Curriculum Vita

Ione Fine

3rd August, 1971
Dual UK/USA Citizen

University of Washington
Department of Psychology
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Education and training

Merton College, Oxford University, UK	B.A.	1989-93	Experimental Psychology and Philosophy
University of Rochester, Rochester N.Y.	M.A.	1996	Brain and Cognitive Sciences
University of Rochester, Rochester N.Y.	Ph.D.	1999	Brain and Cognitive Sciences

Positions and Employment

May 2021 Founding Co-Director Center for Human Neuroscience.
Aug 2014 Full Professor, Department of Psychology, University of Washington, Seattle
Adjunct Professor, Departments of Radiology and Ophthalmology
Co-Director of the UW Center for Brain Imaging
Feb 2010- Associate Professor, Department of Psychology, University of Washington, Seattle
Adjunct Associate Professor, Departments of Radiology and Ophthalmology
Co-Director of the UW Center for Brain Imaging
Feb 2007- Assistant Professor, Department of Psychology, University of Washington, Seattle
Adjunct Assistant Professor of Radiology, University of Washington, Seattle
Co-Director of the UW Center for Brain Imaging
2004-7 Assistant Professor, Department of Ophthalmology, Zilkha Neurogenetic Institute, Keck School of Medicine, USC
2003-4 Joint appointment: Research Assistant Professor, Doheny Eye Institute, Keck School of Medicine, USC & Second Sight Medical Products Inc.
2002 Research Scientist, Department of Psychology, University of California, San Diego
2000 - 2002 Postdoctoral Researcher (with Professors MacLeod, Dobkins), Department of Psychology, University of California, San Diego
1992 Research assistant for Dr Andrew Derrington, Department of Psychology, University of Newcastle
1992 Research assistant for Dr James Thomas, Department of Psychology, University of California, Los Angeles

Other Experience and Professional Memberships

2020-22 OSA Fall Vision Meeting program committee

2020-2023 Vision Sciences Society Davida Teller Award Committee
2019-21 UW Auditory Neuroscience Training Grant Steering Committee
2018 Member UW Advanced Data Science Option Steering Committee.
2018 Co-Chair SfN "Mitigating Implicit Bias: Tools for the Neuroscientist" Virtual Conference
2018 Chair Program Committee Northwest Data Science Summit
2018 -23 Advisory Board for FoVea (Females in Vision Science)
2017-20 Member UW eScience Education committee
2017-19 Applications Chair for OSA
2017 Member of the Innovators in Science Award Jury
2013 One of 12 moderators for the NEI Audacious Goals Development Meeting. This was an international assembly of ~ 200 experts in vision science who were invited to Washington DC to develop a set of "audacious goals" to help shape the breadth and direction of the full portfolio of eye and vision research supported by the NEI and other organizations in the U.S. and abroad. The 12 moderators were chosen as leaders in fields considered of high impact within NEI. (8 of the 12 moderators were full professors.)

2009 Local Organizer for OSA Vision Meeting (Seattle)

2007 Visiting Lecturer for OSA (OSA supports a selected group of speakers whose role is to visit student chapters across the country)

2006-7 Division Chair of OSA (Vision, Color, Applications and Clinical)

2005 Member of the OSA Tillyer Award committee

2004-6 Division Chair-Elect of OSA (Vision, Color, Applications and Clinical)

2003 – 2007 Member of OSA Executive Committee of the Science and Engineering Council

2003 - 2004 Chair of OSA committee (*Vision*)
2001 - 2002 Co-chair of OSA committee (*Vision*)

Editorial Board: Frontiers in Human Neuroscience, Journal of Vision

Journal Reviews
Brain, Cerebral Cortex, Cognitive Science, Current Biology, Cognitive, Computational Neuroscience Conference, eLife, Frontiers Human Neuroscience, IEEE Transactions on Neural Systems and Rehabilitation Engineering, Journal of the Optical Society of America, Investigative Ophthalmology and Visual Science, iScience, Journal of Neuroscience, Journal of Vision; Nature Neuroscience, Nature Communications, Nature Medicine, New England Journal of Medicine, Neuropsychologia, Neuroimage, Neuroreport, Proceedings of the National Academy of Science, Public Library of Science, Royal Society of London, Scientific Reports, Sinauer Press, Transactions on Neural Systems & Rehabilitation Engineering, Visual Neuroscience, Vision Research

Grant reviewing
2005 Cognition and Perception NIH Study Section Panel
2007 NSF Cognitive Neuroscience Program

2011 Mechanisms of Sensory, Perceptual and Cognitive Processes (SPC) Study Section NIH Study Section Panel
2013 Mechanisms of Sensory, Perceptual and Cognitive Processes (SPC) Study Section NIH Study Section Panel
2013 Action on Hearing Loss

