

Curriculum Vitae

1. Personal Details:

E-mail: amir.amed@ekmd.huji.ac.il
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2. Higher Education:

- 1998-2001: The Hebrew University of Jerusalem, B.Sc. in Biology, Graduated with honors (*Magna Cum Lauda*)
- 2001-2003: The Hebrew University of Jerusalem, M.Sc. in Computational Neuroscience [*Without thesis, moved on to the direct ICNC PhD program*].
- 2003-2006: The Hebrew University of Jerusalem, Ph.D in Computational Neuroscience, Thesis title: "Visual and multisensory processing and plasticity in the human brain". Supervisors: Prof. Ehud Zohary; Prof. Rafael Malach. [*Thesis included 5 papers, 3 in Nature Neuroscience*].
- 7/2003: National Institute of Neurological Disorders and Stroke, NIH, USA. Visiting Fellow. Topic: "Transcranial magnetic stimulation of the occipital pole interferes with verbal processing in blind subjects" [*Results published in Nature Neuroscience*]. Host supervisor: Prof. Leonardo G. Cohen.
- 2004-2007: Harvard Medical School, Center for Non-Invasive Brain Stimulation, Beth Israel Deaconess Medical Center, Boston, USA. Post-doctoral Fellowship. Host: Prof. Alvaro Pascual-Leone. [*Items number 6-8, 24-26 in the List of Publications resulted from this research including a Neuron and Annual Reviews in Neuroscience papers*]. Topics: Perception vs. Mental imagery; Crossmodal plasticity in the human brain; Concurrent combination of TMS and fMRI.

3. Appointments at the Hebrew University:

Starting date of academic appointment: 12/06/2012-Present
Academic position: Associate Professor
Department: Medical Neurobiology, Institute for Medical Research - Israel-Canada
Department: Cognitive Science (co-affiliation).

4. Additional Functions/Tasks at the Hebrew University:

- 10/2012: Member of ELSC joint steering committee (also serve as faculty level 'vaadat sinun' which is appointed by the Rector).
- 11/2012: Member of Cognitive Science program development committee (also serves as faculty level 'vaadat sinun' which is appointed by the Rector).
- 6/2010-Present: Member of the Edmond and Lily Safra Center for Brain Sciences (ELSC). [*Selected by a presidential international committee led by Nobel Laureates and other leading neuroscientists*]
- 10/1997-3/2004: Teaching fellow (Instructor / Teaching assistant): Life Science Institute and Interdisciplinary Center for Neural Computation (ICNC 2002-2003 only).
- 2/2009-Present: Member of the Inter-disciplinary center for neuronal computation (ICNC)
- 6/2010-Present: Member of the Edmond and Lily Safra Center for Brain Sciences (ELSC). [*Selected by a presidential international committee led by Nobel Laureates and other leading*

neuroscientists]

- 10/2009-Present: Building a new course on the brain and teaching: Rothberg International School
- 10/2009-Present: Building a new course on the brain to the general public
- 2007-Present: Volunteering to give tens of lectures in various occasions (requested by IMRIC, ELSC, public and foreign relation, donor services) including delegations (donors, Science committee delegation, ambassadors etc. visiting HUJI) or to general public (Veidat Hanasi, talks and visits for groups of blind etc.).
- 02/2011-Present: Cognitive Science program advisor for advanced degrees.
- 2012: HUJI Fund raising excursions in Geneva, Lisbon and Argentina.
- 04/2013: Hosting of 80 High school Arab students from Beit-Safafa.
- 10/2013-present (until 10/2017): Member of the Faculty of Medicine prizes committee.
- 01/2014 Director of public relation and Media, IMIC, HUJI
- 09/2014-present Chairman of the PhD Reception Committee, Department of cognition
- 09/2014-present Director for academic educations, The ELSC brain imaging

5. Service in other Academic and Research Institutions:

04/2005-07/2007: Instructor of Neurology, Harvard Medical School, Boston, USA.

6. Other Activity:

Memberships in editorial boards:

12/2010-06/2012: European Journal of Neuroscience, Scientific Review Board, “Scientific Review Associate” (SRA)

01/2010-present: *Frontiers in Integrative Neuroscience*, Review Editor

01/2010-present: *Frontiers in Human Neuroscience*, Review Editor.

07/2010-present: *Frontiers in Perception Science*, Review Editor

03/2011-present: *World Journal of Neurology* (WJN)

08/2011-present: *Journal of Neurology & Neurophysiology* (Invited; In the process of joining)

11/2011-present: *Multisensory Research*, Associate Editor

11/2013-present: *Restorative Neurology and Neuroscience* (RNN), Associate Editor

Ad Hoc Reviewer (Scientific Journals):

2008-2014: reviewer for *Journal of Neuroscience*

2009-2014: reviewer for *Current Biology*

2010, 2013: reviewer for *Neuron*

2011: reviewer for *Brain*

2008-2014: reviewer for *Cerebral Cortex*

2011: reviewer for *European Journal of Neuroscience*

2007-2012: reviewer for *NeuroImage*

2008: reviewer for *Journal of Vision*

2008, 2012: reviewer for *Neuropsychologia*

2009: reviewer for *Human Brain Mapping*

2009: reviewer for *Restorative Neuroscience and Neurology*

2009, 3/2011: reviewer for *Brain Topography*

2009: reviewer for *Brain Research*

2009: reviewer for *Journal of neurophysiology*

2012: reviewer for *Mutisensory Research*

Ad Hoc Reviewer (Grants):

2008: Reviewer for Economic and Social Research Council (ESRC), UK.
 2009: Reviewer for Israel Science Foundation (ISF), Israel
 2009: Reviewer for The National Institute for psychobiology in Israel, Israel
 2009, 2010, 2012: reviewer for The Wellcome Trust, UK
 2011: reviewer for The Swiss National Science Foundation (SNSF)
 2012: reviewer for the German-Israel foundation (GIF)
 2012: reviewer The Fund for Scientific Research – FNRS, Belgium.

Ad Hoc Reviewer (PhD thesis):

2008, 2012: Hebrew University of Jerusalem
 2008, 2009, 2010, 2011: Weizmann Institute of Science
 2010: Technion- Israel Institute of Technology
 2012: Bar Ilan University

Organization of Conferences:

11/2010: 20th meeting of the Journee Jean-Louis Signoret, Paris, France. "What does sensory handicap teach us about multisensory integration in the brain", *Presidents invites* (together with Prof. Anne-Lise Giraud).

06/2011: 12th Annual Meeting of the International Multisensory Research Forum; Sendai, Japan, *Advisory board member*.

06/2012: 13th Annual Meeting of the International Multisensory Research Forum; Oxford, UK *Advisory board member*.

06/2013: 14th Annual Meeting of the International Multisensory Research Forum; Jerusalem, Israel *Conference organizer (co-chair Prof. David Shore)*

06/2013: Sensory Substitution, Brain Plasticity and Visual Rehabilitation workshop; Jerusalem, Israel. *Conference organizer*

06/2014: 15th Annual Meeting of the International Multisensory Research Forum; Amsterdam, Netherlands. *Advisory board member*.

Awards, Prizes and Honors:

1998: B.Sc. Graduated 'Magna cum Laude' from the Hebrew University of Jerusalem. Also, cited on the Dean's list for academic achievements (1996-7).

1999-2004: Inter-disciplinary center for neuronal computation (ICNC) fellow.

2001-2004: The Horowitz foundation scholarship for outstanding Ph.D. students.

6/2004: Travel Fellowship Award to attend the Human Brain Mapping Meeting.

2005-2007: International Human Frontiers Science Program Long-Term Postdoctoral Fellow.

07/2005: Summer Institute in Cognitive Neuroscience fellowship, Dartmouth College, USA.

01/2007: Presidential absorptions grant, The President of the Hebrew University.

05/2007: Invited plenary keynote speaker in the Georgetown Cognitive Sciences Spring Symposium.

08/2007: My Research was featured in the International Human Frontiers Science Program Organization annual report.

09/2007: Award for outstanding Israeli projects proposals in the "EU 7th Framework Programme for Research & Technological Development".

03/2008: Golda Meijer foundation tenure track lecturer fellow.

06/2008: Alon fellow, Council for Higher Education, Israel. [*Awarded for top Israeli young tenure track lecturers in all fields and universities*].

07/2009: The first graduate student from my lab (Noa Tal) won the faculty of Medicine prize for excellence in M.Sc. studies.

02/2009: International Human Frontiers Science Program Career Development Award.

04/2009: My Research was featured in the Presidential annual report of the Hebrew University of Jerusalem.

