Stanford

Kalanit Grill-Spector

Susan S. and William H. Hindle Professor in the School of Humanities and Sciences and Professor, by courtesy, of Computer Science

Psychology

CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Kalanit Grill-Spector is the Susan S and William H Hindle Professor in Psychology and the Wu Tsai Neurosciences Institute at Stanford University. She is renown for foundational discoveries on the functional organization of the human ventral visual stream, the development of the visual system from infancy through adulthood, and the creation of biologically inspired topographic deep neural networks. Her pioneering research established key principles governing the organization of the human ventral visual stream, revealing how the brain represents faces, objects, places, and words and how this neural activity relates to perception. Her developmental research has transformed our understanding of how the human visual system develops by linking changes in cortical function, microstructure, and white matter connectivity from infancy through adulthood, revealing which features of visual cortex are present at birth and which emerge through development and experience. More recent work with her students and in collaboration with Daniel Yamins has developed topographic deep neural networks that accurately predict the organization of the visual cortex, from fine-scale structure such as orientation columns in V1 to the large-scale organization of multiple visual streams, providing a unified computational framework for understanding how cortical maps arise from spatial constraints and self-supervised learning.

She received her PhD from the Weizmann Institute of Science in Israel and was a postdoctoral fellow in Brain and Cognitive Sciences at MIT before joining Stanford University. She has received several awards and honors including the Human Sciences Frontier Fellowship, the Sloan Fellowship, and the Klingenstein Fellowship in Neuroscience. She has served as an Editor for the Journal of Vision and Neuropsychologia. Presently, she is a board member of the Center for Cognitive and Neurobiological Imaging at Stanford University. Previously she has served as the director of the graduate studies in the Department of Psychology from 2017-2021, and the Chair of the Department of Psychology from 2021-2024.

ACADEMIC APPOINTMENTS

- Professor, Psychology
- Professor (By courtesy), Computer Science
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Chair, Department of Psychology, (2021-2024)
- Diversity, Inclusivity, and Equity Committee, Department of Psychology, (2020-2022)
- Wu Tsai Seminar Committee, Wu Tsai Neurosciences Institute, (2020-2022)
- Wu Tsai Institute Bi-Annual Retreat Organizing Committee, co-chair, Wu Tsai Neurosciences Institute, (2018-2026)
- Director of Graduate Studies, Department of Psychology, (2017-2021)
- Graduate Program Committee Chair, Department of Psychology, (2017-2021)
- Neurosciences Institute Annual Retreat Organizing Committee, Stanford Neurosciences Institute, (2017-2018)
- Center for Neurobiological Imaging (CNI), Board member, CNI, (2012- present)

HONORS AND AWARDS

- R21 EY030588 Neuroimaging and histological investigations of human visual cortex development, National Eye Institute (2019-2021)
- Neural investigations of face perception and attention using population receptive field modeling., National Science Foundation (2018-2021)
- Wu Tsai Big Idea: NeuroDevelopment, Wu Tsai Neurosciences Institute, Stanford University (2018-2021)
- R01EY023915 Functional-neuroanatomy of High-level Visual Cortex: A Quantitative Multimodal Approach, National Eye Institute (2014-2023)
- Stanford Arts Institute's artsCatalyst grant, Stanford University (2013, 2014)
- RO1EY022318 Development of face perception: Cross-sectional and longitudinal investigations., National Eye Institute (2012-2023)
- VPUE grant for introducing new technologies to undergraduate education, Stanford University (2012)
- R01 EY019279 MRI and behavioral studies of unsupervised learning in high level visual cortex, National Eye Institute (2009-2015)
- BCS 0920865 Face perception: mapping psychological spaces to neural responses, National Science Foundation (2009-2013)
- BCS 0617688: Neural Correlates of Maturation of Face Processing, National Science Foundation (2006-2010)
- Klingenstein Fellowship in Neuroscience, Klingenstein Foundation (2006)
- Neural basis of object recognition in humans: Features, objects or categories, White Hall Foundation (2005-2009)
- R21EY016199 Fine scale functional organization of human object-selective cortex., National Eye Institute (2005-2008)
- NSF BCS-0345920 The neural basis of visual priming., National Science Foundation (2004-2006)
- Sloan Research Fellowship in Neuroscience, Sloan Foundation (2004)
- HFSP Long Term Fellowship, Human Frontiers Science Program (2000)
- Rueff-Wormser Postdoctoral Fellowship, Weizmann Institute of Science (1999)
- Aharon Katzir Fund, Weizmann Institute of Science (1997)
- Gerald and Thelma Estrin Scholarship, Weizmann Institute of Science (1995-1998)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Reviewing Editor, Proceedings of the National Academy of Sciences (2020 - present)
- Reviewing Editor, PLoS Biology (2018 - 2018)
- Editor, Neuropsychologia (2016 - 2018)
- Editor, Journal of Vision (2008 - 2012)
- Editorial Board, NeuroImage (2005 - 2008)

PROGRAM AFFILIATIONS

- Symbolic Systems Program

LINKS

- Vision and Perception Neuroscience Lab: http://vpnl.stanford.edu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

For humans, recognition is a natural, effortless skill that occurs within a few hundreds of milliseconds, yet it is one of the least understood aspects of visual perception. Our research utilizes functional imaging (fMRI),diffusion weighted imaging (DWI), computational techniques, and behavioral methods to investigate the neural mechanisms underlying visual recognition in humans. We also examine the development of these mechanisms from childhood to adulthood as well as between populations.