2014 UK Biotechnology and Biological Sciences Research Council

2014 Mechanisms of Sensory, Perceptual and Cognitive Processes (SPC) Study Section NIH Study Section Panel
2015 Connectomes related to Human Disease NIH Study Section Panel

2016 Emerging Technologies and Training in Neurosciences (ETTN) NIH Study Section Panel

2017 Michael Smith Foundation for Health Research

2017 Innovators in Science Award Jury Member

2018 Fonds de la Recherche Scientifique

2018 NIH F31/F32/K08/K23 Awards Study Section Panel

2018 Mind Science Foundation

2019 European Research Council (ERC) – Starting Grant

2019 Cognitive Computational Neuroscience conference

2021 Canada First Research Excellence Fund

2021 UK ERC Advanced Grants

2021 UK MRC Clinician Scientist Fellowships

2022 Institut de la Vision, Paris

2023 Research to Prevent Blindness, Disney Award for Amblyopia Research

Member of: ARVO, Society for Neuroscience, Vision Sciences Society, Society for Neuroscience

Awards and Scholarships

2019 UW Davida Teller Excellence in mentoring award.

2010 Elected Fellow of the *Optical Society* (the leading scientific society dedicated to advancing the study of light—optics and photonics).

2001 - 2002 Fight for Sight Research fellowship from Prevent Blindness America

2000 - 2002 Burroughs Wellcome Interdisciplinary fellowship (mathematics and neuroscience)

1993-1995 Sproull Fellow (a university-wide tuition fellowship) of the University of Rochester

1992 Recipient of a Merton College, Oxford University, UK undergraduate research grant.

1992 Recipient of a special college award to fund research at the University of California, Los Angeles.

Current Research Interests
The effects of long-term visual deprivation
Adult perceptual learning and plasticity
The neural basis of amblyopia
Visual prostheses
Psychophysics, fMRI and computational vision.

Additional Service
Co-Founder of the UW Center for Human Neuroscience, which included raising external funds for a 3T Siemens Prisma. Our center makes a wide variety of large-scale consortium and clinical research opportunities newly available to UW researchers.
Founding member of the UW Faculty Senate Subcommittee on childcare, which successfully persuaded the university to build a new childcare site.
Established the UW Psychology Data Science option (minor) for graduate students. This is now a major graduate recruiting tool.
Reclassified CIPS classification of UW Psychology as STEM, for the benefit of foreign students.
Established feedback mechanism for graduate student annual evaluations so PIs could learn which aspects of mentoring were a priority for their students over the coming year.
Co-Chair for Society for Neuroscience virtual conference "Mitigating Implicit Bias: Tools for the Neuroscientist"

University and Departmental service
Current
Founding co-Director of the UW Center for Human Neuroscience
Steering committee Auditory Neuroscience Training Grant
Auditory Neuroscience Training Grant Steering committee
Member of the Psychology Graduate Recruitment Committee
IET committee

Previous
UW Faculty Senate (~10 years)
The Faculty Senate Subcommittee on Childcare (founding member)

Neurobiology Graduate Training Committee
Neurobiology Graduate Recruitment Committee
Data Science Education Committee (*current*)

Psychology Graduate Training Committee
Psychology Graduate Recruitment Committee (*current*)
Psychology Distinguished Teacher Award for Graduate students (*current chair*)
Psychology Quantitative Committee (*current*)

External funding – Mentoring

The grants listed below on ones on which I am an official mentor. However, based my experience as a reviewer on a wide selection of grant review panels, I have also provided informal review for colleagues as well as postdocs and junior faculty at UW, in areas as varied as computer science, neuro-engineering, retinal neurophysiology and developmental clinical psychology.

STUDENT TECH FUND 11/2020-
UW student leads ~$116,000
Role: Mentor/Faculty grant PI
Provides funds for UW undergraduate and graduate students to carry out independent neuroimaging projects. This unique program is proving to be an exceptional recruitment tool. Currently these funds are being used to collect a large open-access dataset that includes state-of-the-art anatomical measurements not available in other open-access datasets, while students collect their own survey/experimental data on the same participants.

