

Resource Summary Report

Generated by PRECISE-TBI on Sep 17, 2026

Multivariate Exploratory Linear Optimized Decomposition into Independent Components

RRID:SCR_024916

Type: Tool

Proper Citation

Multivariate Exploratory Linear Optimized Decomposition into Independent Components (RRID:SCR_024916)

Resource Information

URL: <https://fsl.fmrib.ox.ac.uk/fsl/fslwiki/MELODIC>

Proper Citation: Multivariate Exploratory Linear Optimized Decomposition into Independent Components (RRID:SCR_024916)

Description: Software tool to use at both the subject and group level to decompose FMRI data into time courses and spatial maps using Independent Component Analysis. Used to decompose single or multiple 4D data sets into different spatial and temporal components.

Abbreviations: MELODIC

Synonyms: MELODIC:Multivariate Exploratory Linear Optimized Decomposition into Independent Components

Resource Type: software application, software resource

Keywords: Independent Component Analysis, decompose FMRI data, decompose single or multiple 4D data sets, spatial and temporal components,

Availability: Free, Freely available

Resource Name: Multivariate Exploratory Linear Optimized Decomposition into Independent Components

Resource ID: SCR_024916

Record Creation Time: 20240129T210604+0000

Record Last Update: 20260912T200433+0000

Ratings and Alerts

No rating or validation information has been found for Multivariate Exploratory Linear Optimized Decomposition into Independent Components.

No alerts have been found for Multivariate Exploratory Linear Optimized Decomposition into Independent Components.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 32 mentions in open access literature.

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

Lee S, et al. (2026) Network-level structural alterations distinguish persistent from remitted post-traumatic stress disorder: a morphometric covariance approach. European journal of psychotraumatology, 17(1), 2655604.

Kuang Z, et al. (2026) Mechanistic signatures of comorbid PTSD with cognitive impairment implicate cortisol-induced neural toxicity. Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology, 51(7), 1325.

Hu G, et al. (2026) A review of decomposition methods for brain states estimation. Biomedical engineering online, 25(1).

Ma Y, et al. (2025) Individual differences in wellbeing are supported by separable sets of co-active self- and visual-attention-related brain networks. Scientific reports, 15(1), 5524.

Laakso H, et al. (2025) Simultaneous zero echo time fMRI of rat brain and spinal cord. bioRxiv : the preprint server for biology.

Laakso H, et al. (2025) Simultaneous zero echo time fMRI of rat brain and spinal cord. Magnetic resonance in medicine, 94(6), 2335.

Pareto D, et al. (2025) Image analysis research in neuroradiology: bridging clinical and technical domains. Neuroradiology, 67(7), 1649.

Gengeç Benli ?, et al. (2024) Data-driven exploratory method investigation on the effect of dyslexia education at brain connectivity in Turkish children: a preliminary study. Brain structure & function, 229(7), 1697.

Pelzer EA, et al. (2024) Data-driven MEG analysis to extract fMRI resting-state networks. Human brain mapping, 45(4), e26644.

Gálber M, et al. (2024) Depressed patients with childhood maltreatment display altered intra- and inter-network resting state functional connectivity. NeuroImage. Clinical, 43, 103632.

Cheng H, et al. (2024) Reversibility of Impaired Large-Scale Functional Brain Networks in Cushing's Disease after Surgery Treatment: A Longitudinal Study. *Neuroendocrinology*, 114(3), 250.

Kim RY, et al. (2024) Alterations in Brain Morphometric Networks and Their Relationship with Memory Dysfunction in Patients with Type 2 Diabetes Mellitus. *Experimental neurobiology*, 33(2), 107.

Lipka R, et al. (2024) No changes in triple network engagement following (combined) noradrenergic and glucocorticoid stimulation in healthy men. *Social cognitive and affective neuroscience*, 19(1).

Joliot M, et al. (2024) Modulate the impact of the drowsiness on the resting state functional connectivity. *Scientific reports*, 14(1), 8652.

Ponticorvo S, et al. (2024) Resting-state functional MRI of the nose as a novel investigational window into the nervous system. *Scientific reports*, 14(1), 26352.

Woisard K, et al. (2023) Executive control network resting state fMRI functional and effective connectivity and delay discounting in cocaine dependent subjects compared to healthy controls. *Frontiers in psychiatry*, 14, 1117817.

Bridgen P, et al. (2023) High resolution and contrast 7 tesla MR brain imaging of the neonate. *Frontiers in radiology*, 3, 1327075.

Ma S, et al. (2022) An fMRI dataset for whole-body somatotopic mapping in humans. *Scientific data*, 9(1), 515.

Pinky NN, et al. (2022) Multimodal magnetic resonance imaging of youth sport-related concussion reveals acute changes in the cerebellum, basal ganglia, and corpus callosum that resolve with recovery. *Frontiers in human neuroscience*, 16, 976013.

Weiss AR, et al. (2022) A novel rhesus macaque model of Huntington's disease recapitulates key neuropathological changes along with motor and cognitive decline. *eLife*, 11.