Zvi N. Roth

Postdoctoral Fellow
Laboratory of Brain and Cognition
NIMH/NIH

Education

2018   Summer Course, Computational Neuroscience: Vision
                  Cold Spring Harbor Laboratory, NY

2009-2017   Ph.D. Program in Brain Sciences: Computation and Information Processing
                  ELSC, Hebrew University of Jerusalem

2008   Ulpanat De Shalit Summer School – Physics
                  Weizmann Institute, Rechovot

2006-2009   BSc. in Physics and Computer Science
                  Hebrew University of Jerusalem

Research

2016-present   Postdoctoral fellow
                  Dr. Elisha Merriam
                  Laboratory of Brain and Cognition
                  National Institute of Mental Health, NIH

2009-2016   Graduate student
                  Prof. Ehud Zohary
                  Neurobiology Dept. & ELSC
                  Hebrew University of Jerusalem
                  Topic: *Brain Representations of Visual Percepts*

2008-2009   Undergraduate student
                  Prof. Haim Sompolinsky
                  Racah Institute of Physics & ELSC
                  Hebrew University of Jerusalem
                  Topic: *Optimal Saccades during Smooth Pursuit*

Peer-reviewed Journal Papers

- **Roth, Z. N.**, Ryoo, M., & Merriam, E. P. (In Press)
  Task-related activity in human visual cortex
  PLOS Biology

- **Roth, Z. N.**, Heeger, D. J., & Merriam, E. P. (2018)
  Stimulus vignetting and orientation selectivity in human visual cortex
  eLife

- **Roth, Z.N.** (2016)
  Functional MRI Representational Similarity Analysis Reveals a Dissociation between Discriminative and Relative Location Information in the Human Visual System
  Frontiers in Integrative Neuroscience

- **Roth, Z.N.**, & Zohary, E. (2015)
  Position and Identity Information Available in fMRI Patterns of Activity in Human Visual Cortex
  The Journal of Neuroscience

- **Roth, Z. N.**, & Zohary, E. (2014)
  Fingerprints of Learned Object Recognition Seen in the fMRI Activation Patterns of Lateral Occipital Complex
  Cerebral Cortex

Teaching Experience

2015-2016   Teacher Assistant
Uncovering principles of human vision using fMRI (course no. 76962)
Initiated and built course, and delivered lectures
ELSC, Hebrew University of Jerusalem

2012-2014   Teacher Assistant
Cognitive Processes A (course no. 76912)
Transformed course, and delivered lectures
ELSC, Hebrew University of Jerusalem

2012-2013   Teacher Assistant
Data Structures (course no. 10031)
Prepared and delivered review lectures
Azrieli College of Engineering, Jerusalem

Scientific Meetings

- **Roth, Z.N.**, Ryoo, M., Merriam, E.P. (2020), *Widespread task-related fMRI responses in visual cortex*. Israel Society for Neuroscience (ISFN) 28th Meeting. (Talk)

- **Roth, Z.N.**, Heeger, D.J., & Merriam, E.P. (2020), *Stimulus vignetting and orientation selectivity in human visual cortex*. Israel Society for Neuroscience (ISFN) 28th Meeting. (Poster)

- **Roth, Z.N.**, Steinberg, N.J., Merriam, E.P. (2019), *Spatiotopic memory is more precise than retinotopic memory in the context of natural images*. Vision Sciences Society annual meeting. Journal of Vision, 19(10), 238-238. (Poster)

- Steinberg, N.J., **Roth, Z.N.**, Movshon, J.A., Merriam, E.P. (2019), *Neural correlates of the double-drift illusion*. Vision Sciences Society annual meeting. Journal of Vision, 19(10), 43c-43c. (Poster)

- **Roth, Z.N.**, Heeger, D.J., & Merriam, E.P. (2018), *Orientation selectivity and stimulus vignetting in human visual cortex*. Cognitive Computational Neuroscience annual meeting. (Poster)

- Ryoo, M., Burlingham, C., **Roth, Z.**, Mirbagheri, S., Heeger, D.J., & Merriam, E. (2018), *A widespread task-related hemodynamic response in human V1 is modulated by task difficulty*. Vision Sciences Society annual meeting. Journal of Vision, 18(10), 1261-1261. (Poster)

- **Roth, Z.N.**, Heeger, D.J., & Merriam, E.P. (2018), *Orientation selectivity and stimulus vignetting in human visual cortex*. Vision Sciences Society annual meeting. Journal of Vision, 18(10), 1052-1052. (Talk)

- **Roth, Z.N.**, & Merriam, E.P. (2017). *Stimulus vignetting and coarse-scale biases for orientation in human visual cortex*. Society for Neuroscience (SFN) annual meeting. (Poster)

- **Roth, Z.N.**, & Merriam, E.P. (2017). *Stimulus vignetting and orientation selectivity in human visual cortex*. NIMH Training Day. (Poster)

- **Roth, Z.N.**, & Zohary, E. (2016). *Position Information in Human Visual Cortex*. OHBM Annual Meeting. (Poster)

- **Roth, Z.N.**, & Zohary, E. (2016). *Position Information in Human Visual Cortex*. JBC Annual Retreat. (Poster)

- **Roth, Z.N.**, & Zohary, E. (2016). *Location and Identity Information Carried by fMRI Activation Patterns in Human Visual Cortex*. ELSC Ein Gedi Retreat. (Talk)

- **Roth, Z.N.**, & Zohary, E. (2015). *Location and identity information carried by fMRI activation patterns in human visual cortex*. ISFN 24th Meeting. (Talk)

- **Roth, Z. N.**, & Zohary, E. (2014). *Position invariance and object affordance in human parietal cortex*. European Conference of Visual Perception (ECVP) 2014 Meeting. (Poster)

- **Roth, Z. N.**, & Zohary, E. (2014). *Position Invariance and Object Affordances in Human Parietal Cortex*. ELSC Ein Gedi Retreat. (Poster)

- **Roth, Z.**, & Zohary, E. (2013). *Learning to recognize degraded objects is associated with a greater match to the objects' template fMRI activation patterns in Lateral Occipital Cortex*. Vision Sciences Society 2013 Meeting. Journal of Vision, 13(9), 497-497. (Poster)

- **Roth, Z.**, & Zohary, E. (2012). *Learning to recognize degraded objects is associated with a greater match to the objects' template patterns in lateral occipital cortex*. Israel Society for Neuroscience (ISFN) 21st Meeting. (Talk)

Awards

2019   NIMH Intramural Research Program OFT Trainee Travel Award

2019   VSS 2019 National Eye Institute Postdoctoral Travel Award

2016-2017   ELSC Postdoctoral Fellowship Abroad scholarship

2016   ELSC Prize for the first scientific paper based on data collected from the SKYRA magnet

2014   ELSC Prize for Outstanding Academic Performance 2013-2014 for published paper

2007   Dean's list, Faculty of Science, Hebrew University of Jerusalem

Personal Info

- Citizenship: Israeli, American, Australian

- Place of birth: Melbourne, Australia

- Residence: Maryland, USA