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.

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. Leo Joskowicz
CASMIP Laboratory
Inbal Goshen, Ph.D
Goshen's lab web site

Prof. Yosef Grodzinsky
Neurolinguistics Lab

Mickey London, Ph.D
Laboratory of neural coding

Prof. Hermona Soreq
Professor of Molecular Neuroscience

Prof. Yosef Yarom
Cerebellum Lab
Prof. Ehud Zohary
Linking Perception, Memory and Action

Prof. Leon Deouell
Human Cognitive Neuroscience Lab

Prof. Merav Ahissar
Perceptual Plasticity and Cognitive Abilities

Prof. Haim Sompolinsky
The Neurophysics Lab

Prof. Yifat Prut
Laboratory of Motor Control
Prof. Hagai Bergman
Basal Ganglia Research Lab.

Prof. Yonatan Loewenstein
Laboratory of Decision Making

Yoram Burak, Ph.D
Computational Neuroscience and Biophysics

Prof. Eilon Vaadia
Motor Cortex Research Lab

Prof. Baruch Minke
Baruch Minke’s web site
Aviv Mezer, Ph.D.
Mezer Lab's web site

Alexander Binshtok, PhD
Pain Plasticity Research Group

Prof. Yair Weiss
Human and machine vision

Prof. Eran Meshorer
meshorer's web site

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

Prof. Shaul Hochstein
Hochstein's web site

Prof. Israel Nelken
Laboratory of Auditory Neurophysiology

Mati Joshua, Ph.D.
Mati Joshua's Lab

Prof. Amir Amedi
Lab for Multisensory Research
Ami Citri, Ph.D.
Experience-Dependent Plasticity in Reward Circuits

Prof. Chaya Kalcheim
Developmental Neurobiology Lab

Prof. Idan Segev
The Lab for Understanding Neurons

Prof. Naftali Tishby
Machine Learning and Computational Biophysics

Positions at ELSC

New Academic, Tenure Track Positions at ELSC
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
Open positions for a PhD candidate in the laboratories of Prof. Leon Deouell and Dr. Yoni Pertzov

Publications

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• 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
• Israel, Z, Bergman H. 2016 Location, location, location: Validating the position of deep brain stimulation electrodes. Movement disorders : official journal of the Movement Disorder Society. 31(3):259.
• Malkinson, T S, Pertzov Y, Zohary E. 2016 Turning Symbolic: The Representation of Motion Direction in Working Memory.