Donald D. Hoffman

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Education

B.A.	University of California, Los Angeles, 1978, Quantitative Psychology
Ph.D.	Massachusetts Institute of Technology, 1983, Computational Psychology

Positions

1978 - 1983	Member of the Technical Staff and Project Engineer, Hughes Aircraft Company, El Segundo, California
1983 - 1983	Research Scientist, Laboratory for Artificial Intelligence, Massachusetts Institute of Technology
1983 - 1986	Assistant Professor of Cognitive Science, and of Information and Computer Science, University of California, Irvine
1986 - 1990	Associate Professor of Cognitive Science, and of Information and Computer Science, University of California, Irvine
1990 -	Professor of Cognitive Science, University of California, Irvine
1995 - 1996	Visiting Professor, Zentrum für interdisziplinäre Forschung der Universität Bielefeld, Germany
1996 - 2000	Professor of Philosophy, University of California, Irvine
2006 -	Professor of Logic and Philosophy of Science, University of California, Irvine

Research Interests
Vision, Cognitive Science, Consciousness, Evolution of Perception

Honors
TED Talk: "Do we see reality as it is?", Vancouver, 2015
Troland Research Award of the National Academy of Sciences, 1994
Distinguished Scientific Award of the American Psychological Association
        for an Early Career Contribution to Psychology in Sensation and Perception,1989
Rustum Roy Spirit Award, Chopra Foundation, 2013
UCI Chancellors's Award for Excellence in Undergraduate Research, 2002
Hughes Aircraft Company Bachelors, Masters, and Ph.D. fellowships
B.A., summa cum laude
Who's Who in America, Editions 50-62; Who's Who in the West, Editions 23-34
Who's Who in the World, Editions 11-13; Who's Who in American Education, Edition 6
Who's Who in Finance and Industry, Edition 28; Who's Who in Science and Engineering, Editions 2-10
Who's Who Among America's Teachers, Editions 8, 9
Dictionary of International Biography, Editions 23, 24
My Last Lecture: Teaching award given by UCI students, 1988
UCI Faculty Mentor of the Month, Undergraduate Research Opportunity Program, 2009

Contracts and Grants

$177,283	NSF, Object Recognition Using Visual Information from Images, PI, 1984	
369,110	ONR, An Interdisciplinary Investigation of Inferences from Images, PI, 1985	
126,000	DOD, Inferring 3-D Shape from Image Motion and Occluding Contours, PI, 1986	
271,064	NSF, A Formal Investigation of Perceptual Information Processing, Co-PI with B. Bennett, 1987	
458,239	ONR, Formal and Psychophysical Investigations of Vision, PI, 1988	
1,676,678	NSF, Research and Training Program in Mathematical Behavioral Science, Faculty Participant (R.D. Luce, PI), 1990-1995	
13,701	ONR, Workshop on Image Representation in Biological and Machine Vision, PI, 1992	
85,015	CalTrans, Automatic Video Analysis For Transportation, PI on subcontract, 1993	
35,000	NAS, Troland Research Award, 1994	
10,000	UCI COR, Perception and Evolution, Co-PI with A. Nelson, 1995	
35,000	German NSF, Perception and Evolution, Faculty Participant, 1995	
530,000	NSF, Acquisition of Equipment for a VR Laboratory, Faculty Participant (M. D'Zmura, PI), 1997	
180,000	Alzheimer's Foundation, Optimizing Object Perception in Alzheimer's Disease, Co-I (W.R. Shankle, PI), 1999	
250,000	Alzheimer's Foundation, Preclinical detection disease measurement of AD, Co-I (W.R. Shankle, PI), 2001	
387,000	NSF, The role of parts in the visual perception of objects, PI, 2001	
100,000	P&G, Vision Research, PI, 2008	
81,730	VF Corporation, Vision Research, PI, 2012	
50,000	Faggin Foundation, Consciousness Research, PI, 2014	
200,000	Faggin Foundation, Consciousness Research, Co-PI, 2015	
200,000	Faggin Foundation, Consciousness Research, Co-PI, 2016	
200,000	Faggin Foundation, Consciousness Research, Co-PI, 2017	
200,000	Faggin Foundation, Consciousness Research, Co-PI, 2018	
220,000	Faggin Foundation, Consciousness Research, Co-PI, 2019	

Publications

1982

1. Equation counting and the interpretation of sensory data. *Perception*, 11, 557-576. W. Richards, J. Rubin, D. Hoffman.
    - also appeared as *MIT Artificial Intelligence Laboratory Memo* 614

2. The interpretation of biological motion. *Biological Cybernetics*, 42, 3, 197-204. D. Hoffman, B. Flinchbaugh.
    - also appeared as *MIT Artificial Intelligence Laboratory Memo* 608

3. Inferring local surface orientation from motion fields. *Journal of the Optical Society of America*, 72, 7, 888-892. D. Hoffman.
    - also appeared as *MIT Artificial Intelligence Laboratory Memo* 592

4. Representing smooth plane curves for recognition: Implications for figure-ground reversal. *Proceedings of the National Conference of the American Association for Artificial Intelligence*, 5-8. D. Hoffman, W. Richards.
    - also appears in *Natural Computation*, W. Richards (Ed), MIT Press, 1988.

5. Interpreting time-varying images: The planarity assumption. *IEEE Workshop on Computer Vision*, 92-94. D. Hoffman.

1983

6. <u>The interpretation of visual illusions</u>. *Scientific American*, 249, 6, 154-162. D. Hoffman.
    - also appears in *The Mind's Eye. Readings From Scientific American*, J. Wolfe (Ed), Freeman Press, 1986.

1984

7. <u>Parts of recognition</u>. *Cognition*, 18, 65-96. D. Hoffman, W. Richards.
    - also appears as *MIT Artificial Intelligence Laboratory Memo* 732, 1983.
    - also appears in *Visual Cognition*, S. Pinker (Ed), MIT Press, 1985.
    - also appears in *From Pixels to Predicates: Recent Advances in Computational Vision*, A. Pentland (Ed), Ablex Publishing Company, 1986.
    - also appears in *Readings in Computer Vision*, M. Fischler and O. Firschein (Eds), Morgan and Kaufmann Publishers, Inc., 1987.

1985

8. <u>The computation of structure from fixed-axis motion: Nonrigid structures</u>. *Biological Cybernetics*, 51, 293-300. B. Bennett, D. Hoffman.

9. <u>Inferring the relative 3-D positions of two moving points</u>. *Journal of the Optical Society of America A*, 2, 350-353. D. Hoffman, B. Bennett.

10. <u>Codon constraints on closed 2-D shapes</u>. Computer Vision, Graphics, and Image Processing, 31, 265-281. W. Richards, D. Hoffman.
    - also appears in Human and Machine Vision II, A. Rosenfeld (Ed), Academic Press, 1986.

1986

11. <u>Regularities of nature: The interpretation of visual motion</u>. In *From Pixels to Predicates: Recent Advances in Computational Vision*, A. Pentland (Ed), Ablex Publishing Company, New Jersey, 201-226. S. Reuman, D. Hoffman.

12. <u>The computation of structure from fixed-axis motion: Rigid structures</u>. *Biological Cybernetics*, 54, 71-83. D. Hoffman, B. Bennett.

1987

13. <u>Description of solid shape and its inference from occluding contours</u>. *Journal of the Optical Society of America, A*, 4, 1155-1167. J. Beusmans, D. Hoffman, B. Bennett.

14. <u>Inferring three-dimensional shapes from two-dimensional silhouettes</u>. *Journal of the Optical Society of America, A,* 4, 1168-1175. W. Richards, J. Koenderink, D. Hoffman.
    - also appears as *MIT Artificial Intelligence Laboratory Memo* 840
    - also appears in *Natural Computation*, W. Richards (Ed), MIT Press, 1988.

15.   Perception and computation. *IEEE First International Conference on Computer Vision, London*, 356-364. B. Bennett, D. Hoffman, C. Prakash.

16.   Minimum points and views for the recovery of three-dimensional structure. *Journal of Experimental Psychology: Human Perception and Performance, 13*, 335-343. M. Braunstein, D. Hoffman, L. Shapiro, G. Andersen, B. Bennett.

17.   Shape decompositions for visual shape recognition: The role of transversality. In *Image Understanding,* W. Richards (Ed), Ablex Publishing Company, New Jersey, 215-256. B. Bennett, D. Hoffman.

1988

18.   Perceptual representations: Meaning and truth conditions. In *Cognition and representation*, S. Schiffer and S. Steele (Eds), Westview Press, Boulder, 87-128. D. Hoffman, B. Bennett.

1989

19.   *Observer Mechanics: A formal theory of perception*. Academic Press, New York. B. Bennett, D. Hoffman, C. Prakash.

20.   Inferring structure from motion: A homotopy algorithm. *Proceedings of the IEEE Workshop on Visual Motion, Irvine*, 238-245. B. Bennett, D. Hoffman, J. Nicola, C. Prakash.

21.   Structure from two orthographic views of rigid motion. *Journal of the Optical Society of America, A, 6*, 1052-1069. B. Bennett, D. Hoffman, J. Nicola, C. Prakash.
        - also appears as *UCI Mathematical Behavioral Sciences Memo* MBS 89-01.

22.   Parts of visual objects: An experimental test of the minima rule. *Perception, 18*, 817-826. M. Braunstein, D. Hoffman, A. Saidpour.

