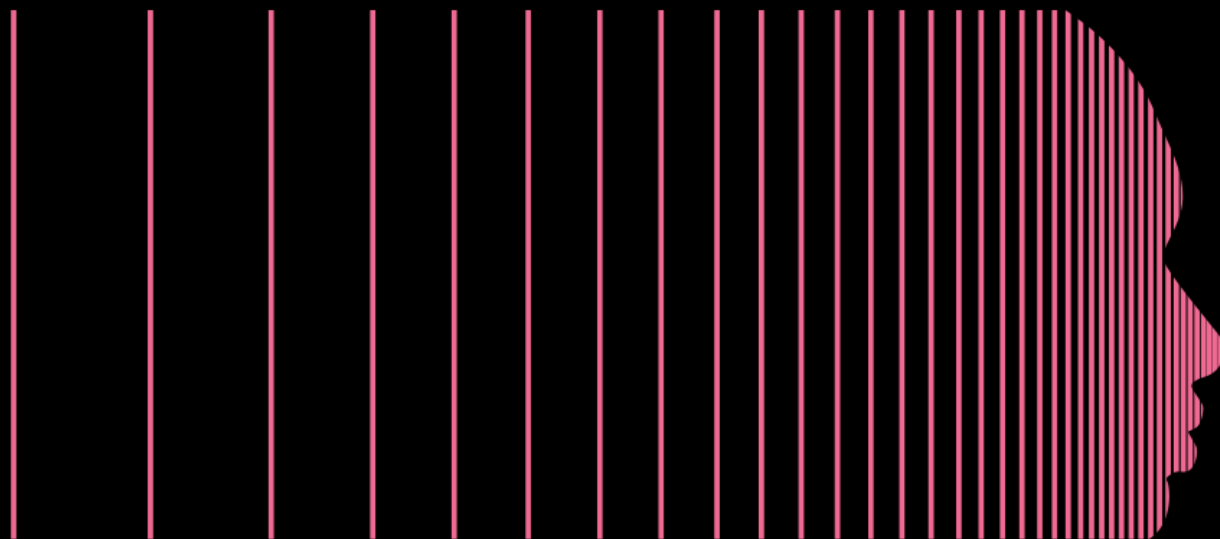


OPTICA
FOUNDATION



AMPLIFY
OPTICS IMMERSION
PROGRAM

07 – 10 October 2023
Tacoma, Washington, USA

optica.org/AmplifyImmersion

Founding Donor



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Amplify Black Voices in Science

There are scientists and engineers who exemplify Black achievement in science from all over the world. However, inequalities in access and opportunities as well as a disparity in recognition and visibility has resulted in a persistent underrepresentation of Black scientists. At Optica, we have committed ourselves to work to change this, particularly for our optics and photonics community.

The *Amplify Optics Immersion Program* is one example of this commitment. This program is designed to highlight the research, technology and careers opportunities for Black undergraduate and master's students. Co-located with Optica's annual meeting *Frontiers in Optics (FiO)*, participating students attend a dedicated program and participate in FiO technical and professional development sessions and student activities.

Learn more about the Amplify Black Voices programs as well as other funding and engagement opportunities at optica.org/diversity.

Optica Code of Conduct & Anti-Harassment Policy

In order to preserve a climate that encourages both civil and fruitful dialogue, we reserve the right to suspend or terminate participation for anyone who violates the Optica Code of Conduct. It is Optica policy that all forms of bullying, discrimination, and harassment, sexual or otherwise, are prohibited in any Optica events or activities, including digital forums. Harassment consists of unwanted, unwelcomed and uninvited comments or behavior that demeans, threatens or offends another. For complete policy information visit optica.org/codeofconduct. If you wish to report bullying, discrimination, or harassment you have witnessed or experienced, you may do so through the following methods:

- use the online portal optica.org/IncidentReport
- email CodeOfConduct@optica.org

