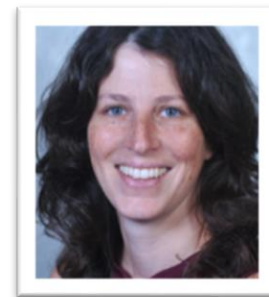


# Shlomit Ben-Ami, M.D.

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I am a neuroscientist with medical training and clinical expertise in neural rehabilitation.

My research is aimed at revealing strategies of sensory learning, and deviations from these strategies caused by atypical sensory experiences such as congenital blindness, and neurological disorders like autism.

I have primarily investigated action-perception links, as well as learning and plasticity in these domains. This has provided insights into perceptual processing mechanisms and development of visual and motor ability.

Grounded in my strong foundations in neurology and neuroscience, my approach involves exploring basic scientific concepts within the context of their functional and clinical significance.

A key objective of my work is to formulate research questions that carry translational implications for rehabilitation medicine, assistive technology, and educational intervention.

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## EMPLOYMENT

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### POSTDOCTORAL POSITIONS

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|----------------|--|
| 2016 - present | <b>Affiliate / Postdoctoral Associate, Massachusetts Institute of Technology</b> <ul style="list-style-type: none"><li>· The Sinha Lab for Vision Development Research, Brain and Cognitive Sciences.</li><li>· In collaboration with <a href="#">Project "Prakash" ("Light") for sight restoration</a>, New-Delhi, India.</li><li>· Project: Visual development after recovery from congenital blindness.</li></ul> |
| 2020 - 2023    | <b>Postdoctoral Fellow, Tel-Aviv University</b> <ul style="list-style-type: none"><li>· The Mukamel Motor Cognition Lab, Sagol School of Neuroscience.</li><li>· Project: Visual Learning from Visuo-Motor Experience.</li></ul>   |
| 2015           | <b>Research Associate, Northeastern University</b> <ul style="list-style-type: none"><li>· The Sternad Action Lab, Departments of Physics &amp; Biology.</li><li>· Project: Predictive impairment in autism.</li></ul>   |
| 2011 - 2014    | <b>Postdoctoral Associate, Weizmann Institute of Science</b> <ul style="list-style-type: none"><li>· Prof. Flash, Laboratory for Motor Control, Departments of Brain Sciences &amp; Math.</li><li>· Project: Production and visual perception of human movement signatures in autism.</li></ul>  |
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## MEDICAL POSITIONS

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2008 - 2010      **Resident Physician, Loewenstein Hospital Rehabilitation Center**  
· Neurological Rehabilitation and Physical Medicine Residency.  
· Focal Brain Lesions Department, under Prof. Soroker.

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2007              **Medical Intern, Rabin Medical Center**

## EDUCATION

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1998 - 2006      **M.D., Faculty of Medicine, Tel-Aviv University**  
· Thesis: "Gender medicine in occlusive vascular disease".

## TRAINING

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2011              **Clinical Hypnosis certification.** Wolfson Medical Center.

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2009 - 2010      **Feldenkrais (Child'Space) Method** for supporting infant development.

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1997 - 1998      **Military Service.** Intelligence Analyst, Special Operations Unit.

## FELLOWSHIPS / SCHOLARSHIPS

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2021 - 2023      **Minducate Science of Learning Research and Innovation Center Fellowship**  
· "Research-driven rehabilitation for learning of visual shapes and patterns".

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2020 - 2021      **Zuckerman STEM & Broshy Brain and Cognitive Sciences Global Seed Fund**  
· "Boosting vision on the go: Perceptual learning through visuo-motor engagement".

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2019              **National Eye Institute**  
· Travel Grant

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## GRANT CO-WRITING

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2024	<b>Project Prakash:</b> <b>Development of vision following extended early onset blindness.</b> <ul style="list-style-type: none"><li>· National Institute of Health, R01 Research Project Grant</li><li>· Submitted by Prof. Sinha, Under review.</li></ul>
2023	<b>The genesis of sensory-motor linkages:</b> <b>Studies in visually mature and visually naïve individuals.</b> <ul style="list-style-type: none"><li>· National Science Foundation with Binational Israel-US Science Foundation Grant.</li><li>· Submitted by Prof. Sinha and Prof. Mukamel, Under review.</li></ul>
2019 - 2024	<b>Development of object perception after late sight onset.</b> <ul style="list-style-type: none"><li>· National Institute of Health, R01 Research Project Grant.</li><li>· <a href="#">Granted to Prof. Sinha, \$2.7M</a></li></ul>
2017 - 2018	<b>Quantification of predictive motor impairments in individuals with ASD.</b> <ul style="list-style-type: none"><li>· National Institute of Health, R21 Exploratory Research Grant.</li><li>· <a href="#">Granted to Prof. Sternad, \$450K</a></li></ul>

