



Brian A. Wandell

Isaac and Madeline Stein Family Professor and Professor, by courtesy, of
Electrical Engineering, of Ophthalmology and of Education

Psychology

 Curriculum Vitae available Online

Bio

BIO

Brian A. Wandell is the first Isaac and Madeline Stein Family Professor. He is a member of the Stanford Psychology faculty and a member, by courtesy, of Electrical Engineering, Ophthalmology, and the Graduate School of Education. He founded and directed Stanford's Center for Cognitive and Neurobiological Imaging, an MRI service center, from 2008-2023. He was deputy director of the Wu Tsai Neurosciences Institute from 2013-2021. Wandell's research centers on vision science, spanning topics from visual disorders, reading development in children, to digital imaging devices and algorithms for both magnetic resonance imaging and digital imaging. Wandell's work in visual neuroscience uses functional, structural and quantitative MRI along with behavior testing and modeling to understand the action of the visual portions of the brain. His lab has worked to identify and then understand the organization of the visual field maps in the human brain, color and motion processing within these maps, the potential for reorganization following injury, and the development of the cortical circuitry for reading. The Wandell lab develops software tools for digital imaging applications. The software includes methods for analyzing magnetic resonance imaging (MRI) data, as well as tools to design and evaluate cameras used in a range of applications: consumer photography, medical imaging, and artificial intelligence for automotive applications. Wandell's work has led to commercial applications including two companies that he co-founded, Imageval, LLC and Flywheel.io, LLC. He is now working on a book, Foundations of Image Systems Engineering, and a second edition of his book Foundations of Vision.

ACADEMIC APPOINTMENTS

- Professor, Psychology
- Professor (By courtesy), Electrical Engineering
- Professor (By courtesy), Ophthalmology
- Professor (By courtesy), Graduate School of Education
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Chair, Psychology, (2006-2009)
- Advisory Board Chair, Stanford's Center for Cognitive and Neurobiological Imaging, (2023- present)
- Director, Stanford's Center for Cognitive and Neurobiological Imaging, (2010-2023)
- Deputy Director, Wu Tsai Neurosciences Institute, (2013-2021)

HONORS AND AWARDS

- Proctor Medal, Association for Research in Vision and Ophthalmology (2021)
- George Miller Prize, Cognitive Neuroscience Society (2016)
- Oberdorfer Award, ARVO (2012)
- Member, American Academy of Arts and Sciences (2011)
- Electronic Imaging Scientist of the Year, SPIE/IS&T (2007)
- Member, US National Academy of Sciences (2003)
- Macbeth Prize, Inter-Society Color Council (2000)
- Edridge-Green Medal in Ophthalmology for work in visual neuroscience, Edridge-Green Medal in Ophthalmology for work in visual neuroscience (1997)
- Senior Investigator, McKnight (1997)
- Fellow, Optical Society of America (1990)
- Troland Research Award, National Academy of Sciences (1986)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Scientific Advisory Board, Dept. Neurobiology, Weizmann Institute of Science (2009 - 2014)
- Advisory board, Max Planck Institute for Cybernetics, Tuebingen (2005 - 2014)
- Board member, Ontario brain institute (2013 - 2016)
- Class president, National Academy of Sciences (2012 - 2015)

PROGRAM AFFILIATIONS

- Symbolic Systems Program

PROFESSIONAL EDUCATION

- PhD, UC Irvine , Social Sciences (1977)

LINKS

- Wandell Home Page: <http://web.stanford.edu/~wandell>

Research & Scholarship

RESEARCH INTERESTS

- Brain and Learning Sciences
- Psychology
- Technology and Education

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Visual perception

Professor Wandell's work in visual neuroscience uses both neuroimaging and computational models to understand the action of the visual portions of the brain. His team has developed a set of magnetic resonance imaging methods for identifying and measuring distinct and specialized regions of human visual cortex and the connections between them. His team has been particularly interested in measuring the development of brain function and reorganization following injury or abnormal development.

Along with a group of colleagues around the world, Wandell is developing software simulations to model how light is encoded by the human eye and through advanced optics in new camera designs. The open-source ISET project generates physically realistic descriptions of three dimensional scene radiances and how they are transformed by the optics and then evoke responses in camera sensors or in the retinal and cortical circuitry of in the brain. (<https://github.com/iset>)

Reading development

The Wandell lab is applying a powerful set of MRI measurement methodologies to study human brain development. These include diffusion measures, functional measures, and novel approaches for assessing quantitative tissue properties such as tissue volume and chemistry. In one group of studies, they are measuring the signals and growth of visual cortex in children, aged 8-12, during the period children become skilled readers. Using very high spatial resolution and neuroimaging techniques, including some methods developed by this group, the lab is hoping to understand how visual signals contribute to the neural pathways of reading. These measurements of the developmental changes during the acquisition of skilled reading are intended to explain how visual signals are rapidly identified and classified as we read.

Data management and computational methods

In support of reproducible research in neuroimaging, Professor Wandell and his team implemented a data and computational management system for medical imaging. The original system (Neurobiological Image Management System) was developed with the support of the Simons Foundation and used at the MRI Center Professor Wandell directs. That system has evolved into a commercial product that supports cloud-scale collaborative science (<https://flywheel.io/>). The Flywheel system is deployed at more than thirty neuroimaging research centers and companies around the world.

Teaching

COURSES

2024-25

- Human Neuroimaging Methods: PSYCH 204A (Win)
- Image Systems Engineering: PSYCH 221, SYMSYS 195I (Aut)
- Seminar Series for Image Systems Engineering: EE 292E (Aut, Win, Spr)

2023-24

- Human Neuroimaging Methods: PSYCH 204A (Win)
- Image Systems Engineering: PSYCH 221, SYMSYS 195I (Aut)
- Seminar Series for Image Systems Engineering: EE 292E (Aut, Win, Spr)

2022-23

- Human Neuroimaging Methods: PSYCH 204A (Win)
- Image Systems Engineering: PSYCH 221, SYMSYS 195I (Aut)
- Seminar Series for Image Systems Engineering: EE 292E (Aut, Win, Spr)

2021-22

- Human Neuroimaging Methods: PSYCH 204A (Win)
- Image Systems Engineering: PSYCH 221, SYMSYS 195I (Aut)
- Seminar Series for Image Systems Engineering: EE 292E (Aut, Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Insub Kim, Austin Kuo, Joshua Ryu, Haley So, Itamar Terem

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Deriving the cone fundamentals: a subspace intersection method.** *Proceedings. Biological sciences*
Wandell, B. A., Goossens, T., Brainard, D. H.
2024; 291 (2030): 20240347
- **Measuring brain beats: Cardiac-aligned fast functional magnetic resonance imaging signals.** *Human brain mapping*
Hermes, D., Wu, H., Kerr, A. B., Wandell, B. A.
2022
- **Validation of Physics-Based Image Systems Simulation With 3-D Scenes** *IEEE SENSORS JOURNAL*
Lyu, Z., Goossens, T., Wandell, B., Farrell, J.
2022; 22 (20): 19400-19410
- **Visual encoding: Principles and software.** *Progress in brain research*
Wandell, B. A., Brainard, D. H., Cottaris, N. P.
2022; 273 (1): 199-229
- **A computational observer model of spatial contrast sensitivity: Effects of photocurrent encoding, fixational eye movements, and inference engine** *JOURNAL OF VISION*
Cottaris, N. P., Wandell, B. A., Rieke, F., Brainard, D. H.
2020; 20 (7): 17
- **A validation framework for neuroimaging software: The case of population receptive fields.** *PLoS computational biology*
Lerma-Usabiaga, G., Benson, N., Winawer, J., Wandell, B. A.
2020; 16 (6): e1007924
- **Neural Network Generalization: The Impact of Camera Parameters** *IEEE ACCESS*
Liu, Z., Lian, T., Farrell, J., Wandell, B. A.
2020; 8: 10443–54
- **A computational-observer model of spatial contrast sensitivity: Effects of wave-front-based optics, cone-mosaic structure, and inference engine.** *Journal of vision*
Cottaris, N. P., Jiang, H., Ding, X., Wandell, B. A., Brainard, D. H.
2019; 19 (4): 8
- **Ray tracing 3D spectral scenes through human optics models.** *Journal of vision*
Lian, T. n., MacKenzie, K. J., Brainard, D. H., Cottaris, N. P., Wandell, B. A.
2019; 19 (12): 23
- **Diagnosing the Neural Circuitry of Reading** *NEURON*
Wandell, B. A., Le, R. K.
2017; 96 (2): 298–311
- **Computational neuroimaging and population receptive fields.** *Trends in cognitive sciences*
Wandell, B. A., Winawer, J.
2015; 19 (6): 349-357