PROJECTS

- Development of the visual system - Stanford Univeristy

Teaching

COURSES

2026-27

- Computational Neuroimaging: Data Analyses: PSYCH 204B (Spr)
- Introduction to Perception: PSYCH 30 (Aut)

2025-26

- Computational Neuroimaging: Data Analyses: PSYCH 204B (Spr)
- Cortical Plasticity: Perception and Memory: PSYCH 206 (Win)
- Introduction to Perception: PSYCH 30 (Aut)

2024-25

- Computational Neuroimaging: Data Analyses: PSYCH 204B (Aut)
- The Artists Guide to Perception: OSPPARIS 96P (Win)

2023-24

- Computational Neuroimaging: Data Analyses and Experimental Designs: PSYCH 204B (Spr)
- Professional Seminar for First-Year Ph.D. Graduate Students: PSYCH 207 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Youssef Faragalla, Jamie Mitchell

Postdoctoral Faculty Sponsor

Seda Akbiyik, Marcel Linka

Doctoral Dissertation Advisor (AC)

Elizabeth Jiwon Im, Jewelia Yao

Doctoral Dissertation Co-Advisor (AC)

Seojin Lee

Doctoral (Program)

Jewelia Yao

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (PhD Program)

Publications

PUBLICATIONS

- **Cortical and white matter myelination proceed in concert during early infancy.** *Nature communications*
  Zika, S., Chang, K., Orhon, A., Kruper, J., Tyagi, C., Yan, X., Tung, S., Grill-Spector, K., Rokem, A., Grotheer, M.
  2026; 17 (1)

- **Correction: Hierarchical microstructural tissue growth of the gray and white matter of human visual cortex during the first year of life.** *Brain structure & function*
  Perez, K., Allen, A., Tyagi, C., Tung, S. S., Fascendini, B., Yan, X., Horenziak, J., Ortiz, D., Wu, H., Grill-Spector, K., Natu, V. S.
  2026; 231 (3)

- **Individual Brain Charting: fifth release of high-resolution fMRI data for cognitive mapping.** *Scientific data*
  Ponce, A. F., Aggarwal, H., Shankar, S., Torre, J. J., Pinho, A. L., Thual, A., Ginisty, C., Lecomte, Y., Berland, V., Beriot, L., Laurier, L., Joly-Testault, V., Médiouni-Cloarec, et al
  2026

- **From adolescence to adulthood: functional fingerprints of high-level visual cortex reveal differential development of visuospatial processing.** *bioRxiv : the preprint server for biology*
  Yao, J. K., Choo, J., Finzi, D., Grill-Spector, K.
  2026

- **Hierarchical microstructural tissue growth of the gray and white matter of human visual cortex during the first year of life.** *Brain structure & function*
  Perez, K., Allen, A., Tyagi, C., Tung, S. S., Fascendini, B., Yan, X., Horenziak, J., Ortiz, D., Wu, H., Grill-Spector, K., Natu, V. S.
  2026; 231 (2): 15

- **How do infant brains fold? Sulcal deepening is linked to development of sulcal span, thickness, curvature, and microstructure.** *Communications biology*
  Tung, S. S., Yan, X., Fascendini, B., Tyagi, C., Reyes, C. M., Ducre, K., Perez, K., Allen, A., Horenziak, J., Wu, H., Keil, B., Natu, V. S., Grill-Spector, et al
  2026

- **Hierarchical microstructural tissue growth of the gray and white matter of human visual cortex during the first year of life.** *bioRxiv : the preprint server for biology*
  Perez, K., Allen, A., Tyagi, C., Tung, S. S., Fascendini, B., Yan, X., Horenziak, J., Ortiz, D., Wu, H., Grill-Spector, K., Natu, V. S.
  2025

- **White matter connections of human ventral temporal cortex are organized by cytoarchitecture, eccentricity and category-selectivity from birth.** *Nature human behaviour*
  Kubota, E., Yan, X., Tung, S., Fascendini, B., Tyagi, C., Duhameau, S., Ortiz, D., Grotheer, M., Natu, V. S., Keil, B., Grill-Spector, K.
  2025

- **Visuospatial computations vary by category and stream and continue to develop in adolescence.** *bioRxiv : the preprint server for biology*
  Yao, J. K., Choo, J., Finzi, D., Grill-Spector, K.
  2025

- **The emergence of visual category representations in infants' brains.** *eLife*
  Yan, X., Tung, S. S., Fascendini, B., Chen, Y. D., Norcia, A. M., Grill-Spector, K.
  2024; 13

- **A practical guide for combining functional regions of interest and white matter bundles.** *Frontiers in neuroscience*
  Meisler, S. L., Kubota, E., Grotheer, M., Gabrieli, J. D., Grill-Spector, K.
  2024; 18: 1385847

