

# Erich Phillips

## **PIZIALI & ASSOCIATES** BIOENGINEERING AND ACCIDENT ANALYSIS

Erich S. Phillips, Ph.D.

**Dr. Phillips** is a biophysicist specializing in the physiology of human vision. With over 20 years of experience in this area, he 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, and stereo photography and videography. Dr. Phillips' research includes photoreceptor transduction, vision and visibility in vehicular accidents, roadway lighting, and computer simulation of nighttime environments.

### **Background and Professional Honors**

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

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

**Managing Scientist**, Piziali & Associates, Inc.

**Principal Scientist**, Exponent

**Assistant Vice-President**, Forensic Technologies International Corporation

**Managing Scientist**, Failure Analysis Associates, Inc. (currently known as Exponent)

**Research Associate**, Failure Analysis Associates, Inc. (currently known as Exponent)

**Postdoctoral Fellow**, Department of Physiology, University of California San Francisco Medical Center

**Teaching Assistant** (Physiology and Advanced Physiology, Cellular Neurophysiology, and Neuropharmacology), The Johns Hopkins University



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## PIZIALI & ASSOCIATES

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### Professional Affiliations

Advisory Member, Roadway Lighting Committee, Illuminating Engineering Society of North America

Past Chairman, Subcommittee on Headlighting (Roadway Lighting Committee), Illuminating Engineering Society of North America

Society of Automotive Engineers (SAE)

Illuminating Engineering Society of North America

### Selected Publications and Presentations

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

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

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

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

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

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

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

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