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TEACHING INTERESTS

Professional and graduate studies in visual optics, theoretical and applied optics, visual perception, binocular vision, contact lenses, primary care optometry, environmental vision.

RESEARCH INTERESTS

Optical quality of the human eye, corneal topography, spatial vision. Comparison of surgical, contact lens, spectacle and adaptive optics correction of vision. Computer modeling of visual optics. Epidemiology and etiology of refractive error.

EDUCATION

1992 - 1999 Doctor of Philosophy
Indiana University School of Optometry
Committee: Drs. Larry Thibos (chairman), Arthur Bradley, Douglas Horner,
Raymond Applegate, P. Sarita Soni
Major: Vision Science & Physiological Optics; Minor: Computer Science
Dissertation: *Corneal Contribution to the Wavefront Aberration of the Eye*

1991 - 1992 Primary care resident
Northeastern State University College of Optometry, Tahlequah, OK

1975 - 1979 Doctor of Optometry
Indiana University School of Optometry

1973 - 1977 Bachelor of Science
Indiana University School of Optometry

PROFESSIONAL EXPERIENCE

1997 - present Assistant Professor of Optometry
Northeastern State University College of Optometry
Didactic & lab teaching: visual perception, binocular vision, environmental vision
Clinical instructor in primary care, contact lenses, acute care

1983 - present Research optometrist (U.S. Army Reserve)
U.S. Army Aeromedical Research Laboratory, Ft. Rucker, AL

1992 - 1997 Clinical Instructor
Indiana University School of Optometry
Clinical and didactic teaching: Primary care, contact lenses, optics

1991 - 1992 Adjunct Assistant Professor
Northeastern State University College of Optometry, Tahlequah, OK
Clinical and didactic teaching: Primary care, contact lenses

1985 - 1990 Optometry consultant
Umeoka Ophthalmology Clinic & the Sanei Optical Company, Osaka, Japan
Clinical and didactic teaching: Clinical refraction, contact lenses, geometric optics,
physiological optics, ophthalmic optics, ocular anatomy

1984 - 1986 Primary care optometry practice
Tokyo Medical and Surgical Clinic, Tokyo, Japan

1983 - 1985 Contact lens specialty practice
Miura Contact Lens Clinic, Tachikawa, Japan

1979 - 1983 Optometry Officer
U.S. Army Medical Activity, Camp Zama, Japan

1979 Neuroanatomy Assistant Instructor
Indiana University School of Optometry

Associations: Oklahoma Association of Optometric Physicians
 American Optometric Association
 American Academy of Optometry
 American Optometric Foundation
 Optical Society of America
 Fellowship of Christian Optometrists

Licensure: Oklahoma, Indiana, Hawaii

Languages: Japanese (speaking, reading, writing);
Programming: MATLAB, C, BASIC

AWARDS & HONORS

- 1999 Member, Optical Society of America committee to establish standard for measuring and reporting aberrations of the human eye
- 1998 Presider, Workshop on Aberrations, Wavefront Sensing and the Human Eye, Optical Society of America Annual Meeting Symposium.
- 1998 2nd Year Class Instructor of the Year, Optometric Student Association
- 1997 EyeSys Premier Travel Fellowship
- 1997 Certificate of Appreciation, U.S. Army Aeromedical Research Laboratory
- 1996 Promotion to Lieutenant Colonel, U.S. Army Reserve
- 1995 Fellow, American Academy of Optometry
- 1995 William C. Ezell Fellowship, American Optometric Foundation
- 1995- Reviewer: *Optometry and Vision Science*
- 1995 - Reviewer: *Journal of the Optical Society of America A*
- 1994 William C. Ezell Fellowship, American Optometric Foundation
- 1994 Gordon G. Heath Fellowship, Indiana Chapter, Am Acad of Optometry
- 1993 EyeSys Technologies Research Grant
- 1991 American Academy of Optometry Travel Fellowship
- 1990 Japan Optometric Association Certificate of Appreciation,
- 1987 U.S. Army Achievement Medal
- 1983 U.S. Army Commendation Medal
- 1979 John P. Davey Award, Indiana Chapter, American Academy of Optometry
- 1973 Four year Army ROTC Scholarship

