

David Omer – CV

Date of birth: March 22, 1972
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Education

2015-2019 Post-doctoral fellow, Weizmann Institute of Science, Rehovot, Israel.
2009-2014 Post-doctoral fellow, Max-Planck Institute for Biological Cybernetics, Tübingen, Germany.
2001-2007 Ph.D. in Neurobiology, Weizmann Institute of Science. Rehovot, Israel.
1997-2001 B.Sc. in Medicine, Tel-Aviv University.

Positions

2019-present Assistant Professor, Edmond and Lily Safra Center for Brain Sciences. The Hebrew University of Jerusalem, Jerusalem, Israel.

Peer-reviewed Articles

1. **Omer DB**, Las L, Ulanovsky N (2022) Contextual and pure time coding for self and other in the hippocampus. **Nature Neuroscience**, doi: <http://dx.doi.org/10.1038/s41593-022-01226-y>.
2. Wagner IC, Graichen LP, Todorova B, Lüttig A, **Omer DB**, Stangl M, Lamm C (2022) Entorhinal grid-like codes and time-locked network dynamics track others navigating through space. **Nature Communications** (accepted).
3. **Omer DB**, Zilkha N, Kimchi T (2019) Social Minds Sync Alike. **Cell** 178:272–274.
4. **Omer DB**, Maimon SR, Las L, Ulanovsky N (2018) Social place-cells in the bat hippocampus. **Science** 359:218–224.
5. **Omer DB**, Fekete T, Ulchin Y, Hildesheim R, Grinvald A (2019) Dynamic Patterns of Spontaneous Ongoing Activity in the Visual Cortex of Anesthetized and Awake Monkeys are Different. **Cerebral Cortex** 29:1291–1304.

6. Fekete T, **Omer DB**, O'Hashi K, Grinvald A, van Leeuwen C, Shriki O (2018) Critical dynamics, anesthesia and information integration: Lessons from multi-scale criticality analysis of voltage imaging data. **NeuroImage** 183:919–933.
7. **Omer DB**, Hildesheim R, Grinvald A (2013) Temporally-structured acquisition of multidimensional optical imaging data facilitates visualization of elusive cortical representations in the behaving monkey. **NeuroImage** 82:237–251.
8. Muir DR, Costa NMAD, Girardin CC, Naaman S, **Omer DB**, Ruesch E, Grinvald A, Douglas RJ (2011) Embedding of Cortical Representations by the Superficial Patch System. **Cereb Cortex** 21:2244–2260.
9. Fekete T, Pitowsky I, Grinvald A, **Omer DB** (2009) Arousal increases the representational capacity of cortical tissue. **Journal of Computational Neuroscience** 27:211–227.
10. Fekete T, **Omer DB**, Naaman S, Grinvald A (2009) Removal of spatial biological artifacts in functional maps by local similarity minimization. **Journal of neuroscience methods** 178:31–39.
11. Reidl J, Starke J, **Omer DB**, Grinvald A, Spors H (2007) Independent component analysis of high-resolution imaging data identifies distinct functional domains. **NeuroImage** 34:94–108.
12. Vanzetta I, Slovlin H, **Omer DB**, Grinvald A (2004) Columnar resolution of blood volume and oximetry functional maps in the behaving monkey; implications for FMRI. **Neuron** 42:843–854.

Book Chapters

Grinvald A, Sharon D, **Omer DB**, Vanzetta I, Imaging the neocortex functional architecture using multiple intrinsic signals: implications for hemodynamic-based functional imaging. Cold Spring Harbor Protocols (2016).

Grinvald A, **Omer DB**, Sharon D, Vanzetta I, Hildesheim R, Voltage-sensitive dye imaging of neocortical activity. Cold Spring Harbor Protocols (2016).

Grinvald A, **Omer DB**, Naaman S, Sharon D, Imaging the dynamics of mammalian neocortical population activity in-vivo. In: Membrane Potential Imaging in the Nervous System and Heart, pp 243–271, Springer (2015).

