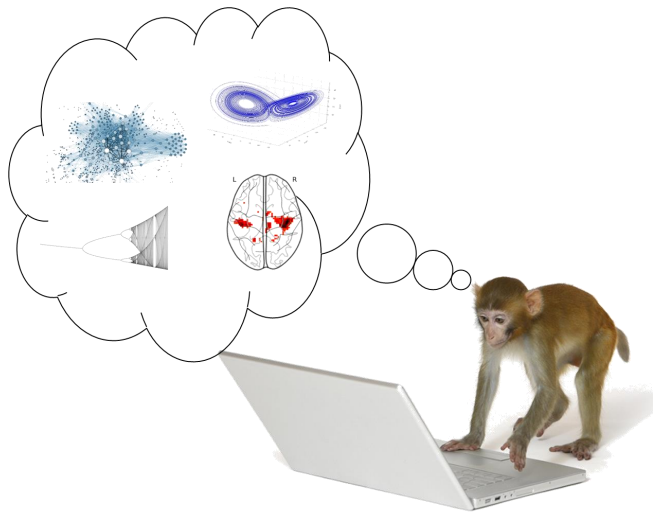# Working with Neuroimaging Data
(for Algebraic Topologists)

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Overview

- Open science

- Neuroimaging data repositories

- Analysis software

- File formats

- Worked example: exploring HCP data

Open science in neuroimaging

Open data repositories

neurosynth.org
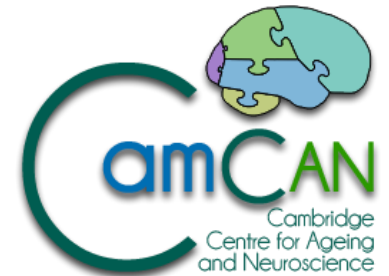
Analysis Software
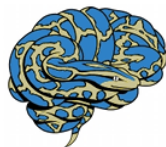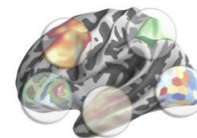
File Formats

Many, many, many, many formats…

(nifti, gifti, cifti, dicom, mgh, mgz, fs surface, fs label, .fif, .elp, .bdf, …)

Most common + easiest: nifti volumes

However most likely you will be working with ROI time series &/or connectivity matrices

Worked example: HCP

Resources

Wordpress site: *http://braintopology.wordpress.com*

Github repo: *https://github.com/JohnGriffiths/BIRS_TMinBNA_Workshop*

Selected HCP data zip file: *See me*

HCP data access portal: *https://db.humanconnectome.org*

my LabNotebook notes on HCP AWS S3 bucket access:

https://johngriffiths.github.io/LabNotebook/accessing-the-hcp-s3-bucket.html

Conclusions

Open science developments in neuroimaging v. positive and important

Neuroimaging data & analysis pipelines are complicated & heterogenous

Most likely will be working with ROI time series + connectivity matrices

That's a wrap ☺