1990

23.   Discriminating rigid from nonrigid motion: Minimum points and views. *Perception & Psychophysics, 47*, 3, 205-214. M. Braunstein, D. Hoffman, F. Pollick.

1991

24.   Unity of perception. *Cognition*, 38, 295-334. B. Bennett, D. Hoffman, C. Prakash.
        - also appears as UCI Mathematical Behavioral Sciences Memo MBS 90-13.

1992

25. Vision. *1992 McGraw-Hill Yearbook of Science and Technology*, 487-489. D. Hoffman.

26. Interpolation in structure from motion. *Perception & Psychophysics*, *51* (2), 105-117. A. Saidpour, M. Braunstein, D. Hoffman.

27. Perception is no accident. *Optics & Photonics News*, *3* (9), 50-51. M. Albert, D. Hoffman.

1993

28. Recognition polynomials. *Journal of the Optical Society of America, A*, 10, 4, 759-764. B. Bennett, D. Hoffman, C. Prakash.
    - also appears as *UCI Mathematical Behavioral Sciences Memo* MBS 92-17.

29. Lebesgue logic for probabilistic reasoning and some applications to perception. *Journal of Mathematical Psychology, 37*, 1, 63-103. B. Bennett, D. Hoffman, P. Murthy.
    - also appears as UCI Mathematical Behavioral Sciences Memo MBS 90-07.

30. No perception without representation. Commentary in *Behavioral and Brain Sciences*, *16*, 2, 247-247. D. Hoffman.

31. Modeling performance in observer theory. *Journal of Mathematical Psychology, 37*, 2, 220-240. B. Bennett, D. Hoffman, R. Kakarala.
    - also appears as *UCI Mathematical Behavioral Sciences Memo* MBS 90-25.

32. Inferring 3D structure from image motion: The constraint of Poinsot motion. *Journal of Mathematical Imaging and Vision, 3*, 143-166. B. Bennett, D. Hoffman, J. Kim, S. Richman.
    - also appears as *UCI Mathematical Behavioral Sciences Memo* MBS 91-01.

33. Inferring structure from motion in two-view and multi-view displays. *Perception, 22*, 1441-1465. J. Liter, M. Braunstein, D. Hoffman.

1994

34. Interpolation Across Surface Discontinuities in Structure-from-motion. *Perception & Psychophysics, 55*, 611-622. A. Saidpour, M. Braunstein, D. Hoffman.

35. Detection of one versus two objects in structure from motion. *Journal of the Optical Society of America, A*, 11, 3162-3166. J. Liter, M. Braunstein, D. Hoffman.

36. Inferring 3D structure from three points in rigid motion. *Journal of Mathematical Imaging and Vision, 4*, 401-406. B. Bennett, D. Hoffman.
    - also appears as *UCI Mathematical Behavioral Sciences Memo* MBS 92-16.

1995

37. <u>The perception of color from motion</u>. C. Cicerone, D. Hoffman, P. Gowdy, J. Kim. *Perception & Psychophysics, 57*(6), 761-777.

38. <u>Genericity in spatial vision</u>. In D. Luce, K. Romney, D. Hoffman, M. D'Zmura (Eds.), *Geometric Representations of Perceptual Phenomena: Articles in Honor of Tarow Indow's 70th Birthday*. Erlbaum, New York, pp. 95-112. M. Albert, D. Hoffman.

1996

39. <u>Observer theory, Bayes theory, and psychophysics</u>. In D. Knill and W. Richards (Eds), *Perception as Bayesian inference,* Cambridge University Press, pp. 163-212. B. Bennett, D. Hoffman, C. Prakash, S. Richman.
- also appears as UCI Mathematical Behavioral Sciences Memo MBS 93-12.

40. <u>What do we mean by the structure of the world?</u> In D. Knill and W. Richards (Eds), *Perception as Bayesian inference*, Cambridge University Press, pp. 219-221. D. Hoffman.

1997

41. <u>Salience of visual parts</u>. *Cognition, 63*, 29-78. D. Hoffman, M. Singh.
- also appears as UCI Mathematical Behavioral Sciences Memo MBS 94-27.

42. <u>Constructing and representing visual objects</u>. *Trends in Cognitive Sciences, 1*, 98-102. M. Singh, D. Hoffman.

43. <u>Color from motion: Dichoptic activation and a possible role in breaking camouflage</u>. *Perception, 26*, 1367-1380. C. Cicerone, D. Hoffman.

1998

44. *<u>Visual intelligence: How we create what we see</u>*. W.W. Norton. D. Hoffman.
- first chapter also appears in *The Norton Psychology Reader*, W. W. Norton, 2006.

45. <u>Part boundaries alter the perception of transparency</u>. *Psychological Science, 9,* 370-378. M. Singh, D. Hoffman.

46. <u>Active vision and the basketball problem</u>. Commentary in *Behavioral and Brain Sciences*, 21, 772-773. M. Singh, D. Hoffman.

1999

47. <u>Parsing silhouettes: The short-cut rule</u>. *Perception & Psychophysics, 61*, 636-660. M. Singh, G. Seyranian, D. Hoffman.

48. Completing visual contours: The relationship between relatability and minimizing inflections. *Perception & Psychophysics, 61*, 943-951. M. Singh, D. Hoffman.

49. Contour completion and relative depth: Petter's rule and support ratio. *Psychological Science, 10*, 423-428. M. Singh, D. Hoffman, M. Albert.

50. Perception, inference, and the veridicality of natural constraints. Commentary in *Behavioral and Brain Sciences, 22*, 395-396. M. Singh, D. Hoffman.

2000

51. The generic-viewpoint assumption and illusory contours. *Perception, 29*, 303-312. M. Albert, D. Hoffman.

52. Constructing surfaces and contours in displays of color from motion: The role of nearest neighbors and maximal disks. *Perception, 29*, 567-580. C. Fidopiastis, D.D. Hoffman, W.D. Prophet, M. Singh.

2001

53. The data problem for color objectivism. *Consciousness and Cognition, 10*, 74-77. D. Hoffman.

54. Mereology of visual form. *Proceedings of the Fourth International Workshop on Visual Form, Capri, Italy,* 40-50. D. Hoffman.

55. Flank transparency: Transparent filters seen in dynamic two-color displays. *Perception, 30*, 1423-1426. D. Wollschläger, A. Rodriguez, D. Hoffman.

56. Part-based representations of visual shape and implications for visual cognition. In *From fragments to objects: Segmentation and grouping in vision*. P. Kellman and T. Shipley (Eds), Elsevier Science, pp. 401-459. M. Singh, D. Hoffman.

57. Contours from apparent motion: A computational theory. In *From fragments to objects: Segmentation and grouping in vision*. P. Kellman and T. Shipley (Eds), Elsevier Science, pp. 509-530. W. Prophet, D. Hoffman, C. Cicerone.

2002

58. Perception and evolution. In *Perception and the Physical World: Psychological and Philosophical Issues in Perception*, D. Heyer and R. Mausfeld (Eds.) Chichester, UK: Wiley, pp. 229-245. B. Bennett, D. Hoffman, C. Prakash.

59. Visual worlds: Construction or reconstruction? *Journal of Consciousness Studies, 9*, 72-87. T. Davies, D. Hoffman, A. Rodriguez.

60. Attention to faces: A change-blindness study. *Perception, 31*, 9, 1123-1146. T. Davies, D. Hoffman.

61. Reality check: Insights from cognitive science. *Topic, 1*, 2, 102-105. T. Davies, D. Hoffman.

62. Flank transparency: The effects of gaps, line spacing, and apparent motion. *Perception, 31*, 1073-1092. D. Wollschläger, A.M. Rodriguez, D.D. Hoffman.

63. Psychophysical studies of expressions of pain. Commentary in *Behavioral and Brain Sciences, 25*, 458-459. T. Davies, D. Hoffman.

2003

64. The interaction of colour and Motion. In *Colour: Mind and the Physical World*, D. Heyer and R. Mausfeld (Eds.) Oxford University Press, 361-377. D. Hoffman.

65. Colour construction. Commentary in *Colour: Mind and the Physical World*, D. Heyer and R. Mausfeld (Eds.) Oxford University Press, 273-274. D. Hoffman.

66. An internalist account of colour. Commentary in *Colour: Mind and the Physical World*, D. Heyer and R. Mausfeld (Eds.) Oxford University Press, 435-436. D. Hoffman.

67. Facial attention and spacetime fragments. *Axiomathes, 13*, 303-327. T. Davies, D. Hoffman.

68. Does perception replicate the external world? Commentary in *Behavioral and Brain Sciences, 26*, 415-416. D. Hoffman.

69. Vision: Form perception. In L. Nadel (Ed.), *Encyclopedia of Cognitive Science, Volume 4*, 486-490. London: Macmillan Publishers Limited. D. Hoffman, M. Singh.

2004

70. Kann man Gott abschreiben? In *Im Anfang war Kein Gott: Naturwissenschaftliche und theologische Perspektiven*, Tobias Daniel Wabbel (Ed.) Düsseldorf: Patmos. Pages 166-174. D. Hoffman. (Dismissing God. In *In the beginning was no god*.)

2005

71. EEG detection of early Alzheimer's disease using psychophysical tasks. *Clinical EEG Neuroscience, 36*, 141-150. R. Sneddon, W. R. Shankle, J. Hara, A. Rodriquez, D. Hoffman, U. Saha.

