

Resource Summary Report

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Spike Train Analysis Software by Attila Szucs: Orbital Spike 4

RRID:SCR_001868

Type: Tool

Proper Citation

Spike Train Analysis Software by Attila Szucs: Orbital Spike 4 (RRID:SCR_001868)

Resource Information

URL: <http://www.blki.hu/~szucs/OS3.html>

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Description: Orbital Spike is a tool for time series analysis. It contains a wide range of methods to analyze data from point processes such as spike arrival times, heart beats or other behavioral episodes. It is optimized this program for spike trains but it works with other types of data, too. The program can analyze up to 8 channels recorded simultaneously each containing a maximum of 132,000 events (spikes). Assuming an average firing rate of 10 Hz for a neuron, you can then analyze a time series of approximately 3 and half hours long. There are up to 8 panels shown in the Orbital Spike desktop. The panels will contain the kind of data of interest. The graphs are associated with a bunch of parameters like window width, bin size, resolution, delay etc. All these parameters are listed in the parameter box, which appears on the right side of the desktop. It is pretty easy to change the parameters and what is nice, the corresponding graph(s) will be recalculated immediately. You can also use a dialog box to change parameters. There are a lot of functions, statistics, graphs and diagrams available. A few of them are: * Interspike interval sequences * ISI Poincar * maps or return maps Instantaneous firing rate * ISI histograms and probability densities * Joint ISI and MSI probability densitograms * Autocorrelation, crosscorrelation * Spike density functions using kernel estimators * Fourier-amplitude spectrum and spectrogram * Symbolic maps, recurrence plots * Phase plots of spike density functions Sponsors: Support for this work came from the U.S. Department of Energy, Office of Basic Energy Sciences, Division of Engineering and Geosciences, under Grants DE-FG03-90ER14138 and DE-FG03-96ER14592; from the Office of Naval Research under Grant N00014-00-1-0181; from the National Science Foundation under Grant PHY0097134; from the National Institutes of Health under Grants R01 NS-40110-01A2 and 1R01 NS-40110; and from the Army Research Office under Contract DAAD19-01-1-0026. R. D. Pinto was supported by the State of Sao Paulo Research Foundation (FAPESP).

Synonyms: Orbital Spike 4

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

Keywords: firing rate, fourier-amplitude spectrum, analyze, behavioral episode, density, interspike interval sequence, neuron, spectrogram, spike

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: Spike Train Analysis Software by Attila Szucs: Orbital Spike 4

Resource ID: SCR_001868

Alternate IDs: nif-0000-10433

Record Creation Time: 20220129T080210+0000

Record Last Update: 20260903T234506+0000

Ratings and Alerts

No rating or validation information has been found for Spike Train Analysis Software by Attila Szucs: Orbital Spike 4.

No alerts have been found for Spike Train Analysis Software by Attila Szucs: Orbital Spike 4.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

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

Fekete EM, et al. (2011) Systemic urocortin 2, but not urocortin 1 or stressin 1-A, suppresses feeding via CRF2 receptors without malaise and stress. British journal of pharmacology, 164(8), 1959.