## OUTREACH ACTIVITIES

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2021 - present	<b>The Agricultural Union Youth Committee.</b> Mentoring a local youth movement.
2019 - present	<b>“Ben-Zvi” School, Kiryat-Ono.</b> Bi-yearly lessons on topics in brain and human behavior.
2018 - present	<b>Prakash Educational Program, India.</b> Initiating specialized education for sight-restored girls.
2015 - 2019	<b>UnrulyArt.</b> Tailoring art activities for children with motoric / sensory / cognitive challenges.
2003 - 2006	<b>“Ayanot” youth village study center.</b> Personal tutor for underprivileged pupils.
2001 - 2013	<b>Free foreign workers clinic, Physicians for human rights.</b> Medical assistant, later physician.
1996 - 1997	<b>“Mifneh” School Program.</b> Year of Service, mentoring & tutoring a group of youth at risk.

## TALKS

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- 2024      **From lab to clinic; Translating kinematic measures.**  
· Invited talk planned for May 2024, Loewenstein Hospital Rehabilitation Center.
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- 2023      **Visual experience and the development of visually-guided object grasping.**  
· Israeli Vision Science Society Conference, Bar-Ilan University.
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- 2023      **Development of biological motion perception: Insights from late-sighted children.**  
· Vision Science Society Meeting, Florida, USA.
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- 2023      **The dependency of biological motion perception on visual experience.**  
· Israeli Conference on Cognition Research, Akko.
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- 2020      **Learning to see biological motion.**  
· Invited Talk, Online, [BIU Vision Science Seminar](#).

## PUBLICATIONS

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### PEER REVIEWED PAPERS

- H Jan, SSA Zaidi, X Boix, N Prasad, S Gilad-Gutnick, **S Ben-Ami**, P Sinha. **Robustness to transformations across categories: Is robustness driven by invariant neural representations?**  
2023, [Neural Computation, 35 \(12\), 1910-1937](#)
- 
- S Ben-Ami**, P Gupta, M Yadav, P Shah, G Talwar, S Paswan, S Ganesh, N Troje, P Sinha. **Human (but not animal) motion can be recognized at first sight – After treatment for congenital blindness.**  
2022, [Neuropsychologia, 174, 108307](#)
- 
- P Rubio-Fernandez, V Shukla, V Bhatia, **S Ben-Ami**, P Sinha. **Head turning is an effective cue for gaze following: Evidence from newly-sighted individuals, school children and adults.**  
2022, [Neuropsychologia, 174, 108330](#)
- 
- A. Unell, ZM. Eisenstat, A Braun, A Gandhi, S Gilad-Gutnick, **S Ben-Ami**, P Sinha. **Influence of visual feedback persistence on visuo-motor skill improvement.**  
2021, [Scientific Reports, 11 \(1\), 1-10](#)
- 
- S. Ben-Ami**, G. Oron, A. Ben-Haroush, D. Blickstein, M. Hod, J. Bar. **Primary Atherothrombotic Occlusive Vascular Disease (AOVD) in premenopausal women with history of adverse pregnancy outcome.**  
2010, [Thrombosis Research, 125, 118-121](#)
-

## UNDER REVIEW / IN PREPARATION

M. Vogelsang, L. Vogelsang, P. Gupta, P. Shah, S. Gilad-Gutnick, **S. Ben-Ami**, S. Diamond, S. Ganesh, P. Sinha. **Impact of early visual experience on later usage of color cue.** (Science, accepted)

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**S. Ben-Ami**, B. Buaron, O. Yaron, K. Keane, V.H. Sun, F. Phillips, J. Friedman, P. Sinha, R. Mukamel. **What the visual system can learn from the non-dominant hand: The effect of graphomotor engagement on visual discrimination.** (Memory & Cognition, [Under review](#))

