

## Kaccie Y. Li

2132 Roosevelt Avenue  
Berkeley, Ca 94703  
E-mail: kaccie@berkeley.edu  
phone: (510) 684-8503



Date of Birth: 06/08/1984  
Country of Citizenship: USA  
Country of Birth: China PR

### Peer Reviewed Articles

Li KY, Mishra S, Tiruveedhula P and Roorda A. *Comparison of control algorithms for a MEMS-based adaptive optics scanning laser ophthalmoscope*. Proceedings of the 2009 American Control Conference, St. Louis, Missouri, June 10-12, 2009, pp. 3848-3853.

Li KY and Roorda A. *Automated identification of cone photoreceptors in adaptive optics retinal images*. J. Opt. Soc. Am. A, 24(5): 1358-1362, 2007.

Li KY and Yoon G. *Changes in aberrations and retinal image quality due to tear film dynamics*. Opt. Express, 14(25): 12552-12559, 2006.

### Conference Abstracts

Li KY, Tiruveedhula P and Roorda A. *Adaptive optics imaging and analysis of cone photoreceptors near the fovea center*. ARVO. IOVS, 2009. (paper)

Li KY, Tiruveedhula P and Roorda A. *Assessment of a linearized controller on a MEMS adaptive optics system for correcting static and dynamic aberrations*. ARVO (poster). IOVS, 48:4197S, 2008.

Li KY, Mishra S and Roorda A. *Simulation and experimental demonstration of a linearized adaptive optics control loop*. OSA vision meeting (poster). JOV, 7(15): 79a, 2007.

Li KY and Roorda A. *Analysis of cone packing arrangement in adaptive optics images*. OSA vision meeting (paper). JOV, 6(13): 20a, 2006.

Li KY, Yoon G and Pan G. *Variability in retinal image quality with tear film behavior after blink*. ARVO (poster). IOVS, 46:848S, 2005.

### Other Publications

Li KY and Zavislan J. *Coral Reef Bleaching: Linking ocean optics with coral health*. Journal of Undergraduate Research (University of Rochester) 2005; Spring: 23-25.

### Teaching

#### Optometry

2005-fall	Geometric optics (VS203A)	University of California
2007-spring	Physical and instrumental optics (VS203B)	University of California

### Undergraduate

2005-spring	Electromagnetic theory (OPT262)	University of Rochester
2004-fall	Optoelectronics 1: devices (OPT226)	University of Rochester
2003-fall	Geometrical optics (OPT241)	University of Rochester

### **Athletics**

2005-06	Lightweight crew (fall and spring)	University of California
2002-05	Club soccer	University of Rochester

### **Awards and Fellowships**

2009	Best Presentation in Session Award (Adaptive Control Applications II) at the 2009 American Control Conference -- St. Louis, MO, June 10-12, 2009	
2009	International Society for Optical Engineers (SPIE) Scholarship	
2009	National Eye Institute Travel Grant (ARVO)	
2005-07	National Institute of Health Training Grant	
2005	Dean's fellowship, University of California, Berkeley	
2005	Bachelor of Science with high distinction	
2005	Bachelor of Arts Cum Laude	
2001-05	Bausch and Lomb award and scholarship for excellence in science	

### **Research Experience**

#### August 2005 – Present

Graduate student researcher                      School of Optometry, University of California

- MEMS-based deformable mirrors
- Adaptive optics control – modeling, wavefront estimation and reconstruction, real-time implementation, hardware integration
- Adaptive optics for the study of myopia and aniseikonia

**Advisors:** Austin Roorda PhD, Masayoshi Tomizuka PhD, Christine Wildsoet OD PhD

#### June 2004 – June 2005

Technical assistant II                              Center for Visual Science, University of Rochester

- Wavefront sensing
- Tear film dynamics

**Advisor:** Geunyoung Yoon PhD

### **Skills**

Optics:                      Alignment and Matlab simulations

Computers:                C, Mathematica and Matlab

General knowledge of C++ and LabView

GUI design:              LabView, LabWindows/CVI and Matlab

Language:                Native English speaker, proficient in French and Mandarin

## Professional Activities

Student member of:

Association for Research in Vision and Ophthalmology (ARVO)  
International Society for Optical Engineers (SPIE)  
American Society of Mechanical Engineers (ASME)

2009            Session chair – *Robust Control II* at the 2009 American Control Conference  
2008-2009    Webmaster for Photobears, the student chapter for the SPIE and OSA at the  
University of California, Berkeley

## Education

2010    Ph.D. (expected) in vision science  
School of Optometry  
University of California, Berkeley  
2006-08

2005    B.S. in optics  
B.A. in mathematics  
Minor in French  
The Institute of Optics and the Center for Visual Science  
University of Rochester, NY

## Summer education

2006    Fundamental issues in vision research, Marine Biological Laboratory, Woods Hole, MA  
2005    Summer student fellow, Department of Biology, Woods Hole Oceanographic Institution,  
Woods Hole, MA  
2004    Summer undergraduate fellowship program, Center for Visual Science, University of  
Rochester, Rochester, NY  
2003    NSF Research experience for undergraduates, the Institute of Optics, University of  
Rochester, Rochester, NY

## References

Austin Roorda, Associate Professor, School of Optometry and Vision Science Group, University of California, Berkeley, California 94720-2020 E-mail: aroorda@berkeley.edu, (510) 642-2380.

Geunyoung Yoon, Associate Professor, The Institute of Optics, Department of Ophthalmology and Center for Visual Science, University of Rochester, Rochester, New York 14627 E-mail: yoon@cvs.rochester.edu, (585) 273-4998.

Curtis Vogel, Professor, Department of Mathematical Sciences, Montana State University, Bozeman, Montana 59717-2400 E-mail: vogel@math.montana.edu, (406) 994-5332.