- **The vertical occipital fasciculus: A century of controversy resolved by in vivo measurements** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Yeatman, J. D., Weiner, K. S., Pestilli, F., Rokem, A., Mezer, A., Wandell, B. A.
2014; 111 (48): E5214-E5223
- **Evaluation and statistical inference for human connectomes** *NATURE METHODS*
Pestilli, F., Yeatman, J. D., Rokem, A., Kay, K. N., Wandell, B. A.
2014; 11 (10): 1058-1063
- **Lifespan maturation and degeneration of human brain white matter** *NATURE COMMUNICATIONS*
Yeatman, J. D., Wandell, B. A., Mezer, A. A.
2014; 5
- **Metadata, Instrumentation, and Netsplaining** *HARVARD DATA SCIENCE REVIEW*
Wandell, B.
2024; 6 (1)
- **Reproducible Tract Profiles 2 (RTP2) suite, from diffusion MRI acquisition to clinical practice and research.** *Scientific reports*
Lerma-Usabiaga, G., Liu, M., Paz-Alonso, P. M., Wandell, B. A.
2023; 13 (1): 6010
- **Ray-transfer functions for camera simulation of 3D scenes with hidden lens design** *OPTICS EXPRESS*
Goossens, T., Lyu, Z., Ko, J., Wan, G. C., Farrell, J., Wandell, B.
2022; 30 (13): 24031-24047
- **Simulations of fluorescence imaging in the oral cavity** *BIOMEDICAL OPTICS EXPRESS*
Lyu, Z., Jiang, H., Xiao, F., Rong, J., Zhang, T., Wandell, B., Farrell, J.
2021; 12 (7): 4276-4292
- **Population receptive field shapes in early visual cortex are nearly circular.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Lerma-Usabiaga, G., Winawer, J., Wandell, B. A.
2021
- **ISETAuto: Detecting Vehicles With Depth and Radiance Information** *IEEE ACCESS*
Liu, Z., Farrell, J., Wandell, B. A.
2021; 9: 41799-808
- **Data-science ready, multisite, human diffusion MRI white-matter-tract statistics.** *Scientific data*
Lerma-Usabiaga, G., Mukherjee, P., Perry, M. L., Wandell, B. A.
2020; 7 (1): 422
- **V1 Projection Zone Signals in Human Macular Degeneration Depend on Task Despite Absence of Visual Stimulus.** *Current biology : CB*
Masuda, Y., Takemura, H., Terao, M., Miyazaki, A., Ogawa, S., Horiguchi, H., Nakadomari, S., Matsumoto, K., Nakano, T., Wandell, B. A., Amano, K.
2020
- **The human connectome project for disordered emotional states: Protocol and rationale for a research domain criteria study of brain connectivity in young adult anxiety and depression.** *NeuroImage*
Tozzi, L., Staveland, B., Holt-Gosselin, B., Chesnut, M., Chang, S. E., Choi, D., Shiner, M. L., Wu, H., Lerma-Usabiaga, G., Sporns, O., Barch, D., Gotlib, I. H., Hastie, et al
2020: 116715
- **Simultaneous Surface Reflectance and Fluorescence Spectra Estimation** *IEEE TRANSACTIONS ON IMAGE PROCESSING*
Blasinski, H., Farrell, J., Wandell, B.
2020; 29: 8791-8804
- **A Convolutional Neural Network Reaches Optimal Sensitivity for Detecting Some, but Not All, Patterns** *IEEE ACCESS*
Reith, F., Wandell, B. A.
2020; 8: 213522-30

- **ISETBIO: Software for the Foundations Of Vision Science**
Wandell, B.
SAGE PUBLICATIONS LTD.2019: 5–6
- **Replication and generalization in applied neuroimaging.** *NeuroImage*
Lerma-Usabiaga, G., Mukherjee, P., Ren, Z., Perry, M. L., Wandell, B. A.
2019: 116048
- **A Conversation with Jacob Nachmias.** *Annual review of vision science*
Nachmias, J., Movshon, J. A., Wandell, B. A., Brainard, D. H.
2019
- **iEEG-BIDS, extending the Brain Imaging Data Structure specification to human intracranial electrophysiology.** *Scientific data*
Holdgraf, C., Appelhoff, S., Bickel, S., Bouchard, K., D'Ambrosio, S., David, O., Devinsky, O., Dichter, B., Flinker, A., Foster, B. L., Gorgolewski, K. J., Groen, I., Groppe, et al
2019; 6 (1): 102
- **A computational-observer model of spatial contrast sensitivity: Effects of wave-front-based optics, cone-mosaic structure, and inference engine** *JOURNAL OF VISION*
Cottaris, N. P., Jiang, H., Ding, X., Wandell, B. A., Brainard, D. H.
2019; 19 (4)
- **Computational-observer analysis of illumination discrimination.** *Journal of vision*
Ding, X. n., Radonjic, A. n., Cottaris, N. P., Jiang, H. n., Wandell, B. A., Brainard, D. H.
2019; 19 (7): 11
- **Soft Prototyping Camera Designs for Car Detection Based on a Convolutional Neural Network**
Liu, Z., Lian, T., Farrell, J., Wandell, B., IEEE
IEEE COMPUTER SOC.2019: 2383–92
- **Simulation of visual perception and learning with a retinal prosthesis.** *Journal of neural engineering*
Golden, J. R., Erickson-Davis, C., Cottaris, N. P., Parthasarathy, N., Rieke, F., Brainard, D., Wandell, B., Chichilnisky, E. J.
2018
- **The ENGAGE study: Integrating neuroimaging, virtual reality and smartphone sensing to understand self-regulation for managing depression and obesity in a precision medicine model.** *Behaviour research and therapy*
Williams, L. M., Pines, A. n., Goldstein-Piekarski, A. N., Rosas, L. G., Kullar, M. n., Sacchet, M. D., Gevaert, O. n., Bailenson, J. n., Lavori, P. W., Dagum, P. n., Wandell, B. n., Correa, C. n., Greenleaf, et al
2018; 101: 58–70
- **Occipital White Matter Tracts in Human and Macaque.** *Cerebral cortex (New York, N.Y. : 1991)*
Takemura, H., Pestilli, F., Weiner, K. S., Keliris, G. A., Landi, S. M., Sliwa, J., Ye, F. Q., Barnett, M. A., Leopold, D. A., Freiwald, W. A., Logothetis, N. K., Wandell, B. A.
2017; 27 (6): 3346-3359
- **Science in the cloud (SIC): A use case in MRI connectomics.** *GigaScience*
Kiar, G., Gorgolewski, K. J., Kleissas, D., Roncal, W. G., Litt, B., Wandell, B., Poldrack, R. A., Wiener, M., Vogelstein, R. J., Burns, R., Vogelstein, J. T.
2017; 6 (5): 1-10
- **In vivo evidence of functional and anatomical stripe-based subdivisions in human V2 and V3** *SCIENTIFIC REPORTS*
Dumoulin, S. O., Harvey, B. M., Fracasso, A., Zuiderbaan, W., Luijten, P. R., Wandell, B. A., Petridou, N.
2017; 7
- **The field of view available to the ventral occipito-temporal reading circuitry** *JOURNAL OF VISION*
Le, R., Witthoft, N., Ben-Shachar, M., Wandell, B.
2017; 17 (4)
- **The visual white matter: The application of diffusion MRI and fiber tractography to vision science** *JOURNAL OF VISION*
Rokem, A., Takemura, H., Bock, A. S., Scherf, K. S., Behrmann, M., Wandell, B. A., Fine, I., Bridge, H., Pestilli, F.

