Curriculum Vitae

David G. Stork

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Education

BS (Physics) Massachusetts Institute of Technology 1976

MS (Physics) University of Maryland, College Park 1979

PhD (Physics) University of Maryland, College Park 1984

Corporate positions

- **Chief Science Officer** and Co-Founder, Vrai-AI (2025–)
- **Rambus Fellow** (2013–2018), Distinguished Research Scientist and Research Director, Rambus Labs (2011–2013)
- **Chief Scientist** (1992–2011), Head, Machine Learning and Perception Group (1990–1992), Head, Digital Optics Research Group (2010), Ricoh California Research Center
- **Chief Scientist**, NeuralWare, Inc. 1988–90
- **Member**, Scientific Advisor Board, Neural Applications, Inc. 1994–98
- **Head, Scientific Advisory Board**, Spend Consciously LLC, 2016–
- **Member, Scientific Advisory Board**, Metalenz LLC, 2017–2025
- **Chief Scientist**, Imagia, 2024–25
- **Consultant**, Alpha Investment Capital, 2019–

Faculty Positions

- Adjunct Professor (Electrical Engineering) 2024–25
- Adjunct Lecturer (Electrical Engineering) 2024
- Visiting Lecturer, Courtauld Institute 2024
- Honorary Professor (Artificial Intelligence), University College London 2023
- Visiting Fellow, Warburg Institute 2023
- Adjunct Professor (Symbolic Systems), Stanford U. 2023–

- Adjunct Professor (Materials Science), Stanford U. 2023–
- Visiting Lecturer (Electrical Engineering), Stanford U. 2023–24
- Adjunct Lecturer (Computational and Mathematical Engineering), Stanford U. 2023–2025
- Visiting Lecturer (Statistics), Stanford U. 2021
- Visiting Professor, Technical University of Vienna (Informatics) 2020–21
- Visiting Lecturer (Electrical Engineering), Stanford U. 2021
- Visiting Lecturer (Computer Science), Stanford U. 2020
- Visiting Lecturer (Computer Science), Stanford U. 2008
- Consulting Professor (Statistics), Stanford U. 2007–2009
- Visiting Lecturer (Statistics), Stanford U. 2006–2007
- Consulting Assoc. Prof. 1991–2000; Consulting Professor (Electrical Engineering), Stanford U. 2000–2005
- Consulting Assoc. Professor (Computer Science), Stanford U. 2001
- Visiting Lecturer (Art and Art History), Stanford U. 2003
- Consulting Assoc. Professor (Statistics), Stanford U. 1993–94
- Visiting Asst. Professor (Elec. Engin.), Stanford U. 1988–91
- Visiting Lecturer (Psychology), Stanford U. 1988–89
- Visiting Research Professor (Mathematics), Boston U. 1986–88
- Assistant Professor (Physics), Clark U. 1985–88
- Adjunct Assistant Professor (Neuroscience), Clark U. 1985–88
- Assistant Professor (Physics), Swarthmore College 1984–85
- Lecturer (Physics), Swarthmore College 1982–84
- Instructor (Physics), Wellesley College 1979

University and college courses taught

- Image Processing of Fine Art (Stanford)
- Economics of Fine Art (Stanford)
- Digital Image Processing (Stanford)
- Fourier transforms (Stanford)
- Making sense of computing in art (Courtauld Institute London)
- Science, Technology, Art (Stanford, Continuing Studies)
- Computational symbolic mathematics (Stanford)
- Visual perception and cognition of art (Stanford, Continuing Studies)

- Science, technology, art (Stanford, Continuing Studies)
- Statistical analysis of fine art (Stanford)
- Image processing of art (Stanford)
- Computer vision and image analysis of art (Stanford, Technical University of Vienna)
- Statistical theory of data acquisition (Stanford)
- Statistical learning and pattern recognition (Stanford)
- Adaptive pattern recognition and neural networks (Stanford)
- Statistical pattern recognition and neural networks (Stanford)
- Introductory statistics (Stanford)
- Neuroscience seminar in vision (Clark)
- Eye and implications of vision (Clark)
- Physics of sound (Swarthmore)
- Light, color, and visual phenomena (Swarthmore, Clark, Stanford)
- Introductory physics (Swarthmore)
- Thermal and statistical physics (Swarthmore)
- Intermediate electricity and magnetism seminar (Swarthmore)
- Physics of aesthetics and perception (Wellesley)

Fellowships and Awards

- 2025 Winner *Basel (Switzerland) Area Accelerator Award* (for Vrai-AI)
- 2025 Macau Award (for Vrai-AI), winner of the United Nation's *AI for SDGs—Global Youth AI Future Innovation Competition*
- 2025 Winner (for Vrai-AI), *9th China (Shenzhen) Innovation & Entrepreneurship International Competition*, Paris/France Division
- 2024 Wolfram Innovator Award
- 2024 Fellow, International Artificial Intelligence Industry Alliance (IAII)
- 2023 Outstanding Reviewer, *Leonardo*
- 2023 *Leonardo@Djerassi Fellow*, Djerassi Resident Arts Foundation
- Fellow, Asia-Pacific Artificial Intelligence Association (AAIA), renamed Academy of Artificial Intelligence Sciences (AAIS)
- *2017 Industrial Distinguished Leader Award*, Asia Pacific Signal and Information Processing Association (APSIPA)

- Best paper award, *SensorComm*, "Ultraminiature, computationally efficient diffractive visual-bar-position sensor," by Mehjabin Monjur, Leonidas Spinoulas, Patrick R. Gill and David G. Stork, 2015
- Best paper award, *SensorComm*, "Lensless ultra-miniature CMOS computational imagers and sensors," by David G. Stork and Patrick R. Gill, 2013
- Co-inventor of lensless smart sensor technology, named by *Tom's Guide* "Best of Mobile World Congress," 2014
- Co-inventor of technology named by *Tom's Guide* "Best Internet of Things Innovation at Mobile World Congress," 2015
- Co-inventor of lensless smart sensor technology, finalist (one of three), *Annual Creativity in Electronics Awards*, Sensor category, San Jose, CA, 2015
- Fellow, International Academy, Research and Industry Association (IARIA), 2014
- Fellow, International Association of Pattern Recognition (IAPR), 2008, "For contributions to pattern recognition education, machine learning, speech recognition, and the application of computer vision to the study of art."
- Life Fellow, International Society for Optics and Photonics (SPIE), 2012, "For specific achievements in pattern recognition, computer vision and joint design of optics and image processing."
- Life Fellow, OPTICA (Optical Society of America, OSA), 2016, "For pioneering contributions to the theory and practice of computational imaging, computer vision and pattern recognition, including their application to the study of art."
- Fellow, IEEE, 2018, "For contributions to pattern recognition and image analysis" (<0.1% of the IEEE membership is elected to this grade each year)
- Fellow, Association for Image Science and Technology (IS&T), 2018 "... for research and development in the fields of optics and computational imaging." (Two members of IS&T were so awarded that year.)
- Senior Life Member, Association for Computing Machinery (ACM), 2016
- Member, Association for the Advancement of Artificial Intelligence (AAAI), 2016–19, 2023–
- Distinguished Lecturer, Association for Computing Machinery (ACM), 1998–99 and 2016–19