04/2010: Prototype demo of our sensory substitution device was selected to feature in Microsoft ThinkNext 2010 exhibition

05/2010: The Sieratzki-Korczyzn Prize for advances in Neuroscience. ("In recognition of his excellent and promising achievements in the field of neuroscience, in particular his contribution towards better understanding of brain reorganizing after injury or damage")

10/2010: The Avraham Shalmon 'Teva' company founders award – for "imaging of diseases"

02/2011: The Krill Prize for Excellence in Scientific Research, The Wolf Foundation (04/2011 selected to give the speech on behalf of the awardees, Wolf foundation ceremony).

06/2011: My lab and our sensory substitution research were selected to feature in "The Israeli Presidential conference 2011 Facing Tomorrow".

07/2011: Dean of The Hebrew University Faculty of Medicine Young Investigator Award in the memory of Prof. Yaacov Matzner.

07/2011: James S. McDonnell Foundation 2011 Scholar Award in Understanding Human Cognition

03/2012: Voted an excellent lecturer by the Hebrew University students / Rector's Letter of appreciation for teaching in the 2011-2012 academic year.

04/2012: Prototype demo of our virtual-cane/sensory-substitution-device hybrid was selected to feature in Microsoft ThinkNext 2012 exhibition

04/2012: Associate Editor for the Multisensory Research (MSR) Journal.

11/2012: Our 2012 Neuron paper work (Striem-Amit et al., 2012) was highlighted in Nature.

12/2012: Our 2012 Neuron paper work (Striem-Amit et al., 2012) was highlighted in Nature's group monthly podcast NEUROPOD.

06/2013: Invited faculty in an Interdisciplinary Summer School on "Embodied Inter-subjectivity: the 1st person and the 2nd person perspectives", Aegina, Greece.

06/2013: The Israel Science Foundation Research Workshops Grant for the Sensory Substitution, Brain Plasticity and Visual Rehabilitation Workshop.

11/2013: Associate Editor for the Restorative Neurology and Neuroscience (RNN) Journal.

7. Research Grants:

Competitive major grants as principle investigator [All grants as PI and without collaborators beside two]

2007-2011: Marie Curie International Reintegration Grant, European Commission - The 7th Framework Programme. (IRG-EU-FP7), Hebrew University of Jerusalem (Jerusalem, Israel). #15-23, #28-29 [*i.e. Items number 15-23 and 28-29 in the List of Publications resulted from this research*](*"SEEING WITH SOUNDS"*)

2008-2009 The National Institute for Psychobiology in Israel. #15, #27 [*i.e. Items number 15, 17 in the List of Publications resulted from this research*]

2008-2009 Alon Award.

2008-2012 Prize award for research in the lab from Teva company

2008-2012 Israeli Science foundation grant (ISF), #15-23, #28-29 [*i.e. Items number 15-23 and 28-*

29 in the List of Publications resulted from this research] (“Neural basis and behavioral correlates of sensory substitution, brain plasticity and brain development in humans”)

2009-2010 German Israeli foundation (GIF) Young Scientists' Program award. #15-16, #18, #27 [i.e. Items number 15, 16, 18 and 27 in the List of Publications resulted from this research]

2009-2012: International Human Frontiers Science Program career development grant (HFSPO), #15-23, #28-29 [i.e. Items number 15-23 and 28-29 in the List of Publications resulted from this research] (“Artificial vision using sensory substitution in blind children: behavior and brain dynamics”)

2012-2018: The James S. McDonnell Foundation 2011 Scholar Award in Understanding Human Cognition (JSMF), The Hebrew University of Jerusalem (Jerusalem, Israel). #22-27, #28-29 [i.e. Items number 22-27 and 28-29 in the List of Publications resulted from this research] (“Understanding Human Cognition”)

02/2013 ERC grant awarded: “Seeing” with the ears, hands and bionic eyes: from theories of brain organization to visual rehabilitation” / BrainVisionRehab

01/2014 Joint grant with Prof. Sahel (IDV) and Prof Banin (Dpt of Ophthalmology)

Individual donors grants, special grants and intramural research grants: [All grants as PI and without collaborators beside vision center grant];

01/2007-12/2010: Presidential research absorption grant.

10/2007-10/2008: The Hebrew University Intramural Research found Career development award.

10/2007-10/2008 Lichenski foundation.

08/2008-06/2011: Moscona foundation award. #15, #16 [i.e. Items number 15 and 16 in the List of Publications resulted from this research]

07/2008-04/2010 Eliyahu Pen foundation award. #15 [i.e. Item number 15 in the List of Publications resulted from this research]

10/2010-10/2011 Shohare USA.

11/2010-11/2013: Vision center grant, ELSC.

8. Teaching at the Hebrew University: [Supervising 3 Post docs, 5 Ph.D., 3 M.Sc., and over 30 past and present undergraduate project students]

Master's degree students

10/2013 – Present: Galit buchs

02/2014 – Present: Shani Shapira

10/2013 – Present: Menahem Kerem

Doctoral degree students

10/2009-Present: Lior Reich; [Direct PhD in Neurobiology, Lior is a Rodin foundation fellow]

04/2008-present: Zohar Tal [research from her thesis was highlighted in FENS 2010 and IMRF 2010 symposiums on body representation and FENS 2010 press release]

10/2008-present: Noa Zeharia, co-supervisor- Prof. Tamar Flash; Noa is a fellow in the prestigious ICNC program. [Research from this thesis was highlighted in FENS 2010 and IMRF 2010 symposiums on body representation and FENS 2010 press release]

03/2012-Present: Shachar Maidenbaum.

10/2012-Present: Roni Arbel (MD-Ph.D. student).

Post-doctoral Fellows and Visitors (6 months or longer):

06/2014-Present: Dr. Benedetta Heimler - ELSC post-doctoral fellow (*Benedetta is the recipient of the prestigious ELSC post-doc fellowship on the research proposal we wrote*)

2009-present: Dr. Andrea Bubic. Visiting fellow. Visited the lab for about half a year and we still collaborate while she is doing postdoc at Harvard [*We published 2 book chapters and in the process of writing 2 additional research papers in relation to the research done when she was here*]

2013-2014 Dr. Petra Vetter. Visiting post-doc fellow.

2013-2014 Dr. Weronika Dębowska. Visiting fellow.

M.Sc. Alumni:

10/2007-10/2009: Noa Tal; completed *magna cum laude*. Thesis won a faculty prize for *Exceptional Master thesis works*. '*Multisensory visual-tactile object-related network in humans: insights gained using a novel crossmodal adaptation approach*'

10/2009-01/2013: Ornella Dakwar.

03/2011-09/2013: Sami Abboud. '*Dissociating the neural processing of color from letters and numbers as encoded by sensory substitution in the blind*'

Ph.D. Alumni

10/2007-02/2014 Ella Striem-Amit; [*Ella is a fellow in the prestigious Hoffman program; Her PhD included peer-reviewed publications in Neuron, Current Biology, Cerebral cortex and several other papers*]. '*NEUROPLASTICITY IN THE BLIND AND SENSORY SUBSTITUTION FOR VISION*'

10/2007-12/2012: Ran Geva [*Ran's research was highlighted in FENS 2010 and IMRF 2010 symposiums on body representation and FENS 2010 press release.*]; Co-supervisor- Prof. Rafael Malach (WIS). '*Neural Correlates of the Intrinsic and Extrinsic Components of the Body Scheme Using fMRI in Humans*'

10/2008-09/2013: Uri Hertz; [*Uri was a fellow in the prestigious ICNC program*]. '*Brain topography and multisensory perception: fMRI studies using novel computational approaches*'

10/2008-08/2014: Haim Azulay; PhD submitted, not yet approved.

Post-doctoral Fellows Alumni

11/2011-2013: Dr. Ilan Goldberg (MD, PhD), ELSC post-doctoral fellow. (*Ilan is a neurologist and won one of first prestigious ELSC post-doc fellowship on the research proposal we wrote*); Co-Supervisor Dr. Shahar Arzy.

10/2010-04/2014: Dr. Shelly Levy-Tzedek, ELSC post-doctoral fellow (*Shelly won one of first prestigious ELSC post-doc fellowship on the research proposal we wrote*)

07/2010-09/2014: Dr. Daniel-Robert Chebat – Azrieli Foundation post-doctoral fellow (*Daniel won the prestigious Azrieli foundation post-doc fellowship on the research proposal we wrote*)

Courses Taught by Candidate:

2009, 2010, 2011, 2012 and 2013: Course 06125: Functional Neuroanatomy for Cognitive Sciences program (B.Sc. and M.Sc. students).

2009, 2010, 2011 and 2012: Course 99164: Principles of Physiology – Occupational therapy (B.Sc.).

