

Resource Summary Report

Generated by [FDI Lab - SciCrunch.org](https://FDILab.org) on May 17, 2025

Neurophysiological Biomarker Toolbox

RRID:SCR_009612

Type: Tool

Proper Citation

Neurophysiological Biomarker Toolbox (RRID:SCR_009612)

Resource Information

URL: <http://www.nbtwiki.net/>

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Description: An open source Matlab toolbox for the computation and integration of neurophysiological biomarkers. NBT offers a pipeline from data storage to statistics including artifact rejection, signal visualization, biomarker computation, and statistical testing. NBT allows for easy implementation of new biomarkers, and incorporates an online wiki that facilitates collaboration among NBT users including extensive help and tutorials. NBT is specialized in analyzing EEG data, however it allows the processing of any kind of signal. NBT can, e.g., be used to analyze ongoing oscillation between: * Eyes-closed rest of subject populations (e.g., healthy subjects and patients, males vs. females, young vs. old, etc.). * Two experimental condition (e.g., classical eyes-closed rest vs. meditation, or before vs. after consumption of a CNS-active substance (a drug, coffee, nicotine, alcohol, etc.).

Abbreviations: NBT

Synonyms: The Neurophysiological Biomarker Toolbox

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

Keywords: brain vision analyzer data exchange format, database application, edf/bdf/gdf, eeg format, eeg, meg, electrocorticography, egi, fourier time-domain analysis, matlab, os independent, statistical operation, temporal transformation, temporal wavelet analysis, visualization, web service, workflow

Funding:

Availability: GNU General Public License

Resource Name: Neurophysiological Biomarker Toolbox

Resource ID: SCR_009612

Alternate IDs: nlx_155831

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

Record Creation Time: 20220129T080253+0000

Record Last Update: 20250517T055931+0000

Ratings and Alerts

No rating or validation information has been found for Neurophysiological Biomarker Toolbox.

No alerts have been found for Neurophysiological Biomarker Toolbox.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 32 mentions in open access literature.

Listed below are recent publications. The full list is available at [FDI Lab - SciCrunch.org](#).

Deiber MP, et al. (2024) Resting-State EEG Microstates and Power Spectrum in Borderline Personality Disorder: A High-Density EEG Study. Brain topography, 37(3), 397.

Müller AR, et al. (2024) Cannabidiol (Epidyolex®) for severe behavioral manifestations in patients with tuberous sclerosis complex, mucopolysaccharidosis type III and fragile X syndrome: protocol for a series of randomized, placebo-controlled N-of-1 trials. BMC psychiatry, 24(1), 23.

Sysoeva O, et al. (2023) Abnormal spectral and scale-free properties of resting-state EEG in girls with Rett syndrome. Scientific reports, 13(1), 12932.

Sugimura K, et al. (2021) Association between long-range temporal correlations in intrinsic EEG activity and subjective sense of identity. Scientific reports, 11(1), 422.

Buchanan DM, et al. (2021) Elevated and Slowed EEG Oscillations in Patients with Post-

Concussive Syndrome and Chronic Pain Following a Motor Vehicle Collision. *Brain sciences*, 11(5).

Eqlimi E, et al. (2020) EEG Correlates of Learning From Speech Presented in Environmental Noise. *Frontiers in psychology*, 11, 1850.

Deiber MP, et al. (2020) Linking alpha oscillations, attention and inhibitory control in adult ADHD with EEG neurofeedback. *NeuroImage. Clinical*, 25, 102145.

Li X, et al. (2020) A Deep Learning Approach for Mild Depression Recognition Based on Functional Connectivity Using Electroencephalography. *Frontiers in neuroscience*, 14, 192.

Ros T, et al. (2020) PET Imaging of Dopamine Neurotransmission During EEG Neurofeedback. *Frontiers in physiology*, 11, 590503.

Bruining H, et al. (2020) Measurement of excitation-inhibition ratio in autism spectrum disorder using critical brain dynamics. *Scientific reports*, 10(1), 9195.

Nissen TD, et al. (2020) Effects of Vortioxetine and Escitalopram on Electroencephalographic Recordings - A Randomized, Crossover Trial in Healthy Males. *Neuroscience*, 424, 172.

Nakao T, et al. (2019) From neuronal to psychological noise - Long-range temporal correlations in EEG intrinsic activity reduce noise in internally-guided decision making. *NeuroImage*, 201, 116015.

Teixeira Borges AF, et al. (2019) Scaling behaviour in music and cortical dynamics interplay to mediate music listening pleasure. *Scientific reports*, 9(1), 17700.

Irrmischer M, et al. (2018) Strong long-range temporal correlations of beta/gamma oscillations are associated with poor sustained visual attention performance. *The European journal of neuroscience*, 48(8), 2674.

Irrmischer M, et al. (2018) Controlling the Temporal Structure of Brain Oscillations by Focused Attention Meditation. *Human brain mapping*, 39(4), 1825.

Sangiuliano Intra F, et al. (2018) Long-Range Temporal Correlations in Alpha Oscillations Stabilize Perception of Ambiguous Visual Stimuli. *Frontiers in human neuroscience*, 12, 159.

Ros T, et al. (2017) Increased Alpha-Rhythm Dynamic Range Promotes Recovery from Visuospatial Neglect: A Neurofeedback Study. *Neural plasticity*, 2017, 7407241.

Hussain L, et al. (2017) Symbolic time series analysis of electroencephalographic (EEG) epileptic seizure and brain dynamics with eye-open and eye-closed subjects during resting states. *Journal of physiological anthropology*, 36(1), 21.

Krzemiński D, et al. (2017) Breakdown of long-range temporal correlations in brain oscillations during general anesthesia. *NeuroImage*, 159, 146.

Stankovski T, et al. (2017) Neural Cross-Frequency Coupling Functions. *Frontiers in systems*

neuroscience, 11, 33.