Amplify Optics Immersion Program Agenda

7-10 October 2023 ♦ Tacoma, Washington USA

Saturday 7 October 2023

Afternoon **Arrivals**

17:30 – 19:00 **Welcome Reception, *Rustin, Marriott***

Sunday 8 October 2023

07:30 – 08:30 **Breakfast, *Chambers Foyer, Marriott***

08:30 – 08:45 **Welcome, *Chambers I, Marriott***
Elizabeth Rogan, CEO, Optica, USA
Marcia Lesky, Sr. Director Diversity & Foundation Programs, Optica, USA

08:45 – 09:15 **Introductions & Kick-off with Master of Ceremonies**
Peter Delfyett, CREOL, UCF, USA

09:15 – 10:15 **Enabled By Optics**
Biomedical Optics – Caroline Boudoux, Polytechnique Montréal, Canada
Fabrication, Design & Instrumentation – Jannick Rolland, University of Rochester, USA
Information Acquisition, Processing & Display – Adam Fleisher, NIST, USA
Laser Systems – Johannes Trbola, Trbola Engineering, Germany
Photonics & Opto-Electronics – Winnie Ye, Carleton University, Canada
Vision & Color Division – Brian Vohnsen, University College Dublin, Ireland

10:15 – 10:30 **Break**

10:30 – 11:30 **An Engineers Path to NASA & a Career in Light Management**
Lyndsey McMillon-Brown, NASA Glenn Research Center, USA

11:30 – 12:30 **The L.A.S.T. Lecture**
Donnell Walton, Corning, Inc., USA

12:30 – 13:30 **Networking Lunch**

13:30 – 14:30 **Opportunities in Optics**
Kenneth Barber, Edmund Optics, USA
Faezeh Gholami, IBM, USA
Ivy Krystal Jones, Hampton University, USA
Justus Ndukaife, Vanderbilt University, USA

14:30 – 15:30 **Paving the Way**
Jami Valentine Miller, PhD, Founder, African American Women in Physics, Inc. & Primary Patent Examiner, U.S. Patent and Trademark Office, USA

Sunday 8 October 2023, continued

- 15:30 – 16:00 **Break**
- 16:00 – 17:30 **Being Black in STEM**
George Okyere Dwapanyin, University of St Andrews, UK
Timothy Oshiobughie Imogore, Friedrich-Schiller-Universität Jena, Germany
Joshua Burrow, Brown University, USA
- 17:30 – 18:00 **Q&A and Closing**
Peter Delfyett, CREOL, UCF, USA
- 18:00 – 19:00 **Joint Student Leadership dinner, [Exhibit Hall Foyer 5th floor, Convention Center](#)**
- 19:00 – 22:00 **Ghost Tours, [McMenamins Elks Temple. 565 Broadway, Tacoma, WA 98402](#)**

Monday 9 October 2023

- 07:30 – 08:30 **Breakfast, [Commencement I and II, Marriott](#)**
- 08:00 – 8:30 **Breakfast Talk: A Word About Frontiers in Optics from the Chair**
Turan Erdogan, Plymouth Grating Laboratory, Inc., USA
- 08:30 – 12:00 **Free time to Explore the Conference**
- 12:00 – 13:00 **Joint Lunch, [Chambers I, Marriott](#)**
DLS, Symposium on Undergraduate Research
- 13:00 – 13:30 **Starting Point: Meet the Exhibitors, [NextGen Lounge, Science & Industry Showcase](#)**
Meet at NextGen Lounge then tour the Showcase in small groups
- 14:15 – 14:45 **Black in Optics Meetup, [NextGen Lounge, Science & Industry Showcase](#)**
- 14:00 – 16:00 **[Optica Foundation Challenge Symposia, Room 405 Convention Center](#)**
[Use Photonics. Change the World: Environment Symposium](#)
Gilberto Brambilla, University of Southampton, UK
Dismas Choge, University of Eldoret, Kenya
Ashim Dhakal, Phutung Research Institute, Nepal
Michela Florinda Picardi, ICFO – the Institute of Photonics Sciences, Spain
Wanvisa Talataisong, Suranaree University of Technology, Thailand
- 15:30 – 16:00 **Ambassador Mixer, [NextGen Lounge, Science & Industry Showcase](#)**
- 18:30 – 19:30 **Joint Dinner DLS Symposium, [The Old Spaghetti Factory, 1250 Pacific Ave](#)**

