Resource Summary Report

Generated by NIF on Apr 17, 2025

Centroid Trajectory Analysis

RRID:SCR_006331
Type: Tool

Proper Citation

Centroid Trajectory Analysis (RRID:SCR_006331)

Resource Information

URL: http://buridan.sourceforge.net/

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Description: Open source software written in R that tracks a single animal walking in a homogenous environment (Buritrack) and analyzes its trajectory. It extracts eleven metrics and includes correlation analyses and a Principal Components Analysis (PCA). It was designed to be easily customized to personal requirements. In combination with inexpensive hardware, these tools can readily be used for teaching and research purposes. Buritrack is a program to track individual Drosophila fruit flies online with any camera as they walk in Buridan's paradigm. The program extracts the coordinate locations of the fly and stores them in a text file.

Abbreviations: CeTrAn

Synonyms: CeTrAn: centroid trajectory analysis

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

Defining Citation: PMID:22912692

Keywords: trajectory, buridan, principal components analysis, correlation analysis, buridan's paradigm, locomotion, software, tracking, drosophila

Funding: Swiss National Science Foundation PA00P3_124141;
EPSRC EP/F030673/1

Availability: Open source, Available for Mac and PC, Source code available for download

Resource Name: Centroid Trajectory Analysis

Resource ID: SCR_006331

Alternate IDs: nlx_152033

Record Creation Time: 20220129T080235+0000

Record Last Update: 20250417T065243+0000

Ratings and Alerts

No rating or validation information has been found for Centroid Trajectory Analysis.

No alerts have been found for Centroid Trajectory Analysis.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 9 mentions in open access literature.

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

Bengochea M, et al. (2023) Numerical discrimination in Drosophila melanogaster. Cell reports, 42(7), 112772.

Steymans I, et al. (2021) Collective action or individual choice: Spontaneity and individuality contribute to decision-making in Drosophila. PloS one, 16(8), e0256560.

Tainton-Heap LAL, et al. (2021) A Paradoxical Kind of Sleep in Drosophila melanogaster. Current biology : CB, 31(3), 578.

Damrau C, et al. (2021) Sensitivity to expression levels underlies differential dominance of a putative null allele of the Drosophila t?h gene in behavioral phenotypes. PLoS biology, 19(5), e3001228.

Palazzo O, et al. (2020) Identification of FoxP circuits involved in locomotion and object fixation in Drosophila. Open biology, 10(12), 200295.

Coelho DS, et al. (2018) Culling Less Fit Neurons Protects against Amyloid-?-Induced Brain Damage and Cognitive and Motor Decline. Cell reports, 25(13), 3661.

Gorostiza EA, et al. (2016) A decision underlies phototaxis in an insect. Open biology, 6(12).

Colomb J, et al. (2014) Sub-strains of Drosophila Canton-S differ markedly in their locomotor behavior. F1000Research, 3, 176.

Colomb J, et al. (2012) Open source tracking and analysis of adult Drosophila locomotion in Buridan's paradigm with and without visual targets. PloS one, 7(8), e42247.