- **Rethinking simultaneous suppression in visual cortex via compressive spatiotemporal population receptive fields.** *Nature communications*
  Kupers, E. R., Kim, I., Grill-Spector, K.
  2024; 15 (1): 6885
- **Both mOTS-words and pOTS-words prefer emoji stimuli over text stimuli during a lexical judgment task.** *Cerebral cortex (New York, N.Y. : 1991)*
  Dalski, A., Kular, H., Jorgensen, J. G., Grill-Spector, K., Grotheer, M.
  2024; 34 (8)
- **White matter connections of human ventral temporal cortex are organized by cytoarchitecture, eccentricity, and category-selectivity from birth.** *bioRxiv : the preprint server for biology*
  Kubota, E., Yan, X., Tung, S., Fascendini, B., Tyagi, C., Duhameau, S., Ortiz, D., Grotheer, M., Natu, V. S., Keil, B., Grill-Spector, K.
  2024
- **A unifying framework for functional organization in early and higher ventral visual cortex.** *Neuron*
  Margalit, E., Lee, H., Finzi, D., DiCarlo, J. J., Grill-Spector, K., Yamins, D. L.
  2024
- **High-resolution myelin-water fraction and quantitative relaxation mapping using 3D ViSTa-MR fingerprinting.** *Magnetic resonance in medicine*
  Liao, C., Cao, X., Iyer, S. S., Schauman, S., Zhou, Z., Yan, X., Chen, Q., Li, Z., Wang, N., Gong, T., Wu, Z., He, H., Zhong, et al
  2023
- **High-resolution myelin-water fraction and quantitative relaxation mapping using 3D ViSTa-MR fingerprinting.** *ArXiv*
  Liao, C., Cao, X., Srinivasan Iyer, S., Schauman, S., Zhou, Z., Yan, X., Chen, Q., Li, Z., Wang, N., Gong, T., Wu, Z., He, H., Zhong, et al
  2023
- **Longitudinal development of category representations in ventral temporal cortex predicts word and face recognition.** *Nature communications*
  Nordt, M., Gomez, J., Natu, V. S., Rezai, A. A., Finzi, D., Kular, H., Grill-Spector, K.
  2023; 14 (1): 8010
- **Characterizing spatiotemporal population receptive fields in human visual cortex with fMRI.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Kim, I., Kupers, E. R., Lerma-Usabiaga, G., Grill-Spector, K.
  2023
- **Both mOTS-words and pOTS-words prefer emoji stimuli over text stimuli during a reading task.** *bioRxiv : the preprint server for biology*
  Dalski, A., Kular, H., Jorgensen, J. G., Grill-Spector, K., Grotheer, M.
  2023
- **Rethinking cortical recycling in ventral temporal cortex.** *Trends in cognitive sciences*
  Kubota, E., Grill-Spector, K., Nordt, M.
  2023
- **Human white matter myelinates faster in utero than ex utero.** *Proceedings of the National Academy of Sciences of the United States of America*
  Grotheer, M., Bloom, D., Kruper, J., Richie-Halford, A., Zika, S., Aguilera Gonzalez, V. A., Yeatman, J. D., Grill-Spector, K., Rokem, A.
  2023; 120 (33): e2303491120
- **Rethinking simultaneous suppression in visual cortex via compressive spatiotemporal population receptive fields.** *bioRxiv : the preprint server for biology*
  Kupers, E. R., Kim, I., Grill-Spector, K.
  2023
- **A Unifying Principle for the Functional Organization of Visual Cortex.** *bioRxiv : the preprint server for biology*
  Margalit, E., Lee, H., Finzi, D., DiCarlo, J. J., Grill-Spector, K., Yamins, D. L.
  2023
- **Characterizing spatiotemporal population receptive fields in human visual cortex with fMRI.** *bioRxiv : the preprint server for biology*
  Kim, I., Kupers, E. R., Lerma-Usabiaga, G., Grill-Spector, K.

