Last update: 2024-12-02

EREZ FREUD, Ph.D.
Associate Professor & York Research Chair in Visual Cognitive Neuroscience

Summary

Dr. Erez Freud is an expert in visual cognitive neuroscience, with extensive experience in advancing our understanding of object recognition, visuomotor control, and the neural mechanisms underlying perception and action. As an Associate Professor and York Research Chair at York University, Dr. Freud has developed a highly impactful research program, combining behavioral experiments, neuroimaging, and neuropsychological investigations. His work has not only contributed to the scientific community through numerous high-impact publications but also through his dedicated mentorship of emerging scholars.

I. CONTACT

Department of Psychology and the Centre for Vision Research
Sherman Health Science Centre 1008
York University
Toronto, Ontario Canada M3J 1P3

II. DEGREES:

Ben-Gurion University of the Negev, Israel
PhD in Psychology
August 2015

Ben-Gurion University of the Negev, Israel
MA in Psychology (*Summa Cum Laude)*
August 2011

Ben-Gurion University of the Negev, Israel
BA in Behavioral sciences (*Cum Laude)*
August 2009

III. EMPLOYMENT HISTORY:

Associate Professor *July 2023- present*
Department of Psychology, York University
Toronto, ON

Affiliations
Graduate Programme in Psychology, York University
Graduate Programme in Biology, York University

Graduate Neuroscience Diploma, York University
Faculty Member, Centre for Vision Research, York University
Core member, Vision-Science to Application (VISTA), York University

Assistant Professor *July 2018- July 2023*
Department of Psychology, York University
Toronto, ON

Post-Doctoral Fellow – *Aug 2015- July 2018*
Department of Psychology and Center for the Neural Basis of Cognition, Carnegie Mellon University, Pittsburgh, PA, USA

IV. HONOURS AND AWARDS:

2024-2029: York Research Chair in Visual Cognitive Neuroscience, York University
2017: Israel Scientific Foundation (ISF) Post-Doctoral Fellowship ($40,000)
2015: Rothschild Foundation Post-Doctoral Fellowship ($60,000)
2015: Cognitive Neuropsychology travel award for outstanding research by an early-stage researcher in the field of cognitive neuropsychology.
2015: Ben-Gurion University Rector award for excellent PhD students
2015: Travel grant in memory of Prof. Shlomo Bentin
2014: Travel grant from the National Institute of Psychobiology in Israel
2014: Recipient of the Prof. Marianne Amir award for academic achievements for PhD students
2013: Faculty of Humanities and Social Sciences award for the best student's publication.
2012: Zlotowski center for Neuroscience scholarship for excelled PhD students (1 year).
2011: The Negev scholarship for outstanding PhD student (4 years).

V. SCHOLARLY AND PROFESSIONAL CONTRIBUTIONS:

PUBLICATIONS REFEREED JOURNALS

Trainees (at the time of project) are underlined

1. Granovetter, M. C., Maallo, A. M. S., Ling, S., Robert, S., **Freud, E.,** Patterson, C., & Behrmann, M. (2024). Functional resilience of the neural visual recognition system post-pediatric occipitotemporal resection. *iScience*. https://doi.org/10.1016/j.isci.2024.111440

2. Luabeya, G. N., Yan, X., **Freud, E.,** & Crawford, J. D. (2024). Influence of gaze, vision, and memory on hand kinematics in a placement task. Journal of Neurophysiology, 132(1), 147-161.

3. Goldstein-Marcusohn, Y., Asaad, R., Asaad, L., & **Freud, E.** (2024). The large-scale organization of shape processing in the ventral and dorsal pathways is dissociable from attention. Cerebral Cortex, 34(6), bhae221.

4. Karsh, N., Ahmad, Z., **Freud, E.,** & Hadad, BS. (2024). An effect that counts: Temporally contiguous action effect enhances motor performance; *Psychonomic Bulletin & Review, 31,* 897-905.

5. Ahmad, Z., Kelly K., & **Freud, E.,** (2023). Reduced perception-action dissociation in children with amblyopia. *Neuropsychologia, 191*, 108738.

6. Baltaretu, B. R., Stevens, W. D., **Freud, E.,** & Crawford, J. D. (2023). Occipital and parietal cortex participate in a cortical network for transsaccadic discrimination of object shape and orientation. Scientific Reports, 13(1), 11628.