Research Grants

2021—2023 Israel Science Foundation F.I.R.S.T – Bikura, “Measuring eye-gaze in primates during free behavior”.

2021—2022 The Brain and Behavior (NARSAD) Young Investigator Award.

2020 Israel Science Foundation (ISF # 815/20), "Research laboratory for the study of neural mechanisms of primate behavior".

2022-2027 Israel Science Foundation – Individual grant, “The primate hippocampus”.

Memberships & Honors

Society for Neuroscience; Society for Social Neuroscience; International Society for Neuroethology; Israel Society for Neuroscience.

Ad-hoc reviewer: *Frontiers in Neuroscience, Proceedings of the National academy of Science, Nature Scientific Reports.*

- 2020 Golda Meir fellow 2020
- 2019 Selected talk, Ascona 2019 meeting on the assembly and function of neuronal circuits, Ascona, Switzerland.
- 2017 Opening lecture at the Spring Hippocampal Research Conference, Taormina, Italy (2017).
- 2016 Invited talk - International Society for Neuroethology biannual congress, Montevideo, Uruguay (2016).
- 2015 Best Poster Award – ISFN meeting 2015.
- 2015 Shapira fellowship – returning scientist.

Invited Lectures and Seminars

- “Space, Time and Others in the Hippocampus”, Hadassah faculty of medicine, Hebrew university, Jerusalem (May 2020).
- “Episodic cells for self and others in the bat hippocampus”, Ascona meeting on neural circuits, Ascona, Switzerland (November 2019).
- “Space, Time and Others in the bat hippocampus”, Ernst Strüngmann Institute (ESI) for Neuroscience (August 2019).
- “Episodic cells for self and other in the bat hippocampus”, Spring Hippocampal Research Conference (June 2019).
- “Social place-cells in the bat hippocampus”, The George S. Wise Faculty of Life Sciences (May 2019).
- “Social place-cells in the bat hippocampus”, Sackel school of medicine, Israel (June 2019).
- “Episodic cells for self and other in the bat hippocampus”, Israel Society for Neuroscience (ISFN) annual meeting, Eilat (2019).
- “Social place-cells in the bat hippocampus”, Edmond and Lily Safra center for brain sciences, The Hebrew university of Jerusalem Israel (2019).
- “Social place-cells in the bat hippocampus”, The Ruth and Bruce Rappaport faculty of medicine, Technion, Israel (2018).
- “Social place-cells in the bat hippocampus”, Department of life sciences, Ben-Gurion University, Israel (2018).
- “Social place-cells in the bat hippocampus”, Weizmann Institute, Israel (2018).
- “Social place-cells in the bat hippocampus”, Johns Hopkins University (2017).
- “Representation of conspecifics by bat hippocampal place cells”, Spring Hippocampal Research Conference, Taormina, Italy (2017).
- “Where are you? Representation of conspecifics by place-cells in the bat hippocampus”, UC Berkeley (2016).
- “Spatial representation of self and other by bat hippocampal place cells“, Israel Society for Neuroscience (ISFN) annual meeting, Eilat (2016).

“Mirror place cells in the bat hippocampus”, International Society for Neuroethology biannual congress, Montevideo, Uruguay (2016).

“Mirror place cells in the bat hippocampus”, Swift talk presentation, Israel Society for Neuroscience (ISFN) annual meeting, Eilat (2015)

Courses taught

2021 - present “Neuroscience of behavior”, ELSC neuroscience graduate program. The Hebrew University of Jerusalem.

2021 - present “Introduction to neuroscience”, ELSC undergraduate program in exact sciences. The Hebrew University of Jerusalem.

2020 “Selective topics and neuronal computations”, The Hebrew University of Jerusalem.

Scientific organizer

Colloquium in Brain Science, Edmond and Lily Safra Center for Brain Sciences, Hebrew University.