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Erich Phillips, Ph.D.

Professional Profile

Dr. Erich Phillips is a biophysicist specializing in the physiology of human vision. His research includes photoreceptor transduction, vision and visibility in vehicular accidents, roadway lighting, and computer simulation of nighttime environments. Dr. Phillips has expertise in contrast perception, color discrimination, visual conspicuity, vision and lighting issues related to vehicular accidents, vision and lighting issues related to falls, computer simulation and visualization of nighttime scenes, photography and videography, computer animation, stereo-photography, and stereo-videography.

Academic Credentials and Professional Honors

B.S. (Biophysics), University of Michigan, 1980

Ph.D. (Biophysics), The Johns Hopkins University, 1985

Teaching Assistant: Physiology and Advanced Physiology, Cellular Neurophysiology, and Neuropharmacology, The Johns Hopkins University, 1980-1985.

Member: Society of Automotive Engineers

Member: Illuminating Engineering Society of North America

Advisory Member: Roadway Lighting Committee of the Illuminating Engineering Society of North America

Past Chairman: Subcommittee on Headlighting, the Roadway Lighting Committee of the Illuminating Engineering Society of North America

Publications and Conference Abstract

Phillips, E. S., Ward, G. and Ayres, T., "Faithful Presentation of Luminance Contrast: Evaluation of Photographic and Computational Display Methods." Proceedings of the IS&T / SPIE symposium: Electronic Imaging Science and Technology, Human Vision and Electronic Imaging (2002).

Publications and Conference Abstract (*continued*)

Phillips, E. S., "Roadway Lighting," in "Rendering with Radiance: The Art and Science of Lighting Visualization," G. W. Larson & R. Shakespeare, Eds. Morgan Kaufmann Publishers, Inc., San Francisco, California, 1998.

Phillips, E. S., "Computer Visualization of Roadway Lighting. STV vs. Traditional Design Criteria," 2nd International Symposium on Visibility and Luminance in Roadway Lighting, Orlando, Florida, 1993.

Piziali, R. L., Phillips, E. S., Khatua, T. P., and Kost, G., "Vision and Visibility in Vehicular Accident Reconstruction," SAE 1990 *Transaction, Journal of Passenger Cars*, Section 6, Vol. 99, pp. 547-561, 1990.

McCarthy, R. L., Kost, G., Piziali, R. L., Khatua, T. P., Werner, S., and Phillips, E. S., "Technical Aspects of Complex Accident Reconstruction," 1989 *Practicing Law Symposium*, Oct 1989.

"Cytoplasmic Diffusion Rates in Rod Outer Segments: How Much Do the Discs Slow Diffusion along the Rod?" Investigative Ophthalmology Meeting, 1985. (With R. A. Cone).

"Vertebrate Olfactory Discrimination," Seminar, Johns Hopkins University, 1981.

"Phototoxicity: The Damaging Effects of Light on the Retina," Seminar, Johns Hopkins University, 1981.