

JAMES C. WYANT

Professor, Optical Sciences
Professor, Electrical and Computer Engineering
University of Arizona
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Educational background:

University of Rochester	PhD	Optics	1968
	MS	Optics	1967
Case Institute of Technology	BS	Physics	1965

Employment history:

University of Arizona	Dean, Optical Sciences	2005-2012
Optical Sciences	Director OSC	1999-2005
	Professor	1979-date
	Associate Professor	1976-1979
	Assistant Professor	1974-1976
Electrical and Computer Engineering	Professor	1985-date
University of Rochester	Board of Trustees	2012-date
Case Western Reserve University	Board of Trustees	2010-date
4D Technology Corporation	Board Chairman	2002-date
ILX Lightwave	Board Member	1988-2012
DMetrix	Board Member	2001-2011
Changchun University	Visiting Professor	2005-2010
Optics 1	Board Member	1999-2008
Veeco Instruments	Board Member	1997-1999
WYKO Corporation	President, Board Chairman	1984-1997
University of Rochester	Visiting Professor	1983
CSIRO	Visiting Scientist	1983
Itek Corporation	Manager, Optical Engineering Section	1974
	Optical Engineer	1968-1974
Lowell Technological Institute	Instructor, Math and Physics	1970-1974
	Lecturer, Physics	1969-1972
Libbey-Owens-Ford Glass Co.	Research Assistant	1964-1965 Summers

Awards:

Election to National Academy of Engineering, 2007.

SPIE Gold Medal (Highest award given by SPIE), "For significant contributions to the field of interferometry and optical testing," 2003.

OSA Joseph Fraunhofer Award, "For pioneering work in the development of optical testing technology," 1992.

SPIE Technology Achievement Award, "For development of software and instrumentation for optical quality metrology," 1988.

SPIE Charles S. Vikram Award for Optical Metrology, 2010

Doctorado Honoris Causa, Instituto Nacional de Astrofisica, Optica y Electronica, Puebla, Mexico, 2008

Optical Society of Korea Honorary Member, 2010

Optical Society of India Lifetime Achievement Award, 2007

SPIE Governors' Award, 1979

R&D 100 Award,

"For Model RST Rough Surface Tester," 1993. (WYKO)

"Phase-Cam 1000 – Fizeau Interferometer," 2004 (4D Technology)

"Phase-Cam 4010-MW – Dynamic multiple wavelength interferometer," 2005 (4D Technology)

"DX-40 Array Microscope," 2005 (DMetrix)

"SpeckleCam," 2006 (4D Technology)

Photonics Circle of Excellence Award,

"Development of multiple-wavelength TOPO," 1988.

"TOPO A/F noncontact surface profiler with autofocus," 1990.

"MicroProbe 3D scanning probe microscope," 1992.

"WYKO rough surface tester," 1993.

"Phase-Cam 4000," 2004 (4D Technology)

NASA Goddard Achievement in Excellence Award for its contribution to the James Webb Space Telescope (JWST) project, 2006.

Arizona Technology Council William F. McWhortor Award, 2011.

University of Arizona Technology Innovation Award, 2005.

Tom Brown Excellence in Entrepreneurship Award, 2005.

University of Rochester College of Engineering Distinguished Alumnus Award, 1994.

Arizona "Innovator of the Year" Product Award, 1993.

University of Arizona College of Business and Public Administration Entrepreneurial Fellow, 1989.

