SPIE. OPTICS + PHOTONICS

CONFERENCE 11813

Tribute to James C. Wyant

The Extraordinaire in Optical Metrology and Optics Education

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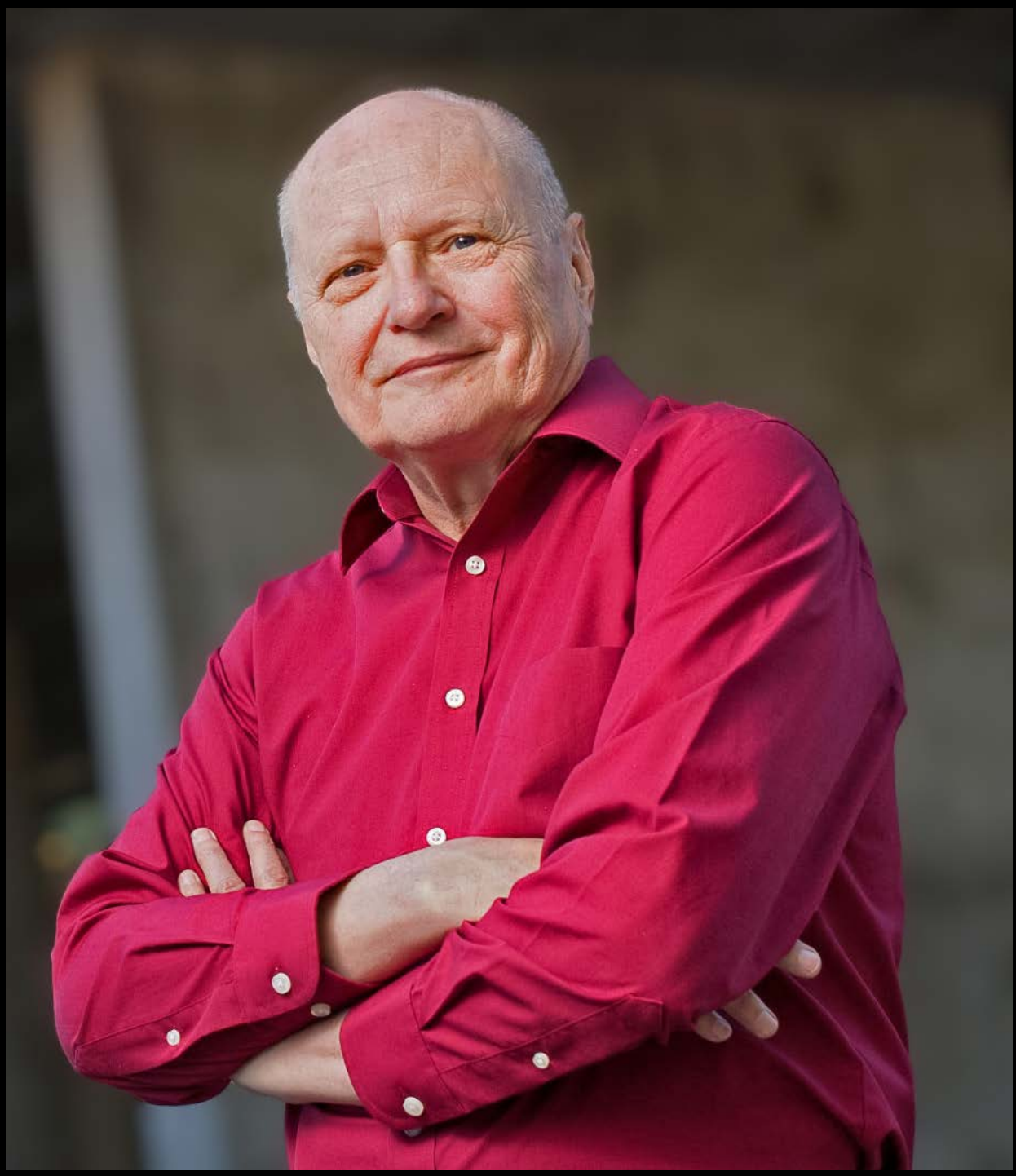

James C. Wyant

James C. Wyant is Professor Emeritus at the College of Optical Sciences at the University of Arizona where he was Director (1999–2005) and Founding Dean (2005–2012). He received a B.S. in physics from Case Western Reserve University and M.S. and Ph.D. in optics from the University of Rochester.

