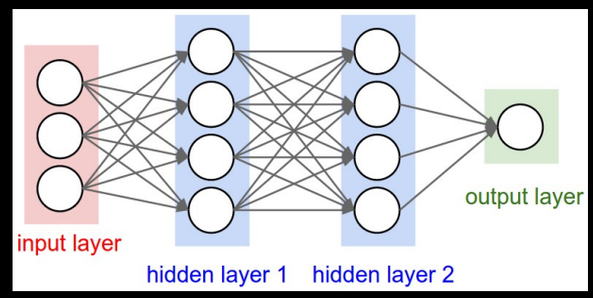
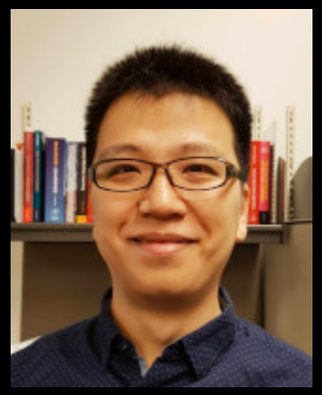


Computation

Computational Neuroscience @ Western

Yalda Mohsenzadeh
(CS)



Boyu Wang
(CS)

Mark Daley
(CS)

Jörn Diedrichsen
(CS/Stats)

Lyle Müller
(Applied Math)

Marieke Mur
(Psychology)

Andrea Soddu
(Physics)

Ali Khan
(Medical Biophysics)

Brain Hack Western (Nov 13-15): https://brainhackwestern.github.io

https://brainscan.uwo.ca/research/cores/computational_core

Teaching

- CS4414 /9637/9114: Introduction to Data Science

- Fall: Dan Lizotte
- Winter: Jörn Diedrichsen

- Machine Learning
  - Linear models, supervised learning
  - Uncertainty, bootstrap, permutation, sampling
  - Prediction, Regularization, Feature selection
  - Classification
  - Deep learning