Richard C. Juergens

Citizenship – United States of America

Place of Residence – 6421 E Paseo Otoño, Tucson, AZ 85750

Career Overview
Mr. Juergens has over 40 years of experience as an optical designer and optical engineer. He has concentrated mainly on infrared optical systems, but has experience with visible optical systems also. He has designed many different types of telescopes and optical systems, including all refractive, all reflective, and catadioptric systems (combination of refractive and reflective components). Systems he has designed include single field-of-view systems, multi-field-of-view systems, and zoom systems. His work experience has been a combination of individual contributor, functional management of small to large engineering groups, and optical educator.

Mr. Juergens is an expert user of the CODE V optical design software, which is used by many optical designers world-wide, such as those at Zeiss in Germany and Nikon in Japan (both places of which he has visited and given seminars and technical support). He worked 11 years at Optical Research Associates, the suppliers of CODE V, and went around the world giving seminars, lectures, and technical support on how to use CODE V effectively for design and analysis of all kinds of optical systems, including lithographic systems.

Mr. Juergens also teaches courses at his current employment on fundamentals of optical engineering, and gives guest lectures at the College of Optical Sciences of the University of Arizona on various aspects of optical engineering and design.

Current Employment – Raytheon Missile Systems, Tucson, Arizona, 1999 to present.
Mr. Juergens is currently a Senior Engineering Fellow, working in the Optical Engineering Department. He is responsible for the technical accuracy and integrity of the design and analysis of the various optical systems in development and production at RMS. He accomplishes this by performing detailed optical design and analysis, directing the technical efforts of other senior and junior optical engineers, conducting and being a member of preliminary and critical design reviews and other review boards, developing new and better tools for optical analysis, and by mentoring and teaching optical engineering.

Consulting
In 1999 Mr. Juergens started a consulting business called Cimarron Optical Consulting, Inc. The consulting work has been mainly with Optical Research Associates to help develop new directions and capabilities for CODE V, compare it to other optical software, and write macros and teaching aids for CODE V. COC has also done lens design and analysis for other consulting companies.

Previous Employment

Optical Research Associates, Pasadena CA, 1988-1999, Assistant Director of Marketing
Hughes Aircraft Company, El Segundo CA, 1984-1988, Senior Scientist
FLIR Systems, Inc., Portland OR, 1982-1984, Vice President of Engineering
Ford Aerospace, Newport Beach CA, 1970-1982, Section Supervisor, System Analysis and Requirements
Rockwell International, Anaheim CA, 1966-1970, Member of the Technical Staff

Education
B.A. in Physics, California State College at Fullerton, Fullerton CA USA, 1967
M.A. in Physics, University of California, Irvine, Irvine CA USA, 1969

Professional Affiliations
Member, Optical Society of Southern California (mid-70s to present); President, 1980
Member, Optical Society of America (mid-70s to present)
Member, SPIE, The International Society for Optical Engineering (mid-70s to present)
Has been on many program committees, domestically and internationally, and chaired several conferences for SPIE.

Publications (recent list)
R. C. Juergens, "The 2010 IODC lens design problem: The green lens," Proc. SPIE (in publication) (2010).

R. C. Juergens and P. K. Manhart, "2006 IODC lens design problem: The lens shuffler," Proc. SPIE 6342 (2006).

R. C. Juergens, R. H. Shepard, J. P. Schaefer, "Simulation of single-point diamond turning fabrication process errors," Proc. SPIE 5174 (2003).

R. C. Juergens and P. A. Coronato, "Improved method of transfer of FEA results to optical codes," Proc. SPIE 5176 (2003).

R. C. Juergens, "2002 IODC design problem: The diffractive simulator," Proc. SPIE 4832 (2002).

J. F. Forkner and R. C. Juergens, "Computer simulation of manufacturing errors," Proc. SPIE 892.

R. C. Juergens, "The sample problem: A comparative study of lens design programs and users," Proc. SPIE 237 (1980).

Patents
US 7,498,558 B2, Scintillation Hardened Semi-Active Laser Sensor
US 7,540,449 B2, Methods and Apparatus for Non-imaging Guidance System
One other pending