Resource Summary Report

Generated by NIF on Apr 16, 2025

Buzsaki Lab

RRID:SCR_008020
Type: Tool

Proper Citation

Buzsaki Lab (RRID:SCR_008020)

Resource Information

URL: http://www.buzsakilab.com/

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Description: Lab interested in understanding how neuronal circuitries of the brain support its cognitive capacities. Its goal is to provide rational, mechanistic explanations of cognitive functions at a descriptive level. In the lab''s view, the most promising area of cognitive faculties for scientific inquiry is memory, since it is a well-circumscribed term, can be studied in animals and substantial knowledge has accumulated on the molecular mechanisms of synaptic plasticity. Available software: * NeuroScope: NeuroScope can display local field potentials (EEG), neuronal spikes, behavioral events, as well as the position of the animal in the environment. It also features limited editing capabilities. * Klusters: Klusters is a powerful and easy-to-use cluster cutting application designed to help neurophysiologists sort action potentials from multiple neurons on groups of electrodes (e.g., tetrodes or multisite silicon probes). * KlustaKwik: KlustaKwik is a program for automatic cluster analysis, specifically designed to run fast on large data sets. * MATLAB m-files: A selection of MATLAB files developed in the lab.

Abbreviations: Buzsaki Lab

Synonyms: Buzsaki''s Lab

Resource Type: software resource, data or information resource, laboratory portal, data analysis software, software application, organization portal, data processing software, portal

Keywords: eeg, electrode, environment, funtion, animal, application, behavioral, brain, capacity, circuit, cluster, cognitive, hippocampal, hippocampus, laboratory, local field potential, mechanism, memory, molecular, neuron, neuronal, plasticity, research, scientific, spike, synaptic, tetrode

Funding:

Resource Name: Buzsaki Lab

Resource ID: SCR_008020

Alternate IDs: nif-0000-10182

Old URLs: http://osiris.rutgers.edu/frontmid/indexmid.html

Record Creation Time: 20220129T080245+0000

Record Last Update: 20250416T063510+0000

Ratings and Alerts

No rating or validation information has been found for Buzsaki Lab.

No alerts have been found for Buzsaki Lab.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 15 mentions in open access literature.

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

Mercier O, et al. (2024) Transient demyelination causes long-term cognitive impairment, myelin alteration and network synchrony defects. Glia, 72(5), 960.

Huang X, et al. (2023) Distinct spatial maps and multiple object codes in the lateral entorhinal cortex. Neuron, 111(19), 3068.

Yaghmazadeh O, et al. (2022) Neuronal activity under transcranial radio-frequency stimulation in metal-free rodent brains in-vivo. Communications engineering, 1.

Oberto VJ, et al. (2022) Distributed cell assemblies spanning prefrontal cortex and striatum. Current biology : CB, 32(1), 1.

Hagen E, et al. (2021) RippleNet: a Recurrent Neural Network for Sharp Wave Ripple (SPW-R) Detection. Neuroinformatics, 19(3), 493.

Sharif F, et al. (2021) Subcircuits of Deep and Superficial CA1 Place Cells Support Efficient Spatial Coding across Heterogeneous Environments. Neuron, 109(2), 363.

Vicente AF, et al. (2020) In Vivo Characterization of Neurophysiological Diversity in the Lateral Supramammillary Nucleus during Hippocampal Sharp-wave Ripples of Adult Rats. Neuroscience, 435, 95.

Angulo-Garcia D, et al. (2020) Cell Assemblies in the Cortico-Hippocampal-Reuniens Network during Slow Oscillations. The Journal of neuroscience : the official journal of the Society for Neuroscience, 40(43), 8343.

Senzai Y, et al. (2019) Layer-Specific Physiological Features and Interlaminar Interactions in the Primary Visual Cortex of the Mouse. Neuron, 101(3), 500.

Bali ZK, et al. (2019) Facilitation and inhibition of firing activity and N-methyl-D-aspartate-evoked responses of CA1 hippocampal pyramidal cells by alpha7 nicotinic acetylcholine receptor selective compounds in vivo. Scientific reports, 9(1), 9324.

Sales-Carbonell C, et al. (2018) No Discrete Start/Stop Signals in the Dorsal Striatum of Mice Performing a Learned Action. Current biology : CB, 28(19), 3044.

Ferraris M, et al. (2018) The Nucleus Reuniens Controls Long-Range Hippocampo-Prefrontal Gamma Synchronization during Slow Oscillations. The Journal of neuroscience : the official journal of the Society for Neuroscience, 38(12), 3026.

Song YH, et al. (2017) A Neural Circuit for Auditory Dominance over Visual Perception. Neuron, 93(4), 940.

Lalla L, et al. (2017) Local or Not Local: Investigating the Nature of Striatal Theta Oscillations in Behaving Rats. eNeuro, 4(5).

Maurer AP, et al. (2014) Back to the future: preserved hippocampal network activity during reverse ambulation. The Journal of neuroscience : the official journal of the Society for Neuroscience, 34(45), 15022.