7. **Freud E.,** Di Giammarino D., & Camilleri C. Mask-wearing selectivity alters observers' face perception. (2022). *Cognitive Research: Principles and Implications, 7(1),* 1-10

8. **Freud, E.,** Di Giammarino D., *Stajduhar, A.,* Rosenbaum, R. S., Avidan, G., & Ganel, T. (2022). Recognition of masked faces in the era of the pandemic: No improvement, despite extensive, natural exposure. *Psychological Science,* 33(10), 1635-1650

9. Ahmad, Z., Behrmann, M., Patterson, C., & **Freud, E.** (2022). Unilateral resection of both cortical visual pathways in a pediatric patient alters action but not perception. *Neuropsychologia*, 168, 108182.

10. Mitchnick K.A., Ahmad Z., Mitchnick S.D., Ryan J.D., Rosenbaum R.S., **Freud E.** (2022). Damage to the human dentate gyrus impairs the perceptual discrimination of complex, novel objects. *Neuropsychologia*,108238,

11. Liu, Y., Caracoglia, J., Sen, S., **Freud, E.**, & Striem-Amit, E. (2022). Are reaching and grasping effector-independent? Similarities and differences in reaching and grasping kinematics between the hand and foot. *Experimental Brain Research*, 1-16.

12. **Freud E.** & Ahsan T. Does the dorsal pathway derive intermediate shape-centred representations? (2022). *Cognitive Neuropsychology*, 1-3 (Invited).

13. Stajduhar A., Ganel T., Rosenbaum R.S., Avidan G. & **Freud E.**, Face Masks Disrupt Holistic Processing and Face Perception in School-Age Children. (2022). *Cognitive Research: Principles and Implications*, 7(1), 1-10.

14. Ahsan, T., Bolton, K., Wilcox, L. M., & **Freud, E.** (2022). Perceived depth modulates perceptual resolution. *Psychonomic Bulletin and Review.* 29(2), 455-466.

15. **Freud E**., Binur N., Srikanth A., Davidson E., Ganel T. & Hadad B.S. Double Dissociation Between Perception and Action in Children. (2021). *Journal of Experimental Child Psychology, 201, 104986.*

16. **Freud E.**, Stajduhar A., Rosenbaum R.S., Avidan G. & Ganel T. The COVID-19 pandemic masks the way people perceive faces (2020). *Scientific Reports.* 10.31234/osf.io/zjmr8 (The paper was included in the "Scientific Reports Top 100 2020" list (https://www.nature.com/collections/feidhcahdd).

17. Maallo, A. M. S., Granovetter, M. C., **Freud, E.,** Kastner, S., Pinsk, M. A., Patterson, C., & Behrmann, M. (2020). All hands on deck: Large-scale (re) sculpting of cortical circuits in post-resection children. *Scientific Reports*.

18. **Freud, E.,** Behrmann, M., & Snow, J. C. (2020). What Does Dorsal Cortex Contribute to Perception? *Open Mind*, 1-18.

19. **Freud, E.**, & Behrmann, M. (2020). Altered large-scale organization of shape processing in visual agnosia. *Cortex*.129, 423-435

20. Maallo, A. M. S., **Freud, E.,** Liu, T. T., Patterson, C., & Behrmann, M. (2020). Effects of unilateral cortical resection of the visual cortex on bilateral human white matter. *NeuroImage*. *207*, 116345

21. **Freud E.,** Plaut D. C., & Behrmann M. (2019) Protracted developmental trajectory of shape processing along the two visual pathways *Journal of Cognitive Neuroscience, 31(10),* 1589-1597

22. Liu, T. T.*, **Freud, E*.,** Patterson, C., & Behrmann, M. (2019). Perceptual function and category-selective neural organization in children with resections of visual cortex. *Journal of Neuroscience*, 39(32), 6299-6314. (*The authors have contributed equally to this work)

23. Collins E., **Freud E.,** Kainerstorfer J. M., Cao J. & Behrmann M. (2019) Temporal dynamics of shape processing differentiate contributions of dorsal and ventral visual pathways. *Journal of Cognitive Neuroscience, 31(6),* 821-836

24. **Freud E.,** Culham J. C., Namdar G., & Behrmann M. (2019) Object complexity modulates the association between action and perception in childhood. *Journal of Experimental Child Psychology, 179,* 56-72.

25. Liu, T. T., Nestor, A., Vida, M. D., Pyles, J. A., Patterson, C., Yang, Y., Yang, F. N., **Freud, E.,** & Behrmann, M. (2018). Successful Reorganization of Category-Selective Visual Cortex following Occipito-temporal Lobectomy in Childhood. *Cell reports*, 24(5), 1113-1122.

26. **Freud, E.,** Robinson A. K., & Behrmann, M. (2018) More than Action: The Dorsal Pathway Contributes to the Perception of 3-D Structure. *Journal of cognitive neuroscience*, 30(7), 1047-1058.