2009, 2010, 2011 and 2012: Course 91147: Physiology for Nursing (B.Sc.).

2010, 2011: Course 48753: Issues in Cognitive Neuroscience – Rothberg International School students (B.Sc.).

2011: Course 76950: Workshop on functional MRI methods (M.Sc. and Ph.D. students)

LIST OF PUBLICATIONS

PI= principal investigator, C=co-researcher, S= student, PD= postdoc T=lab tech.
In bold= submitted chosen reprints best representing my research.

1. Doctoral Dissertation: "Visual and multisensory processing and plasticity in the human brain", Prof. Ehud Zohari, Hebrew University, Prof. Rafael Malach, Weizmann Institute of Science. July 2005. Publications emanated from the dissertation: Numbers #1-4 in general list.

2. Books:

None

3. Books Edited:

None

4. Chapters in Collections: [8 peer-reviewed book chapters]

Merabet, L.^{PD}, **Amedi, A.**^{PD}, Pascual-Leone, A.^{PI}. Activation of the Primary Visual Cortex by Braille reading in Blind Subjects (2006). 377-394. In: Reprogramming the Cerebral Cortex, plasticity following central and peripheral lesions (Eds. S. Lomber and D. Eggermont). Oxford University Press, New York, USA.

Merabet, L.^{PD}, Bass-Pitskel, N.^S, **Amedi, A.**^C, Pascual-Leone A.^{PI} (2008). 23-42. The plastic human brain in blind individuals: The cause of disability and the opportunity for rehabilitation. In: Blindness and brain plasticity in navigation and object perception, (Eds. J. J. Rieser, D. H. Ashmead, F. F. Ebner, and A. L. Corn). Lawrence Erlbaum Associates, New York, USA.

Bubic, A.^{PD}, Striem-Amit E.^S, **Amedi, A.**^{PI,#}. Large-scale brain plasticity following blindness and the use of sensory substitution devices (2010). 351-380. In: Multisensory object perception in the primate brain (Eds. J. Kaiser and M.J. Naumer). Springer Press, New York, USA.

[# corresponding author with HUJI affiliation]

Amedi, A.^{PI,#}, Merabet, L.^C, Tal, N.^S, Pascual-Leone, A.^{PI} (2011). 465-480. Pictorial art beyond sight: revealing the mind of a blind painter. In: Art and the Senses, (Eds. F. Bacci, D. Melcher). Oxford University Press, New York, USA. [# corresponding author with HUJI affiliation]

Amedi, A.^{PI,#}. The occipital lobe and language (2011). In: The Cambridge Encyclopedia of the language sciences (Ed. P. Hogan). Cambridge University Press, Cambridge, UK. [In Press] [# corresponding author with HUJI affiliation]

Striem-Amit, E.^S, Bubic, A.^{PD}, **Amedi, A.**^{PI,#} (2011). Neurophysiological mechanisms underlying plastic changes and rehabilitation following sensory loss in blindness and deafness. In: Frontiers in the Neural Bases of Multisensory Processes, (Eds. M.M. Murray & M.T. Wallace). Taylor and Francis, Oxford, UK. [In Press] [# corresponding author with HUJI affiliation]

Maidenbaum S, **Amedi, A.**^{PI,#} (2012). "Applying plasticity for visual rehabilitation in adulthood" In: Plastic Vision. (Eds. L. Harris & J. Steeves). Cambridge University Press, New York, USA [# corresponding author with HUJI affiliation]

Hillenbrand S, Raveh D, **Amedi A.** (2014) What can sensory substitution tell us about the organization of the brain? British Academy: in press

5. Articles:

Original Papers in Peer Reviewed Journals. [Citations – marked by '{#GoogleS, #WOS}']

[Web of Science citation report Amedi: Total number of citations: 2088; H-index 20]

[Google Scholar citation report Amedi: Total number of citations: 3201; H-index: 21]

1. **Amedi, A.^S**, Malach, R.^C, Hendler, T.^C, Peled, S.^C, Zohary, E.^{PI} (2001). Visuo-haptic object-related activation in the ventral visual pathway. Nature Neuroscience 4:324-330. 14.345;5/231(Neuroscience); {406, 283} [top 1%]
2. **Amedi, A.^S**, Jacobson, G.^S, Hendler, T.^C, Malach, R.^C, Zohary, E.^{PI} (2002). Convergence of visual and tactile shape processing in the human lateral occipital complex. Cerebral Cortex 12:1202-1212. 6.979;19/231(Neuroscience); {266, 166} [top 10%]
3. **Amedi, A.^S**, Raz, N.^S, Pianka, P.^C, Malach, R.^C, Zohary, E.^{PI} (2003). Early 'visual' cortex activation correlates with superior verbal-memory performance in the blind. Nature Neuroscience 6:758-66. 14.345;5/231(Neuroscience); {296, 201} [top 1%]
4. **Amedi, A.^S**, Floel, A.^{PD}, Knecht, S.^C, Zohary, E.^C, Cohen, LG.^{PI} (2004). Transcranial magnetic stimulation of the occipital pole interferes with verbal processing in blind subjects Nature Neuroscience 7:1266-70. 14.345;5/231(Neuroscience); {136, 96} [top 1%]
5. Raz, N.^S, **Amedi, A.^S**, Zohary, E.^{PI} (2005). V1 activation in congenitally blind is associated with episodic retrieval. Cerebral Cortex 15:1459-1468. 6.979;19/231(Neuroscience); {66, 48} [top 10%] [this paper was not submitted to previous committee but is from PhD period]
6. **Amedi, A.^{PD}**, Malach, R.^C, Pascual-Leone, A.^{PI} (2005). Negative BOLD differentiates visual imagery and perception. Neuron 48: 859-72. 13.260;6/231(Neuroscience); {104, 72} [top 1%]
7. Bermpohl, F.^{PI}, Pascual-Leone, A.^C, **Amedi, A.^{PD}**, Merabet, L.^{PD}, Fregni, F.^{PD}, Gaab, N.^S, Alsop, D.^C, Schlaug, G.^C, Northoff, G.^{PI} (2006). Dissociable Networks for the Expectancy and Perception of Emotional Stimuli in the Human Brain. Neuroimage 30:588-600. 5.739 ;1/14 (Neuroimaging); {81, 53} [top 1%]
8. Bermpohl, F.^{PI}, Pascual-Leone, A.^C, **Amedi, A.^{PD}**, Merabet, L.^{PD}, Fregni, F. ^{PD}, Gaab, N.^S, Alsop, D.^C, Schlaug, G.^C, Northoff, G.^{PI} (2006). Attentional modulation of emotional stimulus processing: An fMRI study using emotional expectancy. Human Brain Mapping 27: 662-677. 6.256;2/14(Neuroimaging); {45, 37} [top 10%]
9. Merabet, LB.^S, Swisher, JD.^S, McMains, SA.^S, Halko, MA.^S, **Amedi, A.^C**, Pascual-Leone ,A.^C, Somers, DC.^{PI} (2007). Combined activation and deactivation of visual cortex during tactile sensory processing. Journal of Neurophysiology 97:1633-1641. 3.1; 99/237 (Neuroscience); {65, 46} [top 30%]
10. Ramos-Estebanez, C.^{PD}, Merabet, LB.^S, Machii, K.^S, Fregni, F.^S, Thut, G.^S, Wagner, TA.^S, Romei, V.^S, **Amedi, A.^C**, Pascual-Leone A.^{PI} (2007). Visual phosphene perception modulated by sub-threshold cross-modal sensory stimulation. Journal of Neuroscience 27: 4178-4181. 7.27;17/237 (Neuroscience); {44, 33} [top 10%]
11. **Amedi, A.^{PI,#}**, Stern, W. ^{PD}, Camprodon, JA. ^{PD}, Bermpohl, F. ^{PD}, Merabet, L. ^{PD}, Rotman, S. ^S, Hemond, CC. ^S, Meijer, P. ^C, Pascual-Leone, A. ^{PI} (2007). Shape conveyed by visual-to-auditory sensory substitution activates the lateral occipital complex. Nature Neuroscience 10: 687-689. 14.2;5/237 (Neuroscience); {140, 90} [top 1%] [# corresponding author with both HUJI and Harvard affiliations]
12. Bermpohl, F.^{PI}, Pascual-Leone, A.^C, **Amedi, A.^{PD}**, Merabet, L. ^{PD}, Fregni, F. ^{PD}, Wrase, J. ^C, Schlagenhaut, F. ^C, Bauer, M. ^S, Heinz, A. ^S, Schlaug, G. ^S, Northoff, G. ^{PI} (2008). Novelty seeking modulates medial prefrontal activity during the anticipation of emotional stimuli. Psychiatry Research: Neuroimaging. 164: 81-85. (Clinical Neurology); {12, 9} [top 30%]