2023

- **Comparing retinotopic maps of children and adults reveals a late-stage change in how V1 samples the visual field.** *Nature communications*
  Himmelberg, M. M., Tuncok, E., Gomez, J., Grill-Spector, K., Carrasco, M., Winawer, J.
  2023; 14 (1): 1561
- **White matter connections of high-level visual areas predict cytoarchitecture better than category-selectivity in childhood, but not adulthood.** *Cerebral cortex (New York, N.Y. : 1991)*
  Kubota, E., Grotheer, M., Finzi, D., Natu, V. S., Gomez, J., Grill-Spector, K.
  2022
- **White matter myelination during early infancy is linked to spatial gradients and myelin content at birth.** *Nature communications*
  Grotheer, M., Rosenke, M., Wu, H., Kular, H., Querdasi, F. R., Natu, V. S., Yeatman, J. D., Grill-Spector, K.
  2022; 13 (1): 997
- **Attention enhances category representations across the brain with strengthened residual correlations to ventral temporal cortex.** *NeuroImage*
  Keller, A. S., Jagadeesh, A., Bugatus, L., Williams, L. M., Grill-Spector, K.
  2022: 118900
- **Establishing the functional relevancy of white matter connections in the visual system and beyond.** *Brain structure & function*
  Grotheer, M., Kubota, E., Grill-Spector, K.
  2021
- **Infants' cortex undergoes microstructural growth coupled with myelination during development.** *Communications biology*
  Natu, V. S., Rosenke, M., Wu, H., Querdasi, F. R., Kular, H., Lopez-Alvarez, N., Grotheer, M., Berman, S., Mezer, A. A., Grill-Spector, K.
  2021; 4 (1): 1191
- **Holistic face recognition is an emergent phenomenon of spatial processing in face-selective regions.** *Nature communications*
  Poltoratski, S., Kay, K., Finzi, D., Grill-Spector, K.
  2021; 12 (1): 4745
- **Cortical recycling in high-level visual cortex during childhood development.** *Nature human behaviour*
  Nordt, M., Gomez, J., Natu, V. S., Rezai, A. A., Finzi, D., Kular, H., Grill-Spector, K.
  2021
- **Differential spatial computations in ventral and lateral face-selective regions are scaffolded by structural connections.** *Nature communications*
  Finzi, D., Gomez, J., Nordt, M., Rezai, A. A., Poltoratski, S., Grill-Spector, K.
  2021; 12 (1): 2278
- **White matter fascicles and cortical microstructure predict reading-related responses in human ventral temporal cortex.** *NeuroImage*
  Grotheer, M., Yeatman, J., Grill-Spector, K.
  2020: 117669
- **Sulcal Depth in the Medial Ventral Temporal Cortex Predicts the Location of a Place-Selective Region in Macaques, Children, and Adults.** *Cerebral cortex (New York, N.Y. : 1991)*
  Natu, V. S., Arcaro, M. J., Barnett, M. A., Gomez, J., Livingstone, M., Grill-Spector, K., Weiner, K. S.
  2020
- **The structure of depressive symptoms and characteristics and their relation to overall severity in major depressive disorder.** *Psychiatry research*
  Miller, C. H., Davis, E. G., King, L. S., Sacchet, M. D., Grill-Spector, K., Gotlib, I. H.
  2020; 294: 113399
- **Diverse Temporal Dynamics of Repetition Suppression Revealed by Intracranial Recordings in the Human Ventral Temporal Cortex.** *Cerebral cortex (New York, N.Y. : 1991)*
  Rangarajan, V., Jacques, C., Knight, R. T., Weiner, K. S., Grill-Spector, K.
  2020
- **Combined Neural Tuning in Human Ventral Temporal Cortex Resolves the Perceptual Ambiguity of Morphed 2D Images.** *Cerebral cortex (New York, N.Y. : 1991)*

Rosenke, M., Davidenko, N., Grill-Spector, K., Weiner, K. S.
2020

- **Ultra-high-resolution fMRI of human ventral temporal cortex reveals differential representation of categories and domains.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Margalit, E., Jamison, K. W., Weiner, K. S., Vizioli, L., Zhang, R., Kay, K. N., Grill-Spector, K.
  2020

- **A Probabilistic Functional Atlas of Human Occipito-Temporal Visual Cortex.** *Cerebral cortex (New York, N.Y. : 1991)*
  Rosenke, M. n., van Hoof, R. n., van den Hurk, J. n., Grill-Spector, K. n., Goebel, R. n.
  2020

- **X-chromosome insufficiency alters receptive fields across the human early visual cortex.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Green, T., Hosseini, H., Piccirilli, A., Ishak, A., Grill-Spector, K., Reiss, A. L.
  2019

- **Neural adaptation to faces reveals racial outgroup homogeneity effects in early perception.** *Proceedings of the National Academy of Sciences of the United States of America*
  Hughes, B. L., Camp, N. P., Gomez, J., Natu, V. S., Grill-Spector, K., Eberhardt, J. L.
  2019

- **Extensive childhood experience with Pokemon suggests eccentricity drives organization of visual cortex** *NATURE HUMAN BEHAVIOUR*
  Gomez, J., Barnett, M., Grill-Spector, K.
  2019; 3 (6): 611–24

- **Development of population receptive fields in the lateral visual stream improves spatial coding amid stable structural-functional coupling** *NEUROIMAGE*
  Gomez, J., Drain, A., Jeska, B., Natu, V. S., Barnett, M., Grill-Spector, K.
  2019; 188: 59-69

- **Differential sustained and transient temporal processing across visual streams.** *PLoS computational biology*
  Stigliani, A. n., Jeska, B. n., Grill-Spector, K. n.
  2019; 15 (5): e1007011

- **Separate lanes for adding and reading in the white matter highways of the human brain.** *Nature communications*
  Grotheer, M. n., Zhen, Z. n., Lerma-Usabiaga, G. n., Grill-Spector, K. n.
  2019; 10 (1): 3675

- **Apparent thinning of human visual cortex during childhood is associated with myelination.** *Proceedings of the National Academy of Sciences of the United States of America*
  Natu, V. S., Gomez, J. n., Barnett, M. n., Jeska, B. n., Kirilina, E. n., Jaeger, C. n., Zhen, Z. n., Cox, S. n., Weiner, K. S., Weiskopf, N. n., Grill-Spector, K. n.
  2019

- **Development of population receptive fields in the lateral visual stream improves spatial coding amid stable structural-functional coupling.** *NeuroImage*
  Gomez, J., Drain, A., Jeska, B., Natu, V., Barnett, M., Grill-Spector, K.
  2018

