

Israeli Human Neuroimaging 2019

Final oral presentations list

Keynote lecture: The role of the lateral occipitotemporal cortex in action processing – evidence from human fMRI and MEG

Angelika Lingnau, University of Regensburg

Sessions lectures (alphabetical):

1. Bidirectional signal exchanges during joint attention interaction – a hyperscanning fMRI study

Gadi Goelman^{1}, Rotem Dan^{1,2}, Gabriela Stößel^{3‡}, Heike Tost^{4‡}, Andreas Meyer-Lindenberg^{4‡}, Edda Bilek^{4‡}*

¹Department of Neurology, Hadassah Hebrew University Medical Center, ²Edmond and Lily Safra Center for Brain Sciences, the Hebrew University of Jerusalem, Jerusalem, Israel; ³Department of Clinical Psychology, ⁴Department of Psychiatry and Psychotherapy, Central Institute of Mental Health, Medical Faculty Mannheim, University of Heidelberg, Mannheim, Germany.

2. Body Representations in the Blind Brain

Or Yizhar, Amir Amedi*

The Hebrew University of Jerusalem

3. Building an Empathic Brain

Yoni Levy^{1}, Avi Goldstein², Ruth Feldman¹*

¹Interdisciplinary Center Herzliya; ²Bar Ilan University

4. Computerized radiological longitudinal evaluation of brain tumors after stereotactic radiosurgery

Iliia Marek¹, Leo Joskowicz^{1}, Ruth Eliahou², Iddo Paldor², Yigal Shoshan³*

¹School of Computer Science and Engineering, The Hebrew University of Jerusalem, Israel; ²Dept of Neurosurgery, Hadassah Hebrew University Medical Center, Jerusalem, Israel; ³Dept of Neurosurgery, Hadassah Medical Center, Jerusalem, Israel

- 5. Deep TMS over the mPFC and ACC alters brain connectivity and reduces relapse to alcohol use**
Maayan Harel^{1}, Noam Barnea-ygael¹, Hadar Shalev², Itay Besser², Moti Salti^{1,2}, Robin Kampe³, Markus Heilig³, Abraham Zangen¹*
¹Ben-Gurion University of the Negev, Be'er Sheva, Israel; ²Soroka Medical Center, Be'er Sheva, Israel; ³Linköping University Center for Social and Affective Neuroscience (CSAN), Linköping, Sweden.
- 6. Default mode network dynamics predict sequences of cognitive states**
Talia Brandman^{1}, Rafael Malach¹, Erez Simony^{1,2}*
¹Department of Neurobiology, Weizmann Institute of Science; ²Faculty of Engineering, Holon Institute of Technology.
- 7. Disability or Disease: Connectivity Pattern Changes in the Visual Network After Optic Nerve Damage**
Yael Backner^{1}, Friedemann Paul^{2,3}, Netta Levin¹*
¹The fMRI Unit, Department of Neurology, Hadassah-Hebrew University Medical Centre; ²NeuroCure Clinical Research Center, Charité-Universitätsmedizin Berlin, Berlin, Germany; ³Experimental and Clinical Research Center, Max Delbrueck Center for Molecular Medicine and Charité-Universitätsmedizin Berlin, Berlin, Germany.
- 8. Disrupted network topology in premenstrual dysphoric disorder is related to childhood maltreatment**
Rotem Dan^{1,2}, Inbal Reuveni³, Laura Canetti^{3,4}, Marta Weinstock⁵, Ronen Segman³, Gadi Goelman², Omer Bonne³*
¹Edmond and Lily Safra Center for Brain Sciences (ELSC), The Hebrew University of Jerusalem, Jerusalem, Israel; ²Department of Neurology, Hadassah Hebrew University Medical Center, Jerusalem, Israel; ³Department of Psychiatry, Hadassah Hebrew University Medical Center, Jerusalem, Israel; ⁴Department of Psychology, The Hebrew University of Jerusalem, Jerusalem, Israel.
⁵Institute of drug research, The Hebrew University of Jerusalem, Jerusalem, Israel
- 9. Dissociable neural mechanisms of opening vs. closing the gate to working memory**
Gal Nir-Cohen^{1,3}, Yoav Kessler^{2,3}, Tobias Egner⁴*
¹Department of Cognitive and Brain Sciences, Ben-Gurion University of the Negev; ²Department of Psychology, Ben-Gurion University of the Negev, Beer-Sheva, Israel; ³The Zlotowski Center for Neuroscience, Ben-Gurion University of the Negev, Beer-Sheva, Israel; ⁴Center for Cognitive Neuroscience, Department of Psychology and Neuroscience, Duke University.
- 10. Dissociable neural mechanisms of opening vs. closing the gate to working memory**
Gregory Peters-Founshtein^{1}, Tahel Naveh¹, Liran Domachevsky², Amos Korczyn³, David Groshar², Shahar Arzy¹*