13. Romei, V^S, Brodbeck, V^C, Michel, C^C, **Amedi, A.^C**, Pascual-Leone, A^C and Thut, G^{PI} (2008). Spontaneous fluctuations in posterior alpha-band EEG activity reflect variability in excitability of human visual areas. Cerebral Cortex 18: 2010-2018. 6.84; 20/237 (Neuroscience); {190, 116} [top 10%]
14. **Amedi, A.^{PI, #}**, Merabet, L.B.^{PD}, Camprodon, J.^{PD}, Bermpohl, F.^{PD}, Fox, S.^S, Ronen, I.^C, Kim, D.S.^C, Pascual-Leone, A.^{PI} (2008). Neural and behavioral correlates of drawing in an early blind painter: a case study. Brain Research 1242: 252-262. 2.62;127/237(Neuroscience); {13, 3} [# corresponding author; Hebrew University affiliation appears in paper]
15. Azulay, H.^S, Striem, E.^S, **Amedi, A.^{PI}** (2009). Negative BOLD in Sensory Cortices During Verbal Memory: A Component in Generating Internal Representations? Brain Topography 21: 221-231. 3.29;51/185(Clinical Neurology); {13, 9} [top 30%][# corresponding author with HUJI affiliation]
16. Lacey, S.^{PD}, Tal, N.^S, **Amedi, A.^C**, Sathian, K.^{PI} (2009). A Putative Model of Multisensory Object Representation. Brain Topography 21:269-274. 2.080;158/231(Neuroscience); {70, 47}
17. Tal, N.^S, **Amedi, A.^{PI, #}** (2009). Multisensory visual-tactile object related network in humans: insights gained using a novel crossmodal adaptation approach. Experimental Brain Research 198: 165-182. 2.3;150/237 (Neuroscience); {48, 32} [# corresponding author with HUJI affiliation]
18. **Amedi, A.^{PI, #}**, Raz, N.^S, Azulai, H.^S, Malach, R.^C, Zohary, E.^{PI} (2010). Cortical activity during tactile exploration of objects in blind and sighted humans. Restorative Neurology and Neuroscience 28: 143-156. 3.35; 89/237 (Neuroscience); {44, 23} [# corresponding author with HUJI affiliation]
19. Hertz, U.^S, **Amedi, A.^{PI, #}** (2010). Disentangling unisensory and multisensory components in audiovisual integration using a novel multi-frequency fMRI spectral analysis. NeuroImage 52: 617-632. 5.93;1/14 (Neuroimaging). {12, 9} [top 1%] [# corresponding author with HUJI affiliation]
20. **Reich, L S., Szwed, M S, Cohen, L C, Amedi, A.^{PI}, #** (2011). A Ventral Visual Stream Reading Center Independent of Visual Experience. Current Biology 21: 1-6. 10.03;16/286 (Biochemistry and Molecular biology); {56, 34} [top 5%] [# corresponding author with HUJI affiliation]
21. Striem, E.^S, Hertz, U.^S, **Amedi, A.^{PI, #}** (2011). Extensive cochleotopic mapping of human auditory cortical fields obtained with phase-encoding fMRI. PLoS ONE 6(3):e17832. 4.41; 12/85 (Biology); {27, 11} [top 15%] [# corresponding author with HUJI affiliation]
22. Striem, E.^S, Dakwar, O.^S, Hertz, U.^S, Meijer, P^C., Stern, W^C., Pascual-Leone, A.^C, **Amedi, A.^{PI, #}** (2011); The Neural Network of Sensory-Substitution Object Shape Recognition. Functional Neurology, Rehabilitation, and Ergonomic 1: 271-278 [# corresponding author with HUJI affiliation]
23. Maidenbaum S, Arbel R, Abboud S, Chebat D R, Levy-Tzedek S, **Amedi A** (2012). Virtual 3D shape and orientation discrimination using point distance information. Proc. of the 9th Intl Conf. Disability, Virtual Reality & Associated Technologies. {1, #}
24. Levy-Tzedek, S.^{PD}., Hanassy, S.^S, Abboud, S.^S, Maidenbaum, S.^S, **Amedi, A.** (2012). Fast, Accurate Reaching Movements with a Visual-to-Auditory Sensory Substitution Device. Restorative Neurology and Neuroscience 30: 313-323. {7, 2}
25. Striem, E.^S, Guendelman ,M.^S, **Amedi, A.^{PI, #}** (2012). ‘Visual’ acuity of the congenitally blind using visual-to-auditory sensory substitution PLoS ONE 7(3): e33136. doi:10.1371/journal.pone.0033136; 12/85 (Biology); {13, 5} [top 15%] [# corresponding

author with HUJI affiliation]

26. **Striem-Amit E, Dakwar O, Reich L, Amedi A (2012). The large-scale organization of ‘visual’ streams emerges without visual experience Cerebral Cortex 22:1698-1709 [# corresponding author with HUJI affiliation] 6.84; 20/237 (Neuroscience); {17, 10} [top 10%]**
27. **Striem-Amit,E., Cohen, L., Dehaene, S., Amedi, A. ^{PI} (2012). Reading with Sounds: Sensory Substitution Selectively Activates the Visual Word Form Area in the Blind. Neuron 70: 640-652 [The paper had a huge impact this year including highlights in the Nature magazine (under news), in the highly popular Nature Neuroscience podcast monthly pod cast and many international journals and newspapers]. {11, 1} [top 1%].**
28. **Levy-Tzedek, S., Novick, T., Arbel, R., Abboud, S., Maidenbaum, S., Vaadia, E., Amedi, A. (2012). Cross-sensory transfer of sensory-motor information: visuomotor learning affects performance on an audiomotor task, using sensory-substitution. Scientific Reports 2:949. {2, }**
29. **Zeharia, N., Hertz, U., Flash, T., Amedi, A. (2012). Negative blood oxygenation level dependent homunculus and somatotopic information in primary motor cortex and supplementary motor area. PNAS 109: 18565-18570. {2, 1}**
30. **Maidenbaum S, Amedi A. ^{PI} Applying Plasticity to Visual Rehabilitation in Adulthood. Plasticity in Sensory Systems (2012): 229 2012;. {1, }**
31. **Maidenbaum S, Levy-Tzedek S, Chebat DR, Amedi A. ^{PI} Increasing Accessibility to the Blind of Virtual Environments, Using a Virtual Mobility Aid Based On the "EyeCane": Feasibility Study. PLoS1 (2013) {1, }**
32. **Levy-Tzedek S, Halimi M, Amedi A. ^{PI} Seeing with your ears: a wondrous journey across the senses. Frontiers for Young Minds (2013)**
33. **Maidenbaum S, Chebat DR, Levy-Tzedek S, Amedi A. Depth-To-Audio Sensory Substitution for Navigation in Virtual Environments. HCI International 2014.**
34. **Abboud S, Hanassy S, Levy-Tzedek S, Maidenbaum S, Amedi A. EyeMusic: Introducing a “visual” colorful experience for the blind using auditory sensory substitution RNN. (2014)**
35. **Hertz U, Amedi A. Flexibility and stability in sensory processing revealed using visual-to-auditory sensory substitution. Cerebral Cortex (2014)**
36. **Striem-Amit,E., Amedi, A. ^{PI}, Visual Cortex Extrastriate Body-Selective Area Activation in Congenitally Blind People “Seeing” by Using Sounds. Current Biology (2014); {, } [top 5% [# corresponding author with HUJI affiliation];**
37. **Maidenbaum S, Amedi A. Sensory Substitution and Augmentation – what's happening "under the hood" in our brain? Assistive Augmentation 2014; in press**
38. **Maidenbaum S, Chebat DR, Levy-Tzedek S, Amedi A. Blind in a Virtual World: Vision-deprived Virtual Navigation Patterns Using Depth Cues and The Effect of Extended Sensory Range CHI-WiP 2014; in press**
39. **Buchs G, Maidenbaum S, Amedi A. Obstacle Identification and Avoidance Using the 'EyeCane' EuroHaptics 2014**
40. **Maidenbaum S, Arbel A, Shapira S, Buchs G, Amedi A. Vision through other senses: practical use of Sensory Substitution devices as assistive technology for visual rehabilitation MED 2014**
41. **Maidenbaum S, Hanassy S, Abboud S, Buchs G, Chebat DR, Levy-Tzedek S, Amedi A. The “EyeCane”, a new electronic travel aid for the blind: Technology, behavior & swift learning RNN; in press**

