



Karen Banai, Ph.D. – Curriculum Vitae

Department of Communication Sciences and Disorders

✉ kbantai@research.haifa.ac.il

☎ ++972-4-8288587

🏠 <https://sites.google.com/a/research.haifa.ac.il/karen-banai/>

🏠 <http://haifaac.wix.com/ac-lab> (Hebrew)

Office: Eshkol Building room 807

Lab: Eshkol Building room 1208

Research Questions

1. How do experiences such as training, speaking a Semitic language or acquiring a hearing loss shape auditory cognition?
2. How do cognition, language and sensory processes interact across the life-span?
3. What is the role of context in the development of auditory and language skills?
4. What is the role of perceptual learning in understanding perceptually-difficult speech?

Education

- 2004 Ph.D. Brain Sciences, Hebrew University of Jerusalem, Israel.**
Dissertation: “The relations between perception and high-level cognitive functions.” Advisor Dr. Merav Ahissar
- 2000 M.Sc. Computation and Information Processing in the Brain, Hebrew University of Jerusalem, Israel.** (Awarded as partial fulfillment of the Ph.D. requirements)
- 1997 B.A. Behavioral Sciences, Ben-Gurion University, Beer-Sheva, Israel.**
Magna cum laude

Academic positions/employment (post-doctoral)

- 2017 - Associate Professor, Department of Communication Sciences and Disorders, University of Haifa
- 2012 - 2017 Senior lecturer, Department of Communication Sciences and Disorders, University of Haifa
- 2015 – 2016 Visiting Scientist, Rotman Research Institute, Baycrest Health Sciences, Toronto
- 2008 – 2012 Lecturer, Department of Communication Sciences and Disorders, University of Haifa

2004 – 2008 Postdoctoral fellow, Department of Communication Sciences and Disorders, Northwestern University, Evanston IL (sponsors: Nina Kraus and Beverly Wright)

Teaching

Research methods in communication sciences and disorders (graduate)

Masters student's thesis seminar

Auditory cognition (graduate)

Research seminar – audition and aging (with Dr. Limor Lavie, graduate)

Undergraduate research seminar – between perception and cognition

Introduction to human development (undergraduate)

Funding, awards and honors

- 2018-2022** **Israel Science Foundation.** *Age, hearing and rapid learning in the recognition of perceptually difficult speech.*
- 2014-2016** **National Institute of Psychobiology in Israel.** *Listener, stimulus and procedural factors in the perceptual learning of time compressed speech and its generalization.*
- 2013-2017** **Israel Science Foundation.** *Anchoring, language and literacy in the preschool years.*
- 2011-2013** **National Institute of Psychobiology in Israel.** *The effects of stimulus uncertainty on auditory perceptual learning.*
- 2010** **GIF YSP.** *Changing auditory skills from childhood to adulthood.* Grant number:
- 2009** **Ministry of Health** Feasibility Studies (P.I. Dr. Tali Bitan). *Brain plasticity induced by auditory training and fitting of hearing aids in hearing impaired individuals.*
- 2008-2012** **EU FP7 International Reintegration Grant.** *The effects of auditory training on human communication skills.* Grant number: IRG-224763.
- 2007-2010** **The Legacy Heritage Science Initiative, Israel Science Foundation.** *The relationships between auditory perceptual and auditory neural encoding deficits in individuals with reading disability.* Grant number: LHSI-1842/07.
- 2008-2011** **Alon scholarship,** Israeli Council for Higher Education.
- 2006-2008** **NIH/NRSA individual post-doctoral fellowship.** (Sponsors: Nina Kraus & Beverly A. Wright) *Brainstem timing and reading disability.* F32DC008052

Other professional activities

Ad-hoc reviewer: ACTA Psychologia, Applied Psycholinguistics, Brain and Language, Behavioral Neuroscience, Cerebral Cortex, Cognition, Cortex, Developmental Sciences, Dyslexia, Ear and Hearing, European Journal of Neuroscience (EJN), GIF, International Journal of Audiology, International Journal of Pediatric Otorhinolaryngology, Journal of Communication Disorders, Journal of Experimental Child Psychology, Journal of Speech, Language and Hearing research (JSLHR), Journal of the Acoustical Society of America (JASA), Journal of the Association of Research in Otolaryngology (JARO), Journal of Experimental Psychology; Journal of Neurophysiology, Journal of Neuroscience, Language and Cognitive Processes, Neuroimage, Neuropsychologia, Psychological Bulletin, Reading & Writing, Scientific Studies of Reading, Swiss National Science Foundation, United States – Israel Binational Science Foundation (BSF).