2017; 17 (2)

- **Designing illuminant spectral power distributions for surface classification**

Blasinski, H., Farrell, J., Wandell, B., IEEE
IEEE.2017: 2682–91

- **Characterization of visual stimuli using the standard display model** *HANDBOOK OF VISUAL OPTICS: FUNDAMENTALS AND EYE OPTICS, VOL I*

Farrell, J. E., Jiang, H., Wandell, B. A., Artal, P.
2017: 93–102

- **Evaluating quantitative proton-density-mapping methods** *HUMAN BRAIN MAPPING*

Mezer, A., Rokem, A., Berman, S., Hastie, T., Wandell, B. A.
2016; 37 (10): 3623-3635

- **A Major Human White Matter Pathway Between Dorsal and Ventral Visual Cortex.** *Cerebral cortex*

Takemura, H., Rokem, A., Winawer, J., Yeatman, J. D., Wandell, B. A., Pestilli, F.
2016; 26 (5): 2205-2214

- **Ensemble Tractography.** *PLoS computational biology*

Takemura, H., Caiafa, C. F., Wandell, B. A., Pestilli, F.
2016; 12 (2)

- **A Predominantly Visual Subdivision of The Right Temporo-Parietal Junction (vTPJ).** *Cerebral cortex*

Horiguchi, H., Wandell, B. A., Winawer, J.
2016; 26 (2): 639-646

- **The posterior arcuate fasciculus and the vertical occipital fasciculus.** *Cortex; a journal devoted to the study of the nervous system and behavior*

Weiner, K. S., Yeatman, J. D., Wandell, B. A.
2016

- **Clarifying Human White Matter** *ANNUAL REVIEW OF NEUROSCIENCE, VOL 39*

Wandell, B. A.
2016; 39: 103-128

- **Stimulus Dependence of Gamma Oscillations in Human Visual Cortex.** *Cerebral cortex*

Hermes, D., Miller, K. J., Wandell, B. A., Winawer, J.
2015; 25 (9): 2951-2959

- **Sex differences in the corpus callosum in preschool-aged children with autism spectrum disorder (vol 6, pg 26, 2015)** *MOLECULAR AUTISM*

Nordahl, C., Iosif, A., Young, G. S., Perry, L., Dougherty, R., Lee, A., Li, D., Buonocore, M. H., Simon, T., Rogers, S., Wandell, B., Amaral, D. G.
2015; 6: 39

- **Sex differences in the corpus callosum in preschool-aged children with autism spectrum disorder** *MOLECULAR AUTISM*

Nordahl, C. W., Iosif, A., Young, G. S., Perry, L. M., Dougherty, R., Lee, A., Li, D., Buonocore, M. H., Simon, T., Rogers, S., Wandell, B., Amaral, D. G.
2015; 6

- **Disrupted fornix integrity in children with chromosome 22q11.2 deletion syndrome** *PSYCHIATRY RESEARCH-NEUROIMAGING*

Deng, Y., Goodrich-Hunsaker, N. J., Cabaral, M., Amaral, D. G., Buonocore, M. H., Harvey, D., Kalish, K., Carmichael, O. T., Schumann, C. M., Lee, A., Dougherty, R. F., Perry, L. M., Wandell, et al
2015; 232 (1): 106-114

- **Evaluating the Accuracy of Diffusion MRI Models in White Matter** *PLOS ONE*

Rokem, A., Yeatman, J. D., Pestilli, F., Kay, K. N., Mezer, A., van der Walt, S., Wandell, B. A.
2015; 10 (4)

- **A Lack of Experience-Dependent Plasticity After More Than a Decade of Recovered Sight** *PSYCHOLOGICAL SCIENCE*

Huber, E., Webster, J. M., Brewer, A. A., MacLeod, D. I., Wandell, B. A., Boynton, G. M., Wade, A. R., Fine, I.
2015; 26 (4): 393-401

- **Gamma oscillations in visual cortex: the stimulus matters.** *Trends in cognitive sciences*
Hermes, D., Miller, K. J., Wandell, B. A., Winawer, J.
2015; 19 (2): 57-8
- **Efficient illuminant correction in the Local, Linear, Learned (L-3) method** *Conference on Digital Photography XI*
Germain, F. G., Akinola, I. A., Tian, Q., Lansel, S., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2015
- **Automatically designing an image processing pipeline for a five-band camera prototype using the Local, Linear, Learned (L-3) method** *Conference on Digital Photography XI*
Tian, Q., Blasinska, H., Lansel, S., Jiang, H., Fukunishi, M., Farrell, J. E., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2015
- **Speed discrimination predicts word but not pseudo-word reading rate in adults and children** *BRAIN AND LANGUAGE*
Main, K. L., Pestilli, F., Mezer, A., Yeatman, J., Martin, R., Phipps, S., Wandell, B.
2014; 138: 27-37
- **White Matter Consequences of Retinal Receptor and Ganglion Cell Damage** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*
Ogawa, S., Takemura, H., Horiguchi, H., Terao, M., Haji, T., Pestilli, F., Yeatman, J. D., Tsuneoka, H., Wandell, B. A., Masuda, Y.
2014; 55 (10)
- **White matter consequences of retinal receptor and ganglion cell damage.** *Investigative ophthalmology & visual science*
Ogawa, S., Takemura, H., Horiguchi, H., Terao, M., Haji, T., Pestilli, F., Yeatman, J. D., Tsuneoka, H., Wandell, B. A., Masuda, Y.
2014; 55 (10): 6976-6986
- **Evaluation and statistical inference for human connectomes.** *Nature methods*
Pestilli, F., Yeatman, J. D., Rokem, A., Kay, K. N., Wandell, B. A.
2014; 11 (10): 1058-1063
- **Diffusion properties of major white matter tracts in young, typically developing children** *NEUROIMAGE*
Johnson, R. T., Yeatman, J. D., Wandell, B. A., Buonocore, M. H., Amaral, D. G., Nordahl, C. W.
2014; 88: 143-154
- **Diffusion properties of major white matter tracts in young, typically developing children.** *NeuroImage*
Johnson, R. T., Yeatman, J. D., Wandell, B. A., Buonocore, M. H., Amaral, D. G., Nordahl, C. W.
2014; 88: 143-54
- **Automating the design of image processing pipelines for novel color filter arrays: Local, Linear, Learned (L-3) method** *Conference on Digital Photography X*
Tian, Q., Lansel, S., Farrell, J. E., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Quantifying the local tissue volume and composition in individual brains with magnetic resonance imaging** *NATURE MEDICINE*
Mezer, A., Yeatman, J. D., Stikov, N., Kay, K. N., Cho, N., Dougherty, R. F., Perry, M. L., Parvizi, J., Hua, L. H., Butts-Pauly, K., Wandell, B. A.
2013; 19 (12): 1667-1672
- **Asynchronous Broadband Signals Are the Principal Source of the BOLD Response in Human Visual Cortex** *CURRENT BIOLOGY*
Winawer, J., Kay, K. N., Foster, B. L., Rauschecker, A. M., Parvizi, J., Wandell, B. A.
2013; 23 (13): 1145-1153
- **Compressive spatial summation in human visual cortex** *JOURNAL OF NEUROPHYSIOLOGY*
Kay, K. N., Winawer, J., Mezer, A., Wandell, B. A.
2013; 110 (2): 481-494
- **Anatomy of the visual word form area: Adjacent cortical circuits and long-range white matter connections.** *Brain and language*
Yeatman, J. D., Rauschecker, A. M., Wandell, B. A.
2013; 125 (2): 146-155
- **A Two-Stage Cascade Model of BOLD Responses in Human Visual Cortex.** *PLoS computational biology*
Kay, K. N., Winawer, J., Rokem, A., Mezer, A., Wandell, B. A.