Companies Founded or Co-Founded:

Wyant Measurement Systems - 1981
 WYKO Corporation - 1982
 DMetrix - 2001
 4D Technology - 2002

Professional society affiliations:

OSA - Optical Society of America, Member	1966 - date
Fellow	1977 - date
Board of Directors	1979 - 1981, 2008 - 2011
Executive Committee	1980 - 1981, 2008 - 2011
Vice President	2008
President-Elect	2009
President	2010
Immediate Past-President	2011
Presidential Advisory Committee	2012 - date
Nomination Committee (Chair - 2011)	2010 - 2012
Strategic Planning Committee Chair	2012 - date
SPIE – International Society for Optical Engineering, Member	1972 - date
Fellow	1980 - date
Life Member	1987 - date
Board of Governors	1978 - 1987
President-Elect	1985
President	1986
Immediate Past-President	1987
President's Advisory Committee	1987 - date
Optical Society of India	
Lifetime Fellow	2005 - date
Optical Society of Korea	
Honorary Member	2010 - date
Optical Society of Japan	
International Advisory Member	1999 - date

Journal Editor:

Optical Engineering, Sept.-Oct. 1975, "Applications of Holography."
 Optical Engineering, July-Aug. 1977, "Metal Optics."
 Optical Engineering, Sept.-Oct. 1980, "Holography,"
 Associate Editor, Optical Engineering, 1976 – 1984
 Advisory Editor, Optics Letters - 1975
 Associate Editor, JOSA, 1978 -1983
 Topical Editor, JOSA, 1983 -1986
 Associate Editor, Applied Optics, 1983, 1988 - 1992
 Topical Editor, Applied Optics, 1989 - 1992
 Topical Editor, Optics Letters, 1990 - 1992
 Optical Technology Division Editor, Applied Optics, 1992 - 1997
 Associate Editor, Optics Express, 1998 - 2004
 Editor-in-Chief, Applied Optics, 2006 – 2008

Books:

- Applied Optics and Optical Engineering, Vol. VII, Academic Press, 1979 (Co-edited with R. R. Shannon)
- Applied Optics and Optical Engineering, Vol. VIII, Academic Press, 1980 (Co-edited with R. R. Shannon)
- Applied Optics and Optical Engineering, Vol. IX, Academic Press, 1983 (Co-edited with R. R. Shannon)
- Applied Optics and Optical Engineering, Vol. X, Academic Press, 1987 (Co-edited with R. R. Shannon)
- Applied Optics and Optical Engineering, Vol. XI, Academic Press, 1992 (Co-edited with R. R. Shannon)
- Field Guide to Interferometric Optical Testing, SPIE, 2006 (Co-author with Eric Goodwin)

Patents:

- U.S. Patent No. 3,829,219 "Shearing interferometer," 1974.
- U.S. Patent No. 4,025,195 "Image subtraction, addition system," co-inventor: J. F. Ebersole, 1977.
- U.S. Patent No. 4,639,139 "Optical Profiler using improved phase-shifting interferometry," co-inventor: K. Prettyjohns, 1987.
- U.S. Patent No. 4,832,489 "Two-wavelength phase-shifting interferometer and method," co-inventor: K. Creath, 1989.
- U.S. Patent No. 5,398,112 "Method for testing an optical window with a small wedge angle," co-inventor: Chiayu Ai, 1995.
- U.S. Patent No. 5,502,566 "Method and apparatus for absolute optical measurement of entire surfaces of flats," co-inventors: Chiayu Ai, Lian-Zehn Shao, Robert E. Parks, 1996
- U.S. Patent No. 7,057,737 "Common optical-path testing of high numerical aperture wavefronts," co-inventors: James Millerd, Neal Brock, John Hayes, 2006
- U.S. Patent No. 7,057,738 "Simultaneous phase-shifting Fizeau interferometer," co-inventor: James Millerd, 2006
- U.S. Patent No. 7,230,717 "Pixelated phase-mask interferometer," co-inventors: Neal Brock, James Millerd and John Hayes, 2007
- U.S. Patent No. 7,230,718 "Simultaneous phase-shifting Fizeau interferometer," co-inventor: James Millerd, 2007

Students:

- Major advisor of 32 graduated Ph.D. students
- Major advisor of 25 graduated MS students

Publications:

- Author of more than 300 written publications and invited talks on interferometry, holography, and optical testing.