- Ricoh Junior Patent Master (>50 US and foreign issued patents), 2008
- Rambus Distinguished Inventor, Silver Patent Award (> 10 accepted disclosures)
- Travel Fellowship, Association for Research in Vision and Ophthalmology, ARVO (1981)
- Ralph D. Meyers Teaching Award for Excellence as a Teaching Assistant, U. Maryland Physics Department (1979)
- Erdös number: 3
- Citations: 98,007 (Google Scholar, May 2026)
- i-10 Index 189 (Google Scholar, May 2026)
- h index 63 (Google Scholar, March 2026)

Current research interests

Computer image analysis of fine art; computer vision and image analysis; pattern recognition, machine learning and deep learning; artificial intelligence; data mining; computational sensing and imaging; neural models of vision

Doctoral dissertation committees, member

- "Speechreading by computer: Preprocessing, sensory integration and pattern recognition," Marcus E. Hennecke, Stanford University Department of Electrical Engineering (May, 1998) (Primary signatory: Prof. Bernard Widrow)
- "Using analogy to acquire commonsense knowledge from human contributors," Tim Chklovsky, Massachusetts Institute of Technology Department of Electrical Engineering and Computer Science (February, 2003) (Primary signatory: Prof. Patrick H. Winston)
- "Open data acquisition: Theory and experiments," Chuck Lam, Stanford University Department of Electrical Engineering (May, 2005) (Primary signatory: Prof. Bernard Widrow)
- "Feature selection focused within error clusters," Sui-Yu Wang, Lehigh University (December, 2009) (Primary signatory: Prof. Henry Baird)
- "Foreground–background separation in multi-spectral images of degraded manuscripts," Martin Lettner, Technical University of Vienna (June, 2010) (Primary signatory: Prof. Robert Sablatnig)
- "Mathematics and art: Authentication and artistic style from digital reproductions," C. Robert Jacobsen, Department of Mathematical Sciences, Aalborg University, Denmark (April, 2012) (Primary signatory: Prof. Arne Jensen)

- "Design and analysis of coded mask imaging systems," Leonidas Spinoulas, Northwestern University (July, 2016) (Primary signatory: Prof. Aggelos Katsaggelos)

Grants

- National Institutes of Health, National Eye Institute grant R01 EY05342 $120,000 "Psychophysics of monocular and cyclopean motion processing" (1984–87)
- "Development of Graphics-Based Courseware in Computer Simulation, Optics, and Ecology" (w. H. Gould and T. Livdahl) $76,091 Apple Corporation (1985)
- Product Grant for "Light, Color, and Visual Phenomena" course laboratory, Polaroid Corporation $2000 (1986)
- Planning grant B-1999-18, for *2001: HAL's Legacy* television documentary, Public Understanding of Science and Technology Program, Alfred P. Sloan Foundation, $30,000 (1999)
- Production grant for *2001: HAL's Legacy*, a 90-minute television documentary, from Public Understanding of Science and Technology Program, Alfred P. Sloan Foundation to South Carolina Public Television and InCA (Independent Communications Associates) $785,000 (2000)
- Planning grant for "Light and Mind" documentary film, from National Science Foundation to InCA (Independent Communications Associates) $50,000 (2003)
- "Ultra-low-power computational sensing and imaging: Using special optics for zero-electrical-power signal processing," DARPA-14-42 Microsystems Technology Office, $1,594,000 (2017–18)

Patents (only US issuance listed)

1. US5157275 (1992) "Circuit employing logical gates for calculating activation function derivatives on stochastically-encoded signals," David G. Stork and Ronald C. Keesing
2. US5245696 (1993) "Evolution and learning in neural networks: the number and distribution of learning trials affect the rate of evolution," David G. Stork and Ronald C. Keesing
3. US5268684 (1993) "Apparatus for a neural network one-out-of-N encoder/decoder," James Allen and David G. Stork
4. US5337362 (1994) "Method and apparatus for placing data onto plain paper," Michael J. Gormish, Mark Peairs and David G. Stork
5. US5412670 (1995) "N-bit parity neural network encoder," David G. Stork and James Allen
6. US5471207 (1995) "Compression of palettized images and binarization for bitwise coding of M-ary alphabets," Ahmad Zandi, David G. Stork and James Allen

7. US5497236 (1996) "Method and apparatus for distortion correction of scanned images," Gregory J. Wolff and David G. Stork
8. US5586215 (1996) "Neural network acoustic and visual speech recognition system," David G. Stork, Gregory J. Wolff and Earl I. Levine
9. US5588090 (1996) "Signal processing apparatus," Toshiyuki Furuta, Shuji Motomura, Takahiro Watanabe and David G. Stork
10. US5621858 (1997) "Neural network acoustic and visual speech recognition system training method and apparatus," David G. Stork and Gregory J. Wolff
11. US5636326 (1997) "Method for operating an optimal weight pruning apparatus for designing artificial neural networks," David G. Stork and Babak Hassibi
12. US564234 (1997) "CD ROM apparatus for improved tracking and signal sensing," David G. Stork
13. US5671282 (1997) "Method and apparatus for document verification and tracking," Gregory J. Wolff, David G. Stork and K. Venkatesh Prasad
14. US5680481 (1997) "Facial feature extraction method and apparatus for a neural network acoustic and visual speech recognition system," K. Venkatesh Prasad and David G. Stork
15. US5692048 (1997) "Method and apparatus for sending secure facsimile transmissions and certified facsimile transmissions," Michael J. Gormish, Gregory J. Wolff, David G. Stork, Peter E. Hart and Yoshio Kawajiri
16. US5694228 (1997) "Document image processor with defect detection," Mark Peairs, Mark Cullen, James Allen and David G. Stork
17. US5710816 (1998) "Method and apparatus for ensuring receipt of voicemail messages," David G. Stork and Nancy P. Stork
18. US5771306 (1998) "Method and apparatus for extracting speech related facial features for use in speech recognition systems," David G. Stork, Gregory J. Wolff and Earl Isaac Levine
19. US5781914 (1998) "Converting documents, with links to other electronic information, between hardcopy and electronic formats," David G. Stork and K. Venkatesh Prasad
20. US5806036 (1998) "Speechreading using facial feature parameters from a non-direct frontal view of the speaker," David G. Stork
21. US5818966 (1998) "Method and apparatus for encoding color information on a monochrome document," K. Venkatesh Prasad and David G. Stork

