

Curriculum Vitae

T. ROWAN CANDY MCOptom., Ph.D., FARVO

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Current position:

Professor, Indiana University School of Optometry & Vision Science.

Core faculty in the Cognitive Science & Neuroscience Programs, Indiana University.

Adjunct faculty in the Psychological and Brain Sciences Dept., Indiana University.

Primary research interest:

Typical and atypical development of the human visual system.

Education and Training:

B.Sc. (Hons) Optometry, University of Wales, Cardiff, 1989.

Ph.D. Vision Science, Univ. of California, Berkeley, 1997 (Advisor: Marty Banks)

Post-Doc. Smith-Kettlewell Eye Research Institute (Advisor: Tony Norcia)

Professional honors and activities:

1989 – 1992 Optometric practice, England.

1992 - 1997 Research assistant, Marty Banks' Infant Vision Laboratory, UC Berkeley.

1994 – 1997 Three consecutive William C. Ezell Fellowships from the American Optometric Foundation.

1996 U.C. Berkeley, Elizabeth Roboz Einstein Fellowship in human developmental neuroscience.

1997- 2000 Research Associate, Tony Norcia's laboratory, Smith-Kettlewell Eye Research Institute.

1998 – 2000 Member of the Technical Program Committee for the 'Vision Science and Its Applications' Topical Meeting of the Optical Society of America.

1999 Visiting clinical electrophysiologist at the Great Ormond Street Children's Hospital in London, England.

2000 – 2006 Assistant Professor at the Indiana University School of Optometry.

2001 Fellow of the American Academy of Optometry

2003 – 2007 Program committee for the Association for Research in Vision and Ophthalmology annual meeting.

2005 – 2008 Research committee for the American Academy of Optometry.

2005 – 2011 Topical editor for Optometry and Vision Science.

2006 – 2017 Associate Professor, IU School of Optometry.

2006 – 2011 Member of NIH/CSR Central Visual Processing study section.

2007 Guest editor for a special issue of Optometry and Vision Science, on Infant Hyperopia.

- 2007 – 2011 Associate Dean for Research, Indiana University School of Optometry.
- 2008-2009 Chair of the faculty advisory board for the Indiana University, Bloomington, Women in Science Program.
- 2008-2009 Fellow in the Big Ten universities CIC Academic Leadership Program.
- 2011-pres Associate Topical editor for Optometry and Vision Science.
- 2011-2016 Organizing committee for the Optical Society's annual Fall Vision Meeting.
- 2012-2019 PI (NIH T35 award) and organizer of the Dean's Summer Research Scholar program for IU optometry students.
- 2015 Indiana University Trustees' Teaching Award
- 2016 Fellow of the Association for Research in Vision and Ophthalmology
- 2016 Invited to attend the Lasker/IRRF Initiative on Amblyopia
- 2017 Voted 'Professor of the Year' by the Indiana University chapter of the American Optometric Student Association.
- 2017-pres Professor, IU School of Optometry.
- 2017-pres Vision Sciences Society annual meeting abstract review panel.
- 2017-2019 Vision Sciences Society Young Investigator Award selection committee.
- 2018-pres Editorial Board member, Investigative Ophthalmology & Visual Science.
- 2018 Voted 'Professor of the Year' by the Indiana University chapter of the American Optometric Student Association.
- 2018-pres Editorial Board Member for the Annual Review of Vision Science.
- 2019-pres Executive Associate Dean for Academic Affairs, Indiana University School of Optometry.
- 2020 Vision Sciences Society NEI travel award selection committee.
- 2020 Voted 'Professor of the Year' by the Indiana University chapter of the American Optometric Student Association.

Research Support:

NIH RO1 EY014460 Candy (PI) 07/03-5/22

Accommodation and Defocus in the Infant Visual System - This project investigates the habitual retinal defocus experienced by infants, with a view to understanding the cues available for activity-dependent developmental processes. These processes include the refinement of synaptic connections in visual cortex and the coordination of growth of the eye. Role: PI

Recent Publications:

- Candy TR.** The Importance of the Interaction Between Ocular Motor Function and Vision During Human Infancy. *Annu Rev Vis Sci.* 2019 Sep 15;5:201-221. doi: 10.1146/annurev-vision-091718-014741. PubMed PMID: 31525140.
- Ghahghaei S, Reed O, **Candy TR**, Chandna A. Calibration of the PlusOptix PowerRef 3 with change in viewing distance, adult age and refractive error. *Ophthalmic Physiol Opt.* 2019 Jul;39(4):253-259. doi: 10.1111/opo.12631. PubMed PMID: 31236979; PubMed Central PMCID: PMC6852400.
- Seemiller ES, Port NL, **Candy TR.** (2018) The gaze stability of 4- to 10-week-old human infants. *J Vis.*

- Aug 1;18(8):15. doi: 10.1167/18.8.15. PubMed PMID: 30167673; PubMed Central PMCID: PMC6114941.
- Seemiller ES, Cumming BG, **Candy TR**. (2018) Human infants can generate vergence responses to retinal disparity by 5 to 10 weeks of age. *J Vis.* Jun 1;18(6):17. doi: 10.1167/18.6.17. PubMed PMID: 30029227; PubMed Central PMCID: PMC6025847.
- Chen AM, Manh V, **Candy TR**. (2018) Longitudinal Evaluation of Accommodation During Treatment for Unilateral Amblyopia. *Invest Ophthalmol Vis Sci.* Apr 1;59(5):2187-2196. doi: 10.1167/iovs.17-22990. PubMed PMID: 29801152; PubMed Central PMCID: PMC5916545.
- Wu Y, Thibos LN, **Candy TR**. (2018) Two-dimensional simulation of eccentric photorefractive images for ametropes: factors influencing the measurement. *Ophthalmic Physiol Opt.* Jul;38(4):432-446. doi: 10.1111/opo.12563. Epub 2018 May 7. PubMed PMID: 29736941; PubMed Central PMCID: PMC6097238.
- Kulp MT, Ciner E, Maguire M, Pistilli M, **Candy TR**, Ying GS, Quinn G, Cyert L, Moore B; Vision in Preschoolers-Hyperopia in Preschoolers Study Group. (2017) Attention and Visual Motor Integration in Young Children with Uncorrected Hyperopia. *Optom Vis Sci.* Oct;94(10):965-970. PubMed PMID: 28902771;
- Ying GS, Maguire MG, Kulp MT, Ciner E, Moore B, Pistilli M, **Candy R**; VIP-HIP Study Group. (2017) Comparison of cycloplegic refraction between Grand Seiko autorefractor and Retinomax autorefractor in the Vision in Preschoolers-Hyperopia in Preschoolers (VIP-HIP) Study. *J AAPOS.* Jun;21(3):219-223.
- Troyer ME, Sreenivasan V, Peper TJ, **Candy TR**. (2017) The heterophoria of 3-5 year old children as a function of viewing distance and target type. *Ophthalmic Physiol Opt.* Jan; 37(1): 7-15 doi: 10.1111/opo.12342. Epub 2016 Dec 5 PubMed PMID: 27921322; PubMed Central PMCID: PMC5195916.
- Ciner EB, Kulp MT, Maguire MG, Pistilli M, **Candy TR**, Moore B, Ying GS, Quinn G, Orlansky G, Cyert L; Vision In Preschoolers - Hyperopia In Preschoolers (VIP-HIP) Study Group Writing Committee. (2016) Visual Function of Moderately Hyperopic 4- and 5-Year-Old Children in the Vision in Preschoolers - Hyperopia in Preschoolers Study. *Am J Ophthalmol.* Oct;170:143-152. PubMed PMID: 27477769.
- Wu Y, Sreenivasan V, Babinsky EE, **Candy TR**. (2016) Adaptation of horizontal eye alignment in the presence of prism in young children. *Journal of Vision.* Aug 1;16(10):6. PMID: 27548084.
- Sreenivasan V, Babinsky EE, Wu Y, **Candy TR**. (2016) Objective Measurement of Fusional Vergence Ranges and Heterophoria in Infants and Preschool Children. *Invest Ophthalmol Vis Sci.* May 1;57(6):2678-88. PMID: 27183054; PMCID: PMC4874477.
- Babinsky E, Sreenivasan V, **Candy TR**. (2016) Vergence Adaptation to Short-Duration Stimuli in Early Childhood. *Invest Ophthalmol Vis Sci.* Mar 1;57(3):920-7.
- Seemiller ES, Wang J, **Candy TR**. (2016) Sensitivity of vergence responses of 5- to 10-week-old human infants. *Journal of Vision.* Feb 1;16(3):20.
- VIP-HIP Study Group; Writing Committee.; Kulp MT, Ciner E, Maguire M, Moore B, Pentimonti J, Pistilli M, Cyert L, **Candy TR**, Quinn G, Ying GS. (2016) Uncorrected Hyperopia and Preschool Early Literacy: Results of the Vision in Preschoolers-Hyperopia in Preschoolers (VIP-HIP) Study. *Ophthalmology.* Jan 14. pii: S0161-6420(15)01412-8.

- Babinsky E, Sreenivasan V, **Candy TR.** (2015) Near heterophoria in early childhood. *Invest Ophthalmol Vis Sci.* Jan 29;56(2):1406-15.
- Manh V, Chen AM, Tarczy-Hornoch K, Cotter SA, **Candy TR.** (2015) Accommodative performance of children with unilateral amblyopia. *Invest Ophthalmol Vis Sci.* Jan 27;56(2):1193-207.
- Toner KN, Lynn MJ, **Candy TR,** Hutchinson AK. (2014) The Handy Eye Check: a mobile medical application to test visual acuity in children. *J AAPOS.* Jun;18(3):258-60.
- Babinsky E, **Candy TR.** (2013) Why do only some hyperopes become strabismic? *Invest Ophthalmol Vis Sci.* Jul ;54(7):4941-55.
- Barrett BT, Bradley A, **Candy TR.** (2013) The relationship between anisometropia and amblyopia. *Prog Retin Eye Res.* Sep;36:120-58.

Book Chapters

- Candy, T.R.** (April 2006 & Jan 2020). Development of the Visual System. In: R. Duckman (Ed.) Visual Development, Diagnosis, and Treatment of the Pediatric Patient (pp. 1-50). Baltimore: Lippincott, Williams & Wilkins.
- Candy T.R. & Aslin R.N.** (March 2020) 'Visual Sensory Development' in "Encyclopedia of Infant and Early Childhood Development." Second Edition. Ed. Benson JB. Elsevier.

Recent invited talks:

- 2020: Research seminar at the Center for Perceptual Systems, University of Texas at Austin.
- 2019: Session chair at the Gordon Research Conference on Eye Movements.
- 2018: Minisymposium (EY section) at the ARVO annual meeting.
Invited presentation at the Optical Society's Fall Vision Meeting, Univ. of Reno, Nevada.
Rich lecture series in ophthalmology at the University of Alabama at Birmingham
- 2017: Invited presentation at the Annual Interdisciplinary Conference, Breckenridge, Colorado.
Invited presentation at the University of British Columbia PWIAS workshop on Current Directions in Vision Sciences
Invited presentation at the American Academy of Optometry Annual Meeting in the Ezell Fellows Present symposium
Research seminar at The Ohio State University
Keynote speaker at the Kongsberg Vision Meeting 2017, Norway
- 2016: Research seminar at McMaster University, Hamilton, Ontario.
Invited presentation at the Lasker/IRRF Initiative on Amblyopia at Janelia Farm.
Research seminar at the Smith-Kettlewell Eye Research Institute, San Francisco.
Minisymposium (VI section) at the ARVO annual meeting.
- 2015: Invited presentation at the Child Vision Research Society meeting, Prague.
Invited presentation at the Elite School of Optometry's International Vision Science and Optometry Conference, Chennai, India.