1, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz -ref /usr/local/fsl/data/standard/MNI152\_T1\_2mm\_brain.nii.gz -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/xfm\_t1w2mni\_init.mat -dof 12 -interp spline -cost mutualinfo -searchrx -180 180 -searchry -180 180 -searchrz -180 180

fnirt --in=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz --ref=/usr/local/fsl/data/standard/MNI152\_T1\_2mm\_brain.nii.gz --aff=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/xfm\_t1w2mni\_init.mat --iout=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_aligned\_mni.nii.gz --cout=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/warp\_t12mni.nii.gz --warpres=8,8,8 --refmask=/usr/local/fsl/data/standard/MNI152\_T1\_2mm\_brain\_mask.nii.gz --applyrefmask=1 --config=/usr/local/fsl/etc/flirtsch/T1\_2\_MNI152\_2mm.cnf

invwarp --warp=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/warp\_t12mni.nii.gz --out=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/mni2t1w\_warp.nii.gz --ref=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz

convert\_xfm -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/xfm\_mni2t1w\_init.mat -inverse /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/xfm\_t1w2mni\_init.mat

2, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1w2dwi\_xfm.mat -dof 6 -interp spline -cost mutualinfo -searchrx -180 180 -searchry -180 180 -searchrz -180 180

convert\_xfm -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/dwi2t1w\_xfm.mat -inverse /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1w2dwi\_xfm.mat

3, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/dwi2t1w\_bbr\_xfm.mat -dof 7 -bins 256 -interp spline -cost bbr -searchrx -180 180 -searchry -180 180 -searchrz -180 180 -schedule ${FSLDIR}/etc/flirtsch/bbr.sch -wmseg /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/t1w\_wm\_edge.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/dwi2t1w\_xfm.mat

0.675127 1.000014 0.108914 0.008983 0.000000 -0.108616 0.999667 -0.028990 0.000000 -0.012066 0.027848 1.005510 0.000000 -79.469223 -25.903574 145.534662 1.000000

4, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_in\_dwi.nii.gz -dof 7 -interp spline -cost mutualinfo -searchrx -180 180 -searchry -180 180 -searchrz -180 180 -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1w2dwi\_bbr\_xfm.mat

5, flirt -in /usr/local/fsl/data/atlases/HarvardOxford/HarvardOxford-sub-prob-2mm.nii.gz -ref /usr/local/fsl/data/standard/MNI152\_T1\_2mm\_brain.nii.gz -omat /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/roi\_2\_mni.mat -dof 6 -interp spline -cost mutualinfo -searchrx -180 180 -searchry -180 180 -searchrz -180 180

6, flirt -in /home/jialinkang/.ndmg/ndmg\_atlases/atlases/mask/HarvardOxford-thr25\_space-MNI152NLin6\_variant-lateral-ventricles\_res-2x2x2\_descr-brainmask.nii.gz -ref /usr/local/fsl/data/standard/MNI152\_T1\_2mm\_brain.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/vent\_mask\_mni.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/roi\_2\_mni.mat -interp trilinear -dof 6 -applyxfm

applywarp --ref=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz --in=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/vent\_mask\_mni.nii.gz --out=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/vent\_mask\_t1w.nii.gz --warp=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/mni2t1w\_warp.nii.gz --interp=nn --super --superlevel=a

applywarp --ref=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz --in=/home/jialinkang/.ndmg/ndmg\_atlases/atlases/mask/CorpusCallosum\_res\_2mm.nii.gz --out=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_corpuscallosum.nii.gz --warp=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/mni2t1w\_warp.nii.gz --interp=nn --super --superlevel=a

7, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/vent\_mask\_t1w.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/t1w\_vent\_mask\_dwi.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat -interp trilinear -dof 6 -applyxfm

8, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_corpuscallosum.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_corpuscallosum\_dwi.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat -interp trilinear -dof 6 -applyxfm

9, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_seg\_pve\_0\_nores.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_csf\_mask\_dwi.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat -interp trilinear -dof 6 -applyxfm

10, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_seg\_pve\_1\_nores.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_gm\_in\_dwi.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat -interp trilinear -dof 6 -applyxfm

11, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_seg\_pve\_2\_nores.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/t1w\_wm\_in\_dwi.nii.gz -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat -interp trilinear -dof 6 -applyxfm

12, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/desikan\_space-MNI152NLin6\_res-2x2x2\_reor\_RAS\_nores\_aligned\_atlas\_skull.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz **-out** /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/desikan\_space-MNI152NLin6\_res-2x2x2\_reor\_RAS\_nores\_aligned\_atlas.nii.gz -dof 6 -bins 256 -interp nearestneighbour -cost mutualinfo -searchrx -180 180 -searchry -180 180 -searchrz -180 180 -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat

applywarp --ref=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/preproc/t1w\_brain\_nores.nii.gz --in=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/desikan\_space-MNI152NLin6\_res-2x2x2\_reor\_RAS\_nores\_aligned\_atlas\_t1w\_mni.nii.gz --out=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/desikan\_space-MNI152NLin6\_res-2x2x2\_reor\_RAS\_nores\_aligned\_atlas\_skull.nii.gz --warp=/mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/mni2t1w\_warp.nii.gz --interp=nn --super --superlevel=a

13, flirt -in /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_a/desikan\_space-MNI152NLin6\_res-2x2x2\_reor\_RAS\_nores\_aligned\_atlas\_skull.nii.gz -ref /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/dwi/preproc/nodif\_B0.nii.gz -out /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/anat/registered/desikan\_space-MNI152NLin6\_res-2x2x2\_reor\_RAS\_nores\_aligned\_atlas.nii.gz -dof 6 -bins 256 -interp nearestneighbour -cost mutualinfo -searchrx -180 180 -searchry -180 180 -searchrz -180 180 -init /mnt/d/Downloads/neurodatadesign/ndmg\_outputs/tmp/reg\_m/t1wtissue2dwi\_xfm.mat