- **The functional neuroanatomy of face perception: from brain measurements to deep neural networks**
  Grill-Spector, K., Weiner, K. S., Gomez, J., Stigliani, A., Natu, V. S.
  ROYAL SOC.2018

- **The functional neuroanatomy of face perception: from brain measurements to deep neural networks.** *Interface focus*
  Grill-Spector, K., Weiner, K. S., Gomez, J., Stigliani, A., Natu, V. S.
  2018; 8 (4): 20180013

- **A preference for mathematical processing outweighs the selectivity for Arabic numbers in the inferior temporal gyrus.** *NeuroImage*
  Grotheer, M., Jeska, B., Grill-Spector, K.
  2018; 175: 188–200

- **A preference for mathematical processing outweighs the selectivity for Arabic numbers in the inferior temporal gyrus** *NEUROIMAGE*
  Grotheer, M., Jeska, B., Grill-Spector, K.
  2018; 175: 188-200
- **On object selectivity and the anatomy of the human fusiform gyrus** *NEUROIMAGE*
  Weiner, K. S., Natu, V. S., Grill-Spector, K.
  2018; 173: 604–9
- **Development differentially sculpts receptive fields across early and high-level human visual cortex.** *Nature communications*
  Gomez, J., Natu, V., Jeska, B., Barnett, M., Grill-Spector, K.
  2018; 9 (1): 788
- **Development differentially sculpts receptive fields across early and high-level human visual cortex** *Nature Communications*
  Gomez, J., Natu, V., Jeska, B., Barnett, M., Grill-Spector, K.
  2018; 9: 788
- **Learning to Read Increases the Informativeness of Distributed Ventral Temporal Responses.** *Cerebral cortex (New York, N.Y. : 1991)*
  Nordt, M. n., Gomez, J. n., Natu, V. n., Jeska, B. n., Barnett, M. n., Grill-Spector, K. n.
  2018
- **Data on a cytoarchitectonic brain atlas: effects of brain template and a comparison to a multimodal atlas.** *Data in brief*
  Rosenke, M., Weiner, K. S., Barnett, M. A., Zilles, K., Amunts, K., Goebel, R., Grill-Spector, K.
  2017; 12: 327-332
- **Defining the most probable location of the parahippocampal place area using cortex-based alignment and cross-validation.** *NeuroImage*
  Weiner, K. S., Barnett, M. A., Witthoft, N., Golarai, G., Stigliani, A., Kay, K. N., Gomez, J., Natu, V. S., Amunts, K., Zilles, K., Grill-Spector, K.
  2017
- **Task alters category representations in prefrontal but not high-level visual cortex.** *NeuroImage*
  Bugatus, L., Weiner, K. S., Grill-Spector, K.
  2017
- **A cross-validated cytoarchitectonic atlas of the human ventral visual stream.** *NeuroImage*
  Rosenke, M., Weiner, K. S., Barnett, M. A., Zilles, K., Amunts, K., Goebel, R., Grill-Spector, K.
  2017
- **Experience Shapes the Development of Neural Substrates of Face Processing in Human Ventral Temporal Cortex** *CEREBRAL CORTEX*
  Golarai, G., Liberman, A., Grill-Spector, K.
  2017; 27 (2): 1229-1244
- **Microstructural proliferation in human cortex is coupled with the development of face processing** *SCIENCE*
  Gomez, J., Barnett, M. A., Natu, V., Mezer, A., Palomero-Gallagher, N., Weiner, K. S., Amunts, K., Zilles, K., Grill-Spector, K.
  2017; 355 (6320): 68-?
- **The Cytoarchitecture of Domain-specific Regions in Human High-level Visual Cortex** *CEREBRAL CORTEX*
  Weiner, K. S., Barnett, M. A., Lorenz, S., Caspers, J., Stigliani, A., Amunts, K., Zilles, K., Fischl, B., Grill-Spector, K.
  2017; 27 (1): 146-161
- **The Functional Neuroanatomy of Human Face Perception.** *Annual review of vision science*
  Grill-Spector, K. n., Weiner, K. S., Kay, K. n., Gomez, J. n.
  2017; 3: 167–96
- **Encoding model of temporal processing in human visual cortex.** *Proceedings of the National Academy of Sciences of the United States of America*
  Stigliani, A. n., Jeska, B. n., Grill-Spector, K. n.
  2017; 114 (51): E11047–E11056
- **Two New Cytoarchitectonic Areas on the Human Mid-Fusiform Gyrus** *CEREBRAL CORTEX*
  Lorenz, S., Weiner, K. S., Caspers, J., Mohlberg, H., Schleicher, A., Bludau, S., Eickhoff, S., Grill-Spector, K., Zilles, K., Amunts, K.
  2017; 27 (1): 373-385