2013; 9 (5)

- **Biological development of reading circuits.** *Current opinion in neurobiology*
Wandell, B. A., Yeatman, J. D.
2013; 23 (2): 261-268
- **Connective field modeling** *NEUROIMAGE*
Haak, K. V., Winawer, J., Harvey, B. M., Renken, R., Dumoulin, S. O., Wandell, B. A., Cornelissen, F. W.
2013; 66: 376-384
- **Human trichromacy revisited** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Horiguchi, H., Winawer, J., Dougherty, R. F., Wandell, B. A.
2013; 110 (3): E260-E269
- **A two-stage cascade model of BOLD responses in human visual cortex.** *PLoS computational biology*
Kay, K. N., Winawer, J., Rokem, A., Mezer, A., Wandell, B. A.
2013; 9 (5)
- **GLMdenoise: a fast, automated technique for denoising task-based fMRI data** *FRONTIERS IN NEUROSCIENCE*
Kay, K. N., Rokem, A., Winawer, J., Dougherty, R. F., Wandell, B. A.
2013; 7
- **GLMdenoise: a fast, automated technique for denoising task-based fMRI data.** *Frontiers in neuroscience*
Kay, K. N., Rokem, A., Winawer, J., Dougherty, R. F., Wandell, B. A.
2013; 7: 247-?
- **Tract Profiles of White Matter Properties: Automating Fiber-Tract Quantification** *PLOS ONE*
Yeatman, J. D., Dougherty, R. F., Myall, N. J., Wandell, B. A., Feldman, H. M.
2012; 7 (11)
- **Development of white matter and reading skills** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Yeatman, J. D., Dougherty, R. F., Ben-Shachar, M., Wandell, B. A.
2012; 109 (44): E3045-E3053
- **Plasticity and Stability of the Visual System in Human Optic Chiasm** *NEURON*
Hoffmann, M. B., Kaule, F. R., Levin, N., Masuda, Y., Kumar, A., Gottlob, I., Horiguchi, H., Dougherty, R. F., Stadler, J., Wolynski, B., Speck, O., Kanowski, M., Liao, et al
2012; 75 (3): 393-401
- **Position sensitivity in the visual word form area** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Rauschecker, A. M., Bowen, R. F., Parvizi, J., Wandell, B. A.
2012; 109 (24): E1568-E1577
- **Squaring cortex with color** *NATURE NEUROSCIENCE*
Wandell, B. A., Chichilnisky, E. J.
2012; 15 (6): 809-810
- **Digital camera simulation** *APPLIED OPTICS*
Farrell, J. E., Catrysse, P. B., Wandell, B. A.
2012; 51 (4): A80-A90
- **Learning to See Words** *ANNUAL REVIEW OF PSYCHOLOGY, VOL 63*
Wandell, B. A., Rauschecker, A. M., Yeatman, J. D.
2012; 63: 31-53
- **Anatomical Properties of the Arcuate Fasciculus Predict Phonological and Reading Skills in Children** *JOURNAL OF COGNITIVE NEUROSCIENCE*
Yeatman, J. D., Dougherty, R. F., Rykhlevskaia, E., Sherbondy, A. J., Deutsch, G. K., Wandell, B. A., Ben-Shachar, M.
2011; 23 (11): 3304-3317

- **Problem of signal contamination in interhemispheric dual-sided subdural electrodes** *EPILEPSIA*
Nune, G., Winawer, J., Rauschecker, A. M., Dastjerdi, M., Foster, B. L., Wandell, B., Parvizi, J.
2011; 52 (11): E176-E180
- **Visual Feature-Tolerance in the Reading Network** *NEURON*
Rauschecker, A. M., Bowen, R. F., Perry, L. M., Kevan, A. M., Dougherty, R. F., Wandell, B. A.
2011; 71 (5): 941-953
- **The Development of Cortical Sensitivity to Visual Word Forms** *JOURNAL OF COGNITIVE NEUROSCIENCE*
Ben-Shachar, M., Dougherty, R. F., Deutsch, G. K., Wandell, B. A.
2011; 23 (9): 2387-2399
- **Optimizing subpixel rendering using a perceptual metric** *JOURNAL OF THE SOCIETY FOR INFORMATION DISPLAY*
Farrell, J., Eldar, S., Larson, K., Matskewich, T., Wandell, B.
2011; 19 (8): 513-519
- **Imaging retinotopic maps in the human brain** *VISION RESEARCH*
Wandell, B. A., Winawer, J.
2011; 51 (7): 718-737
- **The neurobiological basis of seeing words.** *Annals of the New York Academy of Sciences*
Wandell, B. A.
2011; 1224: 63-80
- **Bound pool fractions complement diffusion measures to describe white matter micro and macrostructure** *NEUROIMAGE*
Stikov, N., Perry, L. M., Mezer, A., Rykhlevskaia, E., Wandell, B. A., Pauly, J. M., Dougherty, R. F.
2011; 54 (2): 1112-1121
- **Task-Dependent V1 Responses in Human Retinitis Pigmentosa** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*
Masuda, Y., Horiguchi, H., Dumoulin, S. O., Furuta, A., Miyauchi, S., Nakadomari, S., Wandell, B. A.
2010; 51 (10): 5356-5364
- **Congenital Achromatopsia and See-Saw Nystagmus in VACTERL Syndrome** *JOURNAL OF NEURO-OPHTHALMOLOGY*
Prakash, S., Dumoulin, S. O., Fischbein, N., Wandell, B. A., Liao, Y. J.
2010; 30 (1): 45-48
- **Cortical Maps and White Matter Tracts following Long Period of Visual Deprivation and Retinal Image Restoration** *NEURON*
Levin, N., Dumoulin, S. O., Winawer, J., Dougherty, R. F., Wandell, B. A.
2010; 65 (1): 21-31
- **Mapping hV4 and ventral occipital cortex: The venous eclipse** *JOURNAL OF VISION*
Winawer, J., Horiguchi, H., Sayres, R. A., Amano, K., Wandell, B. A.
2010; 10 (5)
- **Using visible SNR (vSNR) to compare the image quality of pixel binning and digital resizing** *Conference on Digital Photography VI*
Farrell, J., Okincha, M., Parmar, M., Wandell, B.
SPIE-INT SOC OPTICAL ENGINEERING.2010
- **High-speed Document Sensing and Misprint Detection in Digital Presses** *Conference on Sensors, Cameras, and Systems for Industrial/Scientific Applications XI*
Leseur, G., Meunier, N., Georgiadis, G., Huang, L., DiCarlo, J., Wandell, B. A., Catrysse, P. B.
SPIE-INT SOC OPTICAL ENGINEERING.2010
- **Frontoparietal white matter diffusion properties predict mental arithmetic skills in children** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Tsang, J. M., Dougherty, R. F., Deutsch, G. K., Wandell, B. A., Ben-Shachar, M.
2009; 106 (52): 22546-22551
- **Plasticity and stability of visual field maps in adult primary visual cortex** *NATURE REVIEWS NEUROSCIENCE*
Wandell, B. A., Smirnakis, S. M.