CAREER

Wyant was a founder of WYKO Corporation and served as its president and board chairman from 1984 to 1997. He was also a founder of 4D Technology Corporation and served as its board chairman from 2002–2018. Wyant is a member of the National Academy of Engineering, the National Academy of Inventors, and the International Order of the Knights of Holography; a Fellow of OSA (Optical Society of America), SPIE (International Society of Optics and Photonics), and Distinguished Fellow of OSI (Optical Society of India); an honorary member of the Optical Society of Korea; and former editor-in-chief of the OSA journal Applied Optics. He was the 2010 president of OSA and the 1986 president of SPIE. In April of 2019, the College of Optical Sciences at the University of Arizona was renamed as the James C. Wyant College of Optical Sciences in his honor.

AWARDS

AccountabilIT Lifetime Achievement Award from the Arizona Technology Council

Arizona's "Innovator of the Year" Product Award

Arizona Technology Council William F. McWhortor Award

Doctorado Honoris Causa from the Instituto Nacional de Astrofisica, Optica y Electronica in Puebla, Mexico

Honorary Doctor of Science Degree, University of Rochester

OSA Joseph Fraunhofer Award

SPIE Chandra Vikram Award

SPIE Gold Medal

SPIE Technology Achievement Award

SPIE Visionary Award

Tom Brown Excellence in Entrepreneurship Award

University of Arizona Technology Innovation Award

University of Rochester College of Engineering Distinguished Alumnus Award

CONFERENCE CHAIRS

Virendra N. Mahajan
Wyant College of Optical Sciences (United States)

Daewook Kim
Wyant College of Optical Sciences (United States)

PROGRAM COMMITTEE

Katherine Creath
Optineering (United States) and Wyant College of Optical Sciences (United States)

Joseph A. Shaw
Montana State Univ. (United States)

John B. Hayes
Wyant College of Optical Sciences (United States)

Marija Strojnik
Centro de Investigaciones en Óptica, A.C. (Mexico)

Masud Mansuripur
Wyant College of Optical Sciences (United States)

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WELCOME AND INTRODUCTION

In person: 2 August 2021 • 9:00 AM–9:10 AM PDT

Virendra N. Mahajan, Wyant College of Optical Sciences (United States); **Daewook Kim,** Wyant College of Optical Sciences (United States)

SESSION 1: JAMES C. WYANT: THE EXTRAORDINAIRE

August 2021 • 9:10 AM–10:10 AM PDT

Session Chair: **Virendra N. Mahajan,** Wyant College of Optical Sciences (United States)

11813-1
James Wyant, east to west, industry to academia: a career of impact and innovation

P. Scott Carney, Thomas G. Brown, The Institute of Optics, Univ. of Rochester (United States)

In person: 2 August 2021 • 9:10 AM–9:25 AM PDT

11813-2
Wyant: from academia to industry to academia

Robert Shannon, The Univ. of Arizona (United States)

On demand starting 2 August 2021

11813-3
James C. Wyant: lighting the future

Thomas L. Koch, Wyant College of Optical Sciences (United States)

In person: 2 August 2021 • 9:40 AM–9:55 AM PDT

11813-4
James C. Wyant: lessons from a master entrepreneur

John B. Hayes, Wyant College of Optical Sciences (United States)

In person: 2 August 2021 • 9:55 AM–10:10 AM PDT

Break

Coffee Break 10:10 AM–11:00 AM

SESSION 2: JAMES C. WYANT: THE LEADER

In person: 2 August 2021 • 11:00 AM–12:00 PM PDT

Session Chair: **Daewook Kim,** Wyant College of Optical Sciences (United States)

11813-5
A career's journey with Jim

John E. Greivenkamp, Wyant College of Optical Sciences, The Univ. of Arizona (United States)

In person: 2 August 2021 • 11:00 AM - 11:15 AM PDT

11813-7
Seeing fringes everywhere: Impact of James C. Wyant's contributions to optical metrology

Katherine Creath, Optineering (United States) and Wyant College of Optical Sciences (United States); **Joanna Schmit,** Onto Innovation Inc. (United States); **Goldie Goldstein,** Nikon Research Corp. of America (United States)