NATIONAL INSTUTUTES OF HEALTH 11/2023-1/2028
R99/R00: Woon Ju Park ~$1,000,000
Role: Mentor
Anatomical, neural, and computational constraints on sensory cross-modal plasticity following early blindness

KNIGHTS TEMPLAR EYE FOUNDATION 07/2021-07/2022
Postdoctoral Award: Kim Meier $70,000
Role: Primary mentor
Neural bases of binocular contrast integration in children with amblyopia

WEILL NEUROHUB 04/2021-04/2023
Postdoctoral Award: Woon Ju Park $150,000
Role: Primary mentor
The effects of early blindness on auditory processing

NATIONAL INSTUTUTES OF HEALTH 11/2021-1/2026
R99/R00: Arathy Katha ~$1,000,000
Role: Secondary mentor
Development of a Multi-sensory Rehabilitation Program for People with Ultra Low Vision

NATIONAL INSTUTUTES OF HEALTH 11/2020-1/2025
Graduate Award (Diversity): Rebecca Esquenazi ~$280,000
Role: Primary mentor
Visual Cortical Plasticity and the Implications for Sight Restoration Technologies

NATIONAL INSTUTUTES OF HEALTH 11/2018-1/2022
Graduate Award (Diversity): Jasmine Awad ~$280,000
Role: Primary mentor

FIGHT FOR SIGHT 9/2017-8/2018
Postdoctoral Award: Brian Allen ~$22,500
Role: Primary mentor

NATIONAL INSTUTUTES OF HEALTH 8/2018-8/2023
R99/R00: Michael Beyeler ~$1,000,000
Role: Mentor
Virtual prototyping for retinal prosthesis patients

Moore Foundation, Alfred P. Sloan 8/2016-8/2018
Foundation, Washington Research Foundation
Postdoctoral Award: Michael Beyeler ~$180,000
Role: Mentor
Modeling of the perceptual experience of retinal prosthesis patients

NATIONAL INSTUTUTES OF HEALTH 8/2012-8/2017
R99/R00: Fang Jiang ~$1,000,000
Role: Mentor
Cross-modal motion responses in blind and deaf humans

International Human Frontier Science Program 08/2010-08/2011
Organization
Postdoctoral Award: Fang Jiang $50,000
Role: Primary mentor
Neural Representation of 3D Shape and 2D Surface Reflectance Information in Faces

External funding – Research grants

Foundation for Individual Rights and 11/12/2021-10/12/2022
Expression, Inc. FIRE $55,500 total direct
PI Fine
DEI Statements: Measures of Pedagogical Competence or A Political Litmus Test?
Supporters of DEI statements argue that they "concretely discuss what a candidate will do as a faculty member to actively encourage DEI and belonging". Skeptics worry that DEI statements enforce an orthodox view of how inequalities in US society should be tackled. We will examine whether the ratings of faculty candidates are influenced by whether or not the candidate shares the political viewpoint of the faculty rater.

NATIONAL EYE INSTITUTE 9/13/2021-10/26/2026

$56,545 total direct ($87,928 total including indirect)

Fine (subcontract PI)

Early Age-Related Hearing Loss Investigation (EARHLI): A Randomized Controlled Trial to Assess the Mechanisms Linking Early Age-Related Hearing Loss and Alzheimer's Disease and Related Dementias

This proposal is an early phase II randomized controlled trial (RCT) to obtain preliminary data on mechanisms and efficacy of a hearing aid-based intervention to prevent cognitive decline in those at risk for Alzheimer's Disease and Alzheimer's Disease Related Dementias (AD/ADRD). The target risk group is 55-75-year-olds with early-stage age- related hearing loss (ARHL) with subjective cognitive complaints or amnestic mild cognitive impairment.

NATIONAL EYE INSTITUTE
Fine (joint PI): R01EY031312 05/2021-08/2026
$1,250,000 total ($1,880,000 total including indirect)

Learning to see again: biological constraints on cortical plasticity and the implications for sight restoration technologies

Within a decade, many blind individuals are likely to be offered a wide range of options for sight restoration that depend on widely different technologies. Interactions between implant electronics and the underlying neurophysiology of the retina or cortex mean that the vision provided by most of these technologies will differ substantially from normal sight. The question of this proposal is – What role can cortical plasticity play in helping patients make use of this artificial visual input?

RESEARCH TO PREVENT BLINDNESS 06/2019-06/2021
Disney Award for Amblyopia Research $100,000
Fine

The neural basis of individual differences in amblyopia: Neural assessment as a route to individualized treatment

We will use advanced neuroimaging techniques in conjunction with psychophysics to accurately measure population receptive field sizes (thought to be related to the size of the underlying neural receptive fields), monocular contrast responses, and binocular suppression in amblyopes and neurotypicals, across the entire visual field. We will use these neural responses to develop behavioral tests that can be applied in the clinic. An ability to separately characterize these phenomena at a neural and behavioral level (in ways that are practical in the clinic) will allow for an 'individualized treatment' approach that might genuinely transform patient care.