22. US5963930 (1999) "Apparatus and method for enhancing transfer function non-linearities in pulse frequency encoded neurons," David G. Stork and Ronald Craig Keesing
23. US6073118 (2000) "Method for performing secure financial transactions using facsimile transmissions," Michael J. Gormish, Peter E. Hart, David G. Stork and Gregory J. Wolff
24. US6081261 (2000) "Manual entry interactive paper and electronic document handling and processing system," Gregory J. Wolff and David G. Stork
25. US6104380 (2000) "Direct pointing apparatus for digital displays," David G. Stork and Gregory J. Wolff
26. US6181329 (2001) "Method and apparatus for tracking a hand-held writing instrument with multiple sensors that are calibrated by placing the writing instrument in predetermined positions with respect to the writing surface," David G. Stork, Michael Angelo and Gregory J. Wolff
27. US6201903 (2001) "Method and apparatus for pen-based faxing," Gregory J. Wolff, David G. Stork and Michael Angelo
28. US6212296 (2001) "Method and apparatus for transforming sensor signals into graphical images," David G. Stork, Michael Angelo and Gregory J. Wolff
29. US6457026 (2002) "System to facilitate reading a document," Jamey Graham and David G. Stork
30. (2002) "Calibration of a system for tracking a writing instrument with multiple sensors," David G. Stork, Michael Angelo and Gregory J. Wolff
31. US6574375 (2003) "Method for detecting inverted text images on a digital scanning device," John F. Cullen, David G. Stork, Peter Hart and Koichi Ejiri
32. US6804659 (2004) "Content based web advertising," Jamey Graham and David G. Stork
33. US6879967 (2005) "Method and apparatus for open data collection," David G. Stork
34. US7124093 (2006) "Method, system and computer code for content based web advertising," Jamey Graham, David G. Stork and Chuck Lam
35. US7120699 (2006) "Document controlled workflow systems and methods," David G. Stork and Rob Jan van Glabbeek
36. US7292728 (2007) "A block quantization method for color halftoning," Maya Rani Gupta, Michael J. Gormish, Kathrin Berkner and David G. Stork

37. US7356611(2008) "Method and apparatus for permissions based active document workflow," David G. Stork, Rob Jan van Glabbeek and Stephen R. Savitzky
38. US7395501 (2008) "Techniques for annotating portions of a document relevant to concepts of interest," Jamey Graham and David G. Stork
39. US7616841 (2009) "End-to-end design of electro-optical imaging systems," M. Dirk Robinson and David G. Stork
40. US7692709 (2010) "End-to-end design of electro-optic imaging systems with adjustable optical cutoff frequency," M. Dirk Robinson and David G. Stork
41. US7948550 (2011) "Electro-optic imaging system with aberrated triplet lens compensated by digital image processing," M. Dirk Robinson and David G. Stork
42. US8531581 (2013) "Focusing and focus metrics for a plenoptic imaging system," by Sapna Shroff, Kathrin Berkner, and David G. Stork
43. US8248511 (2012) "Dual-mode extended depth-of-field imaging systems," M. Dirk Robinson and David G. Stork
44. US8130994 (2012) "Digital encrypted time capsule," David G. Stork and Gregory J. Wolff
45. US201113020708 (2011) "Efficient, remote, private tree-based classification using cryptographic techniques," Nabeel Mohamed and David G. Stork
46. US7124093 (2014) "Method, system and computer code for content-based web advertising," Jamey Graham, David G. Stork and Chuck Lam
47. US9110240 (2015) "Phase gratings with odd-symmetry for high-resolution lensed and lensless optical sensing," Patrick R. Gill and David G. Stork
48. US9442228 (2016) "Phase gratings with odd symmetry for high-resolution lensed and lensless optical sensing," Patrick R. Gill and David G. Stork
49. US9515113 (2016) "Optical sensing of nearby scenes with tessellated phase anti-symmetric gratings," Patrick R. Gill and David G. Stork
50. US9746593 (2017) "Patchwork Fresnel zone plates for lensless imaging," Patrick R. Gill and David G. Stork
51. US9772423 (2017) "Diffraction gratings producing curtains of minimum intensity separated by foci and extending to a focal plane," Patrick R. Gill and David G. Stork
52. US9876043 (2018) "Optical sensing with tessellated diffraction-pattern generators," Patrick R. Gill and David G. Stork

53. US20150293018A1 "Low-Power image change detector," David G. Stork, Evan Lawrence Erickson, Patrick R. Gill and James Tringali
54. US10188289 B2 (2019) "Systems and methods for lensed and lensless optical sensing," Patrick R. Gill and David G. Stork
55. US10,222,742B2 (2019) "Systems and methods for improving resolution in lensless imaging," Patrick R. Gill, David G. Stork, Mehjabin Sultana Monjur, Luke A. Pfister
56. US10,261,584 "Touchless user interface for handheld and wearable computers," Patrick R. Gill, David G. Stork and Thomas Vogelsang
57. US10,386,788 (2019) "System and method for improving resolution in lensless imaging," Patrick R. Gill, David G. Stork and Eric Linstadt
58. US10,404,908 (2019) "Optical systems and methods supporting diverse optical and computational functions," David G. Stork, Patrick R. Gill, Evan L. Erickson, Mark D. Kellam, Alexander C. Schneider, Jay Endsley, Salman Kabir
59. US10,653,313 (2020) "System and methods for lensed and lensless optical sensing of binary scenes," Patrick R. Gill and David G. Stork
60. US10,846,835 (2020) "Optical motion sensing with phase gratings," Patrick R. Gill, David G. Stork, and Patrick R. Johnstone
61. US10,854,652 (2020) "Optical sensing with tessellated diffraction-pattern generators," Patrick R. Gill and David G. Stork
62. US11,029,459 (2021) "Phase gratings with odd symmetry for high-resolution lensless optical sensing," Patrick R. Gill and David G. Stork
63. US11,035,989 (2021) "Systems and methods for improving resolution in lensless imaging," Patrick R. Gill, David G. Stork, and Jon Eric Linstadt
64. US11,372,147 (2022) "Phase gratings with odd symmetry for high-resolution lensless optical sensing," Patrick R. Gill and David G. Stork
65. (2024, submitted) "Systems and Methods for Ultra-Low Power, High-Speed Detectors Using Optical Filters," John Kenison, Lawon Fuller, Mahshid Asri, Greg Kress, and David G. Stork

Theses

- "Determination of Symmetry and Phase in Human Visual Response Functions: Theory and Experiments," University of Maryland, Department of Physics Ph.D. thesis, Advisor: Prof. David S. Falk, University Microfilms International #8510459, 1984

- "An Experimental Determination of the Interhemispheral Neural Transit Time," University of Maryland, Department of Physics M.S. paper (unpub.) Advisor: Prof. David S. Falk, 1978
- "Black and White Referencing Paths in the Retinex Theory of Color Vision," Massachusetts Institute of Technology, Department of Physics B.S. thesis (unpub.) Advisor: Dr. Edwin H. Land, Polaroid Corporation, 1976