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**S Ben-Ami**, C. Ralekar, V. Shukla, P. Gupta, P. Shah, S. Ganesh, P. Rubio-Fernandez, P. Sinha. **Form perception as a bridge to measuring real-world functional proficiency.** (Cognitive Science, [Under review](#))

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P. Rubio-Fernandez, M. Long, V. Shukla, V. Bhatia, A. Mahapatra, **S Ben-Ami**, P. Sinha. **Multimodal communication in newly sighted children: An investigation of the relation between visual experience and pragmatic development.** (Cognitive Science, [Under review](#))

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**S Ben-Ami**, Y Meirovtich, D Israeli, T Flash. **Atypical visual processing of human movement in autism.**

## PUBLISHED IN CONFERENCE JOURNALS

**S. Ben-Ami**, C. Ralekar, D. Verma, K. Tiwari, M. Yadav, P. Gupta, P. Shah, S. Ganesh, NF. Troje, P. Sinha. **Development of biological motion perception: Insights from late-sighted children.** 2023, [Journal of Vision 23\(9\):5449](#)

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S. Raja, S. Gilad-Gutnick, **S. Ben-Ami**, P. Gupta, P. Shah, K. Tiwari, S. Ganesh, P. Sinha. **Detection of visual motion following removal of bilateral congenital cataracts.** 2023, [Investigative Ophthalmology & Visual Science 64\(8\):1447](#).

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E. Striem-Amit, S. Sen, N. Tong, X. Wang, T. Gandhi, V. Mahajan, **S. Ben-Ami**, S. Gilad-Gutnick, Y. Bi, P. Sinha. **Individual differences of brain plasticity in early visual deprivation and sight restoration.** 2022, [Journal of Vision 22\(14\):3483-3483](#).

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**S. Ben-Ami**, N.F. Troje, P. Sinha. **How the brain learns to see biological motion after recovering from visual deprivation.** 2019, [Journal of Vision 19 \(10\), 191a-191a](#).

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S. Raja, S. Gilad-Gutnick, **S. Ben-Ami**, P. Gupta, P. Shah, K. Tiwari, S. Ganesh, T. Gandhi, P. Sinha. **Characterizing global motion perception following treatment for bilateral congenital cataracts.** 2019, [Journal of Vision 19 \(10\), 285c-285c](#).

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S. Raja, S.P. Diamond, F. Thorn, S. Gilad-Gutnick, **S. Ben-Ami**, P. Sinha. **Temporal consequences of spatial acuity reduction.** 2019, [Journal of Vision 19 \(10\), 206c-206c](#).

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S. Gilad-Gutnick, G. Kurian, P. Gupta, K. Tiwari, P. Shah, S. Raja, **S. Ben-Ami**, T. Gandhi, S. Ganesh, P. Sinha. **Development of facial expression recognition following extended blindness: The importance of motion.** 2019, [Journal of Vision 19 \(10\), 21a-21a](#).

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## MEDIA

After a lifetime of blindness, newly sighted can immediately identify human locomotion. 2022, [MIT News](#).

## WORKSHOP POSTER PRESENTATIONS

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**S. Ben-Ami**, B. Buaron, F. Phillips, O. Yaron, P. Sinha, R. Mukamel.

**The role of self-kinematics in shape identification.**

2022, Action Representation Symposium, Regensburg, Germany.

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**S. Ben-Ami**, R. Mukamel, C. Ralekar, M. Yadav, P. Gupta, P. Shah, S. Ganesh, A. Gandhi, P. Sinha.

**Impact of early visual deprivation on the development of visually-guided object prehension.**

2022, Seminar on Multisensory Integration in Action, Hacienda, Israel.

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**S. Ben-Ami**, N.F. Troje, P. Sinha.

**Visual Perception of biological motion.**

2022, Seminar on Multisensory Integration in Action, Hacienda, Israel.

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**S. Ben-Ami**, Y. Meirovtich, D. Israeli, T. Flash.

**Visual processing of the signatures of human movement in autism.**

2021, INSAR conference on Autism Spectrum Disorder, Virtual.

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**S. Ben-Ami**, Y. Meirovtich, D. Israeli, T. Flash.