NATIONAL EYE INSTITUTE 08/2017-08/2023
Fine (PI): EY-014645 $1,250,000 total ($1,880,000 total including indirect)

The neural and functional effects of long-term visual deprivation

I received my first R01 (which scored in the 0.3rd percentile) shortly before taking my first

faculty position. I have been fortunate enough to receive continuous funding from NIH since then. The goal of this project is to examine the neural and behavioral effects of long-term bilateral visual deprivation in adults using a combination of psychophysics and functional magnetic resonance imaging.

UW ROYALTY RESEARCH FUND 09/2016-08/2018
Fine (PI) $50,000 direct
The neuronal basis of perceptual distortions due to vision loss
An award to develop methods to measure visual reorganization that might occur as a result of long- and short-term blindness in people who have suffered vision loss due to diseases like macular degeneration, retinitis pigmentosa, and glaucoma.

York University 1/12015-12/31/2015
Centre for Chronic Diseases and Disorders
Baseler (PI)
Fine (Collaborator)
Assessing visual cortex in candidates for retinal prosthetics
A promising new treatment is under development to restore visual function by implanting retinal prostheses. However, the success of retinal implantation ultimately depends on whether the brain is still capable of processing visual information once signals from the eye are restored. Taking quantitative measures of brain structure and function before and after implantation, we will ask: 1) Can we use neural measures in the brain before treatment to predict the success of retinal implants in restoring sight? 2) How does restoration of visual inputs affect brain structure and function?

JAMES MCKEEN CATTELL FELLOWSHIP 08/2014-08/2015
American Psychological Society
Fine (PI) $40,000 direct
Visual reorganization
A sabbatical award to measure the visual reorganization that might occur as a result of long- and short-term blindness in people who have suffered vision loss due to diseases like macular degeneration, retinitis pigmentosa, and glaucoma.

NATIONAL EYE INSTITUTE 08/2010-08/2017
Fine (PI): EY-014645 $1,250,000 total (~$1,880,000 total including indirect)
The neural and functional effects of long-term visual deprivation
I received my first R01 (which scored in the 0.3rd percentile) shortly before taking my first faculty position. I have been fortunate enough to receive continuous funding from NIH since then. The goal of this project is to examine the neural and behavioral effects of long-term bilateral visual deprivation in adults using a combination of psychophysics and functional magnetic resonance imaging.

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UW BRIDGE FUND 08/2010-08/2011
Fine (PI) $100,000 direct
The neural and functional effects of long-term visual deprivation
Short term-bridge support.

INNOVATIONS IN NEUROIMAGING 08/2007-08/2009
Dana Foundation
Fine (PI) $100,000 direct
Neural Deterioration and Cross-modal plasticity in the Blind
The goal of this project is to examine the neurochemical changes that occur as a result of early blindness.

RESEARCH TO PREVENT BLINDNESS 08/2006-08/2010*
Fine (PI): Career Development Award $200,000 direct
Interactions between cross modal plasticity and visual deprivation
The goal of this project is to examine how cross-modal plasticity interacts with the ability to restore normal vision after long periods of visual deprivation.
* Relinquished 2007 due to move to UW

NATIONAL EYE INSTITUTE 08/2004-08/2010
Fine (PI): EY-014645 $1850,000 total (~$1,290,000 total including indirect)
The neural and functional effects of long-term visual deprivation
I received my first R01 shortly before taking my first faculty position. I have been fortunate enough to receive continuous funding from NIH since then. The goal of this project is to examine the neural and behavioral effects of long-term bilateral visual deprivation in adults using a combination of psychophysics and functional magnetic resonance imaging.

NATIONAL INSTITUTE OF HEALTH 08/2000-08/2010
DEPARTMENT OF ENERGY
Greenberg (PI) ~$25M in total (including indirect)
Fine (co-PI)
Interactions between cross modal plasticity and visual deprivation
I was a co-PI on this Bioengineering Research Partnership between 2004-7, including taking the lead on the first draft of the renewal. Our proposed research for this partnership grant is to develop a long-term implantable retinal stimulator for patients blinded by outer retinal degenerations.

Issued Patents

1 9,078,739 Fitting of brightness in a visual prosthesis

2 8,706,244 Fitting of brightness as a function of current amplitude in a visual prosthesis
3 8,620,442 Multi-electrode integration in a visual prosthesis
4 8,554,327 Method and apparatus for predicting and controlling the percepts induced by a visual prosthesis
5 8,527,056 Encoding of size and brightness of percepts in a visual prosthesis
6 8,457,754 Apparatus and method for electrical stimulation of human neurons

Peer Reviewed Papers

Derrington AM, **Fine** I, Henning GB. Errors in direction-of-motion discrimination with dichoptically viewed stimuli. Vision Res 1993;33:1491-1494.