Books, Manuals and Proceedings Volumes

1. **Pattern Classification** (2nd ed.), Richard O. Duda, Peter E. Hart and David G. Stork, 654 pages (John Wiley and Sons, 2000)
   - **Pattan Shikibetsu** Japanese translation of **Pattern Classification** Richard O. Duda, Peter E. Hart and David G. Stork, 649 pages (New Technology Communications, Inc., 2001)
   - **Fenlei Moshi** Chinese translation of **Pattern Classification**, 530 pages (China International Trust and Investment Corporation Publishers and China Machine Press, 2003)
   - **Pattern Classification** Korean translation of **Pattern Classification** (ITC Press, 2006)
   - **Pattern Classification** Amazon.com Kindle edition (2010)
2. **Solution Manual to accompany Pattern Classification (2nd ed)** by David G. Stork, 456 pages, available only to faculty adopters of the textbook and selected scholars (John Wiley and Sons, 2001)
3. **Computer Manual in MATLAB to accompany Pattern Classification (2nd ed)**, David G. Stork and Elad Yom-Tov, 134 pages (John Wiley and Sons, 2004)
4. **HAL's Legacy: 2001's computer as dream and reality** edited by David G. Stork, 384 pages (MIT Press, 1996)
   - **Haru Densetsu: 2001nen no Kompyuta no yume to genjitsu** Japanese translation of **HAL's Legacy** edited by David G. Stork, 434 pages (Hayakawa Publishing, Inc., 1997)
5. **Speechreading by Humans and Machines: Models, Systems and Applications** edited by David G. Stork and Marcus E. Hennecke, 686 pages (Springer-Verlag, 1996)
6. **Seeing the Light: Optics in Nature, Photography, Color, Vision, and Holography**, David S. Falk, Dieter R. Brill and David G. Stork, 446 pages (Harper and Row Publishers, Inc., 1985; John Wiley and Sons, 1988)
7. **Seeing the Light: Optics in Nature, Photography, Color, Vision, and Holography**, (2nd ed.), David S. Falk, Dieter R. Brill and David G. Stork (Echo Point Books, 2019)

- **Ein Blick ins Licht** (German translation of **Seeing the Light**), David S. Falk, Dieter R. Brill and David G. Stork, 470 pages (Springer-Verlag, 1990)

8. **Seeing the Light: Teachers' Manual**, David S. Falk, Dieter R. Brill and David G. Stork, 1986, 86 pages (Harper and Row Publishers, Inc., 1985; John Wiley and Sons, 1988)
9. **The Physics of Sound**, Richard E. Berg and David G. Stork, 398 pages (Prentice-Hall, Inc. 1982; 2nd edition, 1994; 3rd edition, 2004)
10. **The Physics of Sound: Teachers' Manual (2nd ed.)**, Richard E. Berg and David G. Stork, 62 pages (Prentice-Hall, Inc., 1995)
11. **Computer image analysis in the study of art** (proceedings), edited by David G. Stork and Jim Coddington (eds.), volume **6810** (SPIE Press, 2008)
12. **Computer vision and image analysis of art** (proceedings), edited by David G. Stork, Jim Coddington and Anna Bentkowska-Kafel (eds.), volume **7531** (SPIE Press, 2010)
13. **Computer vision and image analysis of art II** (proceedings), edited by David G. Stork, Jim Coddington and Anna Bentkowska-Kafel (eds.), volume **7869** (SPIE Press, 2011)
14. **Pixels & Paintings: Foundations of computer-assisted connoisseurship** by David G. Stork, 784 pages (Wiley, 2024)
15. **Principled art authentication: A probabilistic foundation for representing and reasoning under uncertainty**, David G. Stork, in preparation
16. **How to ask good questions**, in preparation

Articles, conference publications, extended abstracts and book chapters

1. "In Geology: Holography, Expanding Applications," David G. Stork and R. R. Graus *Geotimes* pp. 19–21 (1981)
2. "Receptive Fields and the Optimal Stimulus," David G. Stork and John Z. Levinson, *Science* **216**(4542) pp. 204–205 (1982)
3. "A Powerful Medium for Geological Study," David G. Stork, *Holosphere* **11**(1) pp. 1–3 (1982)
4. "Integral Hologram of Scanning Electron Micrographs: A New Application of Display Holography," David G. Stork, M.-J. Mann and J. Eisen *J. Microscopy* (London) **133**(Pt1) pp. 89–93 (1984)
5. "Receptive-field symmetry probed using converging gratings," David G. Stork, John Z. Levinson and David S. Falk, *J. Optical Society of America A* **2**(2) pp. 275–279 (1985)

6. "Electronics for generating simultaneous random-dot cyclopean and monocular stimuli," Robert Neff, Scott Schwartz and David G. Stork, *Behavior Research Methods, Instruments and Computers* **17**(3) pp. 363–370 (1985)
7. "The unrestrained brachistochrone," David G. Stork, Ju-Xing Yang and Chris Stover, *American Journal of Physics* **54**(11) pp. 992–997 (1986)
8. "Parallel analog neural networks for tree searches," Janet Saylor and David G. Stork, **Proceedings of the American Physical Society Conference on Neural Networks for Computing**, John Denker (ed.) Snowbird, Utah pp. 392–397 (1986)
9. "Making new problems from old ones," David G. Stork, *The Physics Teacher* **24** pp. 341–345 (1986)
10. "Counterpropagation networks: Adaptive hierarchical networks for 'near optimal' mappings," David G. Stork, *Synapse Connection* **1**(2) pp. 9–11, 17 (1987)
11. "Visual temporal impulse responses from flicker sensitivities," David G. Stork and David S. Falk, *J. Optical Society of America A* **4**(6) pp. 1130–1135 (1987)
12. "Exaptation, preadaptation, evolution and biological neural networks," David G. Stork, *Synapse Connection* **1**(3) pp. 2–5 (1987)
13. "The rolling unrestrained brachistochrone," Ju-xing Yang, David G. Stork and David Galloway, *American Journal of Physics* **55**(9) pp. 844–847 (1987)
14. "Recent developments in a neural model of real-time speech analysis and synthesis," Michael Cohen, Stephen Grossberg and David G. Stork, *Proc. of the IEEE International Conference on Neural Networks* Maureen Caudill and Charles Butler (eds.) vol. IV pp. 443–453 (1987)
15. "Neural networks for decision tree searches," Janet Saylor and David G. Stork, *Proc. of the IEEE Conf. on Biology and Medicine* pp. 1366–1367 Boston, MA (1987)
16. "Neural model of stereopsis from disparity," Joe Landa, Kim Scheff and David G. Stork, *Proc. of the IEEE Conf. on Biology and Medicine* pp. 1359–1360 Boston, MA (1987)
17. "Aspects of a neural model for real-time speech analysis and synthesis," Michael Cohen, Stephen Grossberg and David G. Stork, *Proc. of the IEEE Conf. on Biology and Medicine* pp. 1361–1363 Boston, MA (1987)

18. "Come trasformare un problema vecchio in nuovo," *La Fisica nella Scuola*, David G. Stork Anno. XX(3) pp. 132–137 (1988) — Italian translation of "Making new problems from old ones"

19. "Recirculation networks," David G. Stork, *Synapse Connection* **2**(1) pp. 5–6 (1988)