27. **Freud, E.,** Macdonald, S. N., Chen, J., Quinlan, D. J., Goodale, M. A., & Culham, J. C. (2018). Getting a grip on reality: Grasping movements directed to real objects and images rely on dissociable neural representations. *Cortex*, 98, 34-48.

28. **Freud E.,** Culham J. C., Plaut D. C. & Behrmann M. (2017) The large-scale organization of shape processing in the ventral and dorsal pathways. *eLIFE*, DOI: 10.7554/eLife.27576

29. **Freud E., &** Behrmann, M. (2017). The life-span trajectory of visual perception of 3D objects. *Scientific Reports*, 7(1), 11034. DOI: 10.1038/s41598-017-11406-7

30. **Freud E.**, Ganel T., Shelef I., Hammer M. D., Avidan G. & Behrmann M. (2017). Three-dimensional representations of objects in dorsal cortex are dissociable from those in ventral cortex. *Cerebral Cortex. 27 (1),* 422-434. DOI: 10.1093/cercor/bhv229

31. **Freud, E.,** Plaut, D. C. & Behrmann, M. (2016). "What" is happening in the dorsal visual pathway. *Trends in Cognitive Sciences 20(10),* 773-784. DOI: 10.1016/j.tics.2016.08.003

32. **Freud E.**, Ganel T., Avidan G. & Gilaie-Dotan S., (2016). Functional dissociation between action and perception in developmental object agnosia. *Cortex, 76,*17-27. DOI: 10.1016/j.cortex.2015.12.006

33. **Freud E.**, Ganel T. & Avidan G., (2015). Impossible expectations: fMRI adaptation is modulated by spatial probability. *NeuroImage. 122,* 188-194. DOI: 10.1016/j.neuroimage.2015.07.085

34. **Freud, E**. & Ganel T. (2015). Visual control of action directed to two-dimensional objects relies on holistic processing of object shape. *Psychonomic Bulletin and Review. 22(5)*, 1377-1382. DOI: 10.3758/s13423-015-0803-x

35. **Freud E.**, Rosenthal G., Ganel T. & Avidan G., (2015). Sensitivity to object impossibility in the human visual cortex- Evidence from functional connectivity. *Journal of Cognitive Neuroscience.27(5),* 1029-1043. DOI: 10.1162/jocn_a_00753

36. **Freud E.**, Hadad B-H., Avidan G.& Ganel T. (2015) Evidence for Similar Early but Not Late Representation of Possible and Impossible Objects. *Frontiers in Psychology*, 6(94). DOI: 10.3389/fpsyg.2015.00094

37. **Freud, E**., Avidan, G. & Ganel T., (2015). The highs and lows object impossibility: Effects of spatial frequency on holistic processing of impossible objects. *Psychonomic Bulletin and Review 22(1),* 297-306. DOI: 10.3758/s13423-014-0678-2

38. Ganel T., **Freud E.** & Meiran N. (2014) Action is immune to the effects of Weber's law throughout the entire grasping trajectory. *Journal of Vision. 14(7),* 1-11. DOI: 10.1167/14.7.11

39. Tanzer, M., **Freud, E.**, Ganel, T., & Avidan, G. (2013). General holistic impairment in congenital prosopagnosia: Evidence from Garner's speeded-classification task. *Cognitive Neuropsychology*, 30(6), 429-445. DOI: 10.1080/02643294.2013.873715

40. **Freud E.,** Aisenberg D., Salzer Y., Henik A. & Ganel T. (2013) Simon in Action: The Effect of Spatial Congruency on Grasping Trajectories. *Psychological Research*, *79(1)*, 134-142. DOI: 10.1007/s00426-013-0533-5

41. **Freud, E.**, Avidan, G., & Ganel, T. (2013). Holistic processing of impossible objects: Evidence from Garner's speeded-classification task. *Vision Research, 93*, 10-18. DOI: 10.1016/j.visres.2013.10.001

42. **Freud, E.,** Ganel T., & Avidan, G. (2013). Representation of possible and impossible objects in the human visual cortex: Evidence from fMRI adaptation. *NeuroImage*, 64,685-692. DOI: 10.1016/j.neuroimage.2012.08.070

43. Ganel, T., **Freud, E**., Chajut, E., & Algom, D. (2012). Accurate visuomotor control below the perceptual threshold of size discrimination. *PLoS ONE*, *7*(4), e36253. DOI: 10.1371/journal.pone.0036253.

BOOK CHAPTERS:

1. **Freud, E**., Ganel, T., & Avidan, G. (2023). Functional Specialization Across the Visual Cortex. *Oxford Research Encyclopedia of* Neuroscience.

