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Simon Magarill, Ph.D.

Professional Experience

2009-Current Optical Engineer, Optical Research Associates
2008-2009 Independent Contractor, iToolS Consulting LLC
1990-2008 Principal Optical Scientist, 3M Precision Optics
Optical Engineer, 3M Precision Optics
1976-1990 Project Engineer, Optical-Mechanical Corporation

Education

1984 Ph.D. Degree in Optics, State Institute of Precision Mechanics and Optics
1976 M.S. Degree in Optics, State Institute of Precision Mechanics and Optics

He has a broad experience in illumination system development, optics software development, and imaging design. He has a diversified experience in development and commercialization of various optical devices. He has strong knowledge in the fields of geometrical/aberrational optics, opto-mechanical field, computer simulation and analysis of optical problems. He is fluent in design and analysis of illumination systems as well as writing *LightTools* and SOLIDWORKS macros for specific engineering problems. While at ORA, he has designed a variety of concentrating solar photovoltaic systems, LED illuminators for medical optics, LED optics for games, LED streetlamps, LED flashlights, LED illuminator for a fluorimeter, holographic display illuminators, and modeled automotive LCDs.

Patents

U.S. 7,460,306	Multi-directional optical element and an optical system utilizing the multi-directional optical element
U.S. 7,422,330	Illumination system and projection system using same
U.S. 7,411,735	Illumination system incorporating collimated light source
U.S. 7,411,734	Color-splitting optical element and an optical system utilizing the color-splitting optical element
U.S. 7,410,261	Multicolor illuminator system
U.S. 7,390,097	Multiple channel illumination system
U.S. 7,261,423	Combined light source for projection display
U.S. 7,226,185	Illumination system with alignment mechanism and method
U.S. 7,222,968	Illumination system with separate optical paths for different color channels
U.S. 7,142,302	Light source spectra for projection displays
U.S. 7,101,050	Illumination system with non-radially symmetrical aperture
U.S. 7,090,357	Combined light source for projection display
U.S. 7,085,063	Multi-directional optical element and an optical system utilizing the multi-directional optical element
U.S. 7,070,301	Side reflector for illumination using light emitting diode
U.S. 7,008,065	Color component aperture stops in projection display system
U.S. 6,976,759	Compound polarization beam splitters

U.S. 6,972,810	Optical systems for reflective LCDs
U.S. 6,970,289	Screen for rear projection display
U.S. 6,877,865	Color component aperture stops in projection display system
U.S. 6,764,181	Polarization arrangement
U.S. 6,719,426	Compound polarization beam splitters
U.S. 6,709,124	Scrolling color sequential illumination system
U.S. 6,643,077	Methods and apparatus for positioning optical prisms
U.S. 6,490,087	Optical systems for reflective LCD's
U.S. 6,461,000	Optical systems for projection displays
U.S. 6,332,688	Apparatus for uniformly illuminating a light valve
U.S. 5,625,738	Apparatus for uniformly illuminating a light valve
U.S. 5,604,624	Optical system for projection display
U.S. 5,552,922	Optical system for projection display
U.S.S.R. 906508	Device for measuring eye's refraction
U.S.S.R. 1013801	Device for measuring veiling glare in lens assembly

Publications and Presentations

"Detailed Optical Characteristics of Multi-Layer Optical Film Polarization Beam Splitter," SID, (2007).

"Advances in polymeric Cartesian polarizing beamsplitter and light engines employing them," Proc. SPIE 6675, (2007).

"Multicolor Edge Function Computation," Proc. SPIE 5867, (2005).

"Performance of LED as the Illumination Source for Microdisplay Rear Projection TV," SID, (2005).

"First Order Property of Illumination System," Proc. SPIE 4768, (2002).

"Optomechanical Sensitivity and Tolerancing," Proc. SPIE 3786, (1999).

"Enhanced Measurement of Decentration in Multielement Lens Assemblies," (with B. Welham), Proc. SPIE 1996, (1993).

"Profile of Grooved Surface," Journal of Optical Technology, (1990).

"Reflection from Surfaces of Lens Stop," Journal of Optical Technology, 2, (1985).

"Diminishing of Dual Reflections in Lens Assemblies," Journal of Optical Technology, 3, (1984).

"Possibility to Decrees Veiling Glare," Journal of Optical Technology, 2, (1983).

"Antireflection Coating as Source of Veiling Glare," Journal of Optical Technology, 12, (1982).

Professional Societies

Member, SPIE The International Society for Optical Engineering
Member, SID The Society for Information Display