

Resource Summary Report

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NiftyReg

RRID:SCR_006593

Type: Tool

Proper Citation

NiftyReg (RRID:SCR_006593)

Resource Information

URL: <http://sourceforge.net/projects/niftyreg/>

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Description: Software tools for global and local image registration. The algorithm used for global registration is based on a block matching approach enabling robust registration (outliers rejection). The local registration implementation uses a cubic B-Spline parametrisation (Free-Form Deformation). All registration algorithms are based on symmetric approaches where forward and backward transformations can be optimised concurrently. NiftyReg has been implemented for both CPU and GPU (through the use of CUDA).

Abbreviations: NiftyReg

Synonyms: Nifty Reg

Resource Type: image analysis software, software application, software resource, registration software, data processing software

Keywords: analyze, c, c++, nifti, nrrd, registration, resampling, spatial transformation, warping

Availability: BSD License

Resource Name: NiftyReg

Resource ID: SCR_006593

Alternate IDs: nlx_155899

Alternate URLs: <http://www.nitrc.org/projects/niftyreg>

Record Creation Time: 20220129T080237+0000

Record Last Update: 20260801T190312+0000

Ratings and Alerts

No rating or validation information has been found for NiftyReg.

No alerts have been found for NiftyReg.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 236 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

Solanky BS, et al. (2025) Evaluation of magnetic resonance spectroscopy total sodium concentration measures, and associations with microstructure and physical impairment in cervical myelopathy. Scientific reports, 15(1), 7014.

Dong THK, et al. (2025) Convolutional neural network using magnetic resonance brain imaging to predict outcome from tuberculosis meningitis. PloS one, 20(5), e0321655.

Vestergaard CD, et al. (2025) Comparing methods to improve cone-beam computed tomography for dose calculations in adaptive proton therapy. Physics and imaging in radiation oncology, 34, 100784.

Pinto MS, et al. (2025) Harmonization of diffusion MRI on healthy subjects using NeuroCombat and LongCombat: a B-Q MINDED brain intra- and inter-scanner study. Frontiers in neuroscience, 19, 1591169.

Alibabaei S, et al. (2025) Evaluating machine learning models for post-surgery treatment response assessment in glioblastoma multiforme: a comparative study of gray level co-occurrence matrix (GLCM), curvelet, and combined radiomics features selected by multiple algorithms. BMC medical imaging, 25(1), 362.

Wang Y, et al. (2025) T2 contrast variation in human brain at 7 T and its potential contributors. Imaging neuroscience (Cambridge, Mass.), 3.

Casamitjana A, et al. (2025) A probabilistic histological atlas of the human brain for MRI segmentation. Nature, 648(8094), 678.

Chougar L, et al. (2025) Substantia nigra degeneration in spinocerebellar ataxia 2 and 7 using neuromelanin-sensitive imaging. European journal of neurology, 32(1), e70035.

Pérez A, et al. (2025) CPAP improves regional lung strain rate and diaphragm velocity of relaxation in experimental self-inflicted lung injury. Critical care (London, England), 29(1), 322.

- Simarro J, et al. (2025) Automatic brain quantification in children with unilateral cerebral palsy. *Frontiers in neuroscience*, 19, 1540480.
- Piluso S, et al. (2025) An extended and improved CCFv3 annotation and Nissl atlas of the entire mouse brain. *Imaging neuroscience (Cambridge, Mass.)*, 3.
- Kabak EG, et al. (2025) An Automated Analysis Tool for Diffusion Tensor Imaging-Based Quantitative MRI in X-Linked Adrenoleukodystrophy. *Journal of inherited metabolic disease*, 48(6), e70108.
- Miyakawa S, et al. (2025) Assessing the consistency of CT-based ventilation imaging under noise reduction processing with simulated quantum noise using a nonrigid alveoli phantom. *Frontiers in radiology*, 5, 1567267.
- Lageman SB, et al. (2025) Explaining cognitive function in multiple sclerosis through networks of grey and white matter features: a joint independent component analysis. *Journal of neurology*, 272(2), 142.
- Martinez-Perez ME, et al. (2025) Development and evaluation of customized software to automatically align macula and optic disc centered scanning laser ophthalmoscope fundus images. *PeerJ. Computer science*, 11, e2621.
- Pérot JB, et al. (2025) Longitudinal neuromelanin changes in prodromal and early Parkinson's disease in humans and rat model. *Brain communications*, 7(3), fcac204.
- Long M, et al. (2025) Sex-specific relationships between gray matter volume and executive function in young children with and without prenatal alcohol exposure. *Developmental cognitive neuroscience*, 75, 101608.
- Wess M, et al. (2025) Spatial integration of multi-omics data from serial sections using the novel Multi-Omics Imaging Integration Toolset. *GigaScience*, 14.
- Zhong S, et al. (2025) Comparative evaluation of image registration techniques in functional ultrasound imaging. *Imaging neuroscience (Cambridge, Mass.)*, 3.
- Disselhoff V, et al. (2025) Inhibition abilities and functional brain connectivity in school-aged term-born and preterm-born children. *Pediatric research*, 97(1), 315.