Fine I, Jacobs RA. Combining visual cues to depth and shape: a comparison of three models. Proceedings of the Nineteenth Annual Conference of the Cognitive Science Society. Hillsdale, NJ: Lawrence Erlbaum, 1997.

Fine I, Jacobs RA. A comparison of visual cue combination models. In: Sharkey A, ed. Combining artificial neural nets: ensemble and modular multi-net systems. Berlin: Springer-Verlag, 1999.

Fine I, Jacobs RA. Modeling the combination of motion, stereo, and vergence angle cues to visual depth. Neural Comput 1999;11:1297-1330.

Jacobs RA, **Fine** I. Experience-dependent integration of texture and motion cues to depth. Vision Res 1999;39:4062-4075.

Fine I, Jacobs RA. Visual learning for a mid-level pattern discrimination task. Proceedings of the Nineteenth Annual Conference of the Cognitive Science Society. Hillsdale, NJ: Lawrence Erlbaum, 2000.

Fine I, Jacobs RA. Perceptual learning for a pattern discrimination task. Vision Res 2000;40:3209-3230.

Finney EM, **Fine** I, Dobkins KR. Visual stimuli activate auditory cortex in the deaf. Nat Neurosci 2001;4:1171-1173.

Fine I, Smallman HS, Doyle P, MacLeod DI. Visual function before and after the removal of bilateral congenital cataracts in adulthood. Vision Res 2002;42:191-210. Erratum in: Vision Res 2002;42:2561-2562.

Fine I, Jacobs RA. Comparing perceptual learning across tasks: A review. JOV 2002;2:190-203.

Fine I, MacLeod DI, Boynton GM. Surface segmentation based on the luminance and color statistics of natural scenes. J Opt Soc Am A Opt Image Sci Vis. 2003;20:1283-1291.

Fine I, Wade AR, Brewer AA, May MG, Goodman DF, Boynton GM, Wandell BA, MacLeod DI. Long-term deprivation affects visual perception and cortex. Nat Neurosci 2003;6:915-916. *Recommended by Faculty of 1000.*

Fine I, Anderson CM, Boynton GM, Dobkins, KR. The effects of contrast and coherence on directional tuning. Vision Res 2004; 44(9).

Dobkins KR, **Fine** I, Hsueh AC, Vitten C. Pattern motion integration in infants. Journal of Vision, 2004(3), 144-55.

Buracas, G.T., **Fine**, I. and Boynton, G.M. The relationship between task performance and fmri response. J Neurosci 2005;25:3023-3031. *Recommended by Faculty of 1000.*

Mahadevappa, M., Weiland, J.D., Yanai, D., **Fine**, I., Greenberg, R.J.,, Humayun, M.S. Correlations between perceptual thresholds, electrode impedance, and electrode height from the retina in 3 retinal prosthesis subjects. IEEE Transactions on Neural Systems and Rehabilitation Engineering. 13(2)
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Ng, M., Ciaramitaro, V., Boynton, G.M. and **Fine, I.** (2006) Selectivity for the configural cues that identify gender, ethnicity and identity in human cortex. *Proceedings of the National Academy of Sciences*, 105:51, 19552-7

Dobkins KR, Lewis LB, **Fine I**.(2006) Integration of one- and two-dimensional motion signals in infants: evidence from the barber-pole illusion. *Vision Res.* 2006 Oct; 46(20):3360-72.

Yanai D., Weiland J.D., Mahadevappa M., Greenberg R.J., **Fine I.,** Humayun M.S. (2007) Visual performance using a retinal prosthesis in three subjects with retinitis pigmentosa. *Am J Ophthalmol*;143(5):820-827, 2007

Ng M. Boynton, G.M., **Fine, I**. (2007) Face adaptation does not improve performance on search or discrimination tasks. *JOV*; 4;8(1):1.1-20

Saenz, M., Lewis, L.B., Huth, A.G., **Fine, I.,** Koch, C. (2008) Visual Motion Area MT+/V5 Responds to Auditory Motion in Human Sight-Recovery Subjects. *J. Neuroscience;* 28(20) 5141-8

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Saenz M, **Fine I.** Topographic organization of V1 projections through the corpus callosum in humans. Neuroimage. 2010 Oct 1;52(4):1224-9.