On demand starting 2 August 2021

11813-37
A career working with Jim Wyant

Erik Novak, James Millerd, Neal Brock, 4D Technology Corp. (United States)

In person: 2 August 2021 • 11:30 AM–11:45 AM PDT

11813-8
Celebrating the many contributions of Jim Wyant

Joseph W. Goodman, Stanford Univ. (United States)

On demand starting 2 August 2021

Break

Lunch Break 12:00 PM–2:30 PM

SESSION 3: JAMES C. WYANT: THE EDUCATOR

In person: 2 August 2021 • 2:30 PM–3:50 PM PDT

Session Chair: **Masud Mansuripur,** Wyant College of Optical Sciences (United States)

11813-9
Jim Wyant's impactful philanthropic strategy to advance higher education

Kaye Rowan, Wyant College of Optical Sciences, The Univ. of Arizona (United States)

In person: 2 August 2021 • 2:30 PM–2:45 PM PDT

11813-10
Dr. Wyant: educator, expert, and entrepreneur

Isaac L. Trumper, Logan R. Graves, ELE Optics Inc. (United States)

In person: 2 August 2021 • 2:45 PM–3:00 PM PDT

11813-11
The evolution of OPTI513 Optical Testing course at the Wyant College of Optical Sciences

Daewook Kim, Wyant College of Optical Sciences (United States)

In person: 2 August 2021 • 3:00 PM–3:10 PM PDT

11813-12
James C. Wyant: optical disciple, educator, physician, and producer

Lawrence D. Brooks, PAACR (United States)

In person: 2 August 2021 • 3:10 PM–3:25 PM PDT

11813-13
10.6 micron interferometry and beyond

Osuk Y. Kwon, Consultant (United States)

On demand starting 2 August 2021

11813-14
James C. Wyant: my academic boss

Virendra N. Mahajan, Wyant College of Optical Sciences, The Univ. of Arizona (United States)

In person: 2 August 2021 • 3:40 PM–3:50 PM PDT

Break

Coffee Break 3:50 PM–4:20 PM

SESSION 4: JAMES C. WYANT: THE METROLOGIST

In person: 2 August 2021 • 4:20 PM - 5:35 PM PDT

Session Chair: **John B. Hayes,** Wyant College of Optical Sciences (United States)

11813-16
If you can't measure it, you can't make it: the importance of metrology in optics fabrication
Jessica DeGroote Nelson, Michael Mandina, Rick Plympton, Optimax Systems, Inc. (United States)

In person: 2 August 2021 • 4:20 PM–4:35 PM PDT

11813-17
The ubiquity of Fourier transformation in optical sciences
Masud Mansuripur, Wyant College of Optical Sciences, The Univ. of Arizona (United States)

In person: 2 August 2021 • 4:35 PM–4:50 PM PDT

11813-19
Optical metrology: methodological analogy and duality revisited
Mitsuo Takeda, Utsunomiya Univ. (Japan)

On demand starting 2 August 2021

11813-18
Computer-generated holograms for testing aspheres and freeforms: a review
Chunyu Zhao, Arizona Optical Metrology LLC (United States)

In person: 2 August 2021 • 5:05 PM–5:20 PM PDT

11813-20
High-speed Fizeau interferometry and digital holography for dynamic phenomena measurement
Toyohiko Yatagai, Utsunomiya Univ. (Japan)

On demand starting 2 August 2021

SESSION 5: JAMES C. WYANT: THE INSPIRER

In person: 3 August 2021 • 9:00 AM - 10:00 AM PDT

Session Chair: **Hong Hua,** Wyant College of Optical Sciences (United States)

11813-23
Paths of partial coherence: Jim Wyant's influence on my professional career
H. Philip Stahl, NASA Marshall Space Flight Ctr. (United States)

In person: 3 August 2021 • 9:00 AM–9:15 AM PDT

11813-24
Northern influence: how James Wyant helped grow the optics community in Montana
Joseph A. Shaw, Montana State Univ. (United States); **Lawrence Johnson,** Montana Photonics Industry Alliance (United States)