2. Ganel, T. & **Freud, E.** (2011). Weber's law during grasping. In D. Algom, D. Zakay, E. Chajut, S. Shaki, Y. Mama, & V. Shakuf (Eds.). Fechner Day 2011. Raanana, Israel: International Society for Psychophysics.

NEWSPAPER ARTICLE

1. Freud E. & Rosenbaum R.S. (2022, February 24). Children struggle more than adults to recognize masked faces. The Conversation. Retrieved from https://theconversation.com/children-struggle-more-than-adults-to-recognize-masked-faces-176750

SELECTED TALK PRESENTATION OF PAPERS IN CONFERENCES (REFEREED)

Trainees (at the time of project) are indicated with a solid underline.

1. **Freud E.,** Ahmad Z., Ganel T., Hadad BS., Reduced dissociation between perception and action in individuals with Autism. Talk at the Psychonomic Society Annual Meeting, New York, NY, Nov 2024

2. Ahmad Z., Aziza O., Ganel T., Hadad BS., **Freud E.** Reduced dissociation between perception and action in individuals with Autism. Talk at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2024.

3. **Freud E.,** Object representations in the dorsal pathway are subject to a protracted and susceptible developmental trajectory. Symposium presentation at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2023.

4. Ahmad Z., Kelly K., **Freud E.** Reduced perception-action dissociation in children with amblyopia. Talk at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2023.

5. **Freud E.** Recognition of masked faces demonstrates the rigidity of the face processing system throughout development. Symposium at the Society for Research in Child Development (SRCD) Biennial Meeting, Salt Lake City, UT, March 2023

6. **Freud, E.,** Di Giammarino D., *Stajduhar, A.,* Rosenbaum, R. S., Avidan, G., & Ganel, T. Recognition of masked faces in the era of the pandemic: No improvement, despite extensive, natural exposure. Data Blitz talk presented at the Cognitive Neuroscience Society (CNS), San Francisco, CA, March 2022

7. Ahmad Z., Behrmann M, Patterson C., **Freud E.** A Unilateral Cortical Resection of Both Visual Pathways Alters Action but not Perception. Talk presented at Neuromatch 3.0. Virtual Conference, October 2020.

8. **Freud E.** The role of the dorsal pathway in object perception. Talk presented at the Cognitive Neuroscience society (CNS). Session co-organizer and chair. Virtual Conference, May 2020

9. **Freud E.** & Behrmann M. Altered large-scale cortical organization of shape processing in visual agnosia. Talk presented at the Society for Neuroscience (SfN) Chicago, IL, October 2019

10. Behrmann M., Kastner S., Pinsk M. A. & **Freud E.** Typical functional selectivity and connectivity in category-selective visual cortex in children with unilateral ventral cortex resection. Talk presented at the Society for Neuroscience (SfN) Chicago, IL, October 2019

11. **Freud E.,** & Behrmann M. Preserved shape sensitivity in the dorsal pathway of a visual agnosia patient. Data Blitz talk presented at the Cognitive Neuroscience Society (CNS), San Francisco, CA, March 2019

12. **Freud E.**, Culham J.,& Behrmann M. Differential sensitivity to whole vs. scrambled objects in ventral and dorsal pathways. Talk at the Society for Neuroscience (SfN), San-Diego, CA, November 2016.

13. **Freud E.,** Macdonald S. N., Chen J., Quinlan D. J., Goodale M.A, Culham J. C. Getting a grip on reality :Grasping movements directed to real objects and images rely on dissociable neural representations. Talk at the CAPnet-CPS CAN-ACN SATELLITE SYMPOSIUM "Action & Perception: Cognition, Coding and Clinical Populations" Toronto, ON, May 2016

14. **Freud E.**, Ganel T., Avidan G.,& Behrmann M. Object 3D structure representations in the dorsal pathway is not dependent on the ventral pathway: Evidence from visual agnosia. Talk at the Society for Neuroscience (SfN), Chicago, IL, October 2015.

15. **Freud E.**, Ganel T., Avidan G.,& Behrmann M. Intact implicit representation of object 3D structure in object agnosia. Talk at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2015.