2009; 10 (12): 873-884

- **Visual Field Maps, Population Receptive Field Sizes, and Visual Field Coverage in the Human MT plus Complex** *JOURNAL OF NEUROPHYSIOLOGY*
Amano, K., Wandell, B. A., Dumoulin, S. O.
2009; 102 (5): 2704-2718
- **Two temporal channels in human V1 identified using fMRI** *NEUROIMAGE*
Horiguchi, H., Nakadomari, S., Misaki, M., Wandell, B. A.
2009; 47 (1): 273-280
- **Think global, act local; projectome estimation with BlueMatter.** *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention*
Sherbondy, A. J., Dougherty, R. F., Ananthanarayanan, R., Modha, D. S., Wandell, B. A.
2009; 12: 861-868
- **Think Global, Act Local; Projectome Estimation with BlueMatter** *12th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI2009)*
Sherbondy, A. J., Dougherty, R. F., Ananthanarayanan, R., Modha, D. S., Wandell, B. A.
SPRINGER-VERLAG BERLIN.2009: 861–868
- **Dictionaries for sparse representation and recovery of reflectances** *Conference on Computational Imaging VII*
Lansel, S., Parmar, M., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2009
- **Visual Preference for ClearType Technology** *47th Annual Symposium of the Society-for-Information-Display*
Farrell, J., Xu, J., Larson, K., Wandell, B.
SOC INFORMATION DISPLAY.2009: 702–705
- **V1 Projection Zone Signals in Human Macular Degeneration Depend on Task, not Stimulus** *CEREBRAL CORTEX*
Masuda, Y., Dumoulin, S. O., Nakadomari, S., Wandell, B. A.
2008; 18 (11): 2483-2493
- **A Display Simulation Toolbox for image quality evaluation** *JOURNAL OF DISPLAY TECHNOLOGY*
Farrell, J., Ng, G., Ding, X., Larson, K., Wandell, B.
2008; 4 (2): 262-270
- **Full-brain coverage and high-resolution Imaging capabilities of passband b-SSFP fMRI at 3T** *MAGNETIC RESONANCE IN MEDICINE*
Lee, J. H., Dumoulin, S. O., Saritas, E. U., Glover, G. H., Wandell, B. A., Nishimura, D. G., Pauly, J. M.
2008; 59 (5): 1099-1110
- **What's in your mind?** *NATURE NEUROSCIENCE*
Wandell, B. A.
2008; 11 (4): 384-385
- **Colour vision: Cortical circuitry for appearance** *CURRENT BIOLOGY*
Wandell, B.
2008; 18 (6): R250-R251
- **Population receptive field estimates in human visual cortex** *NEUROIMAGE*
Dumoulin, S. O., Wandell, B. A.
2008; 39 (2): 647-660
- **ConTrack: Finding the most likely pathways between brain regions using diffusion tractography** *JOURNAL OF VISION*
Sherbondy, A. J., Dougherty, R. F., Ben-Shachar, M., Napel, S., Wandell, B. A.
2008; 8 (9)
- **PREDICTION OF PREFERRED CLARITY FILTERS USING THE S-CIELAB METRIC** *15th IEEE International Conference on Image Processing (ICIP 2008)*
Xu, J., Farrell, J., Matskewich, T., Wandell, B.
IEEE.2008: 361–364

- **SPATIO-SPECTRAL RECONSTRUCTION OF THE MULTISPECTRAL DATACUBE USING SPARSE RECOVERY** *15th IEEE International Conference on Image Processing (ICIP 2008)*
Parmar, M., Lansel, S., Wandell, B. A.
IEEE.2008: 473–476
- **Invited paper: A Display Simulation Toolbox** *International Symposium of the Society-for-Information-Display (SID 2008)*
Farrell, J., Ng, G., Larson, K., Wandell, B.
SOC INFORMATION DISPLAY.2008: 896–899
- **SPATIO-SPECTRAL RECONSTRUCTION OF THE MULTISPECTRAL DATACUBE USING SPARSE RECOVERY** *15th IEEE International Conference on Image Processing (ICIP 2008)*
Parmar, M., Lansel, S., Wandell, B. A.
IEEE.2008: 473–476
- **fMRI measurements of color in macaque and human** *JOURNAL OF VISION*
Wade, A., Augath, M., Logothetis, N., Wandell, B.
2008; 8 (10)
- **PREDICTION OF PREFERRED CLEARTYPE FILTERS USING THE S-CIELAB METRIC** *15th IEEE International Conference on Image Processing (ICIP 2008)*
Xu, J., Farrell, J., Matskewich, T., Wandell, B. A.
IEEE.2008: 361–364
- **Identifying the human optic radiation using diffusion imaging and fiber tractography** *JOURNAL OF VISION*
Sherbondy, A. J., Dougherty, R. F., Napel, S., Wandell, B. A.
2008; 8 (10)
- **Visual field maps in human cortex** *NEURON*
Wandell, B. A., Dumoulin, S. O., Brewer, A. A.
2007; 56 (2): 366-383
- **Contrast responsivity in MT plus correlates with phonological awareness and reading measures in children** *NEUROIMAGE*
Ben-Shachar, M., Dougherty, R. F., Deutsch, G. K., Wandell, B. A.
2007; 37 (4): 1396-1406
- **Differential sensitivity to words and shapes in ventral occipito-temporal cortex** *CEREBRAL CORTEX*
Ben-Shachar, M., Dougherty, R. F., Deutsch, G. K., Wandell, B. A.
2007; 17 (7): 1604-1611
- **Temporal-callosal pathway diffusivity predicts phonological skills in children** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Dougherty, R. F., Ben-Shachar, M., Deutsch, G. K., Hernandez, A., Fox, G. R., Wandell, B. A.
2007; 104 (20): 8556-8561
- **White matter pathways in reading** *CURRENT OPINION IN NEUROBIOLOGY*
Ben-Shachar, M., Dougherty, R. F., Wandell, B. A.
2007; 17 (2): 258-270
- **Laminar profiles of functional activity in the human brain** *NEUROIMAGE*
Ress, D., Glover, G. H., Liu, J., Wandell, B.
2007; 34 (1): 74-84
- **Assessment of stimulus-induced changes in human V1 visual field maps** *JOURNAL OF NEUROPHYSIOLOGY*
Liu, J. V., Ashida, H., Smith, A. T., Wandell, B. A.
2006; 96 (6): 3398-3408
- **No functional magnetic resonance imaging evidence for brightness and color filling-in in early human visual cortex** *JOURNAL OF NEUROSCIENCE*
Cornelissen, F. W., Wade, A. R., Vladusich, T., Dougherty, R. F., Wandell, B. A.
2006; 26 (14): 3634-3641

- **Computational neuroimaging: Maps and tracts in the human brain** *Conference on Human Vision and Electronic Imaging XI*
Wandell, B. A., Dougherty, R. F.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Optical interaction of space and wavelength in high-resolution digital imagers** *Conference on Digital Photography II*
Rodricks, B., Venkataraman, K., Catrysse, P., Wandell, B.
SPIE-INT SOC OPTICAL ENGINEERING.2006
- **Visual field maps and stimulus selectivity in human ventral occipital cortex** *NATURE NEUROSCIENCE*
Brewer, A. A., Liu, J. J., Wade, A. R., Wandell, B. A.
2005; 8 (8): 1102-1109
- **Exploring connectivity of the brain's white matter with dynamic queries** *IEEE Visualization 2004 Conference*
Sherbondy, A., Akers, D., Mackenzie, R., Dougherty, R., Wandell, B.
IEEE COMPUTER SOC.2005: 419-30
- **Children's reading performance is correlated with white matter structure measured by diffusion tensor imaging** *CORTEX*
Deutsch, G. K., Dougherty, R. F., Bammer, R., Siok, W. T., Gabrieli, J. D., Wandell, B.
2005; 41 (3): 354-363
- **Lack of long-term cortical reorganization after macaque retinal lesions** *NATURE*
Smirnakis, S. M., Brewer, A. A., Schmid, M. C., Tolias, A. S., Schuz, A., Augath, M., Inhoffen, W., Wandell, B. A., Logothetis, N. K.
2005; 435 (7040): 300-307
- **Functional organization of human occipital-callosal fiber tracts** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Dougherty, R. F., Ben-Shachar, M., Bammer, R., Brewer, A. A., Wandell, B. A.
2005; 102 (20): 7350-7355
- **Visual field map clusters in human cortex** *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*
Wandell, B. A., Brewer, A. A., Dougherty, R. F.
2005; 360 (1456): 693-707
- **Specializations for chromatic and temporal signals in human visual cortex** *JOURNAL OF NEUROSCIENCE*
Liu, J. J., Wandell, B. A.
2005; 25 (13): 3459-3468
- **Predominantly extra-retinotopic cortical response to pattern symmetry** *NEUROIMAGE*
Tyler, C. W., Baseler, H. A., Kontsevich, L. L., Likova, L. T., Wade, A. R., Wandell, B. A.
2005; 24 (2): 306-314
- **Cone signal interactions in direction-selective neurons in the middle temporal visual area (MT)** *JOURNAL OF VISION*
Barberini, C. L., Cohen, M. R., Wandell, B. A., Newsome, W. T.
2005; 5 (7): 603-621
- **Roadmap for CMOS image sensors: Moore meets Planck and Sommerfeld** *Conference on Digital Photography*
Catrysse, P. B., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2005: 1-13
- **Integrating lens design with digital camera simulation** *Conference on Digital Photography*
Maeda, P. Y., Catrysse, P. B., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2005: 48-58
- **Psychophysical thresholds and digital camera sensitivity: the thousand photon limit** *Conference on Digital Photography*
Xiao, F., Farrell, J. E., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2005: 75-84
- **Occipital-callosal pathways in children - Validation and atlas development** *Workshop on White Matter in the Cognitive Neurosciences*
Dougherty, R. F., Ben-Shachar, M., Deutsch, G., Potanina, P., Bammer, R., Wandell, B. A.
NEW YORK ACAD SCIENCES.2005: 98-?