20. "Stability of neural networks for optimization," David G. Stork, *Synapse Connection* **2**(3) pp. 1, 12–13 (1988)

21. "A brief introduction to the operation of an Adaptive Resonance Network," David G. Stork, *Synapse Connection* **2**(8) pp. 1–7 (1988)

22. "Speech Perception and Production by a Self-Organizing Neural Network," Michael Cohen, Stephen Grossberg and David G. Stork, in **Evolution, Learning and Cognition**, Y. C. Lee (ed.) World Publishing Company pp. 217–231 (1988), reprinted in **Pattern Recognition by Self-Organizing Neural Networks** (S. Grossberg and G. Carpenter, eds.) Chapter 19, pp. 615–633 MIT Press (1991)

23. "The general unrestrained brachistochrone," David G. Stork and Juxing Yang, *American Journal of Physics* **65**(1) pp. 22–26 (1988)

24. "Software for generating auto-random dot stereograms," David G. Stork and Chris Rocca, *Behavior Research Methods, Instruments and Computers* **21**(5) pp. 525–534 (1989)

25. "Self-organization, pattern recognition and adaptive resonance networks," David G. Stork, *J. Neural Network Computing* **1** pp. 26–42 (1989)

26. "Self-organization, pattern recognition and adaptive resonance networks," David G. Stork, in **Learning and Recognition—A Modern Approach** pp. 155–178 K. H. Zhao, C. F. Zhang and Z. X. Zhu (eds.) World Scientific Publishing (1989)

27. "Systems neuroscience approaches to speech and language processing," David G. Stork, in **Learning and Recognition—A Modern Approach** K. H. Zhao, C. F. Zhang and Z. X. Zhu (eds.) pp. 178–198 World Scientific Publishing (1989)

28. "Is backpropagation biologically plausible?" David G. Stork, *International Joint Conference on Neural Networks* vol. II, pp. 241–246 Washington, D.C. (1989)

29. "Preadaptation and evolutionary considerations in neuro-biology," David G. Stork, in **Learning and Recognition—A Modern Approach** K. H. Zhao, C. F. Zhang and Z. X. Zhu (eds.) pp. 51–58 World Scientific Publishing (1989)

30. "Neurobiology and Backpropagation: Redux," David G. Stork, *Neural Network Review* **3**(2) pp. 55–56 (1990)

31. "Neuro-computational load balancing, contiguity and modifiable neuronal maps," David G. Stork, *Neural Technology Update* **4**(1) pp. 1–5 (1990)

32. "Dynamic regulation for producing chaotic behavior in simple systems," David G. Stork, *Neural Technology Update* **4**(4) pp. 5–7, 11 (1990)

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23. Plenary lecture, Engineering Intelligent Systems (EIS), Paisley, Scotland, June, 2000
24. Invited lecture, O'Reilly Open Source Software Symposium, Monterey, CA July, 2000
25. Invited lecture, SPIE Electronic Imaging 2001, San Jose, CA, January, 2001
26. Plenary lecture, International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Salt Lake City, UT, May, 2001
27. Plenary lecture, Computational Learning Theory Conference (COLT), Amsterdam, The Netherlands, July, 2001
28. Plenary lecture, International Joint Conference on Artificial Intelligence (IJCAI), Seattle WA, August, 2001
29. Keynote lecture, program on Future of the Internet, Robert Fischer Cultural and Public Policy Institute and Davis Educational Foundation, Nichols College, Dudley, MA, October, 2001
30. Invited presentation, New York University Optics and Art Symposium, December, 2001
31. Plenary lecture, Winter Simulation Conference, Arlington, VA, December, 2001
32. Banquet lecture, Annual Meeting, IEEE Boise Section, December, 2001
33. Invited lecture, Rochester Institute of Technology Industrial Affiliates Meeting, Rochester, NY, May, 2003

34. Plenary lecture, Color Imaging Conference (CIC), Scottsdale, AZ, November, 2003
35. Keynote lecture, Distributed Collaborative Knowledge Capture (DC-KCAP), Sanibel Island, FL, October, 2003
36. Plenary lecture, Mathematical Machine Learning (MML), Como, Italy, June, 2004
37. Banquet lecture, Annual Meeting, Optical Society of America Rochester Section, April, 2004
38. Invited lecture, Symposium on optics and art, Optical Society of America Annual Meeting, Rochester, NY, October, 2004
39. Plenary lecture, Florida Artificial Intelligence Research Symposium (FLAIRS), May, 2005
40. Distinguished Computer Science Lecture, University of Pennsylvania, October, 2005
41. Invited lecture, Margaret Allen Lecture Series in art and mathematics, University of Delaware, October, 2005
42. Distinguished Computer Science Lecture, Columbia University, February, 2006
43. Banquet lecture, Machines that learn workshop, April, 2006
44. Plenary lecture, CATCH (Collaborative annotation) Symposium, The Hague Netherlands, April, 2006
45. Invited lecture, Pattern Recognition for the US Intelligence Community, April, 2006
46. Docent Memorial Lecture, Wadsworth Atheneum, Hartford CT, April, 2006
47. Distinguished Cognitive Science Lecture, Carleton University, Ottawa Canada, September, 2006
48. Invited lecture, American Association of Physics Teachers Winter Conference, Seattle WA, January, 2007
49. Distinguished Computer Science Lecture, University of California at Irvine, January, 2007
50. Distinguished Computer Science Lecture, University of Maryland, March, 2007
51. Distinguished Computer Science Lecture, Lehigh University, April, 2007
52. Plenary lecture, Computational Sensing and Imaging (COSI), M. Dirk Robinson and David G. Stork, Vancouver BC, June, 2007

53. Distinguished computer science lecture, State University of New York, Stony Brook, December, 2007
54. President's High Table Banquet Lecture, University of Redlands, September, 2008
55. Plenary lecture, Image Processing for Artist Identification, van Gogh Museum, October, 2008
56. Inaugural lecture, Jack Kilby Memorial Seminar Series, Southern Methodist University, November, 2008
57. Banquet lecture, Annual Meeting, San Francisco MENSA Society, November, 2009
58. Distinguished speaker lecture, Electrical and Computer Engineering Department, University of Arizona Tucson, February, 2009
59. Distinguished lecture, Concordia University, Montreal Canada, March, 2009
60. Invited lecture, Advanced School for Computing and Imaging, Zeewolde, Netherlands, June, 2009
61. Plenary lecture, International Conference on Computer Analysis of Images and Patterns (CAIP), Münster Germany, September, 2009
62. Plenary lecture, Virtual Systems and Multimedia (VSMM), Vienna Austria, September, 2009
63. Plenary lecture, International Conference on Image Analysis and Processing (ICIAP), Vietri sul Mare Italy, September, 2009
64. Invited lecture, Computational Sensing and Imaging, San Jose CA, October, 2009
65. Distinguished lecture, University of Ottawa, Ottawa Canada, November, 2009
66. Invited lecture, Human vision and electronic imaging, *Electronic Imaging*, January, 2010
67. Invited lecture, Royal Dutch Academy of Sciences workshop on Computers in the Humanities, Wassenaar, The Netherlands, February, 2010
68. Invited lecture series, Sparsity and modern mathematical model for high-dimensional data, Brussels, April, 2010
69. Distinguished signal processing lecture, University of Michigan, Ann Arbor MI, April 2010
70. *Math and...* invited lecture, University of Wisconsin, Madison, April 2010
71. Plenary lecture, Annual conference on New directions in the humanities, Los Angeles CA, June, 2010.