42. Maidenbaum S, Chebat DR, Levy-Tzedek S, Namer-Furstenberg R, **Amedi A.** *The Effect of Expanded Sensory Range via the EyeCane Sensory Substitution Device on the Characteristics of Visionless Virtual Navigation* MSR 2014; *in press*
43. Levy-Tzedek S, Riemer D, Amedi A. *Color improves ‘visual’ acuity via sound* Frontiers in Neuroscience 2014
44. Abboud S, Maidenbaum S, Dehaene S, **Amedi A.** *A number-form area in the blind* Nature Communications 2014; *in press*

Peer-Reviewed Reviews:

45. Merabet, L.^{PI}, Rizzo, J.^C, **Amedi, A.**^{PD}, Somers, D.^C, Pascual-Leone, A.^{PI} (2005). What blindness can tell us about seeing again: Merging neuroplasticity and neuroprostheses. Nature Review Neuroscience 6:71-7. 26.483;1/231(Neuroscience); {114, 71} [top 1%]
46. **Amedi, A.**^{PI, #}, Von Kriegstein, K.^C, Van Atteveldt, N.^C, Beauchamp, MS.^C, Naumer, MJ.^{PI} (2005). Functional imaging of human crossmodal identification and object recognition Experimental Brain Research 166: 559-571. 2.256;146/231(Neuroscience); {220, 167} [special Issue on multisensory integration] [# corresponding author]
47. Pascual-Leone, A.^{PI}, **Amedi, A.**^{PD}, Fregni, F.^{PD}, Merabet, L.^{PI} (2005). The Plastic Human Brain Cortex. Annual Reviews in Neuroscience 28:377-401. 24.822;2/231(Neuroscience); {598, 346} [top 1%]
48. **Amedi, A.**^{PI, #}, Merabet, L.^{PD}, Bermpohl, F.^{PD}, Pascual-Leone, A.^{PI} (2005). The Occipital Cortex in the Blind: Lessons about Plasticity and Vision. Current Directions in Psychological Science 16: 306-311. {44, 20} [Current Directions in Psychological Science is the official journal of the American Psychological Association (APA). [# corresponding author]
49. Reich, L.^{S.}, Maidenbaum, S.^S, **Amedi, A.**^{PI, #} (2012). The brain as a flexible task-machine: implications for visual rehabilitation using non-invasive vs. invasive approaches. Current Opinion in Neurology 25:86-95. 5.021;18/185 (Clinical Neurology). {12, 10} [top 10%]
50. Maidenbaum, S., Abboud, S., **Amedi, A.** (2013). Sensory substitution: Closing the gap between basic research and widespread practical visual rehabilitation. Neuroscience & Biobehavioral Reviews (NBR).

Other publications:

- Amedi, A.**^{PI}. “Seeing” in the dark’: odyssey Journal. Volume 6. 2010. (In Hebrew; a leading science wide audience journal. Subjects covered: brain plasticity in the blind; sensory substitution aids for the blind; revealing the mind of a blind painter).
- Amedi, A.**^{PI}. **Seeing with sounds.** Galileo journal (In Hebrew)

6. Participation in Scientific Conferences, Lectures, and Other Activity:

Participation in Symposiums and invited keynote lectures [38 International and 13 Local symposiums and keynote lectures]

International

6/2004: 5th Annual Meeting of the International Multisensory Research Forum (IMRF), Sitges, Spain; *Multisensory object related processing in the visual cortex of sighted and its reversed hierarchical organization in blind humans.* In: “Multisensory integration in human cortical object recognition” symposium/Symposium speaker

9/2004: 12th World congress of Psychophysiology, Thessaloniki, Greece; *Multisensory object related processing in the visual cortex of sighted and its reversed hierarchical organization in blind humans*. In: "seeing with the hands: how the brain integrates visual and tactile information" symposium/ Symposium speaker

6/2005: 6th Annual Meeting of the International Multisensory Research Forum (IMRF), Roverto, Italy; *Neural correlates of visual-to-auditory sensory substitution in proficient blind users*. In: "Can the blind see?" symposium/ Symposium speaker

11/2005: Society For Neuroscience conference (SFN), Washington D.C., USA; *Role of the visual cortex in verbal memory and language in the blind*. In: "What have we learned about seeing from the blind?" mini-symposium/ Symposium speaker

10/2006: The 6th annual Optical Society of America Vision Meeting. Rochester, USA; *Towards closing the gap between visual neuroprostheses and sight restoration: Insights from studying vision, cross-modal plasticity and sensory substitution*. In: *Multi-sensory Processing and Cross-modal Plasticity symposium*/ Symposium speaker

3/2007: Georgetown Cognitive Sciences Spring Symposium. Georgetown University, Washington D.C., USA; *Seeing with sounds: Neural correlates of visual-to-auditory sensory substitution in proficient blind and sighted users*/ Invited Keynote lecturer

4/2008: 2nd annual workshop on Concepts, Actions, and Objects: Functional and Neural Perspectives. Rovereto, Italy. *Can the blind hear shapes? Insights into vision and brain plasticity from studying blindness and sensory substitution*/ Invited keynote speaker

6/2008: Graduate school workshop on memory, Marburg University, Marburg, Germany, Principles of crossmodal plasticity/ Invited Keynote lecturer

7/2008: 9th Annual Meeting of the International Multisensory Research Forum (IMRF), Hamburg, Germany; *Audio-visual integration for objects, location and low-level dynamic stimuli: novel insights from studying sensory substitution and topographical mapping* In: *Multisensory integration of audition and vision using multimodal approaches: from neurophysiology and brain imaging to neural network modeling symposium*/ Symposium Organizer, Speaker

9/2008: 10th International Conference on Cognitive Neuroscience (ICON 10) Bodrum, Turkey; *Audio-visual integration: novel insights from studying sensory substitution and topographical mapping*. In: *Neural Basis of Multisensory Integration symposium*/ Symposium speaker

6/2010: 11th Annual Meeting of the International Multisensory Research Forum (IMRF), Liverpool, England; *A brain full of body maps: cortical mapping of the somatosensory, visual, motor and mental imagery representations of our body scheme using fMRI*. In: *Multisensory and Body Experience symposium*/ Symposium Organizer, Speaker

7/2010: 7th Forum of European Neuroscience, Amsterdam, Holland; *A brain full of body maps: cortical mapping of the somatosensory, visual, motor and mental imagery representations of our body scheme using fMRI*. In: *How we come to experience that we own our body: from full-body illusions to cortical mapping*/ Symposium speaker

11/2010: 20th meeting of the Journee Jean-Louis Signoret, Paris, France. "What does sensory handicap teach us about multisensory integration in the brain", *Presidents invites* (together with Prof. Anne-Lise Giraud)/ Symposium Organizer, Speaker

02/2011: IGSN – Symposium, Ruhr University, Bochum, Germany. *What did visual deprivation and visual substitution studies teach us about brain organization and reorganization*/ Invited Symposium speaker

05/2011 International Association of Functional Neurology & Rehabilitation, Orlando, Florida, USA. *The Neural Network of Sensory-A Brain Full of Body Maps: Cortical Mapping of the*

Somatosensory, Visual, Motor and Mental Imagery Representations of Our Body Scheme using fMRI Substitution Object Shape Recognition / Invited keynote speaker

06/2011 International Conference on Plastic Vision, York University, Canada. *What did visual deprivation and visual substitution studies teach us about brain organization and reorganization/ Invited speaker*

06/2011: 17th Annual Meeting of the International Human Brain Mapping Organization (OHBM), Quebec City, Canada; Novel Approaches to Image MultiSensory Body Self-Perception symposium / *Symposium speaker*

09/2011: Program in Cognitive, Computational and Systems Neuroscience (PICCS) Summer School, Island Monastery of Frauenchiemsee, Germany. PICCS is sponsored by the US National Science Foundation's (NSF) Partnerships for International Research and Education Program (PIRE)/ *Invited symposium speaker/ Invited Faculty.*

09/2011 La Vision Institute annual meeting, Paris, France. *Visual areas are highly flexible task machines: from basic research to visual rehabilitation/ Invited keynote speaker*

10/2011: 12th Annual Meeting of the International Multisensory Research Forum (IMRF), Sendai, Japan; Multi-sensory integration, Sensory substitution technology and Visual rehabilitation symposium, *What did visual deprivation and visual substitution studies teach us about brain organization and reorganization/ Symposium speaker*

11/2011: The Tactile Research Group annual meeting, Seattle, USA/ *Tactile and auditory approaches to sensory substitution/ Invited keynote speaker*

11/2011: US-Canada international physicians' medical conference, Jerusalem, Israel. *'seeing' with the ears and hands: from basic research to visual rehabilitation/ Invited keynote speaker*