- **The Cytoarchitecture of Domain-specific Regions in Human High-level Visual Cortex.** *Cerebral cortex*
  Weiner, K. S., Barnett, M. A., Lorenz, S., Caspers, J., Stigliani, A., Amunts, K., Zilles, K., Fischl, B., Grill-Spector, K.
  2016: -?
- **Development of Neural Sensitivity to Face Identity Correlates with Perceptual Discriminability.** *journal of neuroscience*
  Natu, V. S., Barnett, M. A., Hartley, J., Gomez, J., Stigliani, A., Grill-Spector, K.
  2016; 36 (42): 10893-10907
- **The Face-Processing Network Is Resilient to Focal Resection of Human Visual Cortex.** *journal of neuroscience*
  Weiner, K. S., Jonas, J., Gomez, J., Maillard, L., Brissart, H., Hossu, G., Jacques, C., Loftus, D., Colnat-Coulbois, S., Stigliani, A., Barnett, M. A., Grill-Spector, K., Rossion, et al
  2016; 36 (32): 8425-8440
- **Learning the 3-D structure of objects from 2-D views depends on shape, not format** *JOURNAL OF VISION*
  Tian, M., Yamins, D., Grill-Spector, K.
  2016; 16 (7)
- **Corresponding ECoG and fMRI category-selective signals in human ventral temporal cortex.** *Neuropsychologia*
  Jacques, C., Witthoft, N., Weiner, K. S., Foster, B. L., Rangarajan, V., Hermes, D., Miller, K. J., Parvizi, J., Grill-Spector, K.
  2016; 83: 14-28
- **Introduction to the special issue on functional selectivity in perceptual and cognitive systems--a tribute to Shlomo Bentin (1946-2012).** *Neuropsychologia*
  Deouell, L. Y., Grill-Spector, K. n., Malach, R. n., Murray, M. M., Rossion, B. n.
  2016; 83: 1–4
- **Experience Shapes the Development of Neural Substrates of Face Processing in Human Ventral Temporal Cortex.** *Cerebral cortex*
  Golarai, G., Liberman, A., Grill-Spector, K.
  2015
- **Two New Cytoarchitectonic Areas on the Human Mid-Fusiform Gyrus.** *Cerebral cortex*
  Lorenz, S., Weiner, K. S., Caspers, J., Mohlberg, H., Schleicher, A., Bludau, S., Eickhoff, S. B., Grill-Spector, K., Zilles, K., Amunts, K.
  2015
- **Temporal Processing Capacity in High-Level Visual Cortex Is Domain Specific.** *journal of neuroscience*
  Stigliani, A., Weiner, K. S., Grill-Spector, K.
  2015; 35 (36): 12412-12424
- **The evolution of face processing networks.** *Trends in cognitive sciences*
  Weiner, K. S., Grill-Spector, K.
  2015; 19 (5): 240-241
- **Attention reduces spatial uncertainty in human ventral temporal cortex.** *Current biology*
  Kay, K. N., Weiner, K. S., Grill-Spector, K.
  2015; 25 (5): 595-600
- **Feature saliency and feedback information interactively impact visual category learning** *FRONTIERS IN PSYCHOLOGY*
  Hammer, R., Sloutsky, V., Grill-Spector, K.
  2015; 6
- **Functionally defined white matter reveals segregated pathways in human ventral temporal cortex associated with category-specific processing.** *Neuron*
  Gomez, J., Pestilli, F., Witthoft, N., Golarai, G., Liberman, A., Poltoratski, S., Yoon, J., Grill-Spector, K.
  2015; 85 (1): 216-227
- **Spatiotemporal information during unsupervised learning enhances viewpoint invariant object recognition** *JOURNAL OF VISION*
  Tian, M., Grill-Spector, K.
  2015; 15 (6)
- **Electrical Stimulation of the Left and Right Human Fusiform Gyrus Causes Different Effects in Conscious Face Perception** *JOURNAL OF NEUROSCIENCE*

Rangarajan, V., Hermes, D., Foster, B. L., Weiner, K. S., Jacques, C., Grill-Spector, K., Parvizi, J.
2014; 34 (38): 12828-12836

