Resource Summary Report

Generated by dkNET on May 21, 2025

Automatic Registration Toolbox

RRID:SCR_005993
Type: Tool

Proper Citation

Automatic Registration Toolbox (RRID:SCR_005993)

Resource Information

URL: http://www.nitrc.org/projects/art

Proper Citation: Automatic Registration Toolbox (RRID:SCR_005993)

Description: ART ""acpcdetect"" program for automatic detection of the AC and PC landmarks and the mid-sagittal plane on 3D structural MRI scans. ART ""brainwash"" program for automatic multi-atlas skull-stripping of 3D structural MRI scans. ART ""3dwarper"" program of non-linear inter-subject registration of 3D structural MRI scans. Software (art2) for linear rigid-body intra-subject inter-modality (MRI-PET) image registration. Data resource: The ART projects makes available corpus callosum segmentations of 316 normal subjects from the OASIS cross-sectional database. ART ""yuki"" program for fast, robust, and fully automatic segmentation of the corpus callosum on 3D structural MRI scans.

Abbreviations: ART

Resource Type: data or information resource, image analysis software, software resource, image processing software, image collection, software toolkit, software application, data processing software

Keywords: artifact removal, intermodal, intersubject, intramodal, intrasubject, image-to-template, nearest neighbor, spline interpolation, tri-linear, affine warp, nonlinear warp, image display, corpus callosum, segmentation, mri, registration, structural mri, image registration, pet, nifti

Related Condition: Normal

Funding:

Availability: Free, Non-commercial

Resource Name: Automatic Registration Toolbox

Resource ID: SCR_005993

Alternate IDs: nlx_151368

Record Creation Time: 20220129T080233+0000

Record Last Update: 20250521T061049+0000

Ratings and Alerts

No rating or validation information has been found for Automatic Registration Toolbox.

No alerts have been found for Automatic Registration Toolbox.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 23 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET.

Da X, et al. (2024) Spectris™ treatment preserves corpus callosum structure in Alzheimer's disease. Frontiers in neurology, 15, 1452930.

Shah NJ, et al. (2022) A novel MRI-based quantitative water content atlas of the human brain. NeuroImage, 252, 119014.

Ardekani BA, et al. (2022) A new approach to symmetric registration of longitudinal structural MRI of the human brain. Journal of neuroscience methods, 373, 109563.

Thakran S, et al. (2022) Impact of deformable registration methods for prediction of recurrence free survival response to neoadjuvant chemotherapy in breast cancer: Results from the ISPY 1/ACRIN 6657 trial. Translational oncology, 20, 101411.

Zafarullah M, et al. (2021) Metabolomic Biomarkers Are Associated With Area of the Pons in Fragile X Premutation Carriers at Risk for Developing FXTAS. Frontiers in psychiatry, 12, 691717.

Wang JY, et al. (2020) Interaction between ventricular expansion and structural changes in the corpus callosum and putamen in males with FMR1 normal and premutation alleles. Neurobiology of aging, 86, 27.

Wang JY, et al. (2020) Cortical gyrification and its relationships with molecular measures and cognition in children with the FMR1 premutation. Scientific reports, 10(1), 16059.

Shelton AL, et al. (2018) Middle Cerebellar Peduncle Width-A Novel MRI Biomarker for FXTAS? Frontiers in neuroscience, 12, 379.

Penner J, et al. (2018) Temporoparietal Junction Functional Connectivity in Early Schizophrenia and Major Depressive Disorder. Chronic stress (Thousand Oaks, Calif.), 2, 2470547018815232.

Lee SH, et al. (2016) Predicting progression from mild cognitive impairment to Alzheimer's disease using longitudinal callosal atrophy. Alzheimer's & dementia (Amsterdam, Netherlands), 2, 68.

Katuwal GJ, et al. (2016) Inter-Method Discrepancies in Brain Volume Estimation May Drive Inconsistent Findings in Autism. Frontiers in neuroscience, 10, 439.

Penner J, et al. (2016) Medial Prefrontal and Anterior Insular Connectivity in Early Schizophrenia and Major Depressive Disorder: A Resting Functional MRI Evaluation of Large-Scale Brain Network Models. Frontiers in human neuroscience, 10, 132.

Serag A, et al. (2016) Accurate Learning with Few Atlases (ALFA): an algorithm for MRI neonatal brain extraction and comparison with 11 publicly available methods. Scientific reports, 6, 23470.

Smiley JF, et al. (2015) Selective reduction of cerebral cortex GABA neurons in a late gestation model of fetal alcohol spectrum disorder. Alcohol (Fayetteville, N.Y.), 49(6), 571.

Lee SH, et al. (2014) Application of fused lasso logistic regression to the study of corpus callosum thickness in early Alzheimer's disease. Journal of neuroscience methods, 221, 78.

Wang L, et al. (2013) Longitudinally guided level sets for consistent tissue segmentation of neonates. Human brain mapping, 34(4), 956.

Deistung A, et al. (2013) Toward in vivo histology: a comparison of quantitative susceptibility mapping (QSM) with magnitude-, phase-, and R2*-imaging at ultra-high magnetic field strength. NeuroImage, 65, 299.

Chang CW, et al. (2012) ADHD classification by a texture analysis of anatomical brain MRI data. Frontiers in systems neuroscience, 6, 66.

Herron TJ, et al. (2012) Automated measurement of the human corpus callosum using MRI. Frontiers in neuroinformatics, 6, 25.

Heckemann RA, et al. (2011) Automatic morphometry in Alzheimer's disease and mild

cognitive impairment. NeuroImage, 56(4), 2024.