16. **Freud E.**, Rosenthal G., Ganel T.& Avidan G. The neural signature of spatial uncertainty. Talk at the Annual meeting of the Israel Society for Neuroscience (ISFN), Eilat, Israel, December, 2013

17. **Freud E.**, Hadad B-H., Avidan G. & Ganel T. Evidence for Similar Early but Not Late Representation of Possible and Impossible Objects. Talk at the Annual meeting of the Israel Society for Neuroscience (ISFN), Eilat, Israel, December, 2012

INVITED TALKS AND SEMINARS

Location	*Date*
Vulnerability of the perception-action dissociation in neurodevelopmental conditions (Clinical Rounds, Department of Psychology, York University)	November 2024
Seeing and Acting workshop: Functional and Neural Perspective (Coimbra, Portugal)	September 2023
Applied Cognitive Neuroscience research group, Toronto Metropolitan University, Toronto, Canada	March 2023
BIU Vision Science Seminar (virtual), Tel-Aviv, Israel	April 2022
Keynote speaker: Association of Graduate Students in the Biological Sciences (AGSBS) Symposium, Toronto, Canada	April 2022
Applied Face Cognition Lab talk series (virtual), Fribourg, Switzerland	April 2021
Rotman Research Institute Rounds, Baycrest (virtual), Toronto, Canada	January 2021
Quantitative methods seminar, York University, Toronto, Canada	November 2019

Hurvitz Brain Sciences Research Program, Sunnybrook Research Institute, Toronto, Canada	June 2019
Google Brain Team, Toronto, Canada	March 2019
IRTG Brain in Action program, York University, Toronto, Canada	November 2018
Tel-Aviv University, Tel-Aviv, Israel	December 2017
University of Haifa, Haifa, Israel	December 2017
Hebrew University, Jerusalem, Israel	December 2017
Ben-Gurion University of the Negev, Beer-Sheva, Israel	December 2017
University of Toronto, Toronto, Canada	September 2016
University of Western Ontario, London, Canada	November 2014
Carnegie Mellon University, Pittsburgh, USA	July 2014
New-York University, New York, USA	July 2013
Ben-Gurion University of the Negev, Beer-Sheva, Israel	February 2013

SELECTED POSTER PRESENTATION OF PAPERS IN CONFERENCES (REFEREED)

** Freud Lab trainees (at the time of project) are underlined*

1. Ahsan T., …. Wilcox L. M., Culham J. C., **Freud E.,** Binocular depth information modulates object-selective activation in high-level visual cortex. Poster presented at the Seeing and Action Workshop, Coimbra, Portugal, Sep 2024

2. Ahmad Z., Aziza O., Ganel T., Hadad BS., **Freud E.** Reduced dissociation between perception and action in individuals with Autism. Poster presented at the Seeing and Action Workshop, Coimbra, Portugal, Sep 2024

3. Ahsan T., …. Wilcox L. M., Culham J. C., **Freud E.,** Binocular depth information modulates object-selective activation in high-level visual cortex. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2024

4. Goldstein Marcusohn Y. & **Freud E.,** Shape sensitivity in the dorsal pathway is dissociable from attentional processes. Poster presented at the Society for Neuroscience (SfN) Washington DC, November 2023

5. Goldstein Marcusohn Y. **& Freud E.,** The effect of attentional allocation on shape processing in the ventral and dorsal pathways. Poster presented at the 16th Canadian Neuroscience Meeting, Montreal, QC, May 2023

6. Hornsey R., **Freud E.,** Wilcox L M. No evidence for a 'close advantage' effect in virtual reality Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2023

7. Ahsan T., Wilcox L. M., **Freud E.** Perceived distance modulates attention allocation. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2023

8. Ahmad Z., Karsh N, Aziza O., ….. **Freud E.** Visual illusions modulate perception and action in autism spectrum disorder. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2022

9. Ahsan T., Wilcox L. M., **Freud E.** Object affordance modulates the near space advantage in 2D imagery. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2022

10. Baltaretu B., Stevens D. W. **Freud E,** Crawford J. D**.** Cortical correlates of transsaccadic object orientation vs. shape change discrimination: an fMRI study. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2022

11. Luabeya G., Le A., **Freud E.,** Monaco S., Crawford J.D. Cortical Integration of Multimodal Cues for Reach / Grasp planning. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2022

12. Ahmad Z., Behrmann M, Patterson C., **Freud E.** A Unilateral Cortical Resection of Both Visual Pathways Alters Action but not Perception. Poster presented at the Vision Scientific Society Annual Meeting (VSS), Online, May 2021

13. Ahsan T., Bolton K., Chiasson L. & Wilcox L. M., **Freud E**. Perceived depth modulates the precision of visual processing. Poster presented at the Vision Scientific Society Annual Meeting (VSS), Online, May 2020

14. Ahmad Z., Hadad B.S. & **Freud E.** Reduced functional dissociation between action and perception in individuals with Autism. Poster presented at the Vision Scientific Society Annual Meeting (VSS), Online, May 2020