SCIENTIFIC & PROFESSIONAL PUBLICATIONS

- 1) Applegate, R., Thibos, L., Bradley, A., Marcos, S., Roorda, A., Salmon, T. & Atchison, D. (2000). *Reference axis selection: A subcommittee report of the OSA working group to establish standards for the measurement and reporting of the optical aberration of the eye*. Visual Science and Its Applications, Technical Digest Series, in press.
- 2) Horner, D.G., Soni, P.S., Salmon, T.O., Swartz, T.S. (1999) *Myopia Progression in Adolescent Wearers of: Soft Contact Lenses vs. Spectacles*, *Optom.Vis. Sci.*, 76, 474-479.
- 3) Horner, D.G., Salmon, T.O. (1998). *Accuracy of the EyeSys 2000 in Measuring Surface Elevation of Calibrated Aspheres*: *Intl. Cont. Lens. Clin.*, 25, 171-177.
- 4) Salmon, T.O., Thibos, L.N. and Bradley, A. (1998). *Comparison of the eye's wave front aberration measured psychophysically and with the Shack-*

- Hartmann wave front sensor*. J Opt Soc Am - A., 15, 2457-2465.
- 5) Salmon, T.O., Rash, C.E. and Mora, J.C. (1998). *Videokeratoscope Accuracy and its Potential Use in Corneal Optics Research*. Ft. Rucker, AL: United States Army Aeromedical Research Laboratory. USAARL Report No. 98-29.
 - 6) Horner, D.G., Salmon, T.O. and Soni, P.S. (1998). *Chapter 17: Corneal Topography*. In: Borish, I.M. and Benjamin, W.J., eds. Borish's Clinical Refraction. Philadelphia: W.B. Saunders Company, 524-558.
 - 7) Salmon, T.O. and Thibos, L.N. (1997). *A New Single Pass Method to Measure the Eye's MTF*. In: Optics & Imaging in the Information Age Proceedings. IS&T - The Society for Imaging Science and Technology, 56-7.
 - 8) Salmon, T.O. and Horner, D.G. (1996). *A new subjective refraction method—the meridional polarized vernier optometer*. J. Am. Optom. Assoc., 67, 599-605.
 - 9) Wang, Y.Z., Thibos, L.N., Lopes, N., Salmon, T.O. and Bradley, A. (1996). *Subjective Refraction of the Peripheral Field Using Contrast Detection Acuity*. J. Am. Optom. Assoc., 67, 584-589.
 - 10) Salmon, T.O. and Horner, D.G. (1995). *Comparison of Elevation, Curvature and Power Descriptors for Corneal Topographic Mapping*. Optom. Vis. Sci., 72, 800-808.
 - 11) Salmon, T.O. (1994). *Minimizing Residual Astigmatism with Rigid Gas Permeable Lens Flexure*. J. Japan Cont. Lens Soc., 35, 285-289.
 - 12) Salmon, T.O. (1993). *Use of Thin Flexible RGP Lenses to Correct Astigmatism*. J. Japan Optom. Assoc., 11, 16-21.
 - 13) Salmon, T.O. (1992). *Beneficial Flexure - Using Thin RGPs to Correct Residual Astigmatism*. Cont. Lens Spectrum, 7, 39-42.
 - 14) Kikkawa, Y. and Salmon, T.O. (1990). *Advantages of the Contact Lens Apical Alignment Fit*. J. Japan Cont. Lens Soc., 32, 290-299.
 - 15) Kikkawa, Y. and Salmon, T.O. (1990). *Rigid Lens Tear Exchange and the Tear Mucous Layer*. Cont. Lens Forum, 1990: Dec., 17-24.
 - 16) Salmon, T.O. (1990). *CLs in the Land of the Rising Sun*. Cont. Lens Forum.1990: Jul., 57-58.
 - 17) Salmon, T.O. (1984). *Overview of Keratoconus and Case Report*. J. Japan Optom.Assoc., 2, 31-41.