72. Consciousness is fundamental. In *What we believe but cannot prove: Today's leading thinkers on science in the age of certainty*, J. Brockman (Ed.) New York: HarperCollins and London: Free Press, 93-96. D. Hoffman.

73. Visual illusions and perception. In 20*05 McGraw-Hill Yearbook of Science & Technology*, D. Hoffman.

2006

74.   The Scrambling Theorem: A simple proof of the logical possibility of spectrum inversion. *Consciousness and Cognition, 15*, 31-45. D. Hoffman.

75.   The Scrambling Theorem unscrambled: A response to commentaries. *Consciousness and Cognition, 15*, 51-53. D. Hoffman.

76.   Mimesis and its perceptual reflections. In W. Pape (ed.), *A View in the Rear-Mirror: Romantic Aesthetics, Culture, and Science Seen from Today. Festschrift for Frederick Burwick on the Occasion of His Seventieth Birthday*. Trier: WVT, Wissenschaftlicher Verlag Trier, 2006 (Studien zur Englischen Romantik. 3). 201-209. D. Hoffman.

2007

77.   Automotive lighting and human vision. Springer Verlag. B. Wördenweber, J. Wallaschek, P. Boyce, D. Hoffman.

78.   A spoon is like a headache. In *What is your dangerous idea?: Today's leading thinkers on the unthinkable,* John Brockman (Ed.), Free Press, UK, 2006, HarperCollins, US, 2007, 211-213. D. Hoffman.

79.   Malperceptions. In *Vectors: Journal of Culture and Technology in a Dynamic Vernacular, Volume 3*. Online Only: http://www.vectorsjournal.net/, P. Hoberman, D. Hoffman.

80.   Visual perception and neural correlates of novel `biological motion'. *Vision Research, 47,* 2786-2797. J. Pyles, J. Garcia, D. Hoffman, E. Grossman.

81.   Spectrum inversion. Artwork exhibited at the Serpentine Gallery, London. Exhibited online at: http://www.edge.org/3rd$\_$culture/serpentine07/serpentine07$\_$index.html\#hoffman D. Hoffman

82.   Solving the mind-body problem. In *What are you optimistic about?: Today's leading thinkers on why things are good and getting better,* John Brockman (Ed.), HarperCollins, New York, 279-282. D. Hoffman.

2008

83.   Conscious realism and the mind-body problem. *Mind & Matter, 6*, 87-121. D. Hoffman.

84.   Computer, Felsen, Gehirne und Sterne: Rätselhafte Zeichen einer multimodalen Benutzerschnittstelle (Sensory experiences as cryptic symbols of a multi-modal user interface). *Activa Nervosa Superior, 52*, 95-104. Also appears in *Kunst und Kognition*, M. Bauer, F. Liptay, S. Marschall (Eds.) Munich: Wilhelm Fink, 261-279. D. Hoffman.

2009

85.   Non-veridical perception. In *What have you changed your mind about?: Today's leading minds rethink everything,* John Brockman (Ed.), Harper Perennial, New York, 75-77. D. Hoffman.

86.   The interface theory of perception. In *Object Categorization: Computer and Human Vision Perspectives,* S. Dickinson, M. Tarr, A. Leonardis, B. Schiele (Eds.), Cambridge University Press, 148-165. D. Hoffman.

87.   Mind and body. In *The Encyclopedia of Perception*, Bruce Goldstein (Ed.), Sage Publishers, Thousand Oaks, CA, 554-555. D. Hoffman.

88.   Consciousness. In *The Encyclopedia of Perception*, Bruce Goldstein (Ed.), Sage Publishers, Thousand Oaks, CA, 300-304. D. Hoffman.

89.   Computer consciousness. In *The Encyclopedia of Perception*, Bruce Goldstein (Ed.), Sage Publishers, Thousand Oaks, CA, 283-285. D. Hoffman.

90.   Nature and consciousness. *Mindfield Bulletin*, *1*, 1, 6-7. D. Hoffman.

2010

91.   The laptop quantum computer. In *This Will Change Everything: Ideas That Will Shape The Future.* Edited by J. Brockman. Harper Perennial, New York. 47-50. D. Hoffman.

92.   Human vision as a reality engine. In *Psychology and the Real World: Essays Illustrating Fundamental Contributions to Society*. Edited by M. Gernsbacher, R. Pew, L. Hough, and J. Pomerantz. FABBS Foundation. New York: Worth Publishers. D. Hoffman

93.   Learning colors. *[ark]: The StoJournal for Architects, 2*, 52-55. D. Hoffman.
        - also appears in Dutch as Kleuren Leren. *Kleurenvisie, 1*, Juli, 2011, 4-7 .

94.   Natural selection and veridical perceptions. *Journal of Theoretical Biology, 266*, 504-515. J. Mark, B. Marion, D. Hoffman.

2011

95.   The sculpting of human thought. In *Is the internet changing the way you think? The net's impact on our minds and future.* Edited by J. Brockman. Harper Perennial, New York. 90-92. D. Hoffman.

96.   Preliminary evidence that the limbal ring influences facial attractiveness. *Evolutionary Psychology, 9,* 137-146. D. Peshek, N. Sammak-Nejad, D. Hoffman, P. Foley.

97.   The construction of visual reality. In *Hallucinations: Research and Practice*. Edited by J.D. Blom, I. Sommer. Springer Verlag. 7-15. D. Hoffman.

2012

98.   The sensory desktop. In *This will make you smarter: New scientific concepts to improve your thinking.* Edited by J. Brockman. Harper Perennial, New York. 135-138. D. Hoffman.

99.   Computational evolutionary perception. *Perception, 41*, 1073-1091. (Special issue in honor of David Marr.) D. Hoffman, M. Singh.

2013

100.   Public objects and private qualia: The scope and limits of psychophysics. In *The Wiley-Blackwell Handbook of Experimental Phenomenology.* L. Albertazzi (Ed.), 71-89, D. Hoffman.

101.   Does evolution favor true perceptions? *Proceedings of the SPIE 8651, Human Vision and Electronic Imaging XVIII,* 865104. DOI: 10.1117/12.2011609. D. Hoffman, M. Singh, J. Mark.

102.   Natural selection and shape perception: Shape as an effective code for fitness. In *Shape Perception in Human and Computer Vision: An Interdisciplinary Perspective.* S. Dickinson and Z. Pizlo (Eds.), Springer, New York. 171-185. M. Singh, D. Hoffman.

103.   Motion and color cognition. In *The Encyclopedia of Color Science and Technology.* Edited by N.M. Moroney. Springer Verlag. D. Hoffman.

2014

104.   Worries on the mystery of worry. In *What should we be worried about: Real scenarios that keep scientists up at night.* Edited by J. Brockman. Harper Perennial, New York. 135-138. D. Hoffman.

105.   Objects of consciousness, *Frontiers of Psychology, 5*:577. DOI: 10.3389/fpsyg.2014.00577. D. Hoffman, C. Prakash.

106.   Consciousness and the interface theory of perception. In *Brain, Mind, Cosmos: The Nature of our Existence and the Universe. Chapter 17.* D. Chopra (Ed). D. Hoffman.

107.   The origin of time in conscious agents. *Cosmology, 18*, 494-520. D. Hoffman.

2015

108.   Truer perceptions are fitter perceptions. In *This idea must die: Scientific theories that are blocking progress.* J. Brockman (Ed.). Harper Perennial, New York. 467-468. D. Hoffman.

109.   Human vision as a reality engine [revised]. In *Psychology and the Real World: Essays Illustrating Fundamental Contributions to Society, Second Edition.* M. Gernsbacher and J.

Pomerantz (Eds.). Forward by Malcolm Gladwell, and Afterward by Steven Pinker. FABBS Foundation. New York: Worth Publishers. 40-47. D. Hoffman

110.   The interface theory of perception. *Psychonomic Bulletin and Review,* 22, 1480-1506. D. Hoffman, M. Singh, C. Prakash. DOI:10.3758s13423-015-0890-8.

111.   Probing the interface theory of perception: Replies to commentaries. *Psychonomic Bulletin and Review, 22, 1551-1576.* D. Hoffman, M. Singh, C. Prakash. DOI: 10.3758/s13423-015-0931-3.

112.   Evolving AI. In *What to think about machines that think*. J. Brockman (Ed). Harper Perennial, New York. 128-131. D. Hoffman.

2016

113.   On visual texture preference. *Perception*, 45, 527-551. K. Stephens, D. Hoffman.

114.   The interface theory of perception. *Current Directions in Psychological Science*, 25(3), 157-161. D. Hoffman.

115.   Illusory color spread from apparent motion. In *The Oxford Compendium of Visual Illusions*. A. Shapiro and D. Todorovic (Eds). Oxford University Press, in press. C. Cicerone, D. Hoffman.

116.   Part and wholes. In *The Oxford Handbook of Computational Perceptual Organization*. L. Maloney, S. Gephstein, and M. Singh (Eds). Oxford University Press, in press. D. Hoffman.

2017

117.   The abdication of space-time. In *Know this: Today's most interesting and important scientific ideas, discoveries, and developments*. J. Brockman (Ed). New York: Harper Perennial. D. Hoffman.

118.   Comment on Chalmers: "The mind bleeds into the world". The Reality Club. D. Hoffman.

119.   Eigenforms, interfaces and holographic encoding: Toward an evolutionary account of objects and spacetime. *Constructivist Foundations, 12* (3), 265-274. C. Fields, D.D. Hoffman, C. Prakash, R. Prentner.