15. Ahsan T., Bolton K., Chiasson L. & Wilcox L. M., **Freud E**. Perceived depth modulates the precision of visual processing. Poster presented at the Lake Ontario Visionary Establishment (LOVE) Niagara Falls, ON, February 2020

16. Ahmad Z., Hadad B.S. & **Freud E.** Reduced functional dissociation between action and perception in individuals with Autism. Poster presented at the Lake Ontario Visionary Establishment (LOVE) Niagara Falls, ON, February 2020

17. Srikanth A., Davidson E., Hadad B.S., Ganel T.& **Freud E.** Functional dissociation between action and perception in early childhood. Poster presented at the Lake Ontario Visionary Establishment (LOVE) Niagara Falls, ON, February 2020

18. Ruttle J., Stajduhar A., Stevens D. & **Freud E.,** Shape sensitivity along the dorsal and ventral pathways is observed for novel and familiar objects. Poster presented at the Lake Ontario Visionary Establishment (LOVE) Niagara Falls, ON, February 2020

19. Mallo A. M. S., **Freud E.**, Patterson C. &Behrmann M. Bilateral changes to white matter structure following unilateral resection in pediatric patients. Poster presented at the Society for Neuroscience (SfN) Chicago, IL, October 2019

20. **Freud E.**, Culham J., Plaut D. & Behrmann M. The large-scale organization of object processing in the ventral and dorsal pathways. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2017.

21. **Freud E.** & Behrmann M. Late maturation of fine-grained of object 3D structure representation. Poster presented at the Vision Scientific Society Annual Meeting (VSS), St. Pete Beach, FL, May 2016.

22. **Freud E.**, Ganel T.& Avidan G. Coarse to fine-grained representation of object 3D structure. Poster presented Society for Neuroscience (SfN), Washington D.C., November 2014.

23. **Freud E.**, Rosenthal G., Ganel T.& Avidan G. The neural signature of spatial uncertainty. The Networked Brain. Satellite event to the SfN conference, San Diego, CA, November 2013.

24. **Freud E.**, Hadad B-H., Avidan G.& Ganel T. (2013). Perceptual Representation of Impossible Objects. Poster presented at the Annual Meeting of the Vision Sciences Society (VSS), Naples, FL, May 2013.

25. **Freud E.**, Avidan G., & Ganel T. Holistic representation of impossible objects. Poster presented at the Annual Meeting of the Vision Sciences Society (VSS), Naples, FL, May 2012.

EDITORIAL ACTIVITIES:

Ad hoc guest editor:

- eLIFE

Ad hoc reviewer journals (alphabetic order):

- Animal Cognition
- Attention, Perception and Psychophysics
- Brain and Behavior
- Brain Structure and Function
- British Journal of Psychology
- Cerebral Cortex
- Cognition
- Cognitive Neuropsychology
- Cognitive Research Principles and Implications

- Cortex
- Developmental Psychology
- eLIFE
- Experimental Brain Research
- Frontiers in Psychology
- Journal of Animal Cognition
- Journal of Autism and Developmental Disorders
- Journal of Cognitive Neuroscience
- Journal of Neuropsychology
- Journal of Neuroscience
- NeuroImage
- Neuropsychologia
- PLoS One
- PNAS
- Psychological Science
- Scientific Reports

Ad hoc reviewer of research grant applications:

- Israel Science Foundation (ISF)
- Natural Sciences and Engineering Research Council Discovery Grant (NSERC)
- The Netherlands Brain Foundation (Hersenstichting)

Research Impact and Knowledge Mobilization:

- Freud et al. (2022) (non-exhaustive list, coverage from over 10 news outlets):
  - Psychology Today (2022) - https://www.psychologytoday.com/us/blog/illusions-delusions-and-reality/202211/study-masks-impair-the-wearers-ability-recognize-faces
  - City News (2022)- https://toronto.citynews.ca/2022/12/17/york-university-study-masks-perception/

- Freud et al. (2022) (non-exhaustive list, coverage from over 15 news outlets):
  - Fresh Air with Nicole Martin – CBC Radio (2022)
  - Toronto Telegraph (2022) - https://www.torontotelegraph.com/news/272756170/adults-dont-become-better-at-recognizing-masked-faces-over-time-study

- Stajduhar et al. (2022) (non-exhaustive list, coverage from over 20 news outlets):
  - *The National – CBC* (2021) - www.cbc.ca/news/technology/children-masks-language-speech-faces-1.5948037
  - City News (2022) - https://toronto.citynews.ca/video/2022/02/08/york-u-study-finds-kids-have-trouble-recognizing-faces-behind-masks/
  - Fox News (2022) - https://www.foxnews.com/us/children-arent-as-good-at-recognizing-masked-faces-as-adults-study-finds