¹Hadassah Hebrew University Medical Center, Jerusalem, Israel; ²Department of Nuclear Medicine, Assuta Medical Center, Tel-Aviv, Israel; ³Department of Neurology Tel Aviv University, Tel-Aviv, Israel.

11. Face-Selective Neurons in the Vicinity of the Human Fusiform Face Area

Vadim Axelrod^{1*}, Camille Rozier², Tal Seidel Malkinson², Lionel Naccache^{2,3}

¹Bar Ilan University; ²Institut du Cerveau et de la Moelle Épineuse ICM, Paris, France; ³AP-HP, Groupe hospitalier Pitié-Salpêtrière, Paris, France.

12. Hippocampal subfields maturation and the development of episodic memory in children

Noa Ofen*

Psychology and Life-Span Cognitive Neuroscience Program, Wayne State University, Detroit, MI, USA; Neurobiology and Life Sciences Core Facilities, Weizmann Institute of Science, Israel.

13. Impaired detection of erroneous arithmetic equations in adolescents with prenatal alcohol exposure: An EEG study

Mattan S. Ben-Shachar, Andrea Berger*

Department of Psychology, Ben Gurion University, Beer Sheva, Israel.

14. In-lab pre-registration: time-locking of study plans and hypotheses without preliminary review

Matan Mazor^{1,2}, Noam Mazor³, Roy Mukamel^{1*}

¹School of Psychological Sciences and Sagol School of Neuroscience, Tel Aviv University, Tel Aviv, Israel; ²Institute of Neurology, University College London, London, UK; ³Blavatnik School of Computer Science, Tel Aviv University, Tel Aviv, Israel.

15. Modeling conduction delays in the corpus callosum using MRI-measured g-ratio

Shai Berman*, Shir Filo, Aviv A. Mezer

Edmond and Lily Safra center for Brain Sciences, at the Hebrew University of Jerusalem, Jerusalem, Israel.

16. Non-invasive detection of molecular profiles in the aging human brain

Shir Filo*, Oshrat Shtangel, Aviv A Mezer

The Edmond and Lily Safra Center for Brain Sciences, at the Hebrew University of Jerusalem, Jerusalem, Israel

17. Perturbation training for rehabilitation of dynamic balance in acquired brain injury victims

Joubran Katherin^{1,2*}, Bar-Haim Simona³, Shmuelof Lior¹

¹Brain and Cognitive Sciences, Zlotowski Center for Neuroscience, Ben-Gurion University, of the Negev, Israel; ²Reuth Rehabilitation Hospital, Tel-aviv, Israel; ³Physical Therapy Department at Ben Gurion University of the Negev, Israel.