120.   Boundaries, encodings and paradox: What models can tell us about experience. *Constructivist Foundations, 12* (3), 284-291. C. Fields, D.D. Hoffman, C. Prakash, R. Prentner.

2018

121. Conscious agents networks: Formal analysis and application to cognition.
      Cognitive Systems Research, 47, 186-213. C. Fields, D.D. Hoffman, C. Prakash, M. Singh.
      https://doi.org/10.1016/j.cogsys.2017.10.003.

122. The interface theory of perception. In *Stevens' Handbook of Experimental Psychology and Cognitive Neuroscience, Fourth Edition, Volume 2: Sensation, Perception, & Attention.* Chapter 16. Wiley Press. D. Hoffman.

123. The holographic principle. In *This Idea is Brilliant*: *Lost, Overlooked and Underappreciated Scientific Concepts Everyone Should Know.* (J. Brockman, Ed), New York: Harper Perennial, 290-293. D. Hoffman.

124. Reality is eye candy. In *Science and Spirituality.* New Harbinger Publications. In press.

125. Review of *Modal Worlds* by Whitman Richards. *Perception.*
      https://doi.org/10.1177/0301006618803815. D. Hoffman

2019

126. The visual perception of volume: Judgment and fixations for objects. *Applied Psychology Bulletin*, 66, 2-17. DOI: 10.26387/bpa.283.1. N. Sammaknejad, D. Hoffman, A. Escobar, P. Foley, J. Kwak.

127. *The Case Against Reality: Why Evolution Hid the Truth from Our Eyes*. W.W. Norton in the US and Penguin (Allen Lane) in the UK. D. Hoffman. ISBN: 978-0-393-25469-3.

      — Review: Believe nothing you see, *Psychology Today*.
      — Review: *Kirkus Review*
      — Review: Reality check, *Physics World*
      — Review: *London Times*
      — Review: *Spectator*

128. Imitation and extinction: The case against reality. *Los Angeles Review of Books,* 23, 51-59.

129. Is reality real? How evolution blinds us to the truth about the world. *New Scientist*.

130. Reality is not as it seems. *Annals of the New York Academy of Sciences*.
      https://doi.org/10.1111/nyas.14194.

2020

131. Fact, fiction, and fitness. *Entropy*, 22(5), 514. C. Prakash, C. Fields, D. Hoffman, R. Prentner, M. Singh.

Under Review

132. Fitness beats truth in the evolution of perception. C. Prakash, K. Stephens, D. Hoffman, M. Singh, C. Fields.

133. Why holography? C. Fields, D. Hoffman, A. Marcianò, C. Prakash, R. Prentner.

Patents

DOUBLE SEAM YOKE: Patent D838085, 15 January 2019

PANTS WITH COLOR BLOCKED YOKE: Patent D840638, 19 February 2019

DOUBLE SEAM YOKE AND STITCHING DETAIL: Patent D841940, 5 March 2019

ANATOMY SHADING FOR GARMENTS (described in **Video 1**, **Video 2**)
Application Number: *U.S.* 14/517,339; *India*, 201647016544; *Japan*, 2016-549209; *Europe*, 14854060.2; *China*, 201480057348.2; *Hong Konk*, 16111999.0; *Philippines*, 12016500719; *Thailand*, 1601002132

Lectures and Interviews

1983   Natural Computation. Massachusetts Institute of Technology.
        Recovery and Recognition of Shape. University of Oregon, Eugene.
        Recovery and Recognition of Shape. Stanford University.
        Recovery and Recognition of Shape. University of California, Irvine.
        Recovery and Recognition of Shape. Stanford Research International.
        Recovery and Recognition of Shape. Fairchild Camera Corporation, Palo Alto.

1984   Shape Recognition: An AI Approach. University of California, Irvine.
        Representing Shapes. NASA Ames.
        Shape Recognition. Texas Instruments Corp., Dallas.
        Parts of Recognition. Optical Society of America, San Diego.
        Recovery and Recognition of Shape. Odetics Inc., Anaheim.
        Recovery and Recognition of Shape. Ford Aerospace, Newport Beach.
        Vision: State of the Art. University of Arizona.
        Recovery and Recognition of Shape. California Institute of Technology.

1985   Recovery and Recognition of Shape. University of California, San Diego.
        Shape Recognition. University of California, Los Angeles.
        Recovery and Recognition of Shape. University of Pennsylvania, Phil.
        Recognizing Visual Shapes. Office of Naval Research (ONR), Pasadena.
        Perception as Inference. Event Perception Conference. Uppsala, Sweden.
        Shape Recognition. Center for Neurobiology of Learning and Memory, UCI.

1986   Observer Theory. ONR Contractors Conference. Dedham, Massachusetts.
        Parts of Recognition. Rochester Vision Conference. Rochester, NY.
        Observer Theory. State Developmental Research Inst., Asilomar, CA.
        Observer Theory. University of Illinois, Champagne.
        Parts of Shape Recognition. University of Illinois, Champagne.
        Observer Theory. Helmholtz Club, UC Irvine.

1987   Observer Theory. University of California, Berkeley.
        Observer Theory. American Philosophical Association, San Francisco.

1988   Observer Theory. ONR Contractors Meeting, UC Irvine.
        My Last Lecture. UC Irvine.
        The Cognitive Revolution: Vision. UCLA.
        Forms of Perception. Institute for Mathematical Behavioral Science, UC Irvine.

1989   Observer Theory. Philosophy Department, UC Irvine.
        Marr — Ten years later. Society of Philosophy and Psychology, Tucson.
        Empirical Tests of Formal Theories of Perception. Helmholtz Club, UC Irvine.

1990   Empirical Tests of Formal Theories of Perception. Cognitive Science, UC
        Irvine.
        The Cognitive Revolution: Vision. UCLA.
        Recognition of 3D Shape. International Conference on Computational and
        Biological Models of Visual Processes. Trieste, Italy.
        Formal Theories of Perception. Western Psychological Association. Los Angeles.

1991   Representing 3D Shapes for Visual Recognition. Society for Photo-Optical Instrumentation
        and Engineering: Medical Imaging V Conference. San Jose.
        Perception and Logic. MIT, Cambridge, Massachusetts.
        Representing 3D Shapes For Visual Recognition. UC Riverside.
        The Principle of Genericity in Visual Interpretations. California Institute of Technology.

1992   Representing 3D Shapes for Visual Recognition. Rockwell Science Center, Thousand Oaks, CA.
        Representing 3D Shapes for Visual Recognition. Center for High-Speed Image/Signal
        Processing, UC Irvine.
        Image Segmentation. ONR Workshop on Image Representation in Biological and Machine
        Vision, Laguna Beach.
        Recognition Polynomials. University of Southern California, Los Angeles.
        Recognition Polynomials. Center for High-Speed Image/Signal Processing, UC Irvine.

Lectures and Interviews

1993　Lebesgue Logic and the Bayesian Foundations of Observer Theory. AFOSR Workshop
　　　on Visual Perception: Computation and Psychophysics. Chatham, Massachusetts.
　　　Generic Visions. Franz Hall, UCLA.
　　　Detecting and Segmenting Rigid Body Motion in Cinematic Images. School of
　　　Engineering, UC Irvine.
　　　Bayesian Estimation in Vision. Cognitive Sciences, UC Irvine.
　　　Genericity in Spatial Vision. Conference on Geometric Representations of Perceptual
　　　Phenomena. Institute for Mathematical Behavioral Sciences, UCI.
　　　Genericity in Spatial Vision. Pacific Construction Management Incorporated, Long Beach.
　　　Genericity in Spatial Vision. Department of Psychology, UC Santa Barbara.

1994　Automated Interpretation of Digital Video for IVHS. Institute for Transportation Studies
　　　and School of Engineering, UC Irvine.
　　　Eye and Virtual Reality. Department of Psychology, Arizona State University, Tempe.
　　　Eye and Virtual Reality. Russian Academy of Science, All-Russian Institute of Scientific
　　　and Technical Information, Moscow, Russia.
　　　Eye and Virtual Reality. International Symposium on Reflexive Processes, Moscow, Russia.
　　　Eye and Virtual Reality. ATR Labs, Nara, Japan.
　　　Eye and Virtual Reality. Keihana Corporation, Nara, Japan.
　　　Eye and Virtual Reality. NTT Basic Research, Tokyo, Japan.
　　　Eye and Virtual Reality. University of Tokyo, Tokyo, Japan.
　　　Genericity in Spatial Vision. The Salk Institute, La Jolla, California.
　　　Unconscious Inferences and the Mind/Body Problem. Helmholtz Centennial Conference,
　　　Kiel, Germany.

1995　Bayes and Darwin: What You See Is What You Beget. Zentrum für interdisziplinäre
　　　Forschung, Bielefeld, Germany.
　　　Vision. College of Engineering, California State Polytechnic University, Pomona.
　　　What You See Is What You Beget. California State University, San Bernardino.
　　　Dynamic Color Spreading. Universität Freiburg, Germany.
　　　Vision and Reality. Zentrum für interdisziplinäre Forschung, Bielefeld, Germany.
　　　Visual Motion. Zentrum für interdisziplinäre Forschung, Bielefeld, Germany.