10/2011: The 17th Meeting of the European Society for Cognitive Psychology (ESCOPE), San Sebastian, Spain. *"The brain as a sensory-motor task machine: insights from the dark"/ Symposium speaker*

04/2012: NUI symposium, Microsoft R&D, Herzelia Israel. *"NUI for special needs – eyes for the blind"/ Symposium speaker*

12/2012: TEDx Jerusalem, Israel. *'Seeing' with the ears and hands: from basic research to visual rehabilitation/ Invited keynote speaker.*

03/2013: Sensory Substitution and Augmentation Conference, The British Academy, London, UK. *"Seeing Colored Images With Music Using the EYEMUSIC: From Perception to Visual Rehabilitation" / Symposium speaker.*

03/2013: Israel Dealmakers Summit 2013, NYC. *'seeing' with the ears and hands: from basic research to visual rehabilitation / Invited keynote speaker.*

06/2013: *The 14th International Multi-Sensory Research Forum (IMRF), Jerusalem, Israel. / Conference Organizer*

06/2013: *Sensory Substitution, Brain Plasticity and Visual Rehabilitation workshop, Jerusalem, Israel. "Reading with sounds: Sensory substitution selectively activates the visual word form area in the blind" / Conference Organizer and Speaker.*

06/2013: *Invited faculty in EU funded Summer school in Cognitive Neuroscience fellowship, Dartmouth College, USA.*

01/2014: Electrical Engineering, EPFL, SWISS. *"“Seeing” and reading with the ears, hands and bionic eyes: from basic research to visual rehabilitation" / Invited keynote speaker.*

01/2014: The 9th "Alpine Bain Imaging Meeting" (ABIM) 2014, Champéry, SWISS. *"A step toward closing the gap between using sensory substitution for understanding brain plasticity and stability and for widespread practical visual rehabilitation" / Invited keynote speaker.*

03/2014: Synesthesia Symposium 2014, Hamburg. *"A step toward closing the gap between using sensory substitution for understanding brain plasticity and stability and for widespread practical visual rehabilitation"* / Invited keynote speaker.

03/2014: 4th scientific conference – Neurological Restoration 2014, Cuba. *"Towards closing the gap between using sensory substitution for basic research and for visual rehabilitation"* / Invited keynote speaker.

03/2014: The adaptive brain: recent advances in cognitive neuroscience symposium, Uva, university of Amsterdam. *"Towards closing the gap between using sensory substitution for basic research and for visual rehabilitation"* / Invited keynote speaker.

10/2014: Internal Seminar 2014 of the Vision Institute of Paris, Amboise, France. *"The neural correlates of hearing colors and shapes: insights from darkness on brain plasticity and stability"* / Invited keynote speaker.

03/2015: FENS 11th Göttingen Meeting of the German Neuroscience Society 2015, Germany. *"The neural correlates of hearing colors and shapes: insights from darkness on brain plasticity and stability"* / Symposium speaker.

07/2015: 9th IBRO World Congress, Symposia on *Cortical Plasticity Following Sensory Loss and Restoration*, Rio de Janeiro, Brazil. *"The neural correlates of hearing colors and shapes: insight from darkness on brain plasticity and stability"* / Symposium speaker.

Local

06/2009: The Hebrew University's Board of Governors, *Roundtable discussion on "Neuroscience and Society"* – *"Reading the mind and manipulating it"* / Symposium speaker.

The Mipo-ve-Misham bi-institutional talk series (Life Science / Medicine faculties of the Hebrew University). *Imaging the mammalian brain: from Neurons (Adi Mizrahi) to human cognition (Amir Amedi)* / Invited speaker together with Dr. Adi Mizrahi.

12/2010: The 19th Annual Meeting of Israel Society for Neuroscience, Eilat, Israel. *The plastic multisensory human brain: insights from crossmodal plasticity and sight restoration efforts in the blind using fMRI and TMS* / Symposium Speaker

05/2011: Brain Plasticity: from science to technology symposium. *The adaptation of the brain to new technologies: the visual system and brain plasticity as an example.* / Symposium invited Speaker

06/2009: The Hebrew University's Board of Governors and "The Israeli Presidential conference 2011 Facing Tomorrow" multiple talks and demo in front of many key figures in Israel and the academy about out blind related research.

01/2011: The 9th Annual Meeting on the history of Neurology, Technion, Israel. *Substituting vision: organization and reorganization in the brain* / Symposium invited Speaker.

07/2011: A talk and demonstration of the virtual cane technology to UK ambassador.

4/2012: The 2012 Israel Medical conference/ *Teaching the Blind to See Through the Use of Sound* / Invited keynote speaker.

11/2011: Italy-Israel Dialogue on Cognitive and Affective Neuroscience. The Interdisciplinary Center, Herzliya, Israel. *Visual Areas are Highly Flexible Task Machines: From Basic Research to Visual Rehabilitation* / Symposium invited Speaker.

03/2011: Cognitive, Motor and Sensory augmentation symposium, Mishkenot Shaananim, Jerusalem, Israel. *Seeing with the ears and hands: sensory augmentation via substitution.* / Symposium invited Speaker.

06/2012: “The Israeli Presidential conference 2012 Facing Tomorrow”/ *Brain research and the human tomorrow symposium/ Symposium invited Speaker*

02/2013: ISFN Brain Awareness Week 2013 in Israel, Tel-Aviv University, Israel. *Brain-machine interface - rehabilitation for the blind and sensory enhancement for the sighted/ Invited keynote speaker.*

03/2013: 33rd Annual Meeting of the Israeli Society for Vision and Eye Research (ISVER), Avenue Conference Center at Airport City. Israel. *Seeing with the ears, hands and bionic eyes: from basic research to visual rehabilitation/ Invited keynote speaker.*

6. b) Invited lectures [50 International and 27 local invited lectures]

International

6/2004: University of Barcelona, Department of Neurology, Guttman Institute (rehabilitation institute), Barcelona, Spain; *Multisensory processing and plasticity: closing the gap between visual neuroprostheses and functional restoration of vision in the blind.* /Invited speaker

11/2003: Society for Neuroscience annual meeting, New Orleans, USA. *Blindness leading to cortical hierarchy turned on its head and superior verbal memory* / Conference speaker

6/2004: University of Barcelona, Department of Neurology, Guttman Institute (rehabilitation institute), Barcelona, Spain; *Multisensory processing and plasticity: closing the gap between visual neuroprostheses and functional restoration of vision in the blind/ Invited speaker*

5/2005: Charite University of Berlin. Department of Psychology and Dept. of Psychiatry, Berlin, Germany; *Can the Blind Learn to “See” Again?/ Invited speaker*

5/2005: Boston University, Department of Anatomy and Neurobiology, Boston Medical School, Boston, USA; *Blindness, plasticity and sensory substitution* / Invited speaker

11/2005: McGill University, Montreal, Canada; *The versatile visual cortex: Combining fMRI and TMS to study visual awareness, multisensory processing and cross-modal plasticity/ Invited speaker*

12/2005: Hamburg University, Hamburg, Germany; *Towards Closing the gap between visual neuroprostheses and sighted restoration: Insights from studying vision, cross-modal plasticity and sensory substitution* / Invited speaker

3/2006: Seirken / Sokendai International symposium, Okazaki, Japan; *Combining fMRI and TMS to study the functions of the visual cortex in blind and sighted individuals. In: Seirken / Sokendai International symposium (The 34th Seiriken conference): Cross-modal integration and plasticity: Multidisciplinary approaches using noninvasive functional neuroimaging techniques* / Invited speaker

3/2007: 9th Taller de Neurociencias, Cordoba, Argentina; *See me, hear me, touch me, sensory substitute me: cross-modal interactions in blind and sighted/ Invited speaker*

7/2007: 2nd France-Israel binational conference in neuroscience, neurology and psychiatry, Bordeaux, France. *See me, hear me, touch me: multisensory interactions, brain plasticity and sensory substitution in sighted and blind people/ Invited speaker.*

7/2007: 8th Annual Meeting of the International Multisensory Research Forum (IMRF 2007), Sydney, Australia, *“Extracting shape and location information conveyed by visual-to-auditory sensory substitution activates the lateral occipital complex and dorsal visual stream respectively in blind and sighted individuals”/ Conference speaker.*

7/2007: The International Human Frontiers Science Program Organization annual awardees meeting . Brisbane, Australia *“Can the brain hear shapes?” /Conference speaker.*

1/2008: University College London (UCL), London, UK. *“Visual perception from a blind*

perspective: Can the blind hear shapes? Insights from studying vision, cross-modal plasticity and sensory substitution"/ Invited speaker.