Scientific review panel membership: Israel Science Foundation (ISF), United States – Israel Binational Science Foundation (BSF)

Professional memberships: Association for Research in Otolaryngology, Auditory Perception & Cognition Society, Israel Society for Auditory Research, Psychonomic Society (Fellow).

Associate Editor: International Journal of Audiology; Auditory Perception & Cognition

Recent Publications

A full list is available on [Google Scholar](#)

Peer reviewed manuscripts

Banai K. & Lavner Y. (2019). [The effects of stimulus repetition and training schedule on the perceptual learning of time-compressed speech and its transfer](#). *Attention, Perception & Psychophysics*. doi: 10.3758/s13414-019-01714-7

Gabay Y., Karni A. & Banai K. (2018). [Learning to decipher time-compressed speech: Robust acquisition with a slight difficulty in generalization among young adults with developmental dyslexia](#). *PLoS One*, 13(10): e0205110. doi: 10.1371/journal.pone.0205110

Manheim M., Lavie L. & **Banai K.** (2018). [Age, hearing and the perceptual learning of rapid speech](#). *Trends in Hearing*, 22:1-18. doi: 10.1177/2331216518778651

Alain C., Du Y., Bernstein L.J., Barten T. & **Banai K.** (2018). [Listening under difficult conditions: An activation likelihood estimation meta-analysis](#). *Human Brain Mapping*. doi: 10.1002/hbm.24031

Banai K. & Ahissar M. (2017). [Poor sensitivity to sound statistics impairs the acquisition of speech categories in dyslexia](#). *Language, Cognition and Neuroscience*. doi: 10.1080/23273798.2017.1408851

Gabay Y., Karni A. & **Banai K.** (2017). [The perceptual learning of time-compressed speech: A comparison of training protocols with different levels of difficulty](#). *PLOS One*. doi: 10.1371/journal.pone.0176488

Banai K. & Lavner Y. (2016). [The effects of exposure and training on the perception of time-compressed speech in native versus nonnative listeners](#). *Journal of the Acoustical Society of America*. 140 doi: 10.1121/1.4962499

Karawani H., Bitan T., Attias J. & **Banai K.** (2016). [Auditory perceptual learning in adults with and without age-related hearing loss](#). *Frontiers in Psychology* 6:2066. doi: 10.3389/fpsyg.2015.02066

Banai K. & Yifat R. (2016). [Perceptual context and individual difference in the language proficiency of preschool children](#). *Journal of Experimental Child Psychology*, 142:118-136. doi:10.1016/j.jecp.2015.10.001

Moav-Scheff R., Yifat R. & **Banai K.** (2015). [Phonological memory and word learning deficits in children with specific language impairment: A role for perceptual context?](#) *Research in Developmental Disabilities*, 45:384-399. doi: 10.1016/j.ridd.2015.08.010

Lavie L., **Banai K.**, Karni A. & Attias J. (2015). [Hearing-aid induced plasticity in the auditory system of the elderly: Evidence from speech perception](#). *Journal of Speech, Language and Hearing Research*. doi: 10.1044/2015_JSLHR-H-14-0225

Banai K. & Amitay S. (2015). [The effects of stimulus variability on the perceptual learning of speech and non-speech stimuli](#). *PLoS One*, 10(2):e0118465. doi: 10.1371/journal.pone.0118465.

Banai K. & Lavner Y. (2014). [The effects of training length on the perceptual learning of time-compressed speech and its generalization](#). *Journal of the Acoustical Society of America*. 136 doi: 10.1121/1.4895684

Other Publications

Green C.S., **Banai K.**, Lu Z.L. & Bavelier D. (2018). Perceptual Learning. *Steven's Handbook of Experimental Psychology and Cognitive Neuroscience*, 4th edition. Wiley

Karawani H., Lavie L. & **Banai, K.** (2017). [Shor-term auditory learning in older and younger adults](#). *Proceedings of the International Symposium on Auditory and Audiological Research*.

Banai K. & Lavner Y. (2013). More than adaptation – evidence for training-induced perceptual learning of time-compressed speech. *Auditory Plasticity – Listening with the Brain, Proceedings of the 4th International Symposium on Auditory and Audiological Research*, August 2013, Nyborg, Denmark. Pp. 37-43.

Banai K. & Kraus N. (2013). Auditory processing disorder : an intersection of cognitive, sensory and reward circuits. In: G.D. Chermak and F.E. Musiek (eds). *Handbook of (Central) Auditory Processing Disorder*, 2nd edition. Plural Publishing Inc: San Diego, CA.