Stanford

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)
- Elected 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 Institue 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

- B.S., University of Michigan , Math and Psych (1973)
- 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

2025-26

- 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)

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)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Joshua Ryu

Postdoctoral Faculty Sponsor

Xi Mou

Doctoral Dissertation Reader (NonAC)

Hyunwoo Gu

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **An image-computable spatio-chromatic receptive field model of the midget retinal ganglion cell mosaic across the retina.** *Journal of computational neuroscience*
  Cottaris, N. P., Wandell, B. A., Brainard, D. H.
  2026
- **Modeling spectroradiometric measurements of oral mucosal tissue autofluorescence** *BIOMEDICAL OPTICS EXPRESS*
  Farrell, J. E., Mou, X., Wandell, B. A.
  2026; 17 (1): 305-321
- **ISETHDR: A Physics-Based Synthetic Radiance Dataset for High Dynamic Range Driving Scenes** *IEEE SENSORS JOURNAL*
  Liu, Z., Shah, D., Wandell, B. A.
  2025; 25 (9): 15261-15269
- **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 populationreceptive 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
- **Modeling spectroradiometric measurements of oral mucosal tissue autofluorescence.** *Biomedical optics express*
  Farrell, J. E., Mou, X., Wandell, B. A.
  2026; 17 (1): 305-321
- **Invited Session I: Focusing on the Human Fovea: Plasticity and stability in human foveal pathways.** *Journal of vision*
  Baseler, H., Morland, A., Wandell, B., Hoffmann, M., Levin, N.
  2025; 25 (5): 1
- **Limitations of 2-dimensional line-scan MRI for directly measuring neural activity.** *Imaging neuroscience (Cambridge, Mass.)*
  Wilson, J. M., Wu, H., Kerr, A. B., Wandell, B. A., Gardner, J. L.
  2024; 2
- **Metadata, Instrumentation, andNetsplaining** *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.
  edited by 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)

- **Ensemble Tractography.** *PLoS computational biology*
  Takemura, H., Caiafa, C. F., Wandell, B. A., Pestilli, F.
  2016; 12 (2)

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

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

- **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
- **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
- **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., Blasinskia, H., Lansel, S., Jiang, H., Fukunishi, M., Farrell, J. E., Wandell, B. A.
  SPIE-INT SOC OPTICAL ENGINEERING.2015
- **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
- **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*
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