Resource Summary Report

Generated by Kravitz on Sep 10, 2026

ORION Software

RRID:SCR_004389
Type: Tool

Proper Citation

ORION Software (RRID:SCR_004389)

Resource Information

URL: http://cbl.uh.edu/ORION/research/software

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Description: ORION is our neuron reconstruction software package developed for the morphological reconstruction of neurons from confocal and multiphoton microscopy data. It accepts raw neuron stack data as input and it is capable of reconstructing the neuron structure, visualizing the output, and exporting the reconstruction in a variety of formats. We are developing tools that will enable Neuroscientists to explore single neuron function via sophisticated image analysis. Advanced optical imaging can produce both structural and functional data and is at the forefront of experimentally exploring the fast, small-scale dynamics of living neurons. Further, compartmental modeling of neuronal function enables rapid testing of hypotheses and estimating experimentally inaccessible parameters. Combining these two techniques will afford unprecedented capabilities in the study of single neuron function. Our software utility bridges the two Neuroscience techniques by rapidly, accurately, and robustly generating, from structural image data, a cylindrical morphology model suitable for simulating neuronal function.

Resource Type: service resource, software resource

Funding: University of Houston; Texas; USA ;
NIA RO1-AG027577;
NSF IIS-0431144;
NSF IIS-0638875;
NSF DMS-0915242

Resource Name: ORION Software

Resource ID: SCR_004389

Alternate IDs: nlx_40212

Record Creation Time: 20220129T080224+0000

Record Last Update: 20260905T133232+0000

Ratings and Alerts

No rating or validation information has been found for ORION Software.

No alerts have been found for ORION Software.

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 Kravitz .

Hernandez-Herrera P, et al. (2016) Multi-scale segmentation of neurons based on one-class classification. Journal of neuroscience methods, 266, 94.