

Resource Summary Report

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Calcium Imaging data Analysis

RRID:SCR_021533

Type: Tool

Proper Citation

Calcium Imaging data Analysis (RRID:SCR_021533)

Resource Information

URL: <https://github.com/flatironinstitute/CalmAn>

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Description: Open source software tool for scalable calcium imaging data analysis. Used for large scale calcium imaging analysis, including movie handling, motion correction, source extraction, spike deconvolution and result visualization.

Abbreviations: CalmAn

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

Defining Citation: [DOI:10.7554/elife.38173](https://doi.org/10.7554/elife.38173)

Keywords: calcium imaging analysis, movie handling, motion correction, source extraction, spike deconvolution, result visualization, OpenBehavior

Availability: Free, Available for download, Freely Available

Resource Name: Calcium Imaging data Analysis

Resource ID: SCR_021533

Alternate URLs: <https://edspace.american.edu/openbehavior/project/caiman/>

License: GNU General Public License

Record Creation Time: 20220129T080356+0000

Record Last Update: 20260805T044450+0000

Ratings and Alerts

No rating or validation information has been found for Calcium Imaging data Analysis.

No alerts have been found for Calcium Imaging data Analysis.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 37 mentions in open access literature.

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

Oesch LT, et al. (2025) Anterior cingulate cortex mixes retrospective cognitive signals and ongoing movement signatures during decision-making. Research square.

Huang TN, et al. (2025) Low-dose mixtures of dietary nutrients ameliorate behavioral deficits in multiple mouse models of autism. PLoS biology, 23(12), e3003231.

Zhu MY, et al. (2025) A Neural Circuit For Bergamot Essential Oil-Induced Anxiolytic Effects. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 12(1), e2406766.

Velez-Angel N, et al. (2025) Optogenetic interrogation of the zebrafish lateral line reveals brain-wide neural circuits involved in pattern separation. iScience, 28(12), 114192.

Oesch LT, et al. (2025) Anterior cingulate cortex mixes retrospective cognitive signals and ongoing movement signatures during decision-making. bioRxiv : the preprint server for biology.

Hatakeyama A, et al. (2025) Protocol for wide-field brainstem imaging largely preserving the overlying cerebellum. STAR protocols, 6(4), 104258.

Lo H, et al. (2025) Feeding-induced olfactory cortex suppression reduces satiation. Neuron, 113(17), 2856.

Ogg MC, et al. (2025) Locus coeruleus norepinephrine neurons facilitate orbitofrontal cortex remapping and behavioral flexibility. Cell reports, 44(12), 116687.

Kohn NK, et al. (2025) Dendritic architecture enables de novo computation of salient motion in the superior colliculus. Current biology : CB, 35(16), 3799.

Shymkiv Y, et al. (2025) Slow cortical dynamics generate context processing and novelty detection. Neuron, 113(6), 847.

Bao Y, et al. (2024) Accurate neuron segmentation method for one-photon calcium imaging videos combining convolutional neural networks and clustering. Communications biology, 7(1), 970.

Reising JP, et al. (2024) Astrocytic Calcium Signaling Toolkit (astroCaST): efficient analysis of dynamic astrocytic calcium events. *Frontiers in cellular neuroscience*, 18, 1408607.

Baker CM, et al. (2024) A Semi-supervised Pipeline for Accurate Neuron Segmentation with Fewer Ground Truth Labels. *eNeuro*, 11(2).

Zhao P, et al. (2024) MiniXL: An open-source, large field-of-view epifluorescence miniature microscope for mice capable of single-cell resolution and multi-brain region imaging. *bioRxiv : the preprint server for biology*.

Benezra SE, et al. (2024) Learning enhances behaviorally relevant representations in apical dendrites. *eLife*, 13.

Stempel AV, et al. (2024) Tonically active GABAergic neurons in the dorsal periaqueductal gray control instinctive escape in mice. *Current biology : CB*, 34(13), 3031.

de Malmazet D, et al. (2024) Retinal origin of orientation but not direction selective maps in the superior colliculus. *Current biology : CB*, 34(6), 1222.

Obara K, et al. (2023) Change detection in the primate auditory cortex through feedback of prediction error signals. *Nature communications*, 14(1), 6981.

Yang JY, et al. (2023) Restructuring of olfactory representations in the fly brain around odor relationships in natural sources. *bioRxiv : the preprint server for biology*.

Lloyd E, et al. (2023) A protocol for whole-brain Ca²⁺ imaging in *Astyanax mexicanus*, a model of comparative evolution. *STAR protocols*, 4(4), 102517.