- **The behavioral and neural effects of long-term deprivation** *Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology*
Fine, I., Wade, A. R., Brewer, A. A., May, M. G., Goodman, D. F., Boynton, G. M., Wandell, B. A., MacLeod, D. I.
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2004: U473-U473
- **Interpreting the BOLD signal** *ANNUAL REVIEW OF PHYSIOLOGY*
Logothetis, N. K., Wandell, B. A.
2004; 66: 735-769
- **Exploration of the brain's white matter pathways with dynamic queries** *IEEE Visualization 2004 Conference*
Akers, D., Sherbondy, A., Mackenzie, R., Dougherty, R., Wandell, B.
IEEE.2004: 377-384
- **Introduction** *Conference of the Summer-Institute-in-Cognitive-Neuroscience*
Movshon, J. A., Wandell, B.
MIT PRESS.2004: 185-186
- **A simulation tool for evaluating digital camera image quality** *Conference on Image Quality and System Performance*
Farrell, J. E., Xiao, F., Catrysse, P. B., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2004: 124-131
- **Integrated color pixels in 0.18- μ m complementary metal oxide semiconductor technology** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Catrysse, P. B., Wandell, B. A.
2003; 20 (12): 2293-2306
- **Long-term deprivation affects visual perception and cortex** *NATURE NEUROSCIENCE*
Fine, I., Wade, A. R., Brewer, A. A., May, M. G., Goodman, D. F., Boynton, G. M., Wandell, B. A., MacLeod, D. I.
2003; 6 (9): 915-916
- **Spectral estimation theory: beyond linear but before Bayesian** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
DiCarlo, J. M., Wandell, B. A.
2003; 20 (7): 1261-1270
- **Functional imaging of the visual pathways** *NEUROLOGIC CLINICS*
Wandell, B. A., Wade, A. R.
2003; 21 (2): 417-?
- **Cognitive neuroscience - Overview** *CURRENT OPINION IN NEUROBIOLOGY*
Wandell, B. A., Movshon, J. A.
2003; 13 (2): 141-143
- **Visual field representations and locations of visual areas V1/2/3 in human visual cortex** *JOURNAL OF VISION*
Dougherty, R. F., Koch, V. M., Brewer, A. A., Fischer, B., Modersitzki, J., Wandell, B. A.
2003; 3 (10): 586-598
- **Preferred color spaces for white balancing** *Conference on Sensors and Camera Systems for Scientific, Industrial, and Digital Photography Applications IV*
Xiao, F., Farrell, J. E., DiCarlo, J. M., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2003: 342-350
- **Color estimation error trade-offs** *Conference on Sensors and Camera Systems for Scientific, Industrial, and Digital Photography Applications IV*
Barnhofer, U., DiCarlo, J. M., OLDING, B., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2003: 263-273
- **Visual areas in macaque cortex measured using functional magnetic resonance imaging** *JOURNAL OF NEUROSCIENCE*
Brewer, A. A., Press, W. A., Logothetis, N. K., Wandell, B. A.
2002; 22 (23): 10416-10426
- **Chromatic light adaptation measured using functional magnetic resonance imaging** *JOURNAL OF NEUROSCIENCE*

- Wade, A. R., Wandell, B. A.
2002; 22 (18): 8148-8157
- **Functional measurements of human ventral occipital cortex: retinotopy and colour** *Discussion Meeting on the Physiology of Cognitive Processes*
Wade, A. R., Brewer, A. A., Rieger, J. W., Wandell, B. A.
ROYAL SOC.2002: 963-73
 - **Optical efficiency of image sensor pixels** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Catrysse, P. B., Wandell, B. A.
2002; 19 (8): 1610-1620
 - **Object-based illumination classification** *PATTERN RECOGNITION*
Hel-Or, H. Z., Wandell, B. A.
2002; 35 (8): 1723-1732
 - **Reorganization of human cortical maps caused by inherited photoreceptor abnormalities** *NATURE NEUROSCIENCE*
Baseler, H. A., Brewer, A. A., Sharpe, L. T., Morland, A. B., Jagle, H., Wandell, B. A.
2002; 5 (4): 364-370
 - **The complex functional Magnetic Resonance Imaging signal**
Liu, J. J., Wade, A., Ress, D., Heeger, D., Wandell, B.
MIT PRESS.2002: 38-39
 - **Common principles of image acquisition systems and biological vision** *PROCEEDINGS OF THE IEEE*
Wandell, B. A., El Gamal, A., Girod, B.
2002; 90 (1): 5-17
 - **Illuminant estimation of natural scene using the sensor correlation method** *9th Congress of the International-Colour-Association (AIC)*
Tominaga, S., Ishida, A., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2002: 918-921
 - **Natural scene-illuminant estimation using the sensor correlation** *PROCEEDINGS OF THE IEEE*
Tominaga, S., Wandell, B. A.
2002; 90 (1): 42-56
 - **Abnormal retinotopic representations in human visual cortex revealed by fMRI** *ACTA PSYCHOLOGICA*
Morland, A. B., Baseler, H. A., Hoffmann, M. B., Sharpe, L. T., Wandell, B. A.
2001; 107 (1-3): 229-247
 - **Scene illuminant classification: brighter is better** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Tominaga, S., Ebisui, S., Wandell, B. A.
2001; 18 (1): 55-64
 - **Image analysis using modulated light sources** *Symposium on Sugarcane and Society*
Xiao, F., DiCarlo, J. M., Catrysse, P. B., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2001: 22-30
 - **Illuminating illumination** *9th Annual Color Imaging Conference*
DiCarlo, J. M., Xiao, F., Wandell, B. A.
SOCIETY IMAGING SCIENCE TECHNOLOGY.2001: 27-34
 - **Visual areas and spatial summation in human visual cortex** *VISION RESEARCH*
Press, W. A., Brewer, A. A., Dougherty, R. F., Wade, A. R., Wandell, B. A.
2001; 41 (10-11): 1321-1332
 - **Visualization and measurement of the cortical surface** *JOURNAL OF COGNITIVE NEUROSCIENCE*
Wandell, B. A., Chial, S., Backus, B. T.
2000; 12 (5): 739-752