SCIENTIFIC PRESENTATIONS

- 1) Salmon, T.O., van de Pol, C., (1999). *Orbscan Accuracy In Measuring Corneal Surface Elevation*. American Academy of Optometry Annual Meeting, Seattle, WA.

- 2) Hatfield, L., Tran, L., Salmon, T.O., Schifanella, L.L., (1999). Post-Lasik Visual Performance In Low Light. American Academy of Optometry Annual Meeting, Seattle, WA.
- 3) Salmon, T.O., Thibos, L.N. (1998). *Relative Contribution of the Cornea and Internal Optics to the Aberrations of the Eye*. American Academy of Optometry Annual Meeting, San Francisco, CA.
- 4) Salmon, T.O., Thibos, L.N. (1998). *The Wavefront Aberration Function of Normal Human Corneas*. American Academy of Optometry Annual Meeting, San Francisco, CA.
- 5) Salmon, T.O., Thibos, L.N. (1998). *Relative balance of corneal and internal aberrations in the human eye*. Optical Society of America Annual Meeting, Baltimore, MD.
- 6) Salmon, T.O., Thibos, L.N., Bradley, A. (1997). *Comparison of wavefront aberration functions measured by the Hartmann-Shack sensor and a psychophysical method for the same eyes*. American Academy of Optometry Annual Meeting, San Antonio, TX.
- 7) Salmon, T.O., Thibos, L.N. (1977). *Eyesys accuracy in surface elevation measurement and estimation of the corneal wavefront aberration function*. American Academy of Optometry Annual Meeting, San Antonio, TX.
- 8) Salmon, T.O., Thibos, L.N., Bradley, A. (1997). *Hartmann-Shack sensor accuracy and precision in measuring aberrations of the eye*. Optical Society of America Annual Meeting Program, Long Beach, CA.
- 9) Salmon, T.O. and Thibos, L.N. (1996). *A New Single Pass Method to Measure the Eye's MTF*. Optical Society of America Annual Meeting Program, 1996, 99.
- 10) Horner, D.G. , Soni, P.S., Salmon, T.O. and Schroeder, T.L. (1996). *Junior High Age Children's Myopia Progression in Soft Lenses vs. Spectacles*. Invest Ophthalmol Vis Sci., 37:3,S1004.
- 11) Horner, D.G. and Salmon, T.O. (1995). *Junior High Age Children's Myopia Progression in Soft Lenses vs. Spectacles*. Optom. Vis. Sci., 72:12s, 96.
- 12) Salmon, T.O. and Horner, D.G. (1995). *Comparison of Surface Elevation, Dioptric Curvature, and Refractive Power Maps of an Ellipsotric Cornea*. Invest. Ophthalmol. Vis. Sci., 36:4, S1032.
- 13) Salmon, T.O. and Horner, D.G. (1994). *Comparison of Four Methods of Corneal Topography Mapping*. Optom. Vis. Sci., 71:12s, 130.
- 14) Horner, D.G., Salmon, T.O., and Soni, P.S. (1994). *Junior High Age Children's*

- Myopia Progression in Soft Lenses vs. Spectacles.* Optom. Vis. Sci., 71:12s, 78.
- 15) Horner, D.G., Salmon, T.O., Moen L.J., and Taylor, L.K. (1994). *Can Residual Astigmatism Account for the Variation in Corrected Acuties in Patients Wearing Soft Toric Lenses?* Optom. Vis. Sci., 71:12s, 56.
 - 16) Salmon, T.O. and Horner, D.G. (1993). *A New Approach To Refraction: The Meridional Polarized Vernier Optometer.* Optom. Vis. Sci., 70:12s, 154-155.
 - 17) Salmon, T.O. (1993). *Minimizing Residual Astigmatism with Rigid Gas Permeable Lens Flexure.* Japan Contact Lens Society Annual Meeting Program, 1994, 78.
 - 18) Salmon, T.O. (1991). *Predicting Residual Astigmatism In RGP Contact Lenses.* Optom. Vis. Sci., 68:12s, 100.