

# Resource Summary Report

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## NiftyReg

RRID:SCR\_006593

Type: Tool

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### Proper Citation

NiftyReg (RRID:SCR\_006593)

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### 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:** data processing software, image analysis software, registration software, software application, software resource

**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:** 20260905T132557+0000

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## Ratings and Alerts

No rating or validation information has been found for NiftyReg.

No alerts have been found for NiftyReg.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 246 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [RRID](#) .

Sorby-Adams A, et al. (2026) Portable Low-Field Magnetic Resonance Imaging in People With Human Immunodeficiency Virus. *Annals of clinical and translational neurology*, 13(3), 537.

Iglesias JE, et al. (2026) On the accuracy of image registration in portable low-field 3D brain MRI. *Research square*.

Iglesias JE, et al. (2026) On the accuracy of image registration in portable low-field 3D brain MRI. *bioRxiv : the preprint server for biology*.

Giampiccolo D, et al. (2026) Mapping white matter tracts with SEEG electrodes. *Epilepsia*, 67(3), 1090.

Hemachandra D, et al. (2026) Brain protein burden is related to intravoxel incoherent motion: PET-MR imaging study. *Frontiers in neuroscience*, 20, 1841093.

Webber G, et al. (2026) Personalized MR-Informed Diffusion Models for 3D PET Image Reconstruction. *IEEE transactions on radiation and plasma medical sciences*, 10(3), 333.

Zhang Y, et al. (2026) Cortical folding and thickness characteristics of gray matter in fetuses with non-severe ventriculomegaly. *BMC pediatrics*, 26(1).

Providência L, et al. (2026) Long vs. short axial field-of-view PET scanners for brain imaging: a phantom study. *Frontiers in nuclear medicine*, 6, 1856651.

Aguirre MC, et al. (2026) Improving Neuropathological Reconstruction Fidelity via AI Slice Imputation. *Research square*.

Deng H, et al. (2026) SMIntegration: A web tool for comprehensive spatial metabolomics and transcriptomics integrated analysis and visualization. *GigaScience*, 15.

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.

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.

Wess M, et al. (2025) Spatial integration of multi-omics data from serial sections using the novel Multi-Omics Imaging Integration Toolset. GigaScience, 14.

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.

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.