Lewis LB, Saenz M, **Fine I.** Mechanisms of cross-modal plasticity in early blind subjects. J. Neurophysiol. 2010. Dec;104(6):2995-3008

Horsager A, Boynton GM, Greenberg RJ, **Fine I.** Temporal interactions during paired-electrode stimulation in two retinal prosthesis subjects. IOVS 2011 Feb 1;52(1):549-57

Nanduri D, **Fine I**, Horsager A, Boynton GM, Humayun MS, Greenberg RJ, Weiland JD. Frequency and amplitude modulation have different effects on the percepts elicited by retinal stimulation. IOVS 2012 Jan 20;53(1):205-14.

Binda, P., Thomas, J.M., Boynton G.M., **Fine, I.** Minimizing biases in estimating the reorganization of human visual areas with BOLD retinotopic mapping. Journal of Vision, 2013 Jun 20;13(7):13

Bock, A., Saenz, M., Tungaraza, R., Boynton, G., Bridge, H., **Fine, I.** Visual callosal topography in the absence of retinal input. Neuroimage, 2013 Nov 1;81:325-34

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Weaver, K.E., Richards, T.L., Saenz, M., Petropoulos, H, **Fine, I.** Neurochemical Changes within Human Early Blind Occipital Cortex. Neuroscience, 2013 Nov 12;252:222-33. *Recommended by Faculty of 1000.*

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the interplay between anatomical and functional connectivity in the human brain". Front Hum Neurosci. 2014; 8: 971.

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Coullon, G.S.J., F. Jiang, F. **Fine, I.,** Watkins, K.E., Bridge, H. Subcortical re-organization due to blindness. J Neurophysiol., 2015; 1;113(7):2889-99

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Park WJ, **Fine I.** New insights into cortical development and plasticity: from molecules to behavior. Curr Opin Physiol. 2020

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Denham, M.W., Arnold, M.L., Sanchez.V.A., Lin, F.R., Tucker, L.H., Gomez, M.C., Fernandez, K., Arpi, P., Neil, H., Boyle, S., Selevan. S., Sussman, T.J., Gmelin, T., **Fine I**, Glynn, N.W., Teresi, J., Noble, J.M., Goldberg, T., Luchsinger, J.A., Golub, J.S. Otol Neurotol. 2024 Jun 1;45(5):594-601. doi: 10.1097

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Peer reviewed conference proceedings

Fine, **I.** and Jacobs, R.A. (1997) Combining visual cues to depth and shape: A comparison of three models. Proceedings of the Nineteenth Annual Conference of the Cognitive Science Society. Hillsdale, NJ: Lawrence Erlbaum.

Fine, **I.** and Jacobs, R.A. (2000) Visual Learning for a Mid Level Pattern Discrimination Task. Proceedings of the Twenty Second Annual Conference of the Cognitive Science Society. Hillsdale, NJ: Lawrence Erlbaum.

M Beyeler, GM Boynton, **I Fine**, A Rokem (2017). pulse2percept: A Python-based simulation framework for bionic vision. Scientific Computing with Python (SciPy), p.81–88.

M Beyeler, GM Boynton, **I Fine**, A Rokem (2019). Model-based recommendations for optimal surgical placement of epiretinal implants. 22nd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 13-17 October 2019, Shenzhen, China.

Books and Book Chapters

Fine, I. & Jacobs, R.A. (1999) A comparison of visual cue combination models. In A. Sharkey (Ed.), Combining Artificial Neural Nets: Ensemble and Modular Multi-Net Systems. Berlin: Springer-Verlag.

Fine, I. (2007) The effects of visual deprivation: Implications for Sensory Prostheses." Chapter in Artificial Sight Basic Research, Biomedical Engineering, and Clinical Advances Series: *Biological and Medical Physics, Biomedical Engineering* Humayun, M.S.; Weiland, J.D.; Chader, G.; Greenbaum, E. (Eds.)

Fine, I. (2007) The behavioral and neurophysiological effects of sensory deprivation." Chapter in Blindness and Brain Plasticity in Navigation and Object Perception. CRC Division of Taylor and Francis, pp. 85-112. Mahwah, NJ: Lawrence Erlbaum Associates. Reiser, Ashmead, Ebner, and Corn (Eds.)

Fine, I. Fine, C. and Fine, K. Oxford Encyclopedia of Consciousness, entry on “Blindness, recovery from”.

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Fine, I. "Recovery of Vision Following Blindness" Encyclopedia of Perception. Goldstein (Ed.)

Lewis, L.B. and Fine, I. The Effects of Visual Deprivation after Infancy. Kaufman et al: Adler’s Physiology of the Eye, 11th edition.

Fine, I. and Boynton, G.M. Matlab for the Behavioral Sciences. Amazon Kindle.

