Melissa D. Bailey  
Associate Professor  
OD, MS, PhD: OSU

Vincent Billock  
Research Associate Professor  
PhD: OSU

Angela M. Brown  
Professor  
PhD: University of Michigan

Colleen M. Cebulla  
Associate Professor  
Department of Ophthalmology  
MD, PhD: OSU

Heather Chandler  
Associate Professor  
PhD: OSU

Stacey S. Choi  
Associate Professor  
BOptom: University of Auckland  
PhD: University of Auckland

Jacqueline Y. Davis  
Professor of Clinical Optometry  
OD, MS: OSU

Nathan Doble  
Associate Professor  
MS: Imperial College, University of London  
PhD: University of Durham

Bradley E. Dougherty  
Assistant Professor  
OD, MS, PhD: OSU

Michael J. Earley  
Associate Dean of Academic Affairs  
OD, PhD: OSU

Barbara A. Fink  
Professor  
OD: Indiana University  
PhD: OSU

Andrew J. Fischer  
Professor  
Department of Neuroscience  
MSc, PhD: University of Calgary

Roanne E. Flom  
Professor of Clinical Optometry  
OD: UC Berkeley

Nicklaus F. Fogt  
Professor  
OD, MS, PhD: OSU

Andrew T.E. Hartwick  
Associate Professor  
OD, MS: University of Waterloo  
PhD: Dalhousie University

Juan (Jenny) Huang  
Research Assistant Professor  
OD, PhD: University of Houston

Lisa A. Jones-Jordan  
Research Professor  
MS, PhD: OSU

Marjean T. Kulp  
Professor  
OD, MS: OSU

Nicky Y. Lai  
Associate Professor of Clinical Optometry  
OD, MS: OSU

Guoqiang Li  
Associate Professor  
PhD: Chinese Academy of Sciences

Delwin T. Lindsey  
Professor  
Department of Psychology  
PhD: University of Chicago

Jun Liu  
Associate Professor  
Department of Biomedical Engineering  
MS: Zhejiang University  
PhD: OSU

Catherine McDaniel  
Associate Professor of Clinical Optometry  
OD, MS: OSU

G. Lynn Mitchell  
Assistant Professor  
MSc: University of California

Donald O. Mutti  
Professor  
OD, PhD: UC Berkeley

Matthew P. Ohr  
Assistant Professor  
Department of Ophthalmology  
MD: Wright State University

Teng Leng Ooi  
Professor  
BOptom: University of New South Wales  
PhD: University of Alabama, Birmingham

Gilbert E. Pierce  
Professor of Clinical Optometry  
OD, PhD: OSU

Timothy F. Plageman, Jr.  
Assistant Professor  
PhD: University of Cincinnati

Thomas W. Raasch  
Associate Professor  
OD, PhD: UC Berkeley

Andrew J. Toole  
Associate Professor of Clinical Optometry  
OD, MS, PhD: OSU

Dean VanNasdale  
Assistant Professor  
OD: Michigan College of Optometry  
PhD: Indiana University

Heidi Wagner  
Professor of Clinical Optometry  
OD: OSU  
MPh: University of Massachusetts Amherst

Jeffrey J. Walline  
Associate Dean for Research  
OD: UC Berkeley  
MS, PhD: OSU

Deyue (Dion) Yu  
Assistant Professor  
MS: Nankai University  
PhD: University of Minnesota

Karla Zadnik  
Dean  
OD, PhD: UC Berkeley

Aaron B. Zimmerman  
Associate Professor of Clinical Optometry  
OD, MS: OSU

Dr. Melissa Bailey’s laboratory, Lab4Eyes (u.osu.edu/bailey352), is devoted to helping children and adults see better and read better. Dr. Bailey has an active research program, studying ciliary muscle development and how it relates to myopia, accommodative function, and academic achievement. She is also working to develop and commercialize new devices that will allow healthcare providers to make more accurate eye measurements and improve access to vision care for patients around the world. 

Dr. Vincent Billock is interested in color vision, spatial vision, sensory integration, and the neuroscience that underlies it all. His early experimental work was on making vision fail: forbidden colors, melting borders, induced hallucinations, and disrupting perception of time. His current research is bifurcated: an experimental project on time perception in virtual reality (at Miami U) and a series of neural simulations/mathematical models of color perception and sensory information combination.

Dr. Angela Brown studies color vision and infant visual development. She collaborates with Dr. Delwin Lindsey in a study of the perception and naming of colors by the Somali people who live in Columbus Ohio. Recently, Dr. Brown was the first person ever to measure the contrast sensitivity of newborn and premature infants, and she is working to develop her visual acuity and contrast sensitivity test for use in clinical infant vision testing worldwide.

Dr. Colleen Cebulla’s research interests include translational research on retinal disease with a focus on the role of inflammation. Her work aims to identify mechanisms of retinal cell death and gliosis due to retinal detachment, macular degeneration, and other diseases that lead to visual loss. Her work also focuses on gene polymorphisms that may predispose individuals to disease and serve as biomarkers. The ultimate goal is to translate these findings to improved therapies for patients.