1996　The Creative Genius of Vision. Christian Albrechts Universit\at, Kiel, Germany.
　　　Illusory Contours. Clarement College, Claremont, California.
　　　Visual Recognition. Southern California Robotics Society.

1997　Does the Brain Create Consciousness, Or Vice Versa? Irvine
　　　Consciousness Conference, Laguna Beach, California.
　　　Observer Theory and Quantum Theory. California State University, Long Beach, California.

1998　Visual Intelligence. HNC Software, San Diego, California.
　　　Constructing Visual Objects. Brain and Cognitive Sciences, Massachusetts Institute of
　　　Technology.
　　　Constructing Visual Objects. Cognitive Science Symposium, UC Riverside.
　　　Visual Object Recognition. Neuroscience Symposium, The MITRE Corporation,
　　　McLean, Virginia.
　　　Visual Object Recognition. George Washington University, District of Columbia. (Spring)
　　　Visual Intelligence. Graduate School of Management, UC Irvine.
　　　Visual Intelligence. George Washington University, District of Columbia. (Fall)

1999　Visual Intelligence. Department of Mathematics, UCLA.
　　　Visual Intelligence. New England Complex Systems Institute: Managing the Complex. Boston,
　　　Massachusetts.
　　　Visual Intelligence. Bard College. Annandale-on-Hudson, New York.
　　　Visual Intelligence. UC Irvine Faculty Associates.
　　　Seeing Digital: The Synergy of Human Senses and Digital Technology.
　　　The Franke Institute for the Humanities, University of Chicago.
　　　Vision and Bayesian Inference. DARPA/ISO. Airlie, Virginia.

Lectures and Interviews
2000   Visual Intelligence. Department of Mathematics, UCI.
        Visual Intelligence. Skidmore College. Saratoga Springs, New York.
        Face Perception. Skidmore College. Saratoga Springs, New York.
        Object Recognition. Skidmore College. Saratoga Springs, New York.
        Visual Intelligence. American Philosophical Association. Albuquerque, New Mexico.
        Visual Intelligence. Timberland Company. Stratham, New Hampshire.
        Visual Intelligence. Hedrick Hall, UCLA.
2001   Visual Intelligence. Neurosciences and Psychology, Johns Hopkins University.
        Independent Component Analysis and Object Detection. Boeing Aircraft, Saint Louis.
        Visual Intelligence. Sigma Xi Society, UC Riverside.
        Visual Intelligence. Skeptics Society. UCI.
        Mereology of Visual Form. IWVF4. Capri, Italy.
        Visual Intelligence. Minary Conference on Humanities and Neuroscience. Dartmouth College.
2002   Face Attention. Western Psychological Association, Irvine.
        Face Attention. Cognitive Sciences Conference, CSU Long Beach.
        Perceptions and realities. UCI UROP Symposium Keynote Address.
        Face Attention. Mitteleuropa Foundation Conference: The Legacy of Kanizsa, Bolzano, Italy.
        Visual Intelligence. The Exploration Place. Wichita, Kansas.
2003   Visual Intelligence. Regents Point, Irvine.
        Attention and Face Perception. American Psychological Society Annual Convention, Atlanta.
        Brain Imaging Studies of Face Perception. UC Irvine.
2004   Visual Intelligence. Sole Technology, Inc., Lake Forest, CA.
        Ellipsoidal Basis Function Networks for Classification. Navy NSWC, Panama City, Florida.
        Is Spectrum Inversion Possible? The Scrambling Lemma. Inst. Math. Behav. Sci., UC Irvine.
        Visual Intelligence. Kiel University, Germany.
        Is Spectrum Inversion Possible? The Scrambling Lemma. Kiel University, Germany.
        Visual Intelligence. Paderborn University-Hella LLAB Summerschool, Germany.
2005   Visual Intelligence. Social Sciences Dinner Club, UCI.
        Visual Intelligence. Annenberg House, USC.
        Ellipsoidal Basis Function Networks for Classification. Boeing Aircraft, St. Louis.
        Visual Intelligence. Ophthalmology Grand Rounds, UCI Medical Center, Orange, CA.
        Neural Nets for Detection and Classification. Lockheed Martin, Long Island, NY.
        Perception and Reality. Soka University, Aliso Viejo, CA.
        Human Vision and Automotive Lighting. Paderborn University-Hella LLAB Summerschool,
        Germany.
2006   Perception, Evolution, and the Mind-Body Problem. Psychology Students Association, UCI.
        Visual Intelligence. FUSION Conference, UCI.
        Visual Intelligence. Campus Village Student Housing, UC Irvine.
        Visual Intelligence. Regents Scholars Association, UCI.
        Perception, Evolution, and the Mind-Body Problem. Future Salon, UCLA.
        Conscious Realism. Toward a Science of Consciousness Conference 2006. Tucson.
        Perception Evolution, and the Mind-Body Problem. Soka University, Aliso Viejo, CA.
        Perception Evolution, and the Mind-Body Problem. Brain Cognitive Sciences, MIT.
        Perception Evolution, and the Mind-Body Problem. Inst. Math. Behav. Sci., UC Irvine.
        Visual Intelligence. Bahai Conference on Evolution of Consciousness. San Francisco.
        Human Vision and the Physical World. Paderborn University-Hella LLAB Summerschool,
        Germany.
        Physics From Consciousness. Inst. Math. Behav. Sci., UC Irvine.
        Niche, User Interface, and Interstellar Communication. American Anthropological Association,
        San Jose.
        Would ETI Understand Our Pictures? SETI Institute, Mountain View, CA.

Lectures and Interviews
2007   Vision and the World. Perception of Perception Conference, Exposition Park, USC.
        Visual Intelligence. Perception of Perception Conference, Velaslavasay Panorama, USC.
        The User-Interface Theory of Perception. Humanitech Conference on Text Image, UCI.
        Conscious Realism. Philosophy of Science Quarterly Lecture Series, UCI.
        Conscious Realism. News 21, Annenberg School for Communication, USC.
        Interstellar Communication. Society for Psychological Anthropology, Manhattan Beach, CA.
        Perception as a User Interface. Visualization in Scientific Practice Conf., University of Toronto.
        Enhanced EBF Networks for ARPDD. Office of Naval Research, Arlington, VA.
        Vision and Perception. UCI Eye Institute 2nd Annual Collaboration Colloquium..
        Perception and Consciousness. Psychology Students Association, UCI.
        Neural Nets for Detection and Classification. Lockheed Martin, Long Island, NY.
        Consciousness Is Fundamental. Five day workshop. Esalen Institute, Big Sur, CA.
        Visual Intelligence. Arroyo Vista Student Housing, UC Irvine.
2008   Visual Intelligence. Campus Village Student Housing, UC Irvine.
        Automated Periscope Detection Using Radar. Naval Research Labs, Washington, DC.
        Visual Intelligence. Regents Scholars Association, UCI.
        Visual Intelligence. VF Corporation. The Presidio, San Francisco.
        Visual Perception of Objects and Events. HumaniTech Events Web Conference, UCI.
        EBF Networks for ARPDD. Naval Research Labs, Washington, DC.
        <u>Quantum Cognitive Science</u>. Inst. Math. Behav. Sci., UC Irvine.
        Visual Intelligence. VF Outdoor, Inc. San Leandro, CA.
        Particle Filters for Geophysical Aided Navigation. Lockheed Martin, Long Island, NY.
        Consciousness Is Fundamental. Five day workshop. Esalen Institute, Big Sur, CA.
        The User Interface Theory of Perception. Waldzell Meeting, Melk Abbey, Austria.
        Consciousness Is Fundamental. Waldzell Meeting, Melk Abbey, Austria.
        Visual Intelligence. VF Corporation Marketing Summit, Greensboro, North Carolina.
        The Interface Theory of Perception. Universita ca'Foscari Venezia, Venice, Italy.
2009   Automated Periscope Discrimination Using Radar. Naval Research Labs, Washington, DC.
        How Do We See? How Can We Visualize? Center for Transformative Scholarship, USC.
        The Interface Theory of Perception. Psychology Department, UC Santa Barbara.
        The Interface Theory of Perception. Mellon Workshop on Science and the Arts, UC Riverside.
        Visual Intelligence Marketing. Procter Gamble, Mind Matters\/ Meeting. Cincinnati, Ohio.
        Consciousness. Parapsychological Association. University of Washington, Seattle.
        Vision Science. VF Corporation, Greensboro, North Carolina.
        Mind, Emotion, Connection. Workshop (with Rupert Sheldrake). Esalen, Big Sur, CA.
        Interface Theory of Perception. Inside Edge Foundation for Education, University Club, UCI.
        The Interface Theory of Perception. Psychology Department, UC San Diego.
2010   Research in Psychology. Psychology Student Association, UC Irvine.
        Visual Intelligence: How We Create What We See. Irvine Presbyterian Church.
        Visual Intelligence. VF Jeanswear, Kansas City, Kansas.
        Visual Attention. VF Jeanswear, Kansas City, Kansas.
        Natural Selection and Veridical Perception. Inst. Math. Behav. Sci., UC Irvine.
        Artificial Neural Networks for ARPDD. Naval Research Labs, Washington, DC.
        Interface Theory of Perception. International Remote Viewing Conference. Las Vegas, NV.
        Mind, Emotion, Connection. Workshop (with Rupert Sheldrake). Esalen, Big Sur, CA.
        Evolution of Shape Perception. Shape Workshop, Europ. Conf. Comput. Vis. Crete, Greece.
        Evolutionary Psychology of Attractiveness. VF Corp. Workshop. Beverly-Wilshire, LA.

