

Resource Summary Report

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Brain Connectivity Toolbox

RRID:SCR_004841

Type: Tool

Proper Citation

Brain Connectivity Toolbox (RRID:SCR_004841)

Resource Information

URL: <http://www.brain-connectivity-toolbox.net>

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Description: A large selection of complex network measures in Matlab that are increasingly used to characterize structural and functional brain connectivity datasets. Several people have contributed to the toolbox, and if you wish to contribute with a new function or set of functions, please contact Olaf Sporns. All efforts have been made to avoid errors, but users are strongly urged to independently verify the accuracy and suitability of toolbox functions for the chosen application. Please report bugs or substantial improvements.

Abbreviations: BCT

Resource Type: software resource, software toolkit

Defining Citation: [PMID:19819337](#)

Keywords: brain, connectivity, matlab, brain network, c++, structure, function, brain connectivity, matlab, magnetic resonance, os independent, statistical operation

Funding: CSIRO ICT Centre scholarship ;
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Resource Name: Brain Connectivity Toolbox

Resource ID: SCR_004841

Alternate IDs: nlx_143925

Alternate URLs: <http://www.nitrc.org/projects/bct>

Record Creation Time: 20220129T080226+0000

Record Last Update: 20260905T133234+0000

Ratings and Alerts

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

No alerts have been found for Brain Connectivity Toolbox.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 370 mentions in open access literature.

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

Duenki T, et al. (2026) Multi-organoid loop cerebral connectoids exhibit enhanced neuronal network dynamics and sequence-specific entrainment. *Communications biology*, 9(1).

Zhang Q, et al. (2026) Thalamic organization differentially contributes to clinical conditions in epilepsy. *Communications medicine*, 6(1).

Shi K, et al. (2026) Brain network characteristics and behavioral correlations in global developmental delay based on functional near-infrared spectroscopy. *iScience*, 29(4), 115301.

Wang Z, et al. (2026) Childhood chronic stress associated with abnormal brain white matter networks in first-episode, drug-naïve MDD adolescents: a machine learning study. *Frontiers in psychiatry*, 17, 1732661.

Li Y, et al. (2026) Neurophysiological connectomic signatures of consciousness during propofol-induced general anesthesia. *Cell reports. Medicine*, 7(2), 102581.

Elbasheir A, et al. (2026) Associations of Racial Discrimination with Resting-state Network Topology: A Mechanism for Post-traumatic Sensory Disruptions. *Research square*.

Tripodi C, et al. (2026) Affective and cognitive theory of mind and associated brain functional alterations in frontotemporal dementia. *Brain communications*, 8(3), fcag216.

Merritt H, et al. (2026) The dual interpretation of edge time series: Time-varying connectivity versus statistical interaction. *iScience*, 29(6), 115949.

Hosford PS, et al. (2026) Control of representation updating by higher-order thalamus enables history-based decision-making. *Neuron*.

Jung M, et al. (2026) Resting-state functional connectome correlates of suicide attempt history and childhood trauma in major depressive disorder. *Journal of affective disorders*, 412, 122111.

Arslan S, et al. (2025) Multimodal prediction of psychotic-like experiences using elastic net modeling: external validation in a clinical sample. *Psychological medicine*, 55, e346.

Monai E, et al. (2025) Case Report: Electro-cortical network effects of an acute stroke revealed by high-density electroencephalography. *Frontiers in neuroscience*, 19, 1486249.

McIntyre CC, et al. (2025) Triple network dynamics and future alcohol consumption in adolescents. *Alcohol, clinical & experimental research*, 49(6), 1206.

Wainstein G, et al. (2025) Evidence from pupillometry, fMRI, and RNN modelling shows that gain neuromodulation mediates task-relevant perceptual switches. *eLife*, 13.

Aghamoosa S, et al. (2025) Accelerated iTBS-Induced changes in resting-state functional connectivity correspond with cognitive improvement in amnesic MCI. *Brain stimulation*, 18(3), 957.

Dong Y, et al. (2025) Effects of tDCS of the DLPFC on brain networks: A hybrid brain modeling study. *PLoS computational biology*, 21(9), e1013486.

Cheung CY, et al. (2025) Individualized connectomic tACS immediately improves oscillatory network with language facilitation in post-stroke aphasia: a feasibility study of a dysfuncome-based targeting approach. *Frontiers in computational neuroscience*, 19, 1635497.

Roshanaei M, et al. (2025) EEG-based functional and effective connectivity patterns during emotional episodes using graph theoretical analysis. *Scientific reports*, 15(1), 2174.

Zhu X, et al. (2025) Modulation of brain oscillations by continuous theta burst stimulation in patients with insomnia. *Translational psychiatry*, 15(1), 416.

Liu L, et al. (2025) Tripartite organization of brain state dynamics underlying spoken narrative comprehension. *eLife*, 13.