

Image Processing and Analysis Overview

The ABCD Data Analysis and Informatics Resource Center (DAIRC) performs centralized processing and analysis of MRI data from each modality (sMRI, dMRI, rs-fMRI, and task-fMRI). We use a collection of processing steps contained within the Multi-Modal Processing Stream (MMPS), a software package developed and maintained in-house at the Center for Multimodal Imaging and Genetics (CMIG) at the J. Craig Venter Institute that provides large-scale, standardized processing and analysis of multimodality neuroimaging data on Linux workstations and compute clusters.

ABCD image processing and analysis methods paper:

<https://pubmed.ncbi.nlm.nih.gov/31415884/>

Data documentation:

<https://docs.abcdstudy.org/latest/documentation/imaging/#methods>

Supporting files and software:

NBDC Datahub: <https://www.nbdc-datahub.org/abcd-study>

Miscellaneous ABCD tools: <https://github.com/ABCD-STUDY>

E-prime extraction functions: https://github.com/ABCD-STUDY/abcd_extract_eprime

AtlasTrack fiber tract atlas files: <https://www.nitrc.org/projects/atlastrack>

ABCD Release 6.0 processing pipeline docker/singularity:

https://www.nitrc.org/projects/cmig_pipeline