Tuesday 10 October 2023

07:30 - 08:30	Breakfast, Commencement I and II, Marriott
08:00 - 8:30	Breakfast talk: FiO's Science & Industry Showcase: What to Expect Jose Pozo, Optica Chief Technology Officer, Netherlands
10:30 - 11:30	FiO Plenary: Towards Wearable Adaptive Optics for Vision, Showcase Theater Pablo Artal, University of Murcia, Spain
11:30 - 12:00	Plenary Q&A, NextGen Lounge, Science & Industry Showcase
12:00 - 12:45	Career Perspectives Roundtable: Academia, NextGen Lounge, Science & Industry Showcase Mitchell Cox, University of the Witwatersrand, South Africa Mateusz Szatkowski, Wrocław University of Science and Technology, Poland Sejeong Kim, University of Melbourne, Australia
13:30 - 14:30	Outreach & Gender Equity in Pakistan, Optica Booth, Science & Industry Showcase Imrana Ashraf, Quaid-i-Azam University, Pakistan
Afternoon	Departures

Master of Ceremonies

Peter Delfyett



Peter Delfyett received the B.E.(E.E.) degree from The City College of New York (1981), the M.S. degree in EE from The University of Rochester (1983), the M. Phil and Ph.D. degrees from The Graduate School & University Center of the City University of New York (1988).

He did his Ph.D. work under the supervision of Prof. Robert Alfano, where his thesis focused on developing and utilizing a real-time ultrafast spectroscopic probe to study molecular and phonon dynamics in condensed matter, using both supercontinuum and optical phase conjugation techniques. After obtaining the Ph.D.

degree, he joined Bell Communication Research as a Member of the Technical Staff, where he concentrated his efforts towards generating ultrafast high power optical pulses from semiconductor diode lasers, for applications in ultra-wideband optical signal processing and communications.

Some of his technical accomplishments were the development of the world's fastest, most powerful mode-locked semiconductor laser diode, the demonstration of an optically distributed clocking network for high-speed digital switches and supercomputer applications, and the first observation of the optical nonlinearity induced by the cooling of highly excited electron-hole pairs in semiconductor optical amplifiers. In 1993, he moved to University of Central Florida, where he is currently University Distinguished Professor, Pegasus Professor and Trustee Chair Professor of Optics, ECE & Physics in CREOL, The College of Optics and Photonics, and is currently serving as the Director of the Townes Laser Institute. In 2003, Dr. Delfyett founded "Raydiance, Inc." a spin-off company developing high power, ultrafast laser systems, based on his research, for applications in medicine, consumer electronics, defense, material processing, biotechnology, automotive and other key technological markets. He is a Fellow of the APS, IEEE, NAI, NSBP, OSA, and SPIE. He is also the recipient of the NSF PECASE Award, the APS Edward Bouchet Award, the Medalist from the Florida Academy of Science, the Townsend Harris Award, the IEEE Photonics Society's William Streifer Scientific Achievement Award, and the APS Arthur L Schawlow Prize in Laser Science. Most recently, he was elected to the National Academy of Engineering (NAE). He has over 800 scientific publications, conference proceedings and invited presentations, and 45 US patents.

