

Resource Summary Report

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Brain Entropy Mapping Toolbox

RRID:SCR_014470

Type: Tool

Proper Citation

Brain Entropy Mapping Toolbox (RRID:SCR_014470)

Resource Information

URL: <https://cfn.upenn.edu/~zewang/BENtbx.php>

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Description: A toolkit for mapping brain entropy using fMRI. It uses several functions from ASLtbx. At its core, the toolkit is a collection of batch scripts that implement a pipeline for processing fMRI data in order to get Sample entropy for each voxel.

Abbreviations: BENtbx

Synonyms: Brain Entropy Mapping Toolbox: BENtbx

Resource Type: data processing software, image processing software, software application, software resource, software toolkit

Defining Citation: [PMID:24657999](#)

Keywords: brain, entropy, fmri, mapping, software toolkit, image processing software

Availability: Acknowledgement required, Register to download application and sample data

Resource Name: Brain Entropy Mapping Toolbox

Resource ID: SCR_014470

License: GPL

Record Creation Time: 20220129T080320+0000

Record Last Update: 20260912T195817+0000

Ratings and Alerts

No rating or validation information has been found for Brain Entropy Mapping Toolbox.

No alerts have been found for Brain Entropy Mapping Toolbox.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 12 mentions in open access literature.

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

Chang D, et al. (2024) Older is order: entropy reduction in cortical spontaneous activity marks healthy aging. BMC neuroscience, 25(1), 74.

Liu H, et al. (2023) Immediate visual reproduction negatively correlates with brain entropy of parahippocampal gyrus and inferior occipital gyrus in bipolar II disorder adolescents. BMC psychiatry, 23(1), 515.

Nezafati M, et al. (2020) Functional MRI Signal Complexity Analysis Using Sample Entropy. Frontiers in neuroscience, 14, 700.

Wang Z, et al. (2020) Brain Entropy Mapping in Healthy Aging and Alzheimer's Disease. Frontiers in aging neuroscience, 12, 596122.

Zhou M, et al. (2019) Resting-state brain entropy in right temporal lobe epilepsy and its relationship with alertness. Brain and behavior, 9(11), e01446.

Xue SW, et al. (2019) Disrupted Brain Entropy And Functional Connectivity Patterns Of Thalamic Subregions In Major Depressive Disorder. Neuropsychiatric disease and treatment, 15, 2629.

Saxe GN, et al. (2018) Brain entropy and human intelligence: A resting-state fMRI study. PloS one, 13(2), e0191582.

Chang D, et al. (2018) Caffeine Caused a Widespread Increase of Resting Brain Entropy. Scientific reports, 8(1), 2700.

Chang D, et al. (2018) Smoking Cessation With 20 Hz Repetitive Transcranial Magnetic Stimulation (rTMS) Applied to Two Brain Regions: A Pilot Study. Frontiers in human neuroscience, 12, 344.

Wang Z, et al. (2017) A hypo-status in drug-dependent brain revealed by multi-modal MRI. Addiction biology, 22(6), 1622.

Zhou F, et al. (2016) Resting State Brain Entropy Alterations in Relapsing Remitting Multiple Sclerosis. PloS one, 11(1), e0146080.

Zhou F, et al. (2016) Temporal regularity of intrinsic cerebral activity in patients with chronic primary insomnia: a brain entropy study using resting-state fMRI. *Brain and behavior*, 6(10), e00529.