**Visual processing of human movement in autism.**

2019, The Israeli Meeting for Autism Research, Ben-Gurion University, Israel.

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S.W. Park, A. Cardinaux, D. Guo, **S. Ben-Ami**, S. Diamond, M. Kjelgaard, P. Sinha, D. Sternad.

**Predictive motor abilities in children with autism spectrum disorder - Evidence from kinematics and muscle activity.**

2019, INSAR conference on Autism Spectrum Disorder, Montreal, Canada.

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P. Rubio-Fernández, V. Shukla, **S. Ben Ami**, C. Ralekar, A. Vaidya, M. Oraa Ali, P. Sinha.

**Perspective taking in newly sighted children: Do they orient towards an interlocutor's face?**

2019, CUNY Conference on Human Sentence Processing, Colorado, USA.

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S.W. Park, A. Cardinaux, **S. Ben-Ami**, D. Guo, L. Denna, P. Sinha, D. Sternad.

**Quantification of predictive motor impairments in children with autism spectrum disorder.**

2018, INSAR conference on Autism Spectrum Disorder, Rotterdam, Netherlands.

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**S. Ben-Ami**, C. Ralekar, V. Shukla, K. Tiwari, P. Rubio-Fernandez, P. Sinha.

**From acuity charts to the Seguin Form Board Test: Looking for new measures of functional vision.**

2018, The Blind Brain Workshop on the Sensory Deprived Brain, IMT Lucca, Italy.

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**S. Ben-Ami**, Y. Meirovtich, D. Israeli, T. Flash.

**Impaired perceptual attunement to biological motion cues in autism.**

2018, Neurodevelopmental Disorders Symposium, Harvard Medical School, Cambridge, MA.

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## MENTORING

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### GRADUATE STUDENTS

Virginia Sun; 2021 – present (MD, Harvard Medical School)  
Guy Baratz; 2021 – present (MA, Tel-Aviv University)  
Fernanda De La Torre; 2019 – 2021 (PhD, MIT)  
Grace Kurian; 2018 – present (MD-PhD, Hospital of Lausanne)  
Rotem Broday; 2015 (M.Sc., Weizman Institute of Science)  
Itzik Norman; 2015 (M.Sc., Weizman Institute of Science)

### RESEARCH ASSOCIATES

Alish Dipani; 2023 – present (Project Prakash, India)  
Naviya Lall; 2023 – present (Project Prakash, India)  
Ori Yaron; 2022 – 2023 (Tel-Aviv University)  
Dhun Verma; 2022 – present (Project Prakash, India)  
Noa Korneev; 2021 (Tel-Aviv University)  
Pragya Shah; 2018 – 2020 (Project Prakash, India)  
Vishaka Shukla; 2018 – 2020 (Project Prakash, India)  
Sruti Raja; 2017 – 2019 (MIT)  
Priti Gupta; 2016 – present (Postdoc at IIT-Delhi)

### VISITING STUDENTS

Lukas Vogelsang; 2017 - 2018  
Coby Jolish, Arjun Singla; Denuka Venkataramen; 2017 / 2018  
Neil Hazra, Jerry Zhang, Sidharta Vadaparty; 2017

### UNDERGRADUATE STUDENTS

Hannah Kim; 2022 – present (Honors thesis, Wellesley)  
Dor Lidgy; 2022 (Engineering project, Tel-Aviv University)  
Alon Ozery; 2022 (Engineering project, Tel-Aviv University)  
Amy Xuan; 2022 - 2024 (Wellesley)  
Yaara Bar Ojalvo; 2021 (Sagol Project, Tel-Aviv University)  
Melinda Alviar; 2021 (Wellesley)  
Gaurika Saw; 2020 – 2021 (Carnegie Mellon University)  
Anwasha Das; 2019 – present (Caltech)  
Veda Donthireddy; 2019 – 2021 (Honors thesis, Wellesley)  
Mariela Perez; 2019 – 2020 (MIT)  
Koumani Ntowe; 2018 – 2020 (MIT)  
Isioma Osuber; 2018 – 2020 (MIT)  
Maddy Davison; 2018 - 2020 (Wellesley)  
Nathaniel Lieberman; 2018 (Harvard)  
Meghana Yallenski; 2017 (Dartmouth)

(Visiting undergraduate)  
(Summer interns)  
(BU RISE Scholars)