Lectures and Interviews
2011   Artificial Neural Networks for ARPDD. Naval Research Labs, Washington, DC.
        How the mind creates the visual world. UCI CEO Roundtable Retreat. Carmel Valley, CA.
        Face Perception. Procter & Gamble, Colerain Township, Ohio.
        Color Vision. Procter & Gamble, Mason, Ohio.
        Visual Science. Procter & Gamble, Cincinnati, Ohio.
        Evolutionary Psychology. Procter & Gamble, Cincinnati, Ohio.
        Visual Attention. Procter & Gamble, Cincinnati, Ohio.
2012   Visual Intelligence. American Association of University Women, Dana Point, CA.
        Vision in Light of Evolution. Inst. Math. Behav. Sci., UC Irvine.
        Visual Intelligence. Regents Point, Irvine CA.
2013   Does Evolution Favor True Perceptions? Keynote Talk, SPIE HVEI Conference, San Francisco.
        Quantum Game Theory. Quantum Thinking Conference. Inst. Math. Behav. Sci., UC Irvine.
        Perception, Evolution, Quantum Measurement. Quantum Thinking Conference. IMBS, UCI.
        The Interface Theory of Perception. Perception and Action in Immersive Worlds,
            Symposium of the Association for the Scientific Study of Consciousness, 17, San Diego.
        Vision Science and Attractiveness. Wrangler Corporation. Greensboro, NC.
        Vision Science and Attractiveness. VF Corporation. Greensboro, NC.
        Consciousness and the Interface Theory of Perception. Sages & Scientists Symposium,
            Chopra Foundation, Costa del Sol, Carlsbad, CA.
        Consciousness and the Interface Theory of Perception. SAND Conference, San Jose.
        Evolutionary Psychology. 7 For All Mankind, Los Angeles.
        Vision Science. 7 For All Mankind, Los Angeles.
        Is Consciousness Ultimate Reality?, Closer To Truth, PBS.
        Does Human Consciousness Have Special Purpose?, Closer To Truth, PBS.
        What Is Consciousness? Closer To Truth, PBS.
        Quantum Physics of Consciousness. Closer To Truth, PBS.
        When Brains Go Bad. Closer To Truth, PBS.
        Computational Theory of the Mind. Closer To Truth, PBS.
        Does Consciousness Cause the Cosmos? Closer To Truth, PBS.
        Can Religion Survive Science? Closer To Truth, PBS.
        Does Evolutionary Psychology Describe Mind? Closer To Truth, PBS.
        Why Did Consciousness Emerge? Closer To Truth, PBS.
        How Do Human Brains Function? Closer To Truth, PBS.
        Is Consciousness Ultimate Reality? Closer To Truth, PBS.
2014   Conscious Agents: A Formal Theory of Consciousness, Cognitive Sciences, UC Irvine.
        Conscious Agents: A Formal Theory of Consciousness, Plenary talk,
            Towards a Science of Consciousness Conference, Tucson.
        Consciousness Chronicles 4. TSSC, Tucson.
        Vision and Evolution. Lee Jeans. Kansas City.
        Vision and Evolution. 7 For All Mankind, Los Angeles.
        Entangling Conscious Agents. SAND Conference, San Jose.
        Dissecting Free Will. SAND Conference, San Jose.
        Theory of Consciousness. SAND Conference, San Jose.
        Brain Activity, Perception, and Conscious Experience. SAND Conference, San Jose.
        Evolution of Perceptions, SAND Conference, San Jose.
        Conscious Agents: A Formal Theory of Consciousness, Mathematics Dept., CSU San Bernardino.

Lectures and Interviews

2015   Do We See Reality As It Is? TED 2015, Vancouver.
        Season 6, Episode 6: Can we handle the truth?, *Through the Wormhole With Morgan Freeman*.
        The Interface Theory of Perception, The Jacob Marschak Interdisciplinary Colloquium
            on Mathematics in the Behavioral Sciences, UCLA.
        Interview: Do We See Reality As It Is? The Cosmos In You Podcast.
        Evolution of Consciousness. Disney Imagineering Ideation Summit. Glendale, CA.
        Visual Intelligence. Newport-Irvine Rotary Club, UC Irvine.
        Do We See Reality? GITEX 2015, Dubai, United Arab Emirates.
        Conscious Agents. Science and Nonduality (SAND) Conference, San Jose.
        How Close Is Science to Understanding Consciousness? Panel. SAND, San Jose.
        Vision, Evolution, and Design. VF MAX Conference. Chicago.
        Do We See Reality? Ciudad de las Ideas. Puebla, Mexico.
        Vision, Evolution, and Design. Lucy, a VF Company. Alameda, CA.
        Interview: The interface theory of perception. The Wright Show.
        Interview: Alien Communication. BYU Radio, Top of Mind with Julie Rose.
        Review: Do We Perceive Reality As It Is? *Scientific American*, with Michael Shermer.
2016   Interview: Perception and Consciousness. Blab Interview.
        Interview: The Evolutionary Argument Against Reality. Quanta Magazine: Amanda Gefter
        Interview: The Case Against Reality. The Atlantic: Amanda Gefter. Twitterstorm.
        Interview: The World Is An Illusion. Business Insider: Amanda Gefter
        Do We See Reality? Irvine Valley College, Psi Beta.
        Interview: Reality Is Nothing Like You See. National Public Radio, Airtalk.
        Interview: A New Understanding of Reality. Grow Big Always, Podcast.
        Interview: Do We See Reality? Drew Carson Podcast.
        The interface theory of perception. Dept. of Psychology, University of Nevada, Reno.
        Interview: What if evolution bred reality out of us? National Public Radio, with Adam Frank.
        Interview: The reality of survival. *Wired Magazine*, with Kathryn Nave.
        Do We See Reality? The Nantucket Project, Nantucket, MA.
        Interview: Is Reality Just Perception?, CBC Radio, Spark with Nora Young.
        Interview: Human Perception. Portland KBOO Radio, The Digital Divide, with Rabia Yeaman.
        The interface theory of perception. Chapman University, Orange, CA.
        The Death of Spacetime and Birth of Conscious Agents. SAND, San Jose.
        Review: Is Reality An Illusion? The Daily Mail, UK.
        Interview: Extraterrestrials and Hollywood. Cheddar Life.
        Review: We Survive Because Reality May Be Nothing Like We Think It Is. Big Think.
        Review: Donald Trump Rejects Reality? That Might Make Him a Great President. Oregon Live.
        Interview: Questioning The Nature of Reality. You Are Not So Smart Podcast.

Lectures and Interviews

2017   Interview: <u>What is Consciousness?</u> <u>The Biggest Questions Podcast Series</u>, Tony Sobrado.
        The Interface Theory of Perception. Center for Mind and Brain, UC Davis.
        The Case Against Reality. USC School of Law Intellectual Property Institute, Santa Monica.
        <u>Seriously but not literally: A roundtable discussion</u>. USC School of Cinematic Arts, Los Angeles.
        The Case Against Reality. USC School of Cinematic Arts, Los Angeles.
        Interview: <u>MindGamers Movie—Reality: The ultimate mind game</u>. CNN.
        Interview: <u>The Case Against Reality</u>. Michael Covel Podcast.
        Interview: <u>The Case Against Reality</u>. Alex Starr Podcast.
        Mill, Mind and Monad: Leibniz and the Problem of Consciousness. The Leibniz Campus Lecture.
          Leibniz Universität Hannover. <u>Poster</u>. <u>Venue</u>.
        Interview: <u>The digital human</u>. BBC Radio, with Aleks Krotoski. Starting at 08:00.
        The Case Against Reality. UCI School of Social Sciences Dean's Leadership Society, Bel Air Bay
          Club, Pacific Palisades, CA.
        Interview: <u>The mind of the universe</u>. Dutch Public TV. Ten shows featuring thirty scientists.
        How We Think We Think. <u>American Society for Cybernetics Conference</u>. Salem, MA.
        Interview: <u>Perception and Reality</u>. The Astral Hustle Podcast, with Cory Allen.
        Interview: <u>The Case Against Reality</u>. <u>Third Eye Drops Podcast</u>, with Michael Phillip.
        Interview: <u>Do We Perceive Reality?</u> <u>Patterson in Pursuit Podcast</u>, with Steve Patterson.
        <u>The case against a physical basis for consciousness</u> (starting 54:40).
          <u>The Mindscience of Reality Symposium</u>. University of Pisa, Italy.
          <u>Photograph with Dalai Lama</u>. <u>Article on Dalai Lama's website</u>.
        Interview: <u>Consciousness and Physics</u>. <u>The Metaprogramming Podcast</u>, with Erick Godsey.
        Interview: <u>The psychology of gold and why it has that allure</u>. CNN, with Puja Bhattacharjee.
        <u>Symmetry Does Not Entail Veridicality</u>. Institute for Mathematical Behaviors Sciences, UC
          Irvine. <u>Conference: Symmetry and Invariance in the Natural and Behavioral Sciences</u>.
        Interview: <u>How your eyes trick your mind</u>**.** RedBull M1NDG4M3RS.
        <u>When Human Science Lifts Human Spirit</u>. <u>SAND</u>, San Jose.
        Interview: <u>Science & Spirituality: Synergy or Disconnect?</u> A Dialogue with Deepak Chopra,
          <u>SAND</u>, San Jose.