72. Banquet lecture, Uncertainty in Artificial Intelligence, Catalina Island, CA, July, 2010
73. Invited lecture, SPIE Optical Engineering and Applications, San Diego CA, August, 2010
74. Invited presentation, Physics and Computation, Nile River, Egypt, September, 2010
75. Plenary lecture, Department of Computer Engineering, Ain Shams University, September 2010
76. Invited talk, Applied Imagery Pattern Recognition workshop (AIPR), Washington DC, October, 2010
77. Distinguished invited lecture, SIGGRAPH Asia, Seoul, South Korea, December, 2010
78. Plenary lecture, Workshop on Applications of Computer Vision (WACV), Kona Hawaii, January, 2011
79. Invited lecture, Visual information processing and communication II, Electronic Imaging, January 2011
80. Plenary lecture, Society for Textual Scholarship Annual Meeting, Penn State University, March, 2011
81. Distinguished lecture, C. P. Snow Memorial Lecture Series, Ithaca College, April, 2011
82. Banquet lecture, Applied Imagery Pattern Recognition (AIPR), Washington DC, October, 2011
83. MillerComm Distinguished Lecture, University of Illinois Urbana-Champaign, April 2012
84. Keynote lecture, VISART, European Conference on Computer Vision (ECCV), October 2012
85. Distinguished lecture, Northwestern University, October 2013
86. Invited lecture, International Conference on Electronics, Communications and Networks, Beijing China, December 2014
87. Optical Society of Southern California, Los Angeles, January 2015
88. Invited lecture, DARPA special "Bootcamp" on brain imaging, Arlington, VA, April 2015
89. Invited lecture, International Conference on Computational Photography, Houston, TX, May 2015
90. Invited lecture, Society for Information Display, San Jose CA, May 2015
91. Invited lecture, Global Sensor Summit, San Diego CA, November 2015

92. Invited lecture, Image Sensors America, Berkeley CA, November 2015
93. Plenary lecture, Egypt National Science Week celebration, Cairo Egypt, March 2016
94. ACM Distinguished Lecture, Amity University, Delhi India, September 2016
95. Colloquium lecture, Institute for Applied Computational Science series lecture, Harvard University, October 2016
96. Photonics Series lecture, Boston University, October 2016
97. SPIE Munich, July 2017
98. IEEE Sensors, Workshop on near-zero-power sensing, Glasgow Scotland, October 2017
99. ACM Distinguished Lecture, Birla Institute of Science and Technology-Pilani (India), February, 2018
100. Distinguished Lecture, Rutgers University, April 2018
101. Invited lecture, *Searching Through Seeing: Optimizing Computer Vision Technology for the Arts*, Frick Collection, April 2018
102. Invited lecture, *SPIE Commercial and Scientific Sensing*, Orlando FL April 2018
103. ACM Distinguished Lecture, Gettysburg College, December 2022
104. International Vermeer Symposium, Rijksmuseum, Amsterdam, March 2023
105. Generative AI as a Creativity Tool? A Program to Explore Implications, Berkeley CA, September 2023
106. International Conference on Algorithms and the Law, Geneva Switzerland, December 2023
107. Keynote lecture, Artificial Intelligence and Machine Learning, AIM, San Francisco CA 2024
108. Invited lecture, Workshop on Space, Scale, and Scaling in Art, Cambridge University, 2024
109. Talks at Google, 2024
110. Distinguished Researcher Lecture, Accenture, San Francisco CA, 2024
111. Plenary Lecture, VFXRio, Rio de Janeiro Brazil, 2024
112. *The machine gaze*, New York University Institute for the Humanities, 2025
113. Plenary Lecture, Artificial Intelligence and Machine Learning (AIM), Seattle WA, 2025

114. Plenary Lecture, Eurographics Symposium on Rendering (EGSR), Copenhagen Denmark, 2025
115. Invited Lecture, Machine Learning for Signal Processing, Istanbul Turkey, 2025
116. Invited Lecture, Molodvizh, Lviv Ukraine, 2025
117. Plenary Lecture, AI for Visual Arts Workshop, *International Conference on Computer Vision*, Honolulu HI, October 2025
118. Boston Museum of Fine Arts, November 2025
119. Art of Wellbeing Annual Summit at the Princeton University Art Museum, January 2026

Conference General Chairmanships

- Founding general chair, Digital Image Processing and Analysis (DIPA), Optical Society of America, 2010

Conference Panels

- CyberFest, University of Illinois Urbana-Champaign, March 13, 1997
- BOTS 2001 West, San Francisco, CA, January 25, 2001
- BOTS 2001 East, Boston, MA, June 18, 2001
- iCommerce, New York University Stern School of Business, April 6, 7, 2001
- American Film Institute, 30th Anniversary of the release of *2001: A Space Odyssey*, April, 1998
- Human Vision and Electronic Imaging, Representation in Art, IS&T Electronic Imaging, February, 2018

Visionary workshops, participant

- Invited participant, Computer Research Association, "Grand Challenges in Information Security and Assurance," Airlie House, Warrenton, VA, November, 2003
- Nokia workshop on the future of invisible interfaces, Carmel Valley, CA, November 2006
- Nokia IdeasCamp, Monterey, CA, August 2009, August 2010

International Chairmanships

Chairman, International Association of Pattern Recognition, Technical Group 19: Computer Vision and Cultural Heritage Applications (2008–10)

Expert witness group memberships

The Round Table Group (2009–2014)

Program Committees

2nd International Conference on Audio- and Video-based Biometric Person Authentication, 1999; Neural Information Processing Systems-3; International Conference on Pattern Recognition 2000; Mathematical Methods for Learning MML 2004; ACM Multimedia Interactive Art MM05; International Conference on Image Analysis and Processing ICIAP 2007, Artificial General Intelligence 2008, Virtual systems and multimedia VSMM 2009; Digital Image Processing and Analysis DIPA, International Conference on Computational Photography 2015, SensorComm 2015, International Conference on Computational Photography 2016, 2017, Image Processing for Art Investigations, 2019, 2020

Feature issue co-editor

Convergence in optical and digital pattern recognition, *Applied Optics* **49**(10)

Film credits

1. Creator, co-writer and subject, *2001: HAL's Legacy* (60-minutes), and host for the 90-minute version, PBS television (2001), Executive Producer David Kennard, InCA Productions through South Carolina Educational Television, first broadcast nationwide September, 2001
2. Co-designed, scripted, and co-produced w. R. E. Berg a series of four, 60-minute videocasettes, *Demonstrations in Acoustics*, available through the University of Maryland Physics Demonstration Facility
3. Mathematical graphic design, *Raising Genius* (2004), Bathroom Boy LLC Productions