While Dr. Heath Chandler’s primary research focus examines the mechanisms by which cataracts and secondary cataracts form, there are several ongoing projects in her laboratory that pertain to protein regulation in the cornea. Research opportunities include: reducing secondary cataract formation through surgical or pharmacologic intervention and improving corneal wound healing. While Dr. Chandler’s research is laboratory-based, the overall goal of her lab is to take bench research findings and clinically apply them to the chairside.

Dr. Stacey Choi’s research interest is the application of adaptive optics (AO) retinal imaging systems to enhance understanding of disease mechanisms of retinal and optic nerve diseases. The AO technology allows us to visualize cellular structures in the retina and optic nerve head in living eyes. We are particularly interested in identifying early biomarkers of these diseases from our in-vivo images and functional tests for earlier diagnosis, hence leading to better prognoses for the patients.

Dr. Jackie Davis’ research interest is issues that impact the visual health of communities. She is currently working with a high school, assisting academically challenged students to receive comprehensive vision exams and glasses when...
needed. Those students needing correction will be offered the opportunity to be refit with contact lenses. Our project will investigate if those students will experience any changes in their self-perception and/or academic performance following this visual health intervention.

**Dr. Nathan Doble**'s research interest is the design, comparison, and use of eye-tracking and head movement recording systems to study the structure and function of the human eye. This is achieved through the use of adaptive optics to overcome the ocular aberration allowing for the ability to observe single cells in-vivo. The overall aim is to use cell based models of early stages of health and disease at a much earlier stage than is currently possible clinically.

**Dr. Bradley Dougherty** conducts research to better our understanding of the impact of vision impairment and to evaluate rehabilitation approaches for patients with low vision. He is currently conducting a study in collaboration with the Department of Ophthalmology of the relationship among stress and depression, inflammation, and treatment outcomes in patients with age-related macular degeneration. Another research focus is road safety in drivers with low vision who use biopic telescopic spectacles.

**Dr. Andrew Fischer**'s research interests are centered on understanding the molecular and cell signaling pathways that influence the ability of support cells in the retina, the Müller glia, to be reprogrammed into stem cells with the capacity to regenerate neurons. Long-term goals are to develop methods to mitigate the precise mechanisms that enhance the neurogenic and regenerative potential of Müller glia-derived progenitor cells to develop novel therapies to treat degenerative diseases of the retina.

In **Dr. Nick Fogt**'s laboratory, eye movements and head movements are explored with a variety of methods. The eye movement studies are focused in two main areas. The first area of study involves eye and head coordination in sports. The second area of study looks at the neural pathways involved in coordination of the two eyes. Problems within the movement coordination between the two eyes are common clinically.

Signals travel from the eye to the brain via retinal ganglion cells (RGCs), and the anatomy and physiology of these neurons are the focus of **Dr. Andy Hartwick**'s research investigations. He is particularly interested in studying the function of a subset of RGCs that capture light in the presence of retinal damage. He uses a variety of techniques to evaluate the optical and visual characteristics of the eye, and novel techniques to design and correct optical defects of the eye. Interests also include the design, fabrication, and measurement of freestyle optical systems, such as progressive addition lenses.

**Dr. Dean VanNasdale**'s primary research focus is advanced retinal imaging, with an emphasis on normal aging changes and pathological changes associated with diabetic retinopathy and age-related macular degeneration. Changes to the normally well-ordered retinal structure can be highlighted using confocal or swept-source optical coherence tomography. The goal of the lab is to distinguish normal aging changes from sight-threatening pathology and detect retinal damage earlier in the disease process using both commercially available and laboratory-based instruments.

As a founding member of the Contact Lens Assessment in Youth Study Group, **Dr. Heidi Wagner**'s research focused on determining whether youth is an independent risk factor for contact lens complications, and has since expanded toward understanding risk factors associated with adverse contact lens events in both children and adults to promote healthy contact lens wear for all ages. Research in **Dr. Jeffrey Walline**'s laboratory focuses on clinical questions in the area of pediatric contact lenses and refractive error. Past research includes comparison of contact lens wear between children and teenagers and attempts to slow myopia progression with alignment-fitted gas permeable contact lenses, children’s perceptions of other children wearing glasses, and the effects of contact lens wear on children’s self-perceptions. Current research focuses on slowing myopia progression with soft bifocal contact lenses.

**Dr. Deway (Dion) Yu**’s research focuses on visual perceptual, perceptual learning, and their neural basis in normal and low vision. Research goals include investigating essential causes of the limitations faced by visually-impaired people, understanding the mechanisms underlying the behavioral and neural changes resulting from learning and visual impairment, developing efficient methods to obtain comprehensive assessment of functional vision, and establishing a visual and neural framework to guide the development of visual diagnostics and rehabilitation programs for visual disorders.

**Dr. Aaron Zimmerman**’s research interests involve sports vision and adverse events with contact lens wear. The majority of the sports vision research has been conducted using eye-tracking and head movement recording devices and assessing how those coordinates with each other while trying to intercept a baseball. At Ohio State we have an excellent patient population for studying adverse events related to contact lens wear. We are continuing to perform studies evaluating corneal conditions.