- **How small should pixel size be?** *Conference on Sensors and Camera Systems for Scientific, Industrial, and Digital Photography Applications*
Chen, T., Catrysse, P., El Gamal, A., Wandell, B.
SPIE-INT SOC OPTICAL ENGINEERING.2000: 451–459
- **Further research on the sensor correlation method for scene illuminant classification** *8th Annual Color Imaging Conference*
Tominaga, S., Ishida, A., Wandell, B. A.
SOCIETY IMAGING SCIENCE TECHNOLOGY.2000: 189–194
- **Illuminant estimation: Beyond the bases** *8th Annual Color Imaging Conference*
DiCarlo, J. M., Wandell, B. A.
SOCIETY IMAGING SCIENCE TECHNOLOGY.2000: 91–96
- **Rendering high dynamic range images** *Conference on Sensors and Camera Systems for Scientific, Industrial, and Digital Photography Applications*
DiCarlo, J. M., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.2000: 392–401
- **Perceived speed of colored stimuli** *NEURON*
Dougherty, R. F., Press, W. A., Wandell, B. A.
1999; 24 (4): 893-899
- **Color signals in area MT of the macaque monkey** *NEURON*
Seidemann, E., Poirson, A. B., Wandell, B. A., Newsome, W. T.
1999; 24 (4): 911-917
- **Color signals in human motion-selective cortex** *NEURON*
Wandell, B. A., Poirson, A. B., Newsome, W. T., Baseler, H. A., Boynton, G. M., Huk, A., Gandhi, S., Sharpes, L. T.
1999; 24 (4): 901-909
- **Trichromatic opponent color classification** *VISION RESEARCH*
Chichilnisky, E. J., Wandell, B. A.
1999; 39 (20): 3444-3458
- **Topographic organization of human visual areas in the absence of input from primary cortex** *JOURNAL OF NEUROSCIENCE*
Baseler, H. A., Morland, A. B., Wandell, B. A.
1999; 19 (7): 2619-2627
- **Adaptive cluster dot dithering** *JOURNAL OF ELECTRONIC IMAGING*
Hel-Or, H. Z., Zhang, X. M., Wandell, B. A.
1999; 8 (2): 133-144
- **Computational neuroimaging of human visual cortex** *ANNUAL REVIEW OF NEUROSCIENCE*
Wandell, B. A.
1999; 22: 145-?
- **Anisotropic smoothing of posterior probabilities** *Mathematical Theory on Networks and Systems Symposium (MTNS-98)*
Teo, P. C., Sapiro, G., Wandell, B. A.
BIRKHAUSER VERLAG AG.1999: 419–432
- **Comparative analysis of color architectures for image sensors** *Conference on Sensors, Cameras, and Applications for Digital Photography*
Catrysse, P. B., Wandell, B. A., El Gamal, A.
SPIE - INT SOC OPTICAL ENGINEERING.1999: 26–35
- **Color temperature estimation of scene illumination** *7th Annual Color Imaging Conference*
Tominaga, S., Ebisui, S., Wandell, B. A.
SOCIETY IMAGING SCIENCE TECHNOLOGY.1999: 42–47
- **Color image fidelity metrics evaluated using image distortion maps** *SIGNAL PROCESSING*
Zhang, X. M., Wandell, B. A.
1998; 70 (3): 201-214

- **Segmenting cortical gray matter for functional MRI visualization** *6th International Conference on Computer Vision*
Teo, P. C., Sapiro, G., Wandell, B.
NAROSA PUBLISHING HOUSE.1998: 292–297
- **Creating connected representations of cortical gray matter for functional MRI visualization** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
Teo, P. C., Sapiro, G., Wandell, B. A.
1997; 16 (6): 852-863
- **Colour tuning in human visual cortex measured with functional magnetic resonance imaging** *NATURE*
Engel, S., Zhang, X. M., Wandell, B.
1997; 388 (6637): 68-71
- **Retinotopic organization in human visual cortex and the spatial precision of functional MRI** *CEREBRAL CORTEX*
Engel, S. A., Glover, G. H., Wandell, B. A.
1997; 7 (2): 181-192
- **Applications of a spatial extension to CIELAB** *Very High Resolution and Quality Imaging II Conference*
Zhang, X. M., Farrell, J. E., Wandell, B. A.
SPIE-INT SOC OPTICAL ENGINEERING.1997: 154–157
- **Anisotropic smoothing of posterior probabilities** *International Conference on Image Processing*
Teo, P. C., Sapiro, G., Wandell, B. A.
IEEE COMPUTER SOC.1997: 675–678
- **Color image quality metric S-CIELAB and its application on halftone texture visibility** *42nd IEEE-Computer-Society International Conference (CompCon 97)*
Zhang, X. M., Silverstein, D. A., Farrell, J. E., Wandell, B. A.
I E E E, COMPUTER SOC PRESS.1997: 44–48
- **Color appearance of mixture gratings** *VISION RESEARCH*
Bauml, K. H., Wandell, B. A.
1996; 36 (18): 2849-2864
- **Seeing gray through the ON and OFF pathways** *VISUAL NEUROSCIENCE*
Chichilnisky, E. J., Wandell, B. A.
1996; 13 (3): 591-596
- **Effects of patterned backgrounds on color appearance**
HELOR, H. Z., Zhang, X. M., Wandell, B. A.
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.1996: 4890–90
- **Pattern-color separable pathways predict sensitivity to simple colored patterns** *VISION RESEARCH*
Poirson, A. B., Wandell, B. A.
1996; 36 (4): 515-526
- **PHOTORECEPTOR SENSITIVITY CHANGES EXPLAIN COLOR APPEARANCE SHIFTS INDUCED BY LARGE UNIFORM BACKGROUNDS IN DICHOTIC MATCHING** *VISION RESEARCH*
Chichilnisky, E. J., Wandell, B. A.
1995; 35 (2): 239-254
- **MATCHING COLOR IMAGES - THE EFFECTS OF AXIAL CHROMATIC ABERRATION** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Marimont, D. H., Wandell, B. A.
1994; 11 (12): 3113-3122
- **FMRI OF HUMAN VISUAL-CORTEX** *NATURE*
Engel, S. A., Rumelhart, D. E., Wandell, B. A., Lee, A. T., Glover, G. H., Chichilnisky, E. J., Shadlen, M. N.
1994; 369 (6481): 525-525
- **Color appearance in images - Measurements and musings** *2nd IS&T/SID Color Imaging Conference on Color Science, Systems and Applications*

- Wandell, B. A., Chichilnisky, E. J.
SOC IMAGING SCIENCE & TECHNOLOGY.1994: 1–4
- **HOW TO TURN YOUR SCANNER INTO A COLORIMETER** *10th International Congress on Advances in Non-Impact Printing Technologies*
Farrell, J., Sherman, D., Wandell, B.
SOC IMAGING SCIENCE & TECHNOLOGY.1994: 579–581
 - **APPEARANCE OF COLORED PATTERNS - PATTERN COLOR SEPARABILITY** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Poirson, A. B., Wandell, B. A.
1993; 10 (12): 2458-2470
 - **COLOR APPEARANCE - THE EFFECTS OF ILLUMINATION AND SPATIAL PATTERN** *COLLOQUIUM ON IMAGES OF SCIENCE : SCIENCE OF IMAGES*
Wandell, B. A.
NATL ACAD SCIENCES.1993: 9778–84
 - **FUNCTIONAL SEGREGATION OF COLOR AND MOTION PERCEPTION EXAMINED IN MOTION NULLING** *VISION RESEARCH*
Chichilnisky, E. J., Heeger, D., Wandell, B. A.
1993; 33 (15): 2113-2125
 - **WATER INTO WINE - CONVERTING SCANNER RGB TO TRISTIMULUS XYZ** *CONF ON DEVICE-INDEPENDENT COLOR IMAGING AND IMAGING SYSTEMS INTEGRATION*
Wandell, B. A., Farrell, J. E.
SPIE - INT SOC OPTICAL ENGINEERING.1993: 92–101
 - **RETHINKING THE WHITE POINT** *IS&T/SID Color Imaging Conference: Transforms and Transportability of Color*
Farrell, J. E., Wandell, B. A.
SOC IMAGING SCIENCE & TECHNOLOGY.1993: 65–67
 - **LINEAR-MODELS OF SURFACE AND ILLUMINANT SPECTRA** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Marimont, D. H., Wandell, B. A.
1992; 9 (11): 1905-1913
 - **ASYMMETRIC COLOR MATCHING - HOW COLOR APPEARANCE DEPENDS ON THE ILLUMINANT** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Brainard, D. H., Wandell, B. A.
1992; 9 (9): 1433-1448
 - **SOURCES OF SCANNER CALIBRATION ERRORS** *8TH INTERNATIONAL CONGRESS ON ADVANCES IN NON-IMPACT PRINTING TECHNOLOGIES*
Farrell, J. E., DISPOTO, G., Motta, R., Meyer, J., Chichilnisky, E. J., Wandell, B. A.
SOC IMAGING SCIENCE & TECHNOLOGY.1992: 491–495
 - **VISUAL-PERCEPTION - THE NEUROPHYSIOLOGICAL FOUNDATIONS - SPILLMANN,L, WERNER,JS (Book Review)** *CONTEMPORARY PSYCHOLOGY*
Book Review Authored by: Wandell, B. A.
1991; 36 (6): 476-477
 - **CALIBRATED PROCESSING OF IMAGE COLOR** *COLOR RESEARCH AND APPLICATION*
Brainard, D. H., Wandell, B. A.
1990; 15 (5): 266-271
 - **TASK-DEPENDENT COLOR DISCRIMINATION** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Poirson, A. B., Wandell, B. A.
1990; 7 (4): 776-782
 - **SURFACE CHARACTERIZATIONS OF COLOR THRESHOLDS** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Poirson, A. B., Wandell, B. A., VARNER, D. C., Brainard, D. H.