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Reviews & Commentaries

Fine, I. (2004) Review of Sight Unseen by Goodale and Milner, *Optometry and Vision Science*, 81(1)

Fine, I. Do you hear what I see? Nature, 2014, 508 (7497), 461-462

Fine, I. Cepko, C. and Landy, M.S. Vision Research Special Issue: Sight restoration: prosthetics, optogenetics and gene therapy. *Vision Research*, 2015

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Rokem A, Takemura H, Bock AS, Scherf KS, Behrmann M, Wandell BA, **Fine I**, Bridge H, Pestilli F. The visual white matter: The application of diffusion MRI and fiber tractography to vision science. J Vis. 2017 Feb 1;17(2):4.

Beyeler M, Rokem A, Boynton G, **Fine I.** Learning to see again: biological constraints on cortical plasticity and the implications for sight restoration technologies. J. Neural Eng. 2017 Jun 14. doi: 10.1088/1741-2552/aa795e.

Shen YA, Shoda Y, **Fine I**. Too few women authors on research papers in leading journals. Nature. 2018 Mar 8;555(7695):165.

Fine I, Shen YA, Webster J. Underrepresentation of women in high-profile journals. American Women in Science Magazine, 2018

Park, WJ, **Fine, I.** New insights into cortical development and plasticity: from molecules to behavior. Curr Opin Physiol, 2020 Aug;16:50-60

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Thompson, B., Das, V.E., **Fine I.** Editorial: Insights in visual neuroscience: 2023. Front Neurosci. 2024 Apr 15;18:1396011.

Park WJ, **Fine I.,** A unified model for cross-modal plasticity and skill acquisition. Front Neurosci. 2024 Feb 7;18:1334283. doi: 10.3389/fnins.2024.1334283.

Invited Academic Talks

Computer Science Department, University of Rochester, (1997)
Department of Psychology, Cambridge University, UK (2000)
Department of Cognitive Sciences, University of California, Irvine, (2001)
Department of Psychology, University of Pennsylvania (2003)
Department of Psychology, Johns Hopkins University (2003)
Rose Resnick Light House for the Blind and Visually Impaired, SF, CA (2003)
Department of Neuroscience, University of California, Davis, CA (2003)
Department of Psychology, University of Nevada, NV (2003)
Scuola Normale, Italy (2003)
Department of Psychology, USC (2003)
Advances in Wayfinding Technology. Institute for Innovative Blind Navigation, Monterey (2003)
Department of Psychology, UCLA (2004)
Department of Ophthalmology, Berkeley, Oxyopia research seminar, San Francisco (2004)
Blindness, Brain Plasticity, and Spatial Function Conference, Vanderbilt University (2004)
Adaptation and Priming in FMRI, University of Minnesota (2004)
The Defense Advanced Research Projects Agency, Washington, DC (2004)
Zilkha Neurogenetic Institute, USC (2004)
Society for Neuroscience Minisymposium on Plasticity, San Diego (2004)
Department of Psychology, York University (2004)
Asilomar conference on implantable auditory prostheses (2005)
Dartmouth Summer Institute on Cognitive Neuroscience (2005)
Department of Energy Symposium on Artificial Sight (2005)
National Eye Institute Council Meeting (2005)
Smith-Kettlewell Eye Institute (2005)
Department of Psychology, Melbourne, Australia (2008)
"All About Eyes", Continuing Medical Education, Portland Oregon (2008)
Molecular, Cellular and Integrative Neurosciences Program, Colorado State University (2009)
American Academy of Ophthalmology Keynote Speaker (2009)
Department of Ophthalmology, University of Washington (2010)
Department of Speech and Hearing, University of Washington (2010)
Keynote speaker American Academy of Optometry annual meeting (2010)
Department of Ophthalmology, Berkeley, Oxyopia research seminar, San Francisco (2010)
Craik Club Invited Speaker, Cambridge University (2011)
University of Rochester, Department of Brain and Cognitive Sciences (2011)
U.S. Army meeting of experts on Human-Systems Integration, Beckman Center, Irvine (2012)
Cold Spring Harbor Lecturer, Computational Vision (2012)

