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

See all Research Topics

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,

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.

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.

Centers and Units

ELSC Neuroimaging Unit (ENU)

Max Planck Hebrew University Center
New Max-Planck Center with the Hebrew University Jerusalem.

Scientists

See all Investigators

Prof. Eran Meshorer
meshorer's web site
Prof. Yosef Grodzinsky
Neurolinguistics Lab

Prof. Leo Joskowicz
CASMIP Laboratory

Prof. Yonatan Loewenstein
Laboratory of Decision Making

Prof. Haim Sompolinsky
The Neurophysics Lab

Prof. Yifat Prut
Laboratory of Motor Control
Prof. Hermona Soreq
Professor of Molecular Neuroscience

Prof. Yosef Yarom
Cerebellum Lab

Aviv Mezer, Ph.D.
Mezer Lab's web site

Prof. Adi Mizrahi
Laboratory of neuronal and circuit plasticity

Prof. Shaul Hochstein
Hochstein's web site
Prof. Ehud Zohary
Linking Perception, Memory and Action

Prof. Baruch Minke
Baruch Minke's web site

Mickey London, Ph.D
Laboratory of neural coding

Prof. Hagai Bergman
Basal Ganglia Research Lab.

Prof. Yair Weiss
Human and machine vision
Alexander Binshtok, PhD
Pain Plasticity Research Group

Prof. Leon Deouell
Human Cognitive Neuroscience Lab

Prof. Israel Nelken
Laboratory of Auditory Neurophysiology

Prof. Eilon Vaadia
Motor Cortex Research Lab

Prof. Chaya Kalcheim
Developmental Neurobiology Lab
Yoram Burak, Ph.D.
Computational Neuroscience and Biophysics

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

Prof. Amir Amedi
Lab for Multisensory Research

Prof. Merav Ahissar
Perceptual Plasticity and Cognitive Abilities

Positions at ELSC

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Tenure Track Positions at ELSC
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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

Publications

See All Publications

- Shaham, N, Burak Y. Submitted **Slow Diffusive Dynamics in a Chaotic Balanced Neural Network**.
- Mosheiff, N, Agmon H, Moriel A, Burak Y. Submitted **An efficient coding theory for a dynamic trajectory predicts non-uniform allocation of entorhinal grid cells to modules**.
- Grodzinsky, Y, Deschamps I, Shapiro LP. In Press **Patients with Broca’s aphasia and Young Children can reconstruct elided VPs**.
- Jaffe-Dax, S, Frenkel O, Ahissar M. 2017 **Shorter neural adaptation to sounds accounts for dyslexics’ abnormal perceptual and reading dynamics**. eLife. 6
- Jaffe-Dax, S, Lieder I, Biron T, Ahissar M. 2016 **Dyslexics’ usage of visual priors is impaired**. Journal of vision. 16(9):10.
• 2016 Intensified vmPFC surveillance over PTSS under perturbed microRNA-608/AChE interaction. Transl Psychiatry. 6:e801.


ELSC Brochures
Heller Lecture Series in Computational Neuroscience 2010-2011
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Ph.D. Program in Computational Neuroscience Registration Information
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UPCOMING EVENTS

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Studying at ELSC

Our Int’l Ph.D. program provides outstanding students with top-notch courses in computational neuroscience.

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The Building

The Jerusalem Brain Sciences Building will provide a state-of-the-art research and teaching facility for the Edmond and Lily Safra Center for Brain Sciences.

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