Scholarly talks

AI Forum, A3 Business Forum, Ains Sham University, Amity University, Art Gallery of Calgary, Ask a Scientist (San Francisco), ATR Human Information Processing Laboratories Kyoto, Amazon.com, American Film Institute, Amherst College, Arizona State University, Art Institute of Chicago, Babson College, Barnes Foundation, Bay Area Chapter of ACM, Beijing University, Birla Institute of Science and Technology (Pilani, India), Boeing Corporation, Boston University, Bowdoin College, Bradford University, Bryn Mawr College, California State Polytechnic Pomona, California State University Sacramento, Cambridge University, Carleton University, Carnegie Mellon University, Carnegie Mellon University Silicon Valley, Centre de Recherche et de Restauration des Musées de France, Chilmark Public Library, City College of New York, Clark University, Columbia University, Computer Museum History Center, Concordia

University Montreal, Cornell University, Cryptography Research Incorporated, CWI Amsterdam, Dartmouth College, Djerassi Artist Residence Program, École Polytechnique Fédérale de Lausanne (EPFL), Edgartown Library, Epson Research, Fermilab, Gage Art Academy, George Mason University, George Washington University, Google, Griffiss Air Force Base, Grinnell College, Halcyon Molecular, Harvard University, Haverford College, Hebrew University of Jerusalem, Holy Cross College, Honda America Research Labs, IBM Almaden Research Center, IBM T. J. Watson Research Center, Image Sensors America, Imperial College, Indian Institute of Technology (New Delhi), Industrial Materials Institute of the National Research Council (Canada), International Computer Science Institute (ICSI), International Institute for Advanced Scientific Studies (Salerno, Italy), Internet Archive, Istituto per la Ricerca sui Sistemi Informatici Paralleli (Naples, Italy), Ithaca College, Johns Hopkins University, King Abdullah University of Science and Technology, KLA-Tencor Corporation, Kodak Research Labs, LASER (Leonardo Art Science Evening Rendezvous) at Stanford University, U. C. Santa Cruz & at U. C. Berkeley, Lawrence Livermore Laboratory, Lehigh University, Lockheed-Martin Palo Alto, Los Alamos National Laboratory, The Louvre, Loyola Marymount College, Lviv Cultural Ministries Department, Mensa Society of America San Francisco, Massachusetts Institute of Technology, Meta Corporation, Michigan State University, Microsoft Research Redmond, Microsoft Research Cambridge, MIT Club of Northern California, Mitsubishi Electric Research Lab (MERL), Muhlenberg College, National Academy of Sciences of the Czech Republic, National Gallery (London), National Gallery of Art (Washington), Naval Postgraduate Center (Monterey), Naval Research Laboratory, New College, New York University, Nichols College, Niels Bohr Institute (Copenhagen, Denmark), Nokia Research Center, North Arizona University, Northwestern University, Oberlin College, Optical Society of Chicago, Oregon Graduate Institute, Oxford University, Palo Alto Research Center (PARC), Penn State University, Philomorphs (Harvard University), Pixar Studios, Polaroid Corporation, Princeton University, Rambus, Redlands College, Redwood Neuroscience Institute, Rijksmuseum, Renaissance Technologies, Rensselaer Polytechnic Institute, Rice University, Ricoh Corporation, Rochester Institute of Technology, Rutgers University, Ryerson University, San Jose Museum of Art, San Jose State University, Santa Fe Institute, Schlumberger-Doll Research Lab, Sensors Global Summit, Smith-Kettlewell Institute of Visual Science, Sony Computer Science Lab Paris, Sony Entertainment America Lab, Southern Connecticut State University, Southern Methodist University, SRI International, Stanford University, State University of New York at Buffalo, Sun Microsystems, Swarthmore College, Tallinn University, Technical University of Delft, Technical University of Vienna, Tel Aviv University, Thompson-CSF, Union College, University College London, Uni-

versity of British Columbia, University of California Berkeley, University of California Davis Cosmos Program, Ukraine Catholic University Lviv, University of Bologna/Ravenna, University of California Irvine, University of California Los Angeles, University of California Riverside, University of California Santa Barbara, University of California Santa Cruz, University of Colorado Boulder, University of Delaware, University of Galway, University of Geneva, University of Groningen, University of Helsinki, University of Illinois Champaign-Urbana, University of Massachusetts Medical Center, University of Massachusetts Amherst, University of Memphis, University of Modena, University of Montreal, University of Oregon Eugene, University of Pennsylvania, University of Puget Sound, University of Redlands, University of Rochester, University of San Francisco, University of Southern California, University of Stockholm, University of Texas at Austin, University of Tokyo, University of Wisconsin Madison, Vassar College, Villanova University, Vineyard Haven Library, Warburg Institute, Wellesley College, William and Mary College, Williams College, Wolfram Research, Inc., Worcester Polytechnic Institute, Xerox PARC, Yahoo! Research Berkeley, Yale University

Museum talks

Katzen Arts Center at American University, Art Gallery of Calgary, Art Institute of Chicago, Belvédère Museum (Heerenveen, Netherlands), Barnes Foundation, British Institute Florence, Calgary University Art Museum, Cantor Center for the Arts at Stanford (Stanford, CA), Courtauld Institute (London), de Young Museum (San Francisco), Fogg Art Museum (Harvard U.), Frick Collection, Frye Gallery of Art (Seattle, WA), Getty Center, Hong Kong University Museum of Art, Hood Museum (Hanover, NH), Legion of Honor, Krannert Museum of Art (Urbana, IL), Kunsthistorisches Museum (Vienna), The Louvre (Paris), Mauritshuis (The Hague), Memorial Art Gallery (Rochester, NY), Metropolitan Museum of Art (New York), Museum of Modern Art (New York), National Gallery (London), National Gallery (Washington), National Museum of Denmark (Copenhagen), Musées Royaux d'Art et d'Histoire (Brussels), Princeton University Art Museum, Rijksmuseum, San Jose Museum of Art, van Gogh Museum (Amsterdam), Wadsworth Atheneum (Hartford, CT), Warburg Institute, Venice Biennale (Italy)

Short courses

- International Conference on Image Processing (ICIP 2005), Genoa Italy
- International Conference on Pattern Recognition (ICPR 2006), Hong Kong

- SPIE Electronic Imaging (SPIE-EI 2007), San Jose CA
- SPIE Electronic Imaging (SPIE-EI 2008), San Jose CA
- International Conference on Computer Vision and Pattern Recognition (CVPR 2008), Anchorage AK
- Computer Vision and Pattern Recognition (CVPR 2009), Kyoto Japan
- SPIE Electronic Imaging (SPIE-EI 2010), San Jose CA
- Computer Vision and Pattern Recognition (CVPR 2010), San Francisco CA
- European Signal Processing Conference (EUSIPCO 2010), Aalborg Denmark
- SPIE Electronic Imaging (SPIE-EI 2012), San Francisco, CA
- ICPR, Tsukuba City, Japan
- SPIE Electronic Imaging (SPIE-EI 2015), San Francisco, CA
- SPIE Electronic Imaging (SPIE-EI 2016), San Francisco, CA
- SPIE Electronic Imaging (SPIE-EI 2017), San Francisco, CA
- SPIE Digital Optical Technologies, Munich (2017)
- SPIE Electronic Imaging (IS&T-EI 2018), San Francisco, CA

