Resource Summary Report

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ICASSO

RRID:SCR_014981
Type: Tool

Proper Citation

ICASSO (RRID:SCR_014981)

Resource Information

URL: http://research.ics.aalto.fi/ica/icasso/

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Description: Software implementing a method for assessing both the algorithmic and statistical reliability of estimated independent components developed by Himburg et al in their 2004 paper. The method is based on running the ICA algorithm many times with slightly different conditions and visualizing the clustering structure of the obtained components in the signal space. In experiments with magnetoencephalographic (MEG) and functional magnetic resonance imaging (fMRI) data, the method was able to show that expected components are reliable; furthermore, it pointed out components whose interpretation was not obvious but whose reliability should incite the experimenter to investigate the underlying technical or physical phenomena.

Synonyms: Icasso 1.2, Icasso

Resource Type: software application, data visualization software, data processing software, algorithm resource, software resource

Defining Citation: PMID:15219593

Keywords: independent component analysis, ica, ica estimate, visualization method, tight cluster

Funding: Academy of Finland ;
Nokia Foundation

Availability: Available for download

Resource Name: ICASSO

Resource ID: SCR_014981

Record Creation Time: 20220129T080323+0000

Record Last Update: 20250519T203845+0000

Ratings and Alerts

No rating or validation information has been found for ICASSO.

No alerts have been found for ICASSO.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 34 mentions in open access literature.

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

Forlim CG, et al. (2024) Resting state network changes induced by experimental inaudible infrasound exposure and associations with self-reported noise sensitivity and annoyance. Scientific reports, 14(1), 24555.

Setiadi TM, et al. (2024) Alterations in Gray Matter Structural Networks in Amnestic Mild Cognitive Impairment: A Source-Based Morphometry Study. Journal of Alzheimer's disease : JAD, 101(1), 61.

Tu Y, et al. (2024) Relationship between brain white matter damage and grey matter atrophy in hereditary spastic paraplegia types 4 and 5. European journal of neurology, 31(8), e16310.

Li J, et al. (2024) Progressive increase of brain gray matter volume in individuals with regular soccer training. Scientific reports, 14(1), 7023.

Li M, et al. (2023) Ameliorative patterns of grey matter in patients with first-episode and treatment-naïve schizophrenia. Psychological medicine, 53(8), 3500.

Sorella S, et al. (2022) Structural and functional brain networks of individual differences in trait anger and anger control: An unsupervised machine learning study. The European journal of neuroscience, 55(2), 510.

Pan J, et al. (2022) Sparse dictionary learning recovers pleiotropy from human cell fitness

screens. Cell systems, 13(4), 286.

Lapomarda G, et al. (2021) Out of control: An altered parieto-occipital-cerebellar network for impulsivity in bipolar disorder. Behavioural brain research, 406, 113228.

Nguyen L, et al. (2020) Brain structural network alterations related to serum cortisol levels in drug-naïve, first-episode major depressive disorder patients: a source-based morphometric study. Scientific reports, 10(1), 22096.

Zhuo C, et al. (2020) Left cerebral cortex complexity differences in sporadic healthy individuals with auditory verbal hallucinations: A pilot study. Psychiatry research, 285, 112834.

Kakeda S, et al. (2020) An independent component analysis reveals brain structural networks related to TNF-? in drug-naïve, first-episode major depressive disorder: a source-based morphometric study. Translational psychiatry, 10(1), 187.

Špiláková B, et al. (2020) Getting into sync: Data-driven analyses reveal patterns of neural coupling that distinguish among different social exchanges. Human brain mapping, 41(4), 1072.

Crespi C, et al. (2019) Executive Impairment in Alcohol Use Disorder Reflects Structural Changes in Large-Scale Brain Networks: A Joint Independent Component Analysis on Gray-Matter and White-Matter Features. Frontiers in psychology, 10, 2479.

Ortuño T, et al. (2019) Slow-Wave Activity in the S1HL Cortex Is Contributed by Different Layer-Specific Field Potential Sources during Development. The Journal of neuroscience : the official journal of the Society for Neuroscience, 39(45), 8900.

Yu Q, et al. (2019) A method for building a genome-connectome bipartite graph model. Journal of neuroscience methods, 320, 64.

Lee JY, et al. (2019) Seed-Based Resting-State Functional MRI for Presurgical Localization of the Motor Cortex: A Task-Based Functional MRI-Determined Seed Versus an Anatomy-Determined Seed. Korean journal of radiology, 20(1), 171.

Norbom LB, et al. (2019) Probing Brain Developmental Patterns of Myelination and Associations With Psychopathology in Youths Using Gray/White Matter Contrast. Biological psychiatry, 85(5), 389.

Galandra C, et al. (2019) Abnormal fronto-striatal intrinsic connectivity reflects executive dysfunction in alcohol use disorders. Cortex; a journal devoted to the study of the nervous system and behavior, 115, 27.

Sorella S, et al. (2019) [Not Available]. NeuroImage. Clinical, 23, 101854.

Zhang G, et al. (2019) Tracking the Dynamic Functional Network Interactions During Goal-Directed Auditory Tasks by Brain State Clustering. Frontiers in neuroscience, 13, 1220.