Department of Brain and Cognitive Sciences, MIT (2012)
Department of Psychology, UCSD (2012)
University of Pennsylvania, Mahoney Institute for Neurological Sciences (2012)
Center for Neural Sciences, NYU (2012)
Co-chair of the NEI Audacious goals leadership conference (2013)
Kavli Royal Society International Scientific Seminar, Oxford (2013)
Graduation Ceremony Scientific Lecture, University of Trento, Rovereto Italy, 11/5/14
CNR Institute of Neuroscience, Italy, 2014
Gained in Translation, Portland, 2015
National Institute of Health, Neuroscience Seminar, January 2016
University of Nevada, Department of Psychology, April 2016
Regenerative Medicine in Ophthalmology CME Conference, Pittsburgh, June 2016
York Festival of Ideas, June 2016
Department of Energy, Eye and Chip, Dearborn Michigan, September 2016
Stanford University, Department of Psychology, October 2016
Stanford University, Department of Ophthalmology, October 2016
Carnegie Mellon University, Annual International Vision Restoration: Regenerative Medicine in Ophthalmology, June 2016
University of British Columbia, April 2017
Eye and Chip, 2017
Optical Society of America Fall Vision meeting, 2017
UBC PWIAS workshop on Current Directions in Vision Sciences, 2017
VSS-ARVO Invited Lecture on Clinical vision, 2018
Cold Spring Harbor Lecturer, Computational Vision, 2018
Envision Keynote speaker, 2018
University of Minnesota, 2018
Optical Society of America Fall Vision Meeting, 2018
Sensory Plasticity, Adaptation and Development, Italy, 2018
NIH 50th Anniversary Symposium on Low Vision, 2018
ARVO at VSS Symposium, 2018
Eye and Chip, 2019
Royal Society 'New Theories of Visual Space', 2021
University of Michigan, 2021
University of Maryland, 2021
International Multisensory Seminar Series, 2021
Ohio State University, 2022
Cambridge, Department of Experimental Psychology, 2022
CUNY Ophthalmology, 2023
Johns Hopkins University, Zanvyl Krieger Mind/Brain Institute, 2023
University of Leeds, UK, 2023
Smith Kettlewell, 2023
Hanse-Wissenschaftskolleg (Institute for Advanced Study) Cortical Prostheses Conference, 2023
NIH Visual Neuroplasticity Workshop, 2024

Invited Outreach Lectures

Vision Sciences Society Outreach Lecture, Sarasota (2006 and 2007)
Luminaires Foundation, LA (2005, 2006)
Keynote speaker for the Women Engineers and Scientists of Tomorrow conference, LA (2005, 2007)
Evergreen radio talk show for the visually impaired, WA (2008)
Annual Convention of the National Federation of the Blind (WA)
Washington-Oregon Association of Education and Rehabilitation spring conference (2009)
GoCognitive online educational webcast on neuroplasticity (2009)
Berkeley, Oxyopia annual retreat. "Women in Science". San Francisco (2010)
Invited Panel Member at VSS career event to discuss career choices and experience with industry at Vision Science society (2012)
UW Edwards outreach lecturer (2012)
Cold Spring Harbor, 'How to negotiate a job offer'. Computational Vision (2012)
Team captain for game show at the Society for Neuroscience Vision Social (2014)
Invited Panel Member at VSS career event to discuss how to start a laboratory at Vision Science society (2016)
York Festival of Ideas, UK (2016)
Panel Member on Careers in Neuroscience, Society of Neuroscience, 2016
Envision Keynote Speaker, 2018
NIH 50th Anniversary Symposium on Low Vision, 2018
Cold Spring Harbor Summer School, "Women in Science", 2018
CSU Fullerton NIH MARC (Diversity Scholar) Program. Virtual visit, 2022
Neurohackademy, UW, Industry, "Careers in neuroimaging and data science", 2022
Keynote Women in AI, UW, 2023

Secondary Citations

Academic/scientific commentaries (selected)
Faculty of 1000 highlighted paper (2004, 2005); Seeing after Blindness (2003) Richard Gregory, R. News and Views. Nature Neuroscience; Highlights of the Week, Nature; The Lancet Neurology (2003); Euro Times, newspaper of the European Society of Cataract and Refractive Surgeons (2003) Science Online (2003); Dana Foundation (2003); Discover Magazine (2002); Trends in Cognitive Science (2002); Psychology 4th Edition (2005); Nature News (2008); Discover (2009); Science et vie (2009);
Newspapers and Magazines (selected)
Newsweek 2018; Science et Vie (2009); LA Times (2008); Associated Press (2003); U.S. News and World Report (2003); Washington Post (2003); Pittsburg Post-Gazette (2003); Baltimore Sun (2003); LA Times (2003); Health Day (2003); WebMD (2003); London Times (2003); London Daily Telegraph (2003); London Daily Mail (2003); German Focus (2003); der Spiegel (2002)

Television/Radio (selected)
Vice Documentary (2015); ABC (2008); HBO (2008); Hot Shot Films (2007); Catalyst (2004); CBS News (2003); Good Morning America (2003); Inside Edition (2003); NPR Science Friday (2003); BBC World Service radio (2003); Design Rules (2002); BBC2 Documentary (2002); NBC Discover (2001), GeekWire (2024), Tech Xplore (2024)