- **Electrical stimulation of the left and right human fusiform gyrus causes different effects in conscious face perception.** *journal of neuroscience*
  Rangarajan, V., Hermes, D., Foster, B. L., Weiner, K. S., Jacques, C., Grill-Spector, K., Parvizi, J.
  2014; 34 (38): 12828-12836
- **Where Is Human V4? Predicting the Location of hV4 and VO1 from Cortical Folding.** *Cerebral cortex*
  Witthoft, N., Nguyen, M. L., Golarai, G., LaRocque, K. F., Liberman, A., Smith, M. E., Grill-Spector, K.
  2014; 24 (9): 2401-2408
- **The functional architecture of the ventral temporal cortex and its role in categorization.** *Nature reviews. Neuroscience*
  Grill-Spector, K., Weiner, K. S.
  2014; 15 (8): 536-548
- **The mid-fusiform sulcus: A landmark identifying both cytoarchitectonic and functional divisions of human ventral temporal cortex** *NEUROIMAGE*
  Weiner, K. S., Golarai, G., Caspers, J., Chuapoco, M. R., Mohlberg, H., Zilles, K., Amunts, K., Grill-Spector, K.
  2014; 84: 453-465
- **Abstracts of Presentations at the International Conference on Basic and Clinical Multimodal Imaging (BaCI), a Joint Conference of the International Society for Neuroimaging in Psychiatry (ISNIP), the International Society for Functional Source Imaging (ISFSI), the International Society for Bioelectromagnetism (ISBEM), the International Society for Brain Electromagnetic Topography (ISBET), and the EEG and Clinical Neuroscience Society (ECNS), in Geneva, Switzerland, September 5-8, 2013.** *Clinical EEG and neuroscience*
  He, B. J., Nolte, G., Nagata, K., Takano, D., Yamazaki, T., Fujimaki, Y., Maeda, T., Satoh, Y., Heckers, S., George, M. S., Lopes Da Silva, F., De Munck, J. C., van Houdt, et al
  2013: -?
- **Global Similarity and Pattern Separation in the Human Medial Temporal Lobe Predict Subsequent Memory** *JOURNAL OF NEUROSCIENCE*
  LaRocque, K. F., Smith, M. E., Carr, V. A., Witthoft, N., Grill-Spector, K., Wagner, A. D.
  2013; 33 (13): 5466-5474
- **Neural representations of faces and limbs neighbor in human high-level visual cortex: evidence for a new organization principle** *PSYCHOLOGICAL RESEARCH-PSYCHOLOGISCHE FORSCHUNG*
  Weiner, K. S., Grill-Spector, K.
  2013; 77 (1): 74-97
- **THE FUSIFORM GYRUS REPRESENTS THE AGE OF FACES**
  Golarai, G., Liberman, A., Grill-Spector, K.
  MIT PRESS.2013: 205
- **Electrical Stimulation of Human Fusiform Face-Selective Regions Distorts Face Perception** *JOURNAL OF NEUROSCIENCE*
  Parvizi, J., Jacques, C., Foster, B. L., Withoft, N., Rangarajan, V., Weiner, K. S., Grill-Spector, K.
  2012; 32 (43): 14915-14920
- **Face-likeness and image variability drive responses in human face-selective ventral regions** *HUMAN BRAIN MAPPING*
  Davidenko, N., Remus, D. A., Grill-Spector, K.
  2012; 33 (10): 2334-2349
- **White matter microstructure on diffusion tensor imaging is associated with conventional magnetic resonance imaging findings and cognitive function in adolescents born preterm** *DEVELOPMENTAL MEDICINE AND CHILD NEUROLOGY*
  Feldman, H. M., Lee, E. S., Loe, I. M., Yeom, K. W., Grill-Spector, K., Luna, B.
  2012; 54 (9): 809-814
- **Synchrony upon repetition: One or multiple neural mechanisms?** *Cognitive neuroscience*
  Weiner, K. S., Grill-Spector, K.
  2012; 3 (3-4): 243-4
- **The improbable simplicity of the fusiform face area** *TRENDS IN COGNITIVE SCIENCES*
  Weiner, K. S., Grill-Spector, K.

2012; 16 (5): 251-254

- **The Interplay between Feature-Saliency and Feedback Information in Visual Category Learning Tasks.** *CogSci ... Annual Conference of the Cognitive Science Society. Cognitive Science Society (U.S.). Conference*
  Hammer, R., Sloutsky, V., Grill-Spector, K.
  2012; 2012: 420-425
- **Synchrony upon repetition: One or multiple neural mechanisms?** *COGNITIVE NEUROSCIENCE*
  Weiner, K. S., Grill-Spector, K.
  2012; 3 (3-4): 243-244
- **Not one extrastriate body area: Using anatomical landmarks, hMT+, and visual field maps to parcellate limb-selective activations in human lateral occipitotemporal cortex** *NEUROIMAGE*
  Weiner, K. S., Grill-Spector, K.
  2011; 56 (4): 2183-2199
- **Sparsely-distributed organization of face and limb activations in human ventral temporal cortex** *NEUROIMAGE*
  Weiner, K. S., Grill-Spector, K.
  2010; 52 (4): 1559-1573
- **fMRI-Adaptation and Category Selectivity in Human Ventral Temporal Cortex: Regional Differences Across Time Scales** *JOURNAL OF NEUROPHYSIOLOGY*
  Weiner, K. S., Sayres, R., Vinberg, J., Grill-Spector, K.
  2010; 103 (6): 3349-3365
- **The Fusiform Face Area is Enlarged in Williams Syndrome** *JOURNAL OF NEUROSCIENCE*
  Golarai, G., Hong, S., Haas, B. W., Galaburda, A. M., Mills, D. L., Bellugi, U., Grill-Spector, K., Reiss, A. L.
  2010; 30 (19): 6700-6712
- **Controlling stimulus variability reveals stronger face-selective responses near the average face** *17th Annual Meeting on Object Perception, Attention and Memory*
  Davidenko, N., Grill-Spector, K.
  PSYCHOLOGY PRESS.2010: 122–26
- **Differential development of the ventral visual cortex extends through adolescence.** *Frontiers in human neuroscience*
  Golarai, G., Liberman, A., Yoon, J. M., Grill-Spector, K.
  2010; 3: 80-?
- **Deos the Bairn Not Raed Ervey Lteter by Istlef, but the Wrod as a Wlohe?** *NEURON*
  Grill-Spector, K., Witthoft, N.
  2009; 62 (2): 161-162
- **The representation of object viewpoint in human visual cortex** *NEUROIMAGE*
  Andresen, D. R., Vinberg, J., Grill-Spector, K.
  2009; 45 (2): 522-536
- **Fine-Scale Spatial Organization of Face and Object Selectivity in the Temporal Lobe: Do Functional Magnetic Resonance Imaging, Optical Imaging, and Electrophysiology Agree?** *JOURNAL OF NEUROSCIENCE*
  Op de Beeck, H. P., DiCarlo, J. J., Goense, J. B., Grill-Spector, K., Papanastassiou, A., Tanifuji, M., Tsao, D. Y.
  2008; 28 (46): 11796-11801
- **Relating retinotopic and object-selective responses in human lateral occipital cortex** *JOURNAL OF NEUROPHYSIOLOGY*
  Sayres, R., Grill-Spector, K.
  2008; 100 (1): 249-267
- **Developmental neuroimaging of the human ventral visual cortex** *TRENDS IN COGNITIVE SCIENCES*
  Grill-Spector, K., Golarai, G., Gabrieli, J.
  2008; 12 (4): 152-162
- **Object recognition: Insights from advances in fMRI methods** *CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE*
  Grill-Spector, K., Sayres, R.

