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

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

Funding:

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: 20250516T053833+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: <u>SciCrunch Registry</u>

## **Usage and Citation Metrics**

We found 215 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>dkNET</u>.

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.

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.

Griessmair M, et al. (2025) Advanced imaging reveals enhanced malignancy in glioblastomas involving the subventricular zone: evidence of increased infiltrative growth and perfusion. Journal of neuro-oncology, 171(2), 343.

Lankinen K, et al. (2024) Individualized white matter connectivity of the articulatory pathway: An ultra-high field study. Brain and language, 250, 105391.

Fujishima M, et al. (2024) Impact of amyloid and tau positivity on longitudinal brain atrophy in cognitively normal individuals. Alzheimer's research & therapy, 16(1), 77.

Gao L, et al. (2024) Regional nigral neuromelanin degeneration in asymptomatic leucine-rich repeat kinase 2 gene carrier using MRI. Scientific reports, 14(1), 10621.

Ziegenfeuter J, et al. (2024) Resolving spatial response heterogeneity in glioblastoma. European journal of nuclear medicine and molecular imaging, 51(12), 3685.

Boelders SM, et al. (2024) Predicting Cognitive Functioning for Patients with a High-Grade Glioma: Evaluating Different Representations of Tumor Location in a Common Space. Neuroinformatics, 22(3), 329.

Calvi A, et al. (2024) Treatment reduces the incidence of newly appearing multiple sclerosis lesions evolving into chronic active, slowly expanding lesions: A retrospective analysis. European journal of neurology, 31(1), e16092.

Cicinelli MV, et al. (2024) Photoreceptor Integrity in MEWDS: Longitudinal Structure-Function Correlations. Investigative ophthalmology & visual science, 65(4), 28.

Wang WJ, et al. (2024) Data-Driven Analysis Reveals Cortical Infarction Patterns Correlated With Inflammation and Prognosis: A Retrospective, Multicenter Cohort Study. Journal of the American Heart Association, 13(12), e033616.

Kujawa A, et al. (2024) Deep learning for automatic segmentation of vestibular schwannoma: a retrospective study from multi-center routine MRI. Frontiers in computational neuroscience, 18, 1365727.

Cruces P, et al. (2024) A machine-learning regional clustering approach to understand ventilator-induced lung injury: a proof-of-concept experimental study. Intensive care medicine experimental, 12(1), 60.

Romanin L, et al. (2024) Similarity-driven motion-resolved reconstruction for ferumoxytolenhanced whole-heart MRI in congenital heart disease. PloS one, 19(6), e0304612.

Needleman SH, et al. (2024) Independent component analysis (ICA) applied to dynamic oxygen-enhanced MRI (OE-MRI) for robust functional lung imaging at 3?T. Magnetic resonance in medicine, 91(3), 955.

Ortega-Cruz D, et al. (2024) Three-dimensional histology reveals dissociable human hippocampal long-axis gradients of Alzheimer's pathology. Alzheimer's & dementia : the journal of the Alzheimer's Association, 20(4), 2606.

Foster MA, et al. (2024) Improving explanation of motor disability with diffusion-based graph metrics at onset of the first demyelinating event. Multiple sclerosis (Houndmills, Basingstoke, England), 30(7), 800.

Long M, et al. (2024) Sex and age effects on gray matter volume trajectories in young children with prenatal alcohol exposure. Frontiers in human neuroscience, 18, 1379959.

Yao G, et al. (2024) Structure-function coupling changes in first-episode, treatment-naïve schizophrenia correlate with cell type-specific transcriptional signature. BMC medicine, 22(1), 491.

Casamitjana A, et al. (2024) A next-generation, histological atlas of the human brain and its

application to automated brain MRI segmentation. bioRxiv : the preprint server for biology.