- 18. Predictive relations between maternal responsiveness, infant neural responses and infant social behavior over the first year of life**
Tahli Frenkel¹, Sophie Rousseau^{1}, Linda Bowman²*
1Ziama Arkin Infancy Institute, Baruch Ivcher School of Psychology, Interdisciplinary Center, Herzliya; ²Department of Psychology and Center for Mind and Brain University of California, Davis.
- 19. Screen Brains: The Relationship between Executive Functions Abilities and Screen Exposure in Children**
Tzipi Horowitz-Kraus^{}*
The Educational Neuroimaging Center, Faculty of Education in Sciences and Technology, Faculty of Biomedical Engineering, Technion Israeli Institute of Technology, Haifa, Israel; Reading and Literacy Discovery Center, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio USA;
- 20. The development of a Hebrew reading brain: The neural changes underlying reading acquisition with missing vowels and abundance of roots**
Tali Bitan^{1}, Yael Weiss², Tammar Truzman³, Bechor Barouch¹, Upasana Nathaniel¹ Tami Katzir⁴*
¹Psychology Dept., IIPDM, University of Haifa, Israel; ²Psychology Dept. University of Texas at Austin, Austin, TX, US; ³Dept. of Communication Sciences and Disorders, University of Haifa, Israel; ⁴Department of Learning Disabilities, The E.J. Safra Brain Research center, University of Haifa, Israel.
- 21. The power of being first: Decoding fMRI signatures of recalling the first item**
Irit Shapira-Lichter^{1}, Vered Bezalel², Gilad Poker³, Noga Oren⁴, Talma Hendler^{2,3}, Itzhak Fried^{3,4}, Antony Wagner⁵*
¹Functional MRI Center, The Cognitive Neurology Clinic and the Neurology Department, Beilinson hospital, Rabin Medical Center, Israel; ²Center for Brain Functions, Wohl Institute for Advanced Imaging, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel; ³Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv 69978, Israel; ⁴Department of Neurosurgery, Tel Aviv Sourasky Medical Center, Tel-Aviv, Israel & Department of Neurosurgery, David Geffen School of Medicine and Semel Institute for Neuroscience, University of California at Los Angeles (UCLA), Los Angeles, CA, USA; ⁵Department of Psychology and Neurosciences Program, Stanford University, Stanford, CA, USA.
- 22. The relationship between neural variability and neural oscillations**
Edan Daniel^{1,2,3, †,}, Thomas Meindertsmas^{4,5,6, †}, Ayelet Arazi^{1,2,3}, Tobias H. Donner^{4,5,6}, Ilan Dinstein^{1,2,3}*
¹Department of brain and cognitive science, Ben Gurion University of the Negev, Beer-Sheva, Israel; ²Department of psychology, Ben Gurion University of the Negev, Beer-Sheva, Israel; ³Zlotowski center for neuroscience, Ben Gurion University of the Negev,

Beer-Sheva, Israel; ⁴Department of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; ⁵Department of Psychology, University of Amsterdam, Amsterdam, The Netherlands; ⁶Amsterdam Brain and Cognition (ABC), University of Amsterdam, Amsterdam, The Netherlands.

23. The representation of composite stimuli in category-selective visual cortex

*Libi Kliger**, Galit Yovel
Tel Aviv University, Israel.

24. Tractography delineation of the vertical occipital fasciculus using quantitative T1 mapping

*Roey Schurr**, Aviv A. Mezer
Edmond & Lily Safra Center for Brain Sciences, The Hebrew University of Jerusalem, Israel.

25. Traumatic Brain Injury Severity in a Network Perspective: A Diffusion MRI Based Connectome Study

Reut Raizman^{1,2}, Ido Tavor^{2,3}, Anat Biegon⁴, Sagi Harnof^{2,5}, Chen Hoffmann^{1,2}, Galia Tsarfaty^{1,2}, Eyal Fruchter⁶, Lucian Tatsa-Laur⁶, Mark Weiser^{2,7}, Abigail Livny^{1,2,8}*
¹Division of Diagnostic Imaging, Sheba Medical Center, Tel-Hashomer, Israel; ²Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel; ³Sagol School of neuroscience, Tel-Aviv University, Tel-Aviv, Israel; ⁴Department of Radiology and Neurology, Stony Brook University School of Medicine, New York, USA; ⁵Department of Neurosurgery, Rabin Medical Center, Belinson, Israel; ⁶Department of Mental Health, Israel Defense Forces, Medical Corps, Tel Hashomer, Israel; ⁷Department of Psychiatry, Sheba Medical Center, Tel Hashomer, Israel; ⁸The Joseph Sagol Neuroscience Center, Sheba Medical Center, Tel Hashomer, Israel.

‡ = equal contribution * = Speaker