



John R. Rogers, Ph.D.

Professional Experience

2010-Present Principal Engineer/Imaging, Synopsys
2005-2010

Patents

US 9,367,648	Specification-guided user interface for optical design systems
US 8,842,272 B2	Apparatus for EUV imaging and methods of using same
US 7,360,899 B2	Beamsplitting structures and methods in optical systems
US 7,230,766 B2	Optical Combiner Designs and Head Mounted Displays
US 7,196,849	Apparatus and methods for illuminating optical surfaces
US 6,612,693	Panoramic reverse Galilean telescope optics for an underwater diving mask
US 6,337,765 B1	Stereomicroscope
US 6,297,497	Method and device for determining the direction in which an object is located
US 6,069,733 A	Stereomicroscope
US 6,043,890 A	Arrangement for Determining the Position of a Surgical Microscope
US 5,953,114	Method of determining measurement-point position data and device for measuring the magnification of an optical beam path
US 5, 841,149	Method of Determining the Distance of a Feature of an Object from a Microscope, and a Device for Carrying Out the Method
WO9745700 A1	Optical sensor for tracking an aiming mark
WO9745701 A1	Optical sensor for determining the angle of inclination
WO9745706 A1	Optical sensor for finding the angle of rotation of a rotary axis

Publications

J. R. Rogers, M. Zollers, and E. Herman, "Characterizing finely structured ghost images using physical optics propagation methods," International Optical Design Conference, Proceedings of the SPIE, Volume 12798, id. 127982E

J. R. Rogers, "Tolerance eigenmodes of optical systems," Proc. SPIE 11488, Optical System Alignment, Tolerancing, and Verification XIII; 114880A (2020); <https://doi.org/10.1117/12.2567176>

J. R. Rogers, "An optically athermalized lens covering a 200-degree temperature range," Proc. SPIE 11180, International Conference on Space Optics — ICSO 2018; 111808E (2019); <https://doi.org/10.1117/12.2536221>

J. R. Rogers, "Origins and fundamentals of nodal aberration theory," Proc. SPIE 10590, International Optical Design Conference 2017; 105900R (2017); <https://doi.org/10.1117/12.2299712>

B. Crother, J. R. Rogers, "Desensitization in aspheric and freeform optical design," Proc. SPIE 10590, International Optical Design Conference 2017; 1059010 (2017); <https://doi.org/10.1117/12.2293274>

J. R. Rogers, "Global optimization and desensitization," Proc. SPIE 9633, Optifab 2015, 96330S (2015)

J. R. Rogers, "Compensator selection considerations for a zoom lens," Proc. SPIE. 9580, Zoom Lenses V; 958009 (2015) <https://doi.org/10.1117/12.2187647>

J. R. Rogers, "Slope Sensitivities for Optical Surfaces," Proc. SPIE. 9582, Optical System Alignment, Tolerancing, and Verification IX, 958206. (2015)

J. R. Rogers, "Optimization of as-built performance," EOS Annual Meeting (Invited, 2014)

J. R. Rogers, "Passive athermalization: Required accuracy of the thermo-optical coefficients," Proc. SPIE 9293, International Optical Design Conference 2014, 92931A. (2014)

J. R. Rogers, "Secondary color correction and tolerance sensitivity: What can you get away with?" Invited paper, Proc. SPIE 8844, 884404 (2013)

J. R. Rogers, "The importance of induced aberrations in the correction of secondary color," Adv.Opt.Tech. 2(1), p. 41-51 (2013)

J. R. Rogers, "Modeling homogeneity for elements made of block glass," EOS OSJ (2012)

J. R. Rogers, "Orthogonal polynomials and tolerancing," Invited paper, Proc. SPIE 8131, 81310D (2011)

J. R. Rogers, "Homogeneity tolerances for Optical Elements," Invited paper, SPIE Optifab_TD-0736.pdf (2011)

T. Kuper and J. R. Rogers, "Automatic Determination of Optimal Aspheric Placement," International Optical Design Conference, OSA Technical Digest (CD) (Optical Society of America, 2010), paper IThB3.

J. R. Rogers, "A Comparison of Anamorphic and Keystone-Distorted Surface Types for Aberration Correction," Proc. SPIE 7652, International Optical Design Conference 2010; 76520B (2010); <https://doi.org/10.1117/12.871025>

J. R. Rogers, "Aktuelle Entwicklungen in der Optikdesignsoftware," Invited paper, German Optical Society meeting, Wetzlar, Germany (May 2010).

O. Cakmakci, J.P. Rolland, K.P. Thompson and J. R. Rogers, "Design efficiency of 3188 optical designs," SPIE 7060, 70600S, 2008.

J. R. Rogers, "Slope Tolerances," 2008 Invited Paper, ODF08 Taipei, 2008.

J. R. Rogers, "Three-

J. R. Rogers and M. Hopler, "Conversion of Group Refractive Index to Phase Refractive Index," Journal of the Optical Society of America 5, 10, 1595 (1988).

J. R. Rogers and S. Tachihara, "Practical Tilted Mirror Systems," Proc. SPIE 679, 12 (1986).

J. R. Rogers, "Vector Aberration Theory and the Design of Off-Axis Systems," Proc. SPIE 554, 1985 International Lens Design Conference (1986); <https://doi.org/10.1117/12.949196>

J. R. Rogers, "Aberrations of Optical Systems with Large Tilts and Decentrations," Proc. SPIE 399, Optical System Design, Analysis, and Production (1983); <https://doi.org/10.1117/12.935441>

J. R. Rogers, "Fringe Shifts in Multiple Beam Fizeau Interferometry," Journal of the Optical Society of America, 72, 638, (1982).

Awards

Rudolf and Hilda Kingslake Award in Optical Design

Professional Societies

Fellow	SPIE
Member	Optical Society of America
Member	German Society for Applied Optics

Professional Activities

Co-chair, 2014 and 2017 International Optical Design Conference

Reviewer, JOSA A, Optics Express, Optics Letters

Guest Editor, Optical Engineering (2018)

Guest Editor, Advanced Optical Technologies, (2013)

Speaker, Optical Society of Southern California (2016)

Past convener (1992 – 1997), ISO TC172 SC1 WG2