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 toolkit, software resource

Defining Citation: PMID:19819337

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

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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

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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 307 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

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

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

Wang X, et al. (2024) The dynamics of functional brain network segregation in feedback-driven learning. Communications biology, 7(1), 531.

Kim YW, et al. (2024) The Importance of Low-frequency Alpha (8-10 Hz) Waves and Default Mode Network in Behavioral Inhibition. Clinical psychopharmacology and neuroscience : the official scientific journal of the Korean College of Neuropsychopharmacology, 22(1), 53.

Zhang JJ, et al. (2024) Modulating low-frequency oscillations in post-stroke brains using priming intermittent theta burst stimulation. European journal of physical and rehabilitation medicine, 60(4), 591.

Tan L, et al. (2024) Exploring brain network oscillations during seizures in drug-naïve patients with juvenile absence epilepsy. Frontiers in neurology, 15, 1340959.

Jakimovski D, et al. (2024) Human restricted CHRFAM7A gene increases brain efficiency. Frontiers in neuroscience, 18, 1359028.

Chopra S, et al. (2024) The Transdiagnostic Connectome Project: a richly phenotyped open

dataset for advancing the study of brain-behavior relationships in psychiatry. medRxiv : the preprint server for health sciences.

Cai M, et al. (2024) Structural Network Efficiency Predicts Conversion to Incident Parkinsonism in Patients With Cerebral Small Vessel Disease. The journals of gerontology. Series A, Biological sciences and medical sciences, 79(1).

Habich A, et al. (2024) Grey matter networks in women and men with dementia with Lewy bodies. NPJ Parkinson's disease, 10(1), 84.

de Jong JJA, et al. (2024) Effect of Magnetic Resonance Image Quality on Structural and Functional Brain Connectivity: The Maastricht Study. Brain sciences, 14(1).

Luo Z, et al. (2024) Frequency-specific segregation and integration of human cerebral cortex: An intrinsic functional atlas. iScience, 27(3), 109206.

Krohn S, et al. (2023) A spatiotemporal complexity architecture of human brain activity. Science advances, 9(5), eabq3851.

Li Z, et al. (2023) Locating causal hubs of memory consolidation in spontaneous brain network in male mice. Nature communications, 14(1), 5399.

Han Z, et al. (2023) Investigating the heterogeneity within the somatosensory-motor network and its relationship with the attention and default systems. PNAS nexus, 2(9), pgad276.

Soleimani N, et al. (2023) Altered brain structural and functional connectivity in cannabis users. Scientific reports, 13(1), 5847.

Zandbagleh A, et al. (2023) Graph-based analysis of EEG for schizotypy classification applying flicker Ganzfeld stimulation. Schizophrenia (Heidelberg, Germany), 9(1), 64.

Spetsieris PG, et al. (2023) Parkinson's disease progression: Increasing expression of an invariant common core subnetwork. NeuroImage. Clinical, 39, 103488.

Tu JC, et al. (2023) Increasing hub disruption parallels dementia severity in autosomal dominant Alzheimer disease. bioRxiv : the preprint server for biology.

Litwi?czuk MC, et al. (2023) Using graph theory as a common language to combine neural structure and function in models of healthy cognitive performance. Human brain mapping, 44(8), 3007.