4/2008: Department of Clinical Neurosciences, University of Luusanne (UNIL). *Perception and integration in the three topographical senses: insights from studying sensory substitution and topographical mapping*/ Invited speaker.

6/2008: "Dynamic Perception, Communication and Action"- An international workshop supported by Israel Science Foundation, Institute of Advanced Studies and the Hebrew University the Interdisciplinary Center for Neural Computation, Jerusalem, Israel; *Using visual cortex for non-visual functions* / Invited Speaker

6/2008: Institut für Medizinische Psychologie (IMP) Johann Wolfgang Goethe-Universität and MPI, Frankfurt, Germany; *fMRI study of visual-to-auditory sensory substitution: Can blind hear shapes and locations using artificial vision?*/ Invited speaker

6/2008: Max Planck Institute of Neurobiology, Munich, Germany. *fMRI study of visual-to-auditory sensory substitution: Can blind hear shapes and locations using artificial vision?*/ Invited speaker

7/2008: 9th Annual Meeting of the International Multisensory Research Forum (IMRF), Hamburg, Germany; *"Audio-visual integration for objects, location and low-level dynamic stimuli: novel insights from studying sensory substitution and topographical mapping"*/ invited Speaker

8/2008: The European Conference on Visual Perception (ECVP), Utrecht, Netherlands. *"A what/where visual-to-auditory sensory substitution fMRI study: Can blind and sighted hear shapes and locations in the visual cortex?"*/ Conference Speaker

10/2008: 2nd Materials and Sensations, IPREM, Pau, France; *fMRI study of visual-to-auditory sensory substitution: Can blind hear shapes and locations using artificial vision?*/ Invited speaker

11/2008: International workshop: Presence and the Science of Virtual Reality, Haifa, Israel; *Neural basis of perception and mental imagery: insights from sensory substitution and topographical mapping studies*/ Invited speaker

11/2008: The International Minerva-Weizmann Workshop on Active Sensing in Touch, Smell, and Vision, Weizmann Institute for Science, Rehovot, Israel. *Neural basis of perception and mental imagery: insights from sensory substitution and topographical mapping studies*/ Invited speaker

3/2009: Israel Science Day, London Science Museum, London, England; *Bionic man, dream or reality?*/ Invited speaker

3/2009: Israel Science Day, Manchester Science and Industry museum, Manchester, England; *Bionic man, dream or reality?*/ Invited speaker

4/2009: The Functions of the Parietal Lobes international workshop, Institute for Advanced Studies, Hebrew University, Jerusalem, Israel; *Topographical Mapping of the Human Body and the "Mind Body Scheme"*/ Invited speaker

5/2009: 23th Sandbjerg Symposium, Danish Society for Neuroscience, Neuroplasticity and Neurorehabilitation, Sandbjerg, Denmark; *Developmental versus adult brain neuroplasticity and neuro-rehabilitation in blindness*/ Invited speaker

5/2009: Copenhagen University, Copenhagen, Denmark; *Using Developmental versus adult brain neuroplasticity and neuro-rehabilitation in blindness; Perception and Brain plasticity in humans: New Insights from Phase-locking Fourier Approaches to fMRI* /Invited speaker.

5/2009: Max-Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany. *Phase-locking Fourier Approaches to fMRI Applied to study brain plasticity in blind using artificial vision and to study the body scheme*/ Invited speaker

9/2009: Max-Planck Institute for Biological Cybernetics, Tübingen, Germany; *Perception and Brain plasticity: New Insights from Sensory Substitution Research and Phase-locking Fourier Approaches to fMRI*/ Invited speaker

9/2009: Departmental seminar, Max-Planck Institute of Neurobiology, Munich, Germany; *Perception and Brain plasticity: New Insights from Sensory Substitution Research and Phase-locking Fourier Approaches to fMRI*/ Invited speaker

2/2010: International workshop on Brain Circuits – from receptors to network dynamics, Ein Gedi, Israel. *Phase-locking Fourier Approaches to fMRI: implementation to study artificial vision, brain plasticity and multisensory integration*/ Invited speaker

2/2010: The 3rd France-Israel binational conference in neuroscience, neurology and psychiatry, Haifa University, Haifa, Israel; *Phase-locking Fourier Approaches to fMRI: implementation to study artificial vision, brain plasticity and multisensory integration*/ Invited speaker

4/2010: Ecole Normale Supérieure, division of Neurosciences, INSERM (Inserm - Institut national de la santé et de la recherche médicale), Paris, France/ *Can we train the visual cortex to 'see' again after years of blindness? Neural correlates of rapid and long term brain plasticity*/ Invited speaker.

6/2010: Vision Institute, Inserm-UPMC Research Center 968 Paris *Can we train the visual cortex to 'see' again after years of blindness?/* Invited speaker

6/2010: NeuroSpin Center, CEA-Saclay Center, France. *Can we train the visual cortex to 'see' again after years of blindness? Neural correlates of rapid and long term brain: Sensory processing and brain plasticity in light of the metamodal theory for brain function;/* Invited speaker

6/2010: Oxford Centre for Functional MRI of the Brain (FMRIB), Oxford, England *Can we train the visual cortex to 'see' again after years of blindness?/* Invited speaker

9/2010: Center for Mind/Brain Sciences (CIMeC), University of Trento, Italy. *What blindness and multisensory integration studies teach us about brain organization and reorganization/* Invited speaker / Invited speaker

2/2011: The CONNECT (Consortium of neuroimagers for the non-invasive exploration of brain connectivity and tracts) Meeting on MRI of Brain Connectivity and Microstructure, Tel-Aviv, Israel. *What did sensory deprivation studies teach us about brain organization and reorganization ?/* Invited speaker

7/2011: C.J. Gorter Center for High Field MRI Research, Leiden University Medical Center, Leiden, The Netherlands *The brain as a flexible, sensory-modality-independent Task Machine: from basic research to visual rehabilitation. Can we train the visual cortex to 'see' again after years of blindness? /* Invited speaker

7/2011: Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland *The brain as a flexible, sensory-modality-independent Task Machine: from basic research to visual rehabilitation. Can we train the visual cortex to 'see' again after years of blindness? /* Invited speaker

9/2011: Munich University, Munich, Germany. *The brain as a flexible, sensory-modality-independent Task Machine: from basic research to visual rehabilitation: can we train the visual cortex to 'see' again after years of blindness?/* Invited speaker

02/2012: Institute du Cerveau et de la Moelle épinière (ICM), Paris, France. *'Seeing' with the ears and hands and bionic eyes: from basic research to visual rehabilitation/* Invited speaker

03/2012: The 5th Annual Brain Circle Meeting, “The Human Brain: Frontiers in Learning and Memory”, Lisbon, Portugal. *“Seeing with the ears, hands and bionic eyes: from basic research to visual rehabilitation”/* Invited speaker

03/2012: Brain-Mind Institute, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne,

Switzerland. *'seeing' with the ears and hands and bionic eyes: from basic research to visual rehabilitation/ Invited speaker*

05/2013: British Royal society meeting on blindness, The Royal Society at Chicheley Hall, UK. *'seeing' with the ears and hands and bionic eyes: from basic research to visual rehabilitation/ Invited speaker*

03/2014: University of Havana - *"Towards closing the gap between using sensory substitution for basic research and for visual rehabilitation"*.

03/2014: Julich University, Germany - *"Towards closing the gap between using sensory substitution for basic research and for visual rehabilitation"*.

04-05/2014 Lectures in NYC, DC, LA, SF, SD, MIAMI, BOCA RATON, USA. *"Towards closing the gap between using sensory substitution for basic research and for visual rehabilitation" / Invited speaker*

06/2014: International Eye Committee invited E-lecture – *" Vision through other senses: practical use of Sensory Substitution devices as assistive technology for visual rehabilitation"*.

06/2014: Forschungszentrum Jülich, Germany – *"How encoding color vision and shapes in spectrograms can help us understand brain organization and restore vision in blind"*.

