Resource Summary Report

Generated by NIF on May 4, 2025

Cortical connectivity data sets

RRID:SCR_003190
Type: Tool

Proper Citation

Cortical connectivity data sets (RRID:SCR_003190)

Resource Information

URL: https://sites.google.com/site/bctnet/datasets

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Description: THIS RESOURCE IS NO LONGER IN SERVICE. Documented on January 5, 2023. This site has a collection of cortical connectivity datasets and modeling software components that can be downloaded and used for modeling of cortical circuits. The toolbox combines Matlab functions and neuroanatomical data sets useful in the analysis of structural or functional brain networks. Several people have made contributions and if you wish to contribute yourself with a new function or set of functions please contact osporns_at_indiana.edu.The following is a collection of commonly used large scale cortical connectivity data sets compiled from tract-tracing studies. Hence nodes represent cortical areas and links represent large cortico-cortical tracts. * macaque71.mat (BD network). Macaque cortical connectivity: 71 nodes 746 links. Reference: Young (1993). Contributor: OS. Used in e.g. Sporns (2002). * fve30.mat; fve32.mat (BD networks). Two version the macaque visual cortex. fve30.mat: 30 nodes 311 links. fve32.mat: 32 nodes 320 links. Reference: Felleman and van Essen (1991). Contributor: OS. Used in e.g. Sportns et al. (2000) Sporns and Kotter (2004). * macaque47.mat (BD network). Large scale cortico-cortical connectivity matrix of the visual and sensorimotor areas in the macaque. 47 nodes; 505 links. Used in e.g. Honey et al. (2007). Contributor: RK. * cat.mat (WD networks). Connection matrices of cat cortex. CIJall contains all cortical and thalamic areas: 95 nodes 2126 links. CIJctx contains only 52 cortical areas: 52 nodes 820 links. Reference: Scannell et al. (1999). Contributor: OS. Used in e.g. Sporns and Zwi (2004) Sporns and Kotter (2004). * DSIhumanctx.mat (WU networks).

Synonyms: CCDS

Resource Type: simulation software, database, software application, software resource, data or information resource

Keywords: electrophysiology, macaque, modeling, neocortex, physiological model, visual cortex

Funding:

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: Cortical connectivity data sets

Resource ID: SCR_003190

Alternate IDs: nif-0000-00584

Old URLs: http://sites.google.com/a/brain-connectivity-toolbox.net/bct/datasets

Record Creation Time: 20220129T080217+0000

Record Last Update: 20250503T055602+0000

Ratings and Alerts

No rating or validation information has been found for Cortical connectivity data sets.

No alerts have been found for Cortical connectivity data sets.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 5 mentions in open access literature.

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

Chamberlain BP, et al. (2018) Real-time community detection in full social networks on a laptop. PloS one, 13(1), e0188702.

Kim DH, et al. (2017) Enhanced storage capacity with errors in scale-free Hopfield neural networks: An analytical study. PloS one, 12(10), e0184683.

Takaguchi T, et al. (2016) Cycle and flow trusses in directed networks. Royal Society open science, 3(11), 160270.

Singh SS, et al. (2016) Scaling in topological properties of brain networks. Scientific reports, 6, 24926.

Pedersen M, et al. (2015) Increased segregation of brain networks in focal epilepsy: An fMRI graph theory finding. NeuroImage. Clinical, 8, 536.