In person: 3 August 2021 • 9:15 AM–9:30 AM PDT

11813-25
The surface PSD and image degradation due to mid-spatial-frequency optical fabrication errors
James E. Harvey, Photon Engineering LLC (United States)

In person: 3 August 2021 • 9:30 AM–9:45 AM PDT

11813-26
Wavefront year for analyzing and testing in 2020
Sen Han, Univ. of Shanghai for Science and Technology (China)

On demand starting 3 August 2021

Break

Coffee/Exhibition Break 10:00 AM–10:30 AM

SESSION 6: JAMES C. WYANT: THE ENABLER

In person: 3 August 2021 • 10:30 AM - 11:45 AM PDT

Session Chair: **Joseph A. Shaw,** Montana State Univ. (United States)

11813-28
Surface slope tolerances: the transition from geometric raytracing to scalar wave theory
John R. Rogers, Synopsys, Inc. (United States)

In person: 3 August 2021 • 10:30 AM–10:45 AM PDT

11813-27
Many facets of interferometry: a deceptively simple and powerful measurement technique
Marija Strojnik, Centro de Investigaciones en Óptica, A.C. (Mexico)

On demand starting 3 August 2021

11813-30
Space-based camera systems
Peter H. Smith, The Univ. of Arizona (United States)

In person: 3 August 2021 • 11:00 AM–11:15 AM PDT

11813-29
Improve TFTP and mechanical projector for complex dynamic three-dimensional shape measurement
Yihang Liu, Wenjing Chen, Haihua Zhang, Zhoujie Zhou, Qican Zhang, Sichuan Univ. (China)

On demand starting 3 August 2021

Break

Lunch/Exhibition Break 11:30 AM–2:00 PM

SESSION 7: JAMES C. WYANT: THE FUTURIST

In person: 3 August 2021 • 2:00 PM–3:30 PM PDT

Session Chair: **Jessica DeGroote Nelson,** Optimax Systems, Inc. (United States)

11813-32
High-speed interferometry for James Webb Space Telescope testing

Ritva A. Keski-Kuha, NASA Goddard Space Flight Ctr. (United States); **Babak N. Saif,** Space Telescope Science Institute (United States); **Lee D. Feinberg,** NASA Goddard Space Flight Ctr. (United States)

In person: 3 August 2021 • 2:00 PM–2:15 PM PDT

11813-33
High-speed 3D imaging with digital fringe projection techniques

Song Zhang, Purdue Univ. (United States)

On demand starting 3 August 2021

11813-34
Freeform optics in wearable displays

Hong Hua, Wyant College of Optical Sciences, The Univ. of Arizona (United States)

In person: 3 August 2021 • 2:30 PM–2:45 PM PDT

11813-6
James Wyant's contributions to polarization aberration theory

Russell A. Chipman, Wyant College of Optical Sciences (United States)

In person: 3 August 2021 • 2:45 PM–3:00 PM PDT

11813-36
Personal connections and admiration of Jim Wyant

John H. Bruning, Null (United States)

On demand starting 3 August 2021

11813-35
Lessons I learned from working for Jim Wyant, but didn't appreciate until later in my career (or Phase shift interferometry and the coherence properties of semiconductor lasers)

Elliot Eichen, Choyu Networks (United States)

In person: 3 August 2021 • 3:15 PM–3:30 PM PDT

CLOSING REMARKS

In person: 3 August 2021 • 3:30 PM–3:40 PM PDT

Virendra N. Mahajan, Wyant College of Optical Sciences (United States); **Daewook Kim,** Wyant College of Optical Sciences (United States)

TUESDAY SMOOTHIES AND COOL JAZZ SCENE

In person: 3 August 2021 • 3:00 PM - 4:00 PM PDT

Cool off with a smoothie while you network with other conference goers and chill with a smooth Jazz trio.

SPIE.

SPIE International Headquarters
PO Box 10
Bellingham, WA 98227-0010 USA
Tel: +1 888 504 8171 / Fax: +1 360 647 1445
help@spie.org / SPIE.org

SPIE Europe Offices
2 Alexandra Gate
Ffordd Pengam, Cardiff, CF24 2SA UK
Tel: +44 29 2089 4747 / Fax: +44 29 2089 4750
info@spieeurope.org / SPIE.org