The Edmond and Lily Safra Center for Brain Sciences is one of the only places in the world where scientists from different fields work closely together in an interdisciplinary approach towards understanding the brain. Research at ELSC encompasses molecular, cellular, circuit and behavioral levels, with particular emphasis on brain theory and modeling.

Research Topics

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Sensation and Perception
The Sensation & Perception research labs at the Hebrew University focus on how our brain generates a representation of the world around us, combining incoming perceptual information with memory to enable us to act.
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Movement Planning and Control
Scientists at the "Movement Planning and Control" laboratories focus on basic questions such as: How is visual information translated for use by the motor system? How do motor neurons learn new patterns of movement? How and where are learned movements stored in motor memory? A special avenue of research is the development of Brain Machine Interfaces, the control of artificial, robotic limbs through a brain interface.
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Computational Neuroscience
The field of computational neuroscience combines theoretical physics, advanced mathematics and state-of-
the art computer technology to create powerful models of working neural networks,
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Consciousness and Cognition
Researchers at ELSC use advanced EEG and fMRI brain mapping tools to understand what happens in the brain when we become aware of something.
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Neurological Disorders
Scientists at the Hebrew University are making similar advances in diseases as diverse as schizophrenia, depression, and Alzheimer's, and are starting to unravel the mechanisms underlying these illnesses.
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Centers and Units

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Scientists

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  Machine Learning and Computational Biophysics
Prof. Yosef Grodzinsky
Neurolinguistics Lab

Prof. Yair Weiss
Human and machine vision

Prof. Merav Ahissar
Perceptual Plasticity and Cognitive Abilities

Prof. Ehud Zohary
Linking Perception, Memory and Action

Yoram Burak, Ph.D.
Computational Neuroscience and Biophysics
Prof. Eilon Vaadia
Motor Cortex Research Lab

Alexander Binshtok, PhD
Pain Plasticity Research Group

Prof. Shaul Hochstein
Hochstein's web site

Prof. Leon Deouell
Human Cognitive Neuroscience Lab

Prof. Adi Mizrahi
Laboratory of neuronal and circuit plasticity
Prof. Hanoch Gutfreund
ELSC Faculty member

Prof. Baruch Minke
Baruch Minke's web site

Prof. Chaya Kalcheim
Developmental Neurobiology Lab

Ami Citri, Ph.D.
Experience-Dependent Plasticity in Reward Circuits

Prof. Idan Segev
The Lab for Understanding Neurons
Mati Joshua, Ph.D.
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Prof. Eran Meshorer
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Prof. Amir Amedi
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Prof. Leo Joskowicz
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Professor of Molecular Neuroscience
Prof. Yifat Prut
Laboratory of Motor Control

Inbal Goshen, Ph.D
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Cerebellum Lab

Aviv Mezer, Ph.D.
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Prof. Yonatan Loewenstein
Laboratory of Decision Making
Prof. Haim Sompolinsky
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Laboratory of Auditory Neurophysiology

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Interdisciplinary Postdoctoral Program in Brain Sciences
ELSC invites applications for postdoctoral fellows in the following fields: Theoretical and Computational Neuroscience, Systems Neuroscience, Molecular and Cellular Mechanisms, Cognitive Neuroscience, and Neuronal Circuits.

Open positions for a PhD candidate in the laboratories of Prof. Leon Deouell and Dr. Yoni Pertzov

Mid-Career Neuroscientists Positions at ELSC

Publications

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- Elber-Dorozko, L, Loewenstein Y. Submitted Striatal action-value neurons reconsidered.
- Jaffe-Dax, S, Frenkel O, Ahissar M. 2017 Shorter neural adaptation to sounds accounts for dyslexics' abnormal perceptual and reading dynamics. eLife. 6
- Berman, S, West, K, Does, MD, Yeatman, JD, Mezer, AA. 2017 Evaluating g-ratio weighted changes in the corpus callosum as a function of age and sex..

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