2018   The Case Against a Physical Origin of Consciousness. <u>12th Swiss Biennial</u> on Science, Technics
          and Aesthetics, Lucerne, Switzerland.
        The Case Against a Physical Origin of Consciousness. Physical Chemistry departmental
          colloquium, ETH Zürich, Switzerland.
        Interview: <u>Is Reality Real?</u> <u>Sufi: Journal of Mystical Philosophy and Practice</u>, David Wright.
        A Universe of Consciousness? D4 Top Event, D4 Business Village, Lucerne, Switzerland.
        <u>We Don't See Reality</u>. <u>Act Out!</u> A Dialogue with Eleanor Goldfield. <u>Video on Youtube</u>.
        The Case Against a Physical Origin of Consciousness. <u>Plenary</u>. <u>IEEE Aerospace Conference</u>.
          Big Sky, Montana.
        <u>Rethinking Reality</u>. <u>Think, Grow Podcast</u>, with Ruben Chavez.
        The Interface Theory of Perception. Swarthmore College, Swarthmore, PA.
        The Case Against Reality. University of Alabama, Tuscaloosa, AL.
        <u>Reality Isn't</u>. <u>After On Podcast</u>, with Rob Reid.
        Webinar: <u>The Mystery of Consciousness</u>. <u>Science and NonDuality</u>.
        <u>Perception and Representation</u>. Department of Cognitive Science. UC San Diego.
        Interview: <u>Piercing the Veil of Reality</u>. <u>Third Eye Drops Podcast</u>, with Michael Phillip.
        Interview: <u>What If We're Wrong About Reality?</u> <u>Incident Report</u>, Dr. Zubin Damania.
          Also online <u>here</u>.
        Interview: <u>It Isn't Real</u>. Video interview with <u>Moon Hooch</u>.
        Interview: <u>The Nature of Consciousness</u>. <u>Re:thinking Podcast</u>, Zack Baker.
        Interview: <u>Have you ever questioned the nature of your reality?</u> <u>Ars Technica</u>.
        Interview: <u>Nothing is real except for object impermanence</u>. <u>Ars Technica</u>.
        Interview: <u>The oddly divisible nature of consciousness</u>. <u>Ars Technica</u>.
        Interview: <u>How Quantum Mechanics Lets Us See, Smell and Touch</u>. <u>Discover Magazine</u>.

Lectures and Interviews
2018   <u>Dreaming with Eyes Open</u>: The Art, Histories, Philosophies, and Practices of Virtual Reality. University of Southern California, <u>Visions & Voices</u>, The Arts and Humanities Initiative.
       Interview: <u>Why Everything You Know Is Not Real</u>. Love University, Alex Avila.
       Interview: <u>Solving the Hard Problem of Consciousness</u>. <u>The Disruptors</u>, Matt Ward.
       Interview: <u>Everything Lies In Our Consciousness</u>. <u>University of Southern California, Muse</u>.
       Interview: <u>The Science of Intuition</u>. <u>Ashleigh Boyd</u>.
       <u>The Mystery of Free Will</u>. <u>SAND</u>, San Jose.
2019   Interview: <u>Reality Is Not As It Seems</u>. <u>Video</u>. <u>Video clip</u>. New York Academy of Sciences.
       Interview: <u>How Color Affects You When You Travel</u>. Conde Nast Traveler.
       <u>Perception, Illusion, and Truth</u>. Krishnamurti Foundation of America. Ojai, CA.
       What is Real? Dialogue with Jan Westerhoff, <u>HowTheLightGetsIn</u>, Hay-On-Wye, England.
       The Case Against Reality, <u>HowTheLightGetsIn</u>, Hay-On-Wye, England.
       Consciousness, <u>HowTheLightGetsIn</u>, Hay-On-Wye, England.
       <u>The Reality Illusion</u>, Panel Discussion, <u>HowTheLightGetsIn</u>, Hay-On-Wye, England.
       Metaphors of the Mind, Panel Discussion, <u>HowTheLightGetsIn</u>, Hay-On-Wye, England.
       <u>The Reality of Reality</u>, <u>Video of Panel Discussion</u>, <u>World Science Festival</u>, New York.
       Interview: The Case Against Reality. <u>The Dissenter Podcast</u>, with Ricardo Lopes.
       Interview: <u>The Case Against Reality</u>. <u>TED Podcast with Chris Anderson</u>, New York.
       Interview: <u>The Case Against Reality</u>. Mosaic Podcast with Daniel Levin.
       Interview: <u>The Case Against Reality</u>. <u>After On Podcast</u> with Rob Reid.
       Interview: <u>Spacetime's Doomed</u>. <u>The Disruptors Podcast</u> with Matt Ward.
       Interview: <u>The Case Against Reality</u>. <u>Science Salon</u> with Michael Shermer.
       Interview: <u>Perception and Consciousness</u>. <u>Moon Hooch</u> with Wenzl McGowen.
       Interview: <u>Is Everything We Know About Reality Wrong?</u>, with 52 Insights.
       Interview: <u>The Hard Problem of Consciousness</u>, <u>HowTheLightGetsIn</u>, Hay-On-Wye, England.
       Interview: <u>Truth Versus Reality</u>, <u>Big Think</u>.
       The Case Against Reality. Electrical Engineering Dept., Stanford University.
       Interview: <u>The Case Against Reality</u>. <u>Incident Report</u>, Dr. Zubin Damania.
       <u>Can AI Feel Real Love?</u> <u>SAND</u>, San Jose. (Goes live on February 7, 2020).
       Interview: <u>The Reality Illusion</u>. <u>Making Sense Podcast</u> with Sam Harris.
2020   Interview: <u>Solving the Hard Problem of Consciousness</u>, Awake TV with Jennifer Hill.
       Interview: <u>Science and Spirituality</u>, with Deepak Chopra, Beckman Center, UC Irvine.
       Interview: <u>The Concept of Reality</u>, The Unregistered Podcast, with Thaddeus Russell.
       Interview: <u>Realism is False</u>, <u>Edge</u> Interview with John Brockman.
       Interview: <u>Can We Perceive Reality?</u>, <u>New Scientist</u> interview with Alison George.
       Interview: <u>The Illusion of Reality</u>, <u>Big Ideas Podcast</u> with Erik Torenberg.

Professional Service

1983   Referee: Journal of the Optical Society of America (JOSA).
        Referee: ACM SIGGRAPH and SIGART Interdisciplinary Workshop on Motion.

1984   Referee: Perception; National Science Foundation (NSF); JOSA; MIT Press.
        Session chair: Optical Society of America National Conference.

1985   Referee: Cognitive Sciences Society National Conference; NSF.
        Referee: IEEE Pattern Analysis and Machine Intelligence (PAMI).
        Panelist: MIT Corporation Visiting Committee.

1986   Referee: NSF; JOSA; Philosophy of Science; Cognition.

1987   Referee: NSF; JOSA; Air Force Office of Scientific Research (AFOSR).

1988   Referee: NSF; JOSA; PAMI.
        Referee: International Journal of Computer Vision (IJCV).
        Panelist: NSF Science and Technology Centers.
        Site Visitor: NSF Science and Technology Centers.
        Host: ONR contractors conference (with B. Bennett and M. Braunstein).

1989   Session chair and host: IEEE Workshop on Visual Motion, (host with M. Braunstein).
        Referee: Journal of Mathematical Psychology; Psychological Review.
        Referee: The Behavioral and Brain Sciences (BBS).
        Referee: NSF; AFOSR.

1990   Associate: BBS.
        Referee: JOSA; NSF; AFOSR; Academic Press; Perception   Psychophysics.
        Referee: University of California Microelectronics Innovation and Computer Research
        Opportunities.

1991   Referee: AFOSR; NSF; JOSA; Journal of Visual Communication and Image Representation.
        Referee: California Space Institute.
        Editorial Board: Cognition; Associate: BBS.

1992   Editorial Board: Cognition; Associate: BBS.
        Host: ONR Workshop on Image Representation in Biological and Machine Vision.
        Referee: Psychological Review; PAMI; Science and Engineering Research Council.
        Referee: Machine Vision and Applications; Perception; JOSA.

1993   Editorial Board: Cognition; Associate: BBS.
        Referee: Journal of Experimental Psychology: Human Perception and Performance (JEP:HPP).
        Referee: Perception & Psychophysics (P&P); Academic Press; IEEE Transactions in Medical
        Imaging.

1994   Editorial Board: Cognition; Associate: BBS.
        Referee: Journal of Mathematical Psychology; JEP:HPP; Spatial Vision; Perception.
        Referee: Psychological Review.

1995   Editorial Board: Cognition; Associate: BBS.
        Editorial Board: Psychological Review.
        Referee: Perception.

1996   Editorial Board: Cognition; Associate: BBS.
        Editorial Board: Psychological Review.
        Referee: Psychonomic Bulletin & Review; Journal of Mathematical Psychology.
        Referee: NSF; Perception.

1997   Editorial Board: Cognition; Associate: BBS.
        Editorial Board: Psychological Review.
        Referee: P&P.

1998   Editorial Board: Cognition; Associate: BBS.
        Referee: P&P; NSF; UC Digital Media Innovation Program.
        Referee: Journal of Cognitive Neuropsychology.

