

## FreeSurfer Recon-All Class

Winter 2017

**Location:** TBD

**Schedule:**

Class	Covers	Date/Time	For Further Practice
Introduction	<ul style="list-style-type: none"> <li>Freesurfer overview</li> <li>Installation</li> <li>MRI T1w data</li> <li>Pipeline overview (recon-all)</li> </ul>	1/9/17 11:00am	1. Install Freesurfer! 2. Download the class bin 3. Process Monica brain (or your own)
		1/11/17 4:30pm	
Data Preprocessing	Autorecon1: <ul style="list-style-type: none"> <li>Motion correction (ish)</li> <li>Talaraich registration</li> <li>NU correction</li> <li>Skull stripping</li> </ul>	1/23/17 11:00am	1. Process Meghan brain (or your own) 2. Manually adjust Tal registration 3. Edit brainmask
		1/25/17 4:30pm	
Segmenting the Brain	Autorecon2: <ul style="list-style-type: none"> <li>WM/GM surface generation</li> <li>Subcortical segmentation</li> <li>TKMedit GUI</li> </ul>	1/30/17 11:00am	1. Run a brain through autorecon2 2. Pull up the wm.mgz and brainmask 3. Edit pial/wm lines
		2/1/17 4:30pm	
Parcellating the Cortex	Autorecon3: <ul style="list-style-type: none"> <li>Surfaces and atlases</li> <li>Freeview GUI</li> <li>Extracting data</li> </ul>	2/6/17 11:00am	1. Run a brain through autorecon3 2. Open aparc+aseg.mgz and brain in freeview 3. Extract data
		2/8/17 4:30pm	
Other Cool Freesurfer Stuff	<ul style="list-style-type: none"> <li>Using multimodal data</li> <li>Hippocampus segmentation</li> <li>TRACULA</li> <li>PETSurfer (and PVC)</li> <li>PySurfer</li> </ul>	2/13/17 11:00am	1. Segment M&M's hippocampus 2. Run Meghan's DTI brain in TRACULA 3. Visualize a brain using the PySurfer script
		2/15/17 4:30pm	

### Helpful Links

Class GitHub Page: [https://github.com/catcamacho/freesurfer\\_class](https://github.com/catcamacho/freesurfer_class)

Wiki Landing Page: <https://surfer.nmr.mgh.harvard.edu/fswiki/FreeSurferWiki>

Installation: <https://surfer.nmr.mgh.harvard.edu/fswiki/DownloadAndInstall>

Recon-All Page: <https://surfer.nmr.mgh.harvard.edu/fswiki/recon-all>

v5.3 Table: <https://surfer.nmr.mgh.harvard.edu/fswiki/ReconAllTableStableV5.3>