- Freud et al. (2020) (non-exhaustive list, coverage from over 70 news outlets):
  - The Nature of Things – CBC (2022) - https://www.cbc.ca/natureofthings/episodes/in-your-face
  - *The National – CBC* (2021) (https://www.cbc.ca/player/play/1858682947761/)
  - *The New-York Times* (2020) (https://www.nytimes.com/2020/08/31/health/covid-masks-face-blindness.html)
  - *The Cut (2020) (https://www.thecut.com/2020/09/covid-masks-make-facial-recognition-difficult.html)*
  - *US news (2020)(* https://www.usnews.com/news/health-news/articles/2020-12-30/masks-do-make-faces-harder-to-recognize-study-shows)
  - *Reshet 13 TV News (2020) https://13news.co.il/item/news/domestic/health/hug-during-corona-1136650/* (Hebrew)
- Interview in *Popular Science* magazine (2020) - This staircase goes on forever. Or does it? (https://www.popsci.com/story/science/head-trip-stairs-illusion/)
- Liu, Freud et al. (2019):
  - *CTV news (2019)* (https://www.ctvnews.ca/video?clipId=1703271)
  - *Technology Network (2019)* (https://www.technologynetworks.com/neuroscience/news/childrens-brains-dramatically-rewire-to-retain-perception-after-epilepsy-surgery-320228)
- Biomedical Picture of the Day (http://bpod.mrc.ac.uk/archive/2018/2/4#.WncIBwXujaw.twitter)

VI. FUNDING

CURRENT:

Date	*Title*	*Source*	*Total*	*Role*
2023-	From 2D to 3D: The importance of depth for neural processing of natural stimuli	CIHR (Canadian Institutes of Health Research) - Project Grant	C$761,175	Co-investigator
2022	REIL: Realistic Environment Interaction Logistics	Canada Foundation for Innovation (CFI), John R. Evans Leaders Fund	C$351,684 (pending ORF contribution)	Co-Applicant
2022-2024	Taking a closer look: How perceived distance modulates visual processing	VISTA – Vision Science to Application, York University	C$50,000	PI
2019-2025	Uncovering the nature of object representations in the human dorsal visual cortex	Natural Sciences and Engineering Research Council (Discovery)	C$210,500	PI

Past:

Date	*Title*	*Source*	*Total*	*Role*
2022	Functional dissociation between perception and action in neurodevelopmental disorders	Distinguish travel grant from the Vision – Science to Application (VISTA) program	C$10,000	PI
2018-2023	Annual allowance	VISTA – Vision Science to Application York University	C$125,000	PI
2021	Perception and action in autism spectrum disorder	Distinguish travel grant from the Vision – Science to Application (VISTA) program	C$10,000	PI
2021	COVID-19 Mitigation Grant	VISTA Research Grant COVID-19 mitigation grant, York University	C$5,000	PI
2020	Behind the mask—the effect of face masks on perception and memory.	VISTA Research Grant COVID-19 Accelerator, York University	C$5,715	PI
2019-2021	Neuropsychological approach for uncovering the relative contribution of parietal cortex to spatial perception and visuomotor control in neurological patients"	VISTA – Vision Science to Application, York University	C$50,000	PI
2019	Perception and Action in Children	Distinguish travel grant from the Vision – Science to Application (VISTA) program	C$10,000	PI
2018	The representation of Weber's law in the human brain	Faculty of Health, York University	C$4,995	PI
2015	Prof. Rahamimoff Travel Grant for Young Scientists	United States- Israel Binational Science Foundation (BSF)	$4,000	PI

VII. TEACHING

UNDERGRADUATE TEACHING

Course	*Format*	*Enrolment*	*Years*
PSYC 4080 - Neuropsychology of Abnormal Behavior	Classroom	20	2018

PSYC 4125 - fMRI Methods - Neuroimaging of Cognition	Classroom	20 (10 UG)	2019-
PSYC 4001 Honours Thesis / PSYC 4902 Independent Research project	Direct Supervision	2-3	2020-
PSYC 4260 Seminar in Perception and Sensation	Classroom	20	2023

I developed PSYC 4215, the first class that offers hands-on fMRI training to undergraduate students at York University.