1999   Editorial Board: Cognition; Associate: BBS.
        Referee: Psychological Review; Perception; P&P.
        Referee: Psychonomic Bulletin & Review; Cognitive Neuropsychology; NSF.
        Reviewer: W.W. Norton

Professional Service

2000   Editorial Board: Cognition; Associate: BBS.
        Referee: Psychonomic Bulletin & Review; Nature; Journal of Mathematical Psychology.
        Reviewer: W.W. Norton
        Referee: Trends in Cognitive Science; P&P; University of Leuven; NSF.
        Program Committee: 7th Joint Symposium on Neural Computation, USC.
        Advisory Panel: National Imaging and Mapping Agency (NIMA).
2001   Editorial Board: Cognition; Associate: BBS.
        Program Committee: 8th Joint Symposium on Neural Computation, USC.
        Reviewer: W.W. Norton.
        Referee: NSF; Perception; Journal of Consciousness Studies.
        Created Illusions Exhibit for Smithsonian, Washington DC (with student Jason Thornton).
2002   Editorial Board: Cognition; Associate: BBS.
        Referee: Perception; Psychological Review; NSF; P&P.
2003   Associate: BBS; Reviewer: Blackwell Publishers.
        Referee: Journal of Cognitive Neuroscience; Perception; P&P.
        Referee: Cognition; Psychological Science; JEP:HPP.
2004   Associate: BBS.
        Referee: Psychological Review; Cognition.
2005   Associate: BBS; Reviewer: W.W. Norton   Co..
        Referee: P&P; JEP: General; Consciousness   Cognition.
        Referee: Cognition; Visual Cognition; Psychological Review.
        Referee: Journal of Experimental Child Psychology.
2006   Associate: BBS; Referee: Consciousness & Cognition.
        Referee: Psychological Review; Theory & Psychology; PNAS.
        Reviewer: Palgrave Macmillan; Journal of Consciousness Studies.
2007   Associate: BBS; Referee: Consciousness & Cognition.
        Referee: Theory & Psychology; Psychological Bulletin & Review; Vision Research.
        Referee: Psychological Review; Philosophical Psychology.
        Program Committee: Mathematics and Vision Conference, IMBS, UC Irvine.
2008   Associate: BBS; Referee: Philosophical Psychology.
2009   Associate: BBS; Reviewer: Sage Encyclopedia of Perception.
        Reviewer: Sociovisual Perspective: Vision and the Forms of the Human Past.
        Referee: Consciousness & Cognition; Philosophy of Science.
2010   Associate: BBS; Reviewer: Seeing and Perceiving.
2011   Associate: BBS; Reviewer: Seeing and Perceiving.
2012   Associate: BBS; Reviewer: Psychological Science; Perception.
2013   Associate: BBS; Reviewer: Psychological Science; Cognition.
2014   Associate: BBS; Reviewer: Cognition and Emotion; Reviewer: MIT Press.
2015   Associate: BBS; Reviewer: Gestalt Theory Journal; Cognition; Psychonomic Bulletin & Review
2016   Associate: BBS; Reviewer: Psychonomic Bulletin & Review
2017   Associate: BBS; Reviewer: Psychonomic Bulletin & Review
2018   Associate: BBS; Referee: Perception; Book Reviewer for Perception
2019   Associate: BBS; Referee: Frontiers in Psychology

University Service

1983 - 1984	Campus Computer Evaluation Committee.
	Graduate Committee, School of Social Sciences.
	Computing Committee, School of Social Sciences.
	Graduate Admissions, Cognitive Science.
	Faculty Search Committee, Cognitive Science.
1984 - 1985	Graduate Admissions, Cognitive Science.
1985 - 1986	School of Social Sciences Merit and Promotions.
	Graduate Admissions, Cognitive Science.
1986 - 1987	Chair, Faculty Search Committee, Cognitive Science.
	Graduate Admissions, Cognitive Science.
1987 - 1988	Senate Committee on Research.
	Graduate Admissions, Cognitive Science.
	Faculty Search Committee, Cognitive Science.
	Ad hoc tenure review committee.
1988 - 1989	Senate Committee on Research.
	Graduate Admissions, Cognitive Science.
	Faculty Search Committee, Cognitive Science.
	Chair, Committee for Review of ITS.
	Search Committee for Vice-Chancellor of Research and Graduate Studies.
1989 - 1990	Senate Committee on Research.
	Graduate Admissions, Cognitive Science.
	Chair, Committee for Review of CNLM.
1990 - 1991	Sabbatical: Fall and Winter.
	Computer Acquisition Commmittee of the IRU in Mathematical Behavioral Sciences.
	Computer Administration Commmittee of the IRU in Mathematical Behavioral Sciences.
1991 - 1992	Chair, Graduate Committee of Cognitive Science.
	Computer Administration Commmittee of the IRU in Mathematical Behavioral Sciences.
	Senate Ad Hoc Committee for Review of Teaching Loads.
	$100K Committee.
1992 - 1993	Chair, Graduate Committee of Cognitive Science.
	Computer Administration Commmittee of the IRU in Mathematical Behavioral Sciences.
	Chair, Graduate Fellowship Committee for Social Sciences.
	Acting Chair, Department of Cognitive Science (spring quarter).
1993 - 1994	Chair, Graduate Committee of Cognitive Science.
	Chair, Graduate Fellowship Committee for Social Sciences.
	Executive Committee of the School of Social Sciences.
	Ad Hoc Committee for CAP.
1994 - 1995	Chair, Graduate Committee of Cognitive Science.
	Chair, Faculty Search Committee, Cognitive Science.
	Chair, Ad Hoc Personnel Committee for School of Social Sciences.
	Executive Committee of the School of Social Sciences.
1995 - 1996	Sabbatical and leave.
1996 - 1997	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Ad Hoc University Committee.
1997 - 1998	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Member of Formal Hearing Panel for Tenure Grievance.
	Neuroscience Webpage Committee.
1998 - 1999	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Committee on Priviledge and Tenure.
	Member of Ad Hoc Panel for Tenure Appointment.
	Neuroscience Webpage Committee.
	Preliminary Investigation Committee for CPT

University Service

1999 - 2000	Undergraduate Research Opportunity Program, Faculty Advisory Committee. (Fall)
	Committee on Priviledge and Tenure. (Fall)
2000 - 2001	Committee on Priviledge and Tenure.
	Preliminary Investigation Committee for CPT (twice)
	Cognitive Science Web Page Revision Committee.
	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Ad Hoc Tenure Review Committee.
2001 - 2002	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Cognitive Science Faculty Recruitment Committee.
	Faculty Panelist for School of Social Sciences Honors Experience recruitment.
2002 - 2003	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Referee: Southern California Junior Science and Humanities Symposium.
	Member of UCI Task Force on Undergraduate Education.
	Chair of UCI Working Group on Undergraduate Research.
	Chair of Ad Hoc Committee for CAP.
2003 - 2004	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Member of UCI Task Force on Undergraduate Education.
	Chair of UCI Working Group on Undergraduate Research.
	Cognitive Science Faculty Recruitment Committee.
	Session Moderator, 2004 UROP Research Symposium.
	Jack Yellott Scholarship Award Committee.
2004 - 2005	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Member of UCI Social Sciences Faculty Mentoring Program.
	Session Moderator, 2005 UROP Research Symposium.
2005 - 2006	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Member of UCI Social Sciences Faculty Mentoring Program.
2006 - 2007	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Member of UCI Social Sciences Faculty Mentoring Program.
2007 - 2008	Undergraduate Research Opportunity Program, Faculty Advisory Committee.
	Member of UCI Social Sciences Faculty Mentoring Program.
	School of Social Sciences Executive Committee.
	UCI Council on Planning and Budget.
2008 - 2009	School of Social Sciences Executive Committee.
	UCI Council on Planning and Budget.
	UCI Academic Planning Group.
	Special Senate Committee on Diversity.
	Special Committee for the Review of Lower- and Upper-Division Writing at UC Irvine.
	Department of Cognitive Sciences Jack Yellott Award Committee.
2009 - 2010	Sabbatical.
2010 - 2011	Undergraduate Curriculum Director, Cognitive Sciences.
	Jack Yellott Scholarship Award Committee.
	Falmagne Dissertation Award Committee.
2011 - 2012	Falmagne Dissertation Award Committee.
2012 - 2013	Dean Recruitment Committee for Paul Merage School of Business.
	Falmagne Dissertation Award Committee.
2014 - 2015	Social Sciences Representative to Academic Senate.
	External Review Committee: UCSD Cognitive Science Undergraduate Program.
	Jack Yellott Scholarship Award Committee.
2015 - 2016	Social Sciences Representative to Academic Senate.
	Cognitive Sciences Faculty Recruitment Committee for Endowed Chairs.
2016 - 2017	Falmagne Dissertation Award Committee.

Photography

2012   3rd Place, First International Juried Competition and Exhibit: The Magic of Point Lobos, Carmel Art Institute, Carmel, CA, 28 September - 18 October. Photo appears in *Point Lobos Magazine, Volume 36*, 4, 13.

        Honorable Mention, 9th Annual National Natural Landmarks Photo Contest. Photo appears in the National Natural Landmarks 2013 Calendar.

2013   International Juried Competition and Exhibit Along Junipero Serra's Path: California Missions and Presidios, Carmel Art Institute, Carmel, CA, 28 March - 19 April.

        Exhibit in Juried Competition: Nature of Water. Wildling Museum. Solvang, CA.