Resource Summary Report

Generated by NIF on Aug 19, 2026

BioSig: An Imaging Bioinformatics System for Phenotypic Analysis

RRID:SCR_008428
Type: Tool

Proper Citation

BioSig: An Imaging Bioinformatics System for Phenotypic Analysis (RRID:SCR_008428)

Resource Information

URL: http://biosig.sourceforge.net/

Proper Citation: BioSig: An Imaging Bioinformatics System for Phenotypic Analysis (RRID:SCR_008428)

Description: Software library for processing of electroencephalogram (EEG) and other biomedical signals like electroencephalogram (EEG), electrocorticogram (ECoG), electrocardiogram (ECG), electrooculogram (EOG), electromyogram (EMG), respiration, and so on. Biosig contains tools for quality control, artifact processing, time series analysis, feature extraction, classification and machine learning, and tools for statistical analysis. Many tools are able to handle data with missing values (statistics, time series analysis, machine learning). Another feature is that more then 40 different data formats are supported, and a number of converters for EEG,, ECG and polysomnography are provided. Biosig has been widely used for scientific research on EEG-based BraiN-Computer Interfaces (BCI), sleep research, and ECG and HRV analysis. It provides software interfaces several programming languages (C, C++, Matlab/Octave, Python), and it provides also an interactive viewing and scoring software for adding, and editing of annotations, markers and events.

Abbreviations: BioSig

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

Defining Citation: DOI:10.1109/MC.2008.407

Keywords: application, autocorrelation, bsd, c, c++, connectivity analysis, correlation, cross-correlation, directed transfer analysis, discriminant analysis, domain independent, eeg, meg, electrocorticography, end event related potential, format conversion, german, gnome, granger causality, information theory, kde, linux, matlab, microsoft, multivariate analysis, partial directed coherence, posix/unix-like, python, regression, spectral analysis,

statistical operation, temporal transformation, time domain analysis, win32 (ms windows), windows, electrocorticogram, electrocardiogram, electrooculogram, electromyogram, respiration, signal, processing, biosignal

Availability: Free, Available for download, Freely available

Resource Name: BioSig: An Imaging Bioinformatics System for Phenotypic Analysis

Resource ID: SCR_008428

Alternate IDs: nif-0000-30190

Alternate URLs: http://www.nitrc.org/projects/biosig, https://sources.debian.org/src/biosig-tools/

License: GNU GPL

Record Creation Time: 20220129T080247+0000

Record Last Update: 20260819T044228+0000

Ratings and Alerts

No rating or validation information has been found for BioSig: An Imaging Bioinformatics System for Phenotypic Analysis.

No alerts have been found for BioSig: An Imaging Bioinformatics System for Phenotypic Analysis.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 165 mentions in open access literature.

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

Grassi F, et al. (2026) Meaningless but memorable: Reward associations boost recognition of abstract visual stimuli. Cognitive, affective & behavioral neuroscience, 26(3), 903.

Manivasagam S, et al. (2026) Social learning of emotion and its implication for memory: an ERP study. Scientific reports, 16(1).

Awang D, et al. (2026) Transcriptional mechanisms of hearing acclimatization to high altitude in rats. Scientific reports, 16(1), 4223.

Chen C, et al. (2026) Study on the Mechanism of Hearing Loss Induced by USH2A Gene Knockout. Human mutation, 2026, 8451291.

Cacciato-Salcedo S, et al. (2026) Sex- and etiology-specific effects on predictive processing in the inferior colliculus of two rat models of autism. Communications biology, 9(1).

Greger IH, et al. (2025) 'Mini analysis' misrepresents changes in synaptic properties due to incomplete event detection. The Journal of physiology, 603(22), 7189.

Doornaert EE, et al. (2025) Postnatal environment affects auditory development and sensorimotor gating in a rat model for autism spectrum disorder. Frontiers in neuroscience, 19, 1565919.

Sánchez JS, et al. (2025) Neuronal mismatch responses to auditory stimuli in the dorsal hippocampus of anesthetized rats. Communications biology, 9(1), 110.

Fabrizio-Stover EM, et al. (2025) Sound-evoked plasticity differentiates tinnitus from non-tinnitus mice. Frontiers in neuroscience, 19, 1549163.

Moreland ZG, et al. (2025) Myosin-based nucleation of actin filaments contributes to stereocilia development critical for hearing. Nature communications, 16(1), 947.

McCain KJ, et al. (2025) The Contribution of the Koniocellular Visual Pathway to Aversive Learning in Human Visual Cortex. bioRxiv : the preprint server for biology.

Czepiel AM, et al. (2025) Audio-visual concert performances synchronize audience's heart rates. Annals of the New York Academy of Sciences, 1543(1), 117.

Awang D, et al. (2025) CircRNA-miRNA-mRNA regulatory network in high-altitude hypobaric hypoxia-induced hearing impairment and hearing acclimatization. Brazilian journal of otorhinolaryngology, 91(2), 101557.

Shen M, et al. (2025) Mesoporous Silica Nanoparticles for Quercetin-Controlled Delivery to Protect Cisplatin-Induced Ototoxicity. ACS applied bio materials, 8(11), 10419.

Oestreicher D, et al. (2024) CaBP1 and 2 enable sustained CaV1.3 calcium currents and synaptic transmission in inner hair cells. eLife, 13.

Hartig EI, et al. (2024) Proteins required for stereocilia elongation during mammalian hair cell development ensure precise and steady heights during adult life. Proceedings of the National Academy of Sciences of the United States of America, 121(40), e2405455121.

Chokr SM, et al. (2024) Loss of C1q alters the auditory brainstem response. Frontiers in cellular neuroscience, 18, 1464670.

Grassi F, et al. (2024) Relevance acquisition through motivational incentives: Modeling the time-course of associative learning and the role of visual features. Imaging neuroscience (Cambridge, Mass.), 2.

Martinez-Lizana E, et al. (2024) Resting state connectivity biomarkers of seizure freedom after epilepsy surgery. NeuroImage. Clinical, 44, 103673.

Pérez-González D, et al. (2024) Acetylcholine modulates the precision of prediction error in the auditory cortex. eLife, 12.