

# ALEXIS VOGT

Endowed Chair & Professor of Optics at Monroe Community College  
Executive Director of Workforce & Higher Education at AmeriCOM

## Education

Ph.D. in Optics, University of Rochester, The Institute of Optics

B.S. in Optics, University of Rochester, The Institute of Optics

## Technical activities/interests

- Teaching Optics, Photonics, and Imaging
- Workforce Development
- Educational Outreach
- Advocacy for the optics industry at the local, state, and national levels
- Polarization engineering, coherence theory, and microscopy

## Service to the technical community

- Current Board of Director Positions:
  - New York Photonics/Rochester Regional Photonics Cluster Board of Directors
  - American Precision Optics Manufacturers Association (APOMA) Board of Directors
  - Rochester Museum & Science Center Board of Directors
  - Exploring Racism Group Steering Committee
  - Monroe Community College Optics Advisory Board
  - Brighton Boys Lacrosse Club Board of Directors
- Director's Advisory Council for Institute of Optics at the University of Rochester
- University of Rochester Hajim School of Engineering Visiting Committee

## Service to SPIE

- SPIE Education and Outreach Committee member
- Created short course “Fundamentals of Optical Engineering”; Instructor since 2017
- Organized and hosted Student Day at SPIE Optifab conferences 2019, 2021, 2023
- 2018 SPIE Women in Optics Diversity & Inclusion keynote speaker “Raising the Bar While Raising Kids: Increasing Diversity in Optics Careers” [https://spie.org/news/pw18\\_vogt-#\\_=\\_](https://spie.org/news/pw18_vogt-#_=_)
- Frequent participant, speaker, instructor, exhibitor, and panel member at SPIE conferences
- Featured in video for SPIE TV “Learn about Careers as an Optics and Photonics Technician” <https://www.youtube.com/watch?v=eVbTtAjWYFA>
- Featured in SPIE Faces of Photonics: [https://spie.org/news/faces-of-photonics\\_alexis-vogt#\\_=\\_](https://spie.org/news/faces-of-photonics_alexis-vogt#_=_)
- Featured in 2019 Women in Optics Planner: <https://spie.org/community-support/equity-diversity-inclusion/women-in-optics/2019-wio-planner/alexis-vogt>
- 2021 SPIE Women in Optics Series speaker

## Professional honors

- 2023 SPIE María J. Yzuel Educator Award Recipient
- 2020 IEEE Technical Skills Educator Award Recipient

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- Senior Member of Optica
- Fellow of The American Academy of Optometry
- 2022 Rochester Business Journal Power 50 List for Technology Recipient
- 2021 New York Photonics/Rochester Regional Photonics Cluster Leadership Award Recipient
- 2021 Rochester Museum & Science Center “The Changemakers: Rochester Women Who Changed the World”
- 2018 National Women’s Hall of Fame Keeper of the Flame Recipient
- 2017 New York Photonics/Rochester Regional Photonics Cluster Education Award Recipient
- 2016 Rochester Business Journal “40 Under Forty” Recipient
- 2015 IDEX KEEP Award Recipient
- 2012 Bausch + Lomb CEO Award Recipient

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## Election Statement

Our industry is the future. Remarkable research and technological advancements across light-based technologies have been, and will continue to be, developed by members of SPIE. I welcome the opportunity to serve as one of its directors and will set, as one of my goals, the development of a more diverse, inclusive Society that values the work of a Technician as much as the work of a PhD or CEO.

I envision the future of SPIE as a community dedicated to inspiring one another — today and as we welcome our next generation of members. We need to increase opportunities for collaboration. For celebrating our differences. We are a stronger people, a stronger society, a stronger group of companies, a stronger organization with increased diversity – diversity of thought, diversity of race, diversity of gender, diversity of ethnicity and of socio-economic status.

I did not grow up with a desire to become an optical engineer; I didn't even know what optics was. I wasn't raised by scientists or engineers. However, as an undergraduate at the University of Rochester, I did have the good fortune to heed the advice of a friend who suggested I take Intro to Optics. Taught by an inspiring professor, this introduction to our remarkable field changed my life. I experienced the power an educator can have on a young person's trajectory and the importance of having a role model. Upon graduating with my bachelor's degree and PhD in optics from the Institute of Optics at the University of Rochester, I worked at Bausch + Lomb designing contact lenses and intraocular lenses. From there I moved to Melles Griot/IDEX as senior product manager and business development manager, in the manufacturing of optical systems used for DNA sequencing and semiconductor chip applications.

While at IDEX I became acutely aware of the need for Optics Technicians – the people using their hands to manufacture and test everything designed by the engineers. Product shipments, the lifeblood of manufacturing companies, literally depended upon these Technicians. I quickly learned that this problem was affecting companies around the world. This served as my motivation to make the move into academia and lead the, at-the-time, nearly defunct precision optics program at Monroe Community College, the first college worldwide to award associate degrees in the field. I am now a tenured professor of optics and the endowed chair of the Optical Systems Technology program, and have secured more than \$20 million to expand the program's scope and impact.

Under my leadership, laboratory renovations yielded 7,500 square feet of teaching space in four optics labs making use of \$10 million of state-of-the-art optics manufacturing and metrology equipment. Program enrollment and completion rates increased exponentially. There were five (5) students on-board back when I joined the program; today's enrollment total reflects an increase of 2,480%, with the number of graduates increasing by 1,075%. Proudly, the job placement rate for all of our graduates is 100%.

Very important to me as part of this growth, has been to also diversify the program. Ongoing recruiting efforts to populations historically underrepresented in STEM have contributed improvements in student diversity with 23% female and 25% people of color.

Building upon my success at MCC, I also serve as executive director of workforce and higher education at AmeriCOM, the American Center for Optics Manufacturing, to expand the MCC model to AmeriCOM partner colleges, faculty, students, and employers across the nation.

With a commitment to the future of optics, photonics, and imaging industries, I dedicate time to youth outreach and am involved with coordinating and presenting of optics demonstrations to children and educators both within the Rochester community and internationally. I rolled out an optics dual enrollment program which has trained more than 2,000 high school students in 19 different high schools.

My work with the US Department of Defense, the Buffalo Rochester Syracuse Tech Hub, NSF STELLAR, AIM Photonics, APOMA, the Congressional Optics & Photonics Caucus, NY Photonics, and other organizations only highlights the need for a more robust optics workforce.

Now is the time for SPIE to play a pivotal role in developing that workforce.

I am grateful for everyone who has helped me along the way and I hope the work I do inspires future generations, particularly girls, to pursue science.