1990; 7 (4): 783-789

- **COMPONENT ESTIMATION OF SURFACE SPECTRAL REFLECTANCE** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Tominaga, S., Wandell, B. A.
1990; 7 (2): 312-317
- **THE ELLIPSOIDAL REPRESENTATION OF SPECTRAL SENSITIVITY** *VISION RESEARCH*
Poirson, A. B., Wandell, B. A.
1990; 30 (4): 647-652
- **ESTIMATION OF SURFACE SPECTRAL REFLECTANCE OF INHOMOGENEOUS OBJECTS** *SYMP ON SENSING AND RECONSTRUCTION OF THREE-DIMENSIONAL OBJECTS AND SCENES*
Tominaga, S., Wandell, B. A.
SPIE - INT SOC OPTICAL ENGINEERING.1990: 112-121
- **THE EFFECT OF THE ILLUMINANT ON COLOR APPEARANCE** *CONF ON PERCEIVING, MEASURING, AND USING COLOR*
Brainard, D. H., Wandell, B. A.
SPIE - INT SOC OPTICAL ENGINEERING.1990: 119-130
- **STANDARD SURFACE-REFLECTANCE MODEL AND ILLUMINANT ESTIMATION** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Tominaga, S., Wandell, B. A.
1989; 6 (4): 576-584
- **BLACK LIGHT - HOW SENSORS FILTER SPECTRAL VARIATION OF THE ILLUMINANT** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
Brainard, D. H., Wandell, B. A., Cowan, W. B.
1989; 36 (1): 140-149
- **COLOR CONSTANCY AND THE NATURAL IMAGE** *PHYSICA SCRIPTA*
WANDALL, B. A.
1989; 39 (1): 187-192
- **DISCRETE ANALYSIS OF SPATIAL-SENSITIVITY MODELS** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
NIELSEN, K. R., Wandell, B. A.
1988; 5 (5): 743-755
- **THE SYNTHESIS AND ANALYSIS OF COLOR IMAGES** *IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE*
Wandell, B. A.
1987; 9 (1): 2-13
- **ANALYSIS OF THE RETINEX THEORY OF COLOR-VISION** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Brainard, D. H., Wandell, B. A.
1986; 3 (10): 1651-1661
- **COLOR CONSTANCY - A METHOD FOR RECOVERING SURFACE SPECTRAL REFLECTANCE** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Maloney, L. T., Wandell, B. A.
1986; 3 (1): 29-33
- **COLOR RENDERING OF COLOR CAMERA DATA** *COLOR RESEARCH AND APPLICATION*
Wandell, B. A.
1986; 11: S30-S33
- **COLOR MEASUREMENT AND DISCRIMINATION** *JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION*
Wandell, B. A.
1985; 2 (1): 62-71

- **A MODEL OF A SINGLE VISUAL CHANNELS RESPONSE TO WEAK TEST LIGHTS** *VISION RESEARCH*
Maloney, L. T., Wandell, B. A.
1984; 24 (7): 633-640
- **VISUAL SENSING BY HUMANS AND COMPUTERS** *BEHAVIOR RESEARCH METHODS INSTRUMENTS & COMPUTERS*
Wandell, B. A.
1984; 16 (2): 88-95
- **REACTION-TIMES TO WEAK TEST LIGHTS** *VISION RESEARCH*
Wandell, B. A., Ahumada, P., Welsh, D.
1984; 24 (7): 647-652
- **DURATION DISCRIMINATION BETWEEN WEAK TEST LIGHTS** *VISION RESEARCH*
Casson, E. J., Wandell, B. A.
1984; 24 (7): 641-645
- **MEASUREMENT OF SMALL COLOR DIFFERENCES** *PSYCHOLOGICAL REVIEW*
Wandell, B. A.
1982; 89 (3): 281-302
- **ADAPTATION IN THE LONG-WAVELENGTH PATHWAYS** *VISION RESEARCH*
Wandell, B. A., Welsh, D., Maloney, L.
1982; 22 (8): 1071-1074
- **DETECTION DISCRIMINATION IN THE LONG-WAVELENGTH PATHWAYS** *VISION RESEARCH*
Wandell, B. A., Sanchez, J., Quinn, B.
1982; 22 (8): 1061-1069
- **A FIELD-ADDITIVE PATHWAY DETECTS BRIEF-DURATION, LONG-WAVELENGTH INCREMENTAL FLASHES** *VISION RESEARCH*
Wandell, B. A., Pugh, E. N.
1980; 20 (7): 613-624
- **DETECTION OF LONG-DURATION, LONG-WAVELENGTH INCREMENTAL FLASHES BY A CHROMATICALLY CODED PATHWAY** *VISION RESEARCH*
Wandell, B. A., Pugh, E. N.
1980; 20 (7): 625-636
- **POOLING PERIPHERAL INFORMATION - AVERAGES VERSUS EXTREME VALUES** *JOURNAL OF MATHEMATICAL PSYCHOLOGY*
Wandell, B., Luce, R. D.
1978; 17 (3): 220-235
- **HUMAN CONE SATURATION AS A FUNCTION OF AMBIENT INTENSITY - TEST OF MODELS OF SHIFTS IN DYNAMIC RANGE** *VISION RESEARCH*
Hood, D. C., ILVES, T., Maurer, E., Wandell, B., BUCKINGHAM, E.
1978; 18 (8): 983-993
- **SPEED-ACCURACY TRADEOFF IN VISUAL DETECTION - APPLICATIONS OF NEURAL COUNTING AND TIMING** *VISION RESEARCH*
Wandell, B. A.
1977; 17 (2): 217-225
- **COLOR PROPERTIES OF CONTRAST FLASH EFFECT - MONOPTIC VS DICHOPTIC COMPARISONS** *VISION RESEARCH*
Yellott, J. I., Wandell, B. A.
1976; 16 (11): 1275-1280
- **ANALYSIS OF NERVE SIGNALS DEDUCED FROM METACONTRAST EXPERIMENTS WITH HUMAN OBSERVERS** *JOURNAL OF PHYSIOLOGY-LONDON*
Wandell, B. A.
1976; 263 (3): 321-329
- **EQUIVALENCE CLASSES OF FUNCTIONS OF FINITE MARKOV CHAINS** *JOURNAL OF MATHEMATICAL PSYCHOLOGY*

Wandell, B. A., GREENO, J. G., EGAN, D. E.
1974; 11 (4): 391-403

PRESENTATIONS

- Human neuroimaging using MRI - Samsung Resesarch (March 27, 2018)