2008; 17 (2): 73-79

- **Representation of shapes, edges, and surfaces across multiple cues in the human visual cortex** *JOURNAL OF NEUROPHYSIOLOGY*
  Vinberg, J., Grill-Spector, K.
  2008; 99 (3): 1380-1393
- **Differential development of high-level visual cortex correlates with category-specific recognition memory** *NATURE NEUROSCIENCE*
  Golarai, G., Ghahremani, D. G., Whitfield-Gabrieli, S., Reiss, A., Eberhardt, J. L., Gabrieli, J. D., Grill-Spector, K.
  2007; 10 (4): 512-522
- **Autism and the development of face processing.** *Clinical neuroscience research*
  Golarai, G., Grill-Spector, K., Reiss, A. L.
  2006; 6 (3): 145-160
- **Autism and the development of face processing** *85th Annual Conference of the Association-for-Reseach-in-Nervous-and-Mental-Disease*
  Golarai, G., Grill-Spector, K., Reiss, A. L.
  ELSEVIER SCI LTD.2006: 145–60
- **High-resolution imaging reveals highly selective nonface clusters in the fusiform face area** *NATURE NEUROSCIENCE*
  Grill-Spector, K., Sayres, R., Ress, D.
  2006; 9 (9): 1177-1185
- **Object-selective cortex exhibits performance-independent repetition suppression** *JOURNAL OF NEUROPHYSIOLOGY*
  Sayres, R., Grill-Spector, K.
  2006; 95 (2): 995-1007
- **Selectivity of adaptation in single units: Implications for fMRI experiments** *NEURON*
  Grill-Spector, K.
  2006; 49 (2): 170-171
- **Repetition and the brain: neural models of stimulus-specific effects** *TRENDS IN COGNITIVE SCIENCES*
  Grill-Spector, K., Henson, R., Martin, A.
  2006; 10 (1): 14-23
- **Visual recognition - As soon as you know it is there, you know what it is** *PSYCHOLOGICAL SCIENCE*
  Grill-Spector, K., Kanwisher, N.
  2005; 16 (2): 152-160
- **The fusiform face area subserves face perception, not generic within-category identification** *NATURE NEUROSCIENCE*
  Grill-Spector, K., Knouf, N., Kanwisher, N.
  2004; 7 (5): 555-562
- **The human visual cortex** *ANNUAL REVIEW OF NEUROSCIENCE*
  Grill-Spector, K., Malach, R.
  2004; 27: 649-677
- **The neural basis of object perception** *CURRENT OPINION IN NEUROBIOLOGY*
  Grill-Spector, K.
  2003; 13 (2): 159-166
- **fMR-adaptation: a tool for studying the functional properties of human cortical neurons** *ACTA PSYCHOLOGICA*
  Grill-Spector, K., Malach, R.
  2001; 107 (1-3): 293-321
- **The lateral occipital complex and its role in object recognition** *VISION RESEARCH*
  Grill-Spector, K., Kourtzi, Z., Kanwisher, N.
  2001; 41 (10-11): 1409-1422
- **The dynamics of object-selective activation correlate with recognition performance in humans** *NATURE NEUROSCIENCE*
  Grill-Spector, K., Kushnir, T., Hendler, T., Malach, R.

2000; 3 (8): 837-843

- **Differential processing of objects under various viewing conditions in the human lateral occipital complex** *NEURON*
  Grill-Spector, K., Kushnir, T., Edelman, S., Avidan, G., Itzchak, Y., Malach, R.
  1999; 24 (1): 187-203
- **Toward direct visualization of the internal shape representation space by fMRI** *PSYCHOBIOLOGY*
  Edelman, S., Grill-Spector, K., Kushnir, T., Malach, R.
  1998; 26 (4): 309-321
- **Cue-invariant activation in object-related areas of the human occipital lobe** *NEURON*
  Grill-Spector, K., Kushnir, T., Edelman, S., Itzchak, Y., Malach, R.
  1998; 21 (1): 191-202
- **A sequence of object-processing stages revealed by fMRI in the human occipital lobe** *HUMAN BRAIN MAPPING*
  Grill-Spector, K., Kushnir, T., Hendler, T., Edelman, S., Itzchak, Y., Malach, R.
  1998; 6 (4): 316-328

PRESENTATIONS

- Human visual cortex as a window into the developing brain - BIU Vision Science