Local

11/2003: Education and Rehabilitation of the Visually Impaired and Blind conference, Zikron yaakov, Israel; *The 'visual' cortex of the blind/ Invited speaker*

12/2005: Interdisciplinary Center for Neural Computation (ICNC) The Hebrew University of Jerusalem, Israel, *Towards Closing the gap between visual neuroprostheses and sighted restoration: Insights from studying vision, cross-modal plasticity and sensory substitution/ Invited speaker*

12/2005: Advanced Brain Imaging Center, Tel-Aviv Sourasky Medical Center, Israel. *Towards Closing the gap between visual neuroprostheses and sighted restoration: Insights from studying vision, cross-modal plasticity and sensory substitution/ Invited speaker*

10/2007: Department of Physiology, Hebrew University of Jerusalem *Neuromodulation of visual cortex by non-visual functions, insights from studying vision, cross-modal plasticity and sensory substitution/ The Magnes annual memorial invited speaker*

11/2007: The brain circle of the Hebrew University annual meeting, Paris, France. *Visual consciousness from a blind perspective: Can the blind hear shapes? Insights from studying vision, cross-modal plasticity and sensory substitution/ Invited speaker. brain circle*

1/2008: Department of Ophthalmology, Hadassah University Hospital, Jerusalem, Israel. *Neuromodulation of visual cortex by non- visual functions Insights from studying vision, cross-modal plasticity and sensory substitution/ Invited speaker*

3/2008: 28th Annual Meeting of the Israel Society for Vision and Eye Research (ISVER) 2008) *ISVER C Non-visual factors modulating 'visual' cortex: Multisensory integration and sensory substitution in blind and sighted individuals/ Conference speaker*

3/2008: the Interdisciplinary Center for Neural Computation (ICNC) seminar. *The three topographical senses: perception, interactions and plasticity / Invited speaker*

4/2008: Interdisciplinary Center for Neural Computation (ICNC) annual retreat. *Audio-visual integration for objects, location and low-level dynamic stimuli: novel insights from studying sensory substitution and topographical mapping/ Conference speaker*

5/2008: Haifa University, Neurobiology Department, Haifa, Israel. *Can the blind hear shapes? Insights from studying vision, cross-modal plasticity and sensory substitution/ Invited speaker*

6/2008: Department of Medical Neurobiology, Hebrew University of Jerusalem. *Visual perception from a blind perspective: Can the blind hear shapes? Insights from studying vision, cross-modal plasticity and sensory substitution/* Invited speaker

6/2008: Department of Neurobiology, Tel-Aviv University, Tel Aviv, Israel. *Visual perception from a blind perspective: Can the blind hear shapes? Insights from studying vision, cross-modal plasticity and sensory substitution/* Invited speaker

12/2008: The Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, Bar-Ilan University, Israel. *Neural basis of perception and mental imagery: insights from sensory substitution and topographical mapping studies/* Invited speaker

4/2009: The brainstorm lecture series, Institute for Medical Research Israel-Canada (IMRIC), Jerusalem, Israel. *Natural and Artificial Senses in the Human Brain: Vision Enhancement and the Mind Body Scheme/* Invited speaker

5/2009: Weizmann Institute of Science, Neurobiology Department, Rehovot, Israel; *Using Developmental versus adult brain neuroplasticity and neuro-rehabilitation in blindness; Perception and Brain plasticity in humans: New Insights from Phase-locking Fourier Approaches to fMRI/* Invited speaker

5/2009: Ben-Gurion University of the Negev, Department of Physiology and Neurobiology, Beer-Sheva, Israel; *Using Developmental versus adult brain neuroplasticity and neuro-rehabilitation in blindness; Perception and Brain plasticity in humans: New Insights from Phase-locking Fourier Approaches to fMRI/* Invited speaker

6/2009: The Moscona foundation annual report. Jerusalem, Israel. *Artificial vision using sensory substitution in blind: behavior and brain dynamics/* Invited speaker

5/2009: The cognitive science program scientific day, Jerusalem, Israel. *Part A: artificial vision and sensory substitution. Part B: fMRI Spectral analysis reveals topographical nature of human cortex/* Invited speaker

3/2010: Madua lecture series – Center for Partnership and Outreach, Jerusalem, Israel; *Seeing with your ears? Modern approaches for rehabilitation of blindness and studying the human brain/* Invited keynote speaker

6/2010: The 1st Institute for Medical Research Israel-Canada (IMRIC) retreat, Eilat, Israel. *Artificial vision for the blind: technology, behavior and brain dynamics/* Invited speaker

5/2011: Department of Life Sciences, Ben-Gurion University, Beer-Sheva, Israel. *What did sensory deprivation and visual-to-auditory sensory substitution studies teach us about brain (re)-organization? /* Invited speaker

5/2011: Department of Biology, University of Haifa, Haifa, Israel. *What did sensory deprivation and visual-to-auditory sensory substitution studies teach us about brain (re)-organization? /* Invited speaker

1/2012: Department of Neurology, Hadassah Medical Center, Jerusalem, Israel. *'Seeing' with the ears, hands and bionic eyes: from basic research to visual rehabilitation/* Invited speaker

2/2012: Sensory Enhancement symposium, Mishkenot Shaananim, Jerusalem, Israel. Sensory enhancement via sensory substitution: the case of visual rehabilitation (and beyond).

1/2013: A Scandinavian delegation of young leaders, Merkior Hotel, Tel Aviv, Israel. *'Seeing' with the ears, hands and bionic eyes: from basic research to visual rehabilitation/* Invited speaker

3/2014: The Israeli Science day 2014, Jerusalem. *"What sight restoration in blind, synesthesia and echolocation, teach us about the human brain?"/*Invited speaker

5/2014: Quebec-Israeli Symposium on Biomedical Imaging, Tel Aviv. *"Vision through other senses: practical use of Sensory Substitution devices as assistive technology for visual*

rehabilitation"/Invited speaker

6 c) Media coverage

International

02/2011: The New York Times -

http://www.nytimes.com/2011/02/22/science/22obbrain.html?_r=0

02/2011: Science Update - <http://www.scienceupdate.com/2011/02/braille-brains/>

06/2011: Your Health Radio - <http://yourhealthradio.org/2011/06/10/seeing-with-your-ears-with-dr-amir-amed/>

11/2012: Nature NeuroPod - <http://www.nature.com/neurosci/neuropod/index-2012-11-27.html>

12/2012: TedX Jerusalem - <http://www.youtube.com/watch?v=jVBp2nDmg7E>

11/2013: Frontiers for Young Minds -

http://kids.frontiersin.org/articles/seeing_with_your_ears/12/

04/2014: Science - <http://news.sciencemag.org/biology/2014/03/computer-program-allows-blind-see-sound>

04/2014: WIRED - <http://www.wired.com/wiredscience/2014/03/blind-brain-sound/>

04/2014: National Geographic - <http://news.nationalgeographic.com/news/2014/04/140403-eyemusic-ssd-visual-impairment-software-science/>

Local

08/2009: Channel 10 news - <http://www.youtube.com/watch?v=JM0IfxIdoew>

08/2010: London and Kirshenbaum - <http://www.youtube.com/watch?v=Wxr13Z0Hn9M>

06/2012: The Jerusalem Post - <http://www.jpost.com/Health/Article.aspx?id=274636>

09/2012: National Geographic Israel - <http://www.nrg.co.il/online/20/ART2/404/141.html>

01/2013: The Jerusalem Post - <http://www.jpost.com/Health/Article.aspx?id=298773>

04/2014: Channel 10 - HaMagazin - Oshrat Kotler - <https://www.youtube.com/watch?v=-4MKX6hVmdU&feature=youtu.be>

7. Patents:

Amedi A^{PI}, Shlomi Hanassy^S. “Representing visual images by alternative senses” (Patent pending. International PCT was filed on the 04.11.2010; National Phase filed May 2012).

Amedi A^{PI}, Shlomi Hanassy^S. “A device for guiding blind and visually impaired persons” (Patent pending. Provisional stage)

Amedi A^{PI}. “A device for visual rehabilitation by complementary stimulations.” (Patent pending. Provisional stage)

Jerusalem ranking index

Annual Reviews in Neuroscience-**B** [ref #26]

Brain Research-**B** [ref #14]

Brain Topography-**Not included** [refs #16, 29]

Cerebral Cortex-**B** [refs #2, 5, 13, 22]

Current Biology-**A** [ref #19]

Current Directions in Psychological Science-**B** [refs #27]

Current Opinion in Neurology-**B** [ref #30]

Experimental Brain Research-**B** [ref #17, 26]

Functional Neurology, Rehabilitation, and Ergonomic-**Not included** [ref #21][A new journal; the official journal of the international association for neurology and rehabilitation]

Human Brain Mapping-**Not included** [ref #8]

Journal of Neurophysiology-**B** [ref #9]

Journal of Neuroscience-**A** [ref #10]

Nature Neuroscience-**A** [refs. #1, 3, 4, 11]

Nature Review Neuroscience-**Not included** [ref #25][Very strange it is not included]

NeuroImage-**C** [refs. #7, 18]

Neuron-**A** [ref #6]

PLoS ONE-**Not included** [refs #20,23][relatively new journal]

Psychiatry Research: Neuroimaging-**C** [ref #12]

Restorative Neurology and Neuroscience-**Not included** [ref #15, 24]