UNDERGRADUATE SUPERVISION

Date	*Name*	*Topic*	*Next Position*	*Job title*
2018-2019	Tasfia Ahsan	Dorsal pathway representation	PhD student Psychology (York University)	Research Assistant
2018-2019	Zoha Ahmad	Dorsal pathway representation	PhD student Biology (York University)	Research Assistant
2018-2020	Kathryn Bolton	Depth perception	MA student Clinical Psychology (Ryerson)	Research Assistant
2019-2020	Emily Davidson	Visuomotor control	MA student Neuroscience (Western University)	Research Assistant
2019-2020	Krista Chiasson	Depth perception	Unknown	Research Assistant
2019-2022	Ashish Srikanth	Visuomotor control	Lab manager (Rotman research institute)	Research Assistant
2019-2021	Andreja Stajduhar	Face Perception	PhD student (University of Toronto)	Honours Thesis (CPA award)
2020-2021	David Eldridge	Working memory	Nursing School	Honours Thesis
2021-2022	Daniela Di Giammarino	Face Perception	Teachers' college	Research Assistant
2021-	Orly Aziza	Visuomotor control	NSERC USRA (in my lab)	Research Assistant
2021-2022	Carmel Camilleri	The effect of depth of visual perception	MA student (York university)	Research Assistant
2022-2023	Judy Kalenga	Visuomotor control		Research Assistant
2022-2023	Shampora Boll	Visuomotor control		Honours Thesis
2023-2024	Nathaniel Goldstein	Visuomotor control	MA student (York university)	NSERC USRA

2023-2024	Mario Costantino	Visuomotor control	MA student (York university)	Neuroscience Capstone
2024-	Noya Aronovich	Configural shape processing		Honours Thesis

GRADUATE TEACHING

Course	*Format*	*Enrolment*	*Years*
PSYC 6253 – Fundamental of Neuroscience II	Classroom	20	2020-

GRADUATE SUPERVISION

Current:

Date	*Name*	*Degree*	*Department*	*Topic*
2019-	Tasfia Ahsan	Ph.D.	Psychology	Depth Perception
2019-	Zoha Ahmad	Ph.D.	Biology	Development of Visuomotor control
2020-	Gaelle Nsamba Luabeya	Ph.D.	Biology Co-supervision	Neural mechanisms of Object placement
2023-	Tasfia Tassone	M.A	Psychology	The perception & action dissociation in older adults
2023-	Emily Fewster	M.A.	Psychology	Handedness in autism
2024-	Nathaniel Goldstein	M.A.	Psychology Co-supervision	Visuomotor control in 3D space
2024-	Mario Costantino	M.A.	Psychology	Action prediction in autism

Past:

Date	*Name*	*Degree*	*Department*	*Topic*
2020-2022	Rachel Moreau	M.A.	Psychology Co-supervision	Symmetry perception
2019- 2023	Krista Mitchnick	Ph.D.	Psychology Co-supervision	Pattern Separation
2022-2024	Maxym Yerkeyev	M.A.	Psychology Co-supervision	Memory and eye-movements

Last update: 2024-12-02

POST-DOCTORAL SUPERVISION

Past:

Date	*Name*	*Department*	*Topic*
2022-2024	Dr. Yael Goldstein-Marcusohn	Psychology	The role of the dorsal pathway in object perception

IX. PROFESSIONAL SERVICE

PROVINCIAL OR NATIONAL LEVEL

Date	*Position*	*Role*
2023	Symposium organization for the Vision Scientific Society (VSS)	Organizer
2021 - 2022	Canadian Brain Research Strategy	Member
2020	Symposium organization for the Cognitive Neuroscience Society (CNS)	Chair & co-organizer
2019- ongoing	Organizing committee - Annual Lake Ontario Visionary Establishment (L.O.V.E)	Member
2018	steering committee CAPnet conference	Member
2015	Nano-Symposium organization for the Society for Neuroscience (SfN)	Chair & organizer

UNIVERSITY LEVEL

Date	*Position*	*Role*
2024	Review York Research Chair Application	Member
2022-	VISTA training committee	Member
2022-2023	Centre for Vision Research – Seminar series	Co-organizer
2021	Centre for Vision Research Conference committee	Member
2020- 2023	Centre for Vision Research website committee	Chair
2020- ongoing	MRI user committee	Member
2019- 2024	Steering committee – Centre for Vision Research	Member
2019	VISTA grant reviewing committee	Member
2019- ongoing	Steering committee-Graduate Diploma in Neuroscience	Member

Departmental Level

Date	*Position*	*Role*
2023	Computational neuroscience search committee	Chair
2022	Multiple search committees (clinical neuropsychology, computational neuroscience)	Member
2021	Undergraduate Research Opportunities committee	Member
2021	Tenure & Promotion committee	File preparation coordinator
2019- 2024	Area Head – Brain. Behavior and Cognitive Sciences, Department of Psychology	Area head
2018 - 2020	Undergraduate Studies Committee, Department of Psychology	Member