Speakers & Panelists

Kenneth Barber



Kenneth has over 23 years of experience in the photonics industry specializing in Project Management and Product Development. During his career he founded and help develop Edmund Optics' Project Management department and New Product Introduction process. As Director of Engineering and Project Management, he leads a global team of Designers and Project Managers in the US, China and Germany in the development of new product. Kenneth holds a graduate certification in Project Management from the New Jersey Institute of Technology and received his BS in Optics from the University of Rochester in Rochester, NY. • Founder and Co-chair of Edmund Optics' US Diversity, Equity and Inclusion Committee • Certified Lean Six Sigma Green Belt Published Articles contributed to: • Optics that focus on manufacturing www.machinedesign.com/archive/article/21815751/optics-that-focus-on-manufacturing • Hemispherical Display Uses Single Lens and Digital Projector

Caroline Boudoux



Caroline Boudoux, Eng., PhD, is a full professor in the Department of Engineering Physics at Polytechnique Montréal, a member of Institut de génie biomédical, and a researcher at Centre de recherche du CHU Ste-Justine and Centre d'Optique, Photonique et Laser (COPL). After earning a bachelor's degree in engineering physics from Université Laval, she obtained a PhD in biomedical optics at the Harvard-MIT Division of Health Sciences and Technology, followed by a postdoctorate in nonlinear microscopy at École Polytechnique de Paris. Since then, she has been directing the Laboratory of Optical Diagnoses and Imagery, which specializes in optical coherence tomography and microscopy.

Joshua Burrow



Dr. Joshua A. Burrow is a Hibbitt Postdoctoral Fellow in the School of Engineering at Brown University. He earned his B.S. degrees in Physics and Mathematics with a concentration in Engineering from Morehouse College, a liberal arts HBCU located in Atlanta, GA. He then obtained his M.S. and Ph.D. degrees as a Ford Foundation Dissertation Fellow in the Electro-Optics and Photonics Department at the University of Dayton under the direction of Profs. Jay Mathews and Imad Agha, respectively. His graduate school work spanned a myriad of topics within light-matter interactions including plasmonic metasurfaces for biological sensing and 5G communications, as well as designing and developing high-speed tunable photonic materials such as chalcogenide phase change materials to dynamically tune properties of light at the nanoscale. Since joining the PROBE Laboratory led by Prof. Kimani C. Toussaint Jr's,

Joshua has expanded his research to bio-photonics where he noninvasively investigates a variety of inorganic and organic systems, at mesoscopic scales, through the development of advanced optical microscopy techniques. Joshua pursues several other research topics including optical tweezing, non-linear optics, and physiological monitoring using structured light and spatially varying polarized wavefronts. Concurrently, he is also working with 2022 Amplify Scholar, Ms. Rutendo Jakachira to develop an equitable and accurate pulse oximeter for black individuals in clinical settings. Additionally, he is and has been actively involved in student development and outreach for many years throughout his career. He was a two-term president of Optica chapters both at Morehouse College and the University of Dayton. Most notably, he co-organized with Purdue University the IONS Midwest-US 2019 international conference that hosted over 100 students. He has attended Congressional Visits, advocating for optics and photonics. Presently, he serves as co-advisor to the Brown University Optics Society (BRUNOS). Joshua is also a past student representative and executive board member of the National Society of Black Physicists (NSBP) and the co-founder of the Student Leadership Development Summit. In his free time, he enjoys playing basketball, traveling, and trying new cuisines.

George Okyere Dwapanyin



George O. Dwapanyin is a Ghanaian early career researcher. He received his Bachelor of Science in Physics in 2009 from the University of Cape Coast, Ghana. He worked with the Radiation Protection Institute of the Ghana Atomic Energy Commission where he was part of the pioneering team for non-ionising radiation protection. He was then awarded the Erasmus Mundus scholarship which saw him complete his master's degree in Optics and Photonics from the Karlsruhe Institute of Technology,

Germany as well as the European masters in Photonics Engineering, Nanophotonics and Biophotonics from the Polytechnic University of Catalunya, Spain. His PhD in Physics was awarded by Stellenbosch University, South Africa in 2020 where his research led to the development of multimodal nonlinear imaging systems for biophotonics applications. This research also led to the first real world application of time domain ptychography in imaging. George has served as a reviewer and mentor for several committees within Optica and beyond. He is currently a research fellow with the Optical Manipulation Group at the University of St Andrews in the UK where his research currently dwells around advanced imaging techniques and Raman spectroscopy.

Turan Erdogan



Turan Erdogan received his SB in Electrical Engineering from Massachusetts Institute of Technology (MIT), USA and his PhD from the University of Rochester, USA. He completed postdoctoral work at AT&T Bell Labs. He is currently President of Plymouth Grating Lab (PGL), USA. He has been studying, teaching, and practicing optics for 30 years. His previous experience includes serving as site leader for Melles Griot, USA; CTO and VP of Business Development for IDEX Optics & Photonics and IDEX Health & Science, USA; co-founded Semrock, Inc., USA, which was acquired by IDEX; and a tenured professor at The Institute of Optics at the University of Rochester. Turan has authored or co-authored over 50 peer-reviewed scientific publications and over 50 major conference talks and holds more than 30 issued patents, with about half of these covering optical devices in mass production today. A dedicated volunteer he has served on the Optica Board of Directors, the Nominating Council, and several Award Selection Award Committees. He was also Chair of the Corporate Engagement Council, the OFC Program Committee, and the Frontiers in Optics Program Committee. He is a Fellow of Optica and a recipient of the David Richardson Medal and Adolph Lomb Medal.

Adam J. Fleisher



Adam J. Fleisher (A.J.) is a Research Chemist in the Optical Measurements Group and a former National Research Council postdoctoral fellow. His research efforts include the development of optical methods for trace gas detection which bring the new SI to measurements of isotopic composition. In 2019, he was named an Ambassador of Optica.

Timothy Imogore



Timothy Imogore obtained a bachelor's degree in Physics/Electronics from the Federal University of Technology Minna, Nigeria in 2014. Afterwards, he proceeded to the Abbe School of Photonics Jena, where he obtained a master's degree in Photonics in 2018. He carried out his PhD research at the Ultrafast Optics group of the Institute of Applied Physics, Jena and partly at the Centre For Optics, Photonics and Lasers (COPL) Quebec, Canada. He concluded his PhD research in 2023 and he currently works with ASML Netherlands as a Design Engineer. Timothy Imogore also co-founded Research Awake Africa Initiative (an NGO that aims to facilitate research cooperations between Research Institutes in Africa and their counterparts in the Global North).

Faezeh Gholami



Faezeh Gholami is a Lead I/O Subsystem Hardware Architect and Senior IBM Quantum Ambassador at IBM. She has a PhD in Electrical Engineering with a focus on Optical Communication from the University of California - San Diego and a micro-MBA from Rady School of Management. Prior to IBM, Fae had worked in multiple startups focusing on Integrated Hardware Design. She is an IEEE and Optica Senior Member and the former Chair of the Optica Fiber Optics Technology Technical Group. Fae is an advocate for building

the women's pipeline in engineering and technology through engagements in the Society of Women Engineers and IBM Pathways in Technology Early College High Schools. She is a 2022 Optica Ambassador.

Ivy Krystal Jones



Dr. Jones completed a Postdoctoral Research Associate position at Marquette University in the Department of Mechanical Engineering working in the Shock Physics Laboratory working on dynamic behavior material analysis from 2018-2019 becoming an Optica Ambassador in 2018. She was an adjunct faculty professor, instructor, and lecturer at Wilbur Wright College, Olive-Harvey College, Harry S. Truman College, Blitstein Institute for Women, and Chicago State University teaching general chemistry, physical

science, and engineering physics from 2017- 2018. She has recently obtained a Physics Postdoctoral Fellowship position at the Medical College of Wisconsin, where she will be researching computational code for radiotherapy oncological imaging modeling applications for cancer diagnostic and treatment techniques. In addition, Dr. Jones completed Postdoctoral Research Staff position(s) in the Materials Science & Physics Division, Sensor Materials and Measurement group at Lawrence Livermore National Laboratory, 2016-2017; where her postdoctoral research involved working on synthetic procedures and processing methods to yield high-performance transparent ceramics for current scintillator application projects directly related to medical imaging where she received a US Patent. She completed her MS (2009) and PhD (2015) degrees in Physics from Hampton University in the Department of Physics at the Crystal Physics Laboratory, specializing in optical physics. Her dissertation research focused on solid-state eye safe laser material development, she has also worked on various multi-disciplinary research projects from bioengineering molecular ligation methods to characterization and evaluation of hybrid space-survivable nanocomposites. She also received two MS degrees in Mechanical Engineering and Biotechnology & Chemical Sciences from Tuskegee University and Roosevelt University in 2009 and 2003. She obtained her BS and BA in Chemistry and Psychology from Tuskegee University in 2001.

Lyndsey McMillon-Brown



Dr. Lyndsey McMillon-Brown is a research electrical engineer at NASA Glenn Research Center where she focuses on solar cell materials development. She is currently the principal investigator of an Early Career Initiative developing a perovskite solar cells that can be manufactured in space and on the moon. Prior to joining NASA, Lyndsey earned her Ph.D. in Chemical Engineering at Yale University in 2019 where she researched novel materials and nano-patterns for advanced light trapping in solar cells. Lyndsey earned her bachelor's in Mechanical and Manufacturing Engineering from Miami University in Ohio in 2013. In 2022 Lyndsey was awarded the NASA Space Flight Awareness Trailblazer Award, an early career award in recognition of her dedication to excellence and commitment to ensuring safety and mission success in support of NASA's human space flight programs. This year, Lyndsey received the NASA agency early career achievement medal. Outside the lab, Lyndsey is dedicated to increasing opportunities for underrepresented individuals in STEM fields and facilitating cultural changes that generate more inclusive environments. She is founder of IEEE Photovoltaic Specialists Conference "Minority Carriers" diversity initiative and has published several articles on steps organizations can take to attract and retain people from minoritized groups.

Jami Valentine Miller



Dr. Jami Valentine Miller was the first African American woman to earn a Ph.D. in physics from the Johns Hopkins University where she studied the physics behind spintronic materials and devices. She earned a bachelor's in physics from Florida A & M University and a master's in physics from Brown University. She joined the U.S. Patent and Trademark Office (USPTO) where she examines semiconductor patent applications for nanoscale memory and spintronic devices. Dr. Miller is the founder of African American Women in Physics (AAWIP), Inc., an organization dedicated to honoring the women who paved the way, inspiring future physicists and connecting with people interested in promoting diversity and inclusion in STEM. She enjoys spending her free time being a motivational STEM speaker, working on her first book and being a football mom.

Justus Ndukaife



Dr. Justus Ndukaife is an accomplished researcher, contributor, and innovator in the field of Optics and Photonics. He earned his Ph.D. in Electrical Engineering from Purdue University, USA, in 2017, following his MSc degree from Purdue Northwest and a BSc degree with First Class Honors from the University of Lagos, Nigeria. During his doctoral program at Purdue, he held the position of president of the Purdue Chapter of Optica. Dr. Ndukaife's research primarily revolves around optical nanotweezers enabled by cutting-edge nanophotonics technologies, including plasmonics and resonant dielectric metasurfaces. His work has focused on single extracellular vesicle analysis and enhancing on-chip quantum light sources. He has been published in top peer-reviewed journals, including Nature Nanotechnology, Science, Nature Communications, ACS Nano, ACS Photonics, Nanoscale, and Nano Letters. Dr. Ndukaife is also an inventor of seven US patents related to optical nanotweezers, underscoring his commitment to practical applications of his research. He has participated in various committees and conferences, serving as Co-Chair of a Gordon Research Seminar on Plasmonics and Nanophotonics and on the program committee for events like CLEO, SPIE Optics and Photonics, and MRS meetings. Dr. Ndukaife's received a global Rising Stars of Light award in 2020, and his iCANX talk on Optical Nanotweezers research captured the attention of over 260,000 viewers worldwide. He received the NIH R35 Maximizing Investigator's Research Award (MIRA) for outstanding investigators, NSF CAREER award, Vanderbilt Chancellor's Award for Excellence