Editorial board service

- *Arts and Communication* (2024–)
- *Pattern Analysis and Applications*
- *International Journal of Computational Intelligence and Applications*
- *Artificial Life* (1994–2002)
- *International Journal of Neural Systems* (1995–2004)
- *Neurocomputing* (1991–2005)
- Guest editorial board member, special issue on optical and digital pattern recognition, *Applied Optics*, 2010
- *Journal of Industrial Mathematics* (2013–2016)
- *IEEE Transactions on Computational Imaging* (2015–)
- *Perspectives on Art and Beyond* (2025–)
- *Contemporary Visual Culture and Art* (2026–)
- *ACM Transactions on Probabilistic Learning* (2026–)
- Associate Editor-in-Chief, *Journal of the Academy of Artificial Intelligence Sciences* (2026–)

Referee/reviewer

Neural Networks; *Neural Computation*; *Neural Networks Letters*; *American Journal of Physics*; *Mathematical Biosciences*; *IEEE Expert*; *Investigative Ophthalmology and Visual Science*; *Computer*; *Leonardo*; *Perception*; *The Behavioral and Brain Sciences*; *IEEE Transactions on Signal Processing*; *Discover Artificial Intelligence*; *Heritage Science*; *IEEE Transactions on Information Theory*; *IEEE Transactions on Circuits and Systems*; *IEEE Transactions on Neural Networks*; *IEEE Transactions on Information Forensics and Security*; *IEEE Transactions on Knowledge and Data Engineering*; *Applied Physics Letters*; *Journal of Electronic Imaging*; *Neurocomputing*; *Artificial Life*; *Optical Engineering*; *Optics Letters*; *Journal of Perceptual Computing*; *International Journal of Smart Engineering Systems Design*; National Science Foundation; *Nature*; *Physical Review A*; Scholarpedia, U. S. Air Force Office of Sponsored Research; U. S. Army Research Office; NSF Supercomputer Theory Center; Alfred P. Sloan Foundation; *Early music*; **Handbook of Cognitive Science**; *SIGGRAPH*; *ACM Computing and Cultural Heritage*; *Proceedings of the National Academy of Science*

Workshop and symposium leader

- Leader: "Speechreading by Humans and Machines," NATO Advanced Studies Workshop, Bonas France, 1995
- Leader: "Foundations of Occam's razor and parsimony in learning," Neural Information Processing Systems 2001, Whistler, British Columbia Canada, 2001
- Co-leader: "Computer image analysis in the study of art," SPIE *Electronic Imaging*, San Jose, CA, 2008

National committees

- Education Council, Optical Society of America (1990–1993)
- Book Publishing Committee, Optical Society of America (1994–1996)
- Esther Hoffman Beller Award Committee, Optical Society of America (1995)
- Advisory Board member, Comparative Media Studies Program, MIT (1999–2001)
- Tech Day Committee, MIT (2002–2005)
- ACM SIGAI Award Officer (2017–present)

Memberships (as given in records of the associations)

- Econometric Society (2026–)

- Association for the Advancement of Artificial Intelligence (AAAI) (2023–)
- Association for Computing Machinery (ACM) (1995–Lifetime)
- Institute of Electronics and Electrical Engineers (IEEE) (since 1994 affiliate; 2008–present)
- Optical Society of America (OSA) (1980–Lifetime)
- Society for Photographic Instrumentation and Engineering (SPIE) (2006–Lifetime)
- American Association for Artificial Intelligence (AAAI) (2000–2004)
- American Association of Physics Teachers (AAPT) (1981–1996)
- International Neural Network Society (INNS) (1987–2004)
- International Foundation for Art Research (IFAR) (2007–2008)
- International Brain Research Organization (IBRO)
- Sigma Xi, The Scientific Research Society ($\Sigma\Xi$) (1976–present)
- The National Association of Scholars (NAS) (1990–2005)
- Academic Freedom Alliance (2021–)

Languages studied

- German (5 years)
- French (2 years)
- Japanese (7 years)

Computer language proficiency (in decreasing proficiency)

- *Mathematica*, *LaTeX*, *Matlab*, *Python*, *Fortran*, *Lisp*

Appearances in popular media National television and numerous radio appearances, including NPR's "Talk of the Nation: Science Friday" and "Weekend Edition," BBC's "The World," CBC radio, "The Big Byte," CNN's "The Computer Connection," CBC-TV's "@Discovery," MSNBC's "The Site," "Art'sm desire and hot tech cool science," KWMR-FM, and many others. Quotations, book reviews/notices and references in over 200 printed articles, including *Scientific American*, *Newsweek*, *The New York Times*, *Washington Post*, *Discover*, *WIRED*, *New Scientist*, *Stanford magazine*, and many others.

Interviews and long-form podcasts Santa Fe Institute Complexity, Edge of AI, Association for Computing Machinery (CACM) (`cacm.acm.org/research/computer-vision-ml-and-ai-in-the-study-of-fine-art/`)

Hobbies

- Music
  Orchestral, chamber and solo timpanist/percussionist: Heard on three Vox-Turnabout albums, four Clarity Recordings compact disks, nine Redwood Recordings compact disks, one SFGMC Recordings compact disk and one OG compact disk. Member of numerous academic, semiprofessional and professional orchestras including: MIT Symphony Orchestra; MIT Chamber Players; Harvard Summer School Orchestra; Boston Summer Opera Orchestra; Worcester Orchestra; Worcester Bach Society Orchestra; Central Massachusetts Symphony Orchestra; Worcester Ballet Orchestra; Redwood Symphony Orchestra; Nova Vista Orchestra; Palo Alto Chamber Orchestra (PACO).
- Visual Arts
  Artist-in-Residence in Holography, Cabin Creek Center for Work and Environmental Studies, New York State Council of the Arts (summer, 1979); Creative photographs and images reproduced in *Clark Journal of the Arts* **6** (spring, 1986); *Pinhole Resource* **2**(2) (August, 1986) (cover); *Crossproduct: The Magazine of Science and Humanities* (April, 1986) (cover); *Scientific American* (July, 1981); **The Rainbow: From Myth to Mathematics** by Carl Boyer, Princeton U. Press (1987); *Optics and Photonics News* (November, 1992) (cover), *The Mathematica Journal* (Fall, 1994) (cover)
- Other
  Certified Advanced Open Water scuba diving and long-distance swimming, Professional Association of Diving Instructors (PADI), Member: Soaring Society of America (SSA), soloed and received A, B and C badges; international travel (62 countries), reading literature and non-fiction

References

Available upon request