

Mahalakshmi Ramamurthy

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Education and Experience

- Oct 2019 to Present Postdoctoral fellow at Yeatman Lab, Stanford University, California.
- Dec 2018 to June 2019 Medical break
- Feb 2018 to Oct 2018 Post doctoral fellow at Schepens Eye Research Institute, Harvard Medical School, Boston.
- 2012 – 2017 *PhD* Human Vision Laboratory, Developmental and Brain Sciences Program, University of Massachusetts, Boston.
- 2012 *Research Assistant* at the School of Optometry, University of Waterloo, Ontario. (March to July).
- 2012 *Engineering Assistant* – Industrial Research Lab, Short-term contract position. (Jan to June).
- 2009 – 2011 *MSc in Vision Science*, School of Optometry, University of Waterloo, Waterloo, Ontario, Canada.
- 2008 – 2009 *Lecturer* – General Anatomy & Ocular Anatomy, Human Physiology
- 2004 – 2008 *B.Sc. Optometry*, Elite School of Optometry, BITS, Chennai, India.
- 2003 – 2004 *HSSLC* Holy Angels Anglo Indian Higher Secondary School, Chennai, India
- 2001 – 2002 *SSLC* Holy Angels Anglo Indian Higher Secondary School, Chennai, India

Awards and Honors

- 2015 Dissertation Proposal grant award. Internal UMass research grant.
- 2015 Cold Spring Harbor Laboratory course on Vision: Linking Circuits Perception and Behavior.
- 2014 Travel Award - Vision Science Society Conference.
- 2013 Joseph. H. Healey grant. Internal UMass research grant.

- 2012 Dean of Science Award for creative and outstanding research, University of Waterloo.
- 2011 Graduate Research Studentship, University of Waterloo.
- 2010 University of Waterloo Graduate Scholarship & Science Graduate Experience Award
- 2009 University of Waterloo Graduate Scholarship & Science Graduate Experience Award
- 2009 International Master's Student Award, University of Waterloo.
- 2008 Excellence in Human Anatomy- 2nd in Cooper Exam.
- 2007 Excellence in Pediatric Optometry.
- 2007 Dr. S. Srinivasan Award for the Best Project of the Year.
- 2007 Essilor Award in Dispensing Optics.
- 2005 Appreciation award for summer project on, "Literature search on the Duochrome test".

Editorial Activities

Ad hoc Reviewer

Journal of Vision (JoV)

Optical Society of America (OSA)

Research Interests

Functional plasticity in the adult brain

Visual attention (mechanisms and resource allocation)

Developmental disorders Amblyopia, Dyslexia

Visual development and its neural underpinnings

Local Teaching and Training

Teaching of Students in Courses:

Spring 2016	Instructor on record: Course Introduction to behavioral research (Psych 201)	University of Massachusetts, Boston
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Summer 2014	Instructor on record: Course Perception (Psych 355)	University of Massachusetts, Boston
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Fall 2012 Spring 2013	Teaching assistant: 300 level course on Perception	University of Massachusetts, Boston
2009- 2012	Tutorial Instructor – Freshman year Optometry students	University of Waterloo, Ontario, Canada
2009 – 2012	Teaching Assistant – Junior and Senior year Optometry students Visual Perception, Color Perception, Binocular Vision, Motion Perception	University of Waterloo, Ontario, Canada
2008 – 2009	Human Physiology, Freshman year Optometry students	Sankara Eye Foundation, Chennai
2008 – 2009	General and Ocular Anatomy, Freshman year Optometry students	Elite School of Optometry, Chennai

Regional, National and International Invited Teaching and Presentations

2017	Experience dependent plasticity in the adult human visual system. Invited talk at Schepens Eye Research Institute.
2014	New rules for visual selection: Isolating procedural attention. Graduate Talk. University of Massachusetts, Boston
2012	“Acceptability ratings for simulated image distortions at different viewing angles for static complex images” in the 6th European Conference CGIV, Amsterdam, 2012.
2011	“Color Perceptibility thresholds using CRT monitors” in the International Center for Theoretical Physics (ICTP), Trieste, Italy- January, 2011.
2010	Oral presentation on “Effects of modifying the Duochrome test on subjective spherical endpoint of refraction” in the Graduate Student research Conference, University of Waterloo, 2010.
2010	Color Perceptibility thresholds and industrial color norms, at Eight E Vaithilingam Memorial Conference, 2010.
2008	“Effects of changes in Duochrome’s foreground and background on the end point of subjective refraction” in the Seventh E Vaithilingam Memorial Conference, 2008.

Symposium/Conference Attended

Vision Science Society (2016).

Cold Spring Harbor Laboratory course on Vision: Linking Circuits Perception and Behavior (2015).
Vision Science Society (2014).
Vision Science Society (2013).
6th European Conference CGIV (2012).
International Center for Theoretical Physics (ICTP) (2011)
Eight E Vaithilingam Memorial Conference (2010).
27th Center for Vision Science Symposium, University of Rochester (2010).
Seventh E Vaithilingam Memorial Conference (2008).
Sixth E Vaithilingam Memorial Conference (2007).
Elite School of Optometry International Vision Science and Optometry Conference (2006).

Publications, Books/Textbooks, Current Submissions, Thesis

- Ramamurthy. M**, Blaser. E; (2020). Sustained homeostatic response on the normal adult visual system. (Under submission)
- Ramamurthy. M**; (2020). Revisiting the idea of critical periods in development. (Opinion paper in preparation)
- Ramamurthy, M.**, & Blaser, E. (2018). Assessing the kaleidoscope of monocular deprivation effects. *Journal of vision*, 18(13), 14-14.
- Ramamurthy. M**, Blaser. E; (2017) New rules for visual selection: Isolating procedural attention. *Journal of Vision*, 17(2):18. doi: 10.1167/17.2.18.
- Ramamurthy. M**, Blaser E., (2016) Ocular dominance plasticity tested with non-contrast based (kaleidoscopic) monocular deprivation, Vision science society Conference. *Journal of Vision*, 12, 432.
- Ramamurthy. M** & Lakshminarayan. V., (2015), *Light and Sight*, in Ghatak, A., A. Pathak, and V. P. Sharma (eds.), *Light and Its Many Wonders*, National Academy of Sciences, Viva Books, India, p. 368-380, HIGP-2179.
(*This book is a dedication to the International year of Light and light-based technologies 2015*).
- Ramamurthy. M** and Lakshminarayanan. V, (2015) Human Vision and Perception, *Handbook of Advanced Lighting Technology*, Springer, DOI 10.1007/978-3-319-00295-8_46-1.
- Ramamurthy, M.**, Hovis, J., Zsivanov, D., & Lakshminarayanan, V. (2013). Color shifts at different viewing eccentricities on flat-panel rear projection displays in steps of perceptibility threshold units. *Journal of Modern Optics*, 60(14), 1151-1158.
- Ramamurthy. M.**, Hovis. J., and Lakshminarayanan. V, (2012) Acceptability ratings for simulated image distortions of static images corresponding to different viewing

angles for a flat panel display, *Proceedings of CGIV*, Pages 31-35, Society for Imaging Science and Technology.

Ramamurthy, M. Colour discrimination thresholds and acceptability ratings using simulated Microtile displays, 2011.
(https://uwspace.uwaterloo.ca/bitstream/10012/6349/1/Ramamurthy_Mahalakshmi.pdf)

Ramamurthy, M., Varadharajan, S., Devi, Y., & Mohan, S; (2010) Effects of Changing Duochrome's Foreground and Background on the End Point of Subjective Spherical Refraction. In *Frontiers in Optics*. Optical Society of America.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:

Ramamurthy. M, Blaser E., (2016). Ocular dominance plasticity tested with non-contrast based (kaleidoscopic) monocular deprivation, Vision science society Conference. *Journal of Vision*, 12, 432

Ramamurthy. M and Blaser, E; (2014). New rules for visual attention selection. Vision Sciences Society Conference. *Journal of Vision*, 14, 1028

Ramamurthy. M., Varadharajan, S., Devi, Y., & Mohan, S; (2009) Effects of Changing Duochrome's Foreground and Background on the End Point of Subjective Spherical Refraction. Optical Society of America.

Ommani A, Thapa D, **Ramamurthy M**, Lu Y, Lakshminarayanan V, Leys M, Mumford R.B., Odom J. V., Kondo T, Wu F; (2012) An assessment of universal reading acuity chart, American Academy Optometry meeting Phoenix.

T Kondo, F. Wu, D. Thapa, A. Ommani, **M. Ramamurthy**, V. Lakshminarayanan, M.Leys, R.B. Mumford, J. V. Odom, (2012) Evaluation of a Universal Reading Acuity Chart in a Clinical Population, ARVO abstract, program # 4794/D709, Association for Research in Vision and Ophthalmology annual meeting.

Skills

Psychophysical Experimental Design and Analysis.

Programing in Matlab (Psychtoolbox).

Tobii eye tracker system (Tobii Studio).

Near-infrared Spectroscopy (NIRS) imaging tool.

PsyScope (basic programming)

R (basic programming and for statistical analysis)

Experience in monitor calibration routines and color space transformations and color stimulus.

Basic - Python

Statistical software - SPSS, Graph Pad, Sigmaplot, Excel

Clinical Optometry

References

Dr. Vasudevan (Vengu) Lakshminarayanan

Professor, School of Optometry and Vision Science

University of Waterloo,

Waterloo, ON N2L 3G1,

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Telephone: 519-888-4567 ext. 38167

Dr. Erik Blaser

Director, Developmental and Brain Sciences,

Professor, Department of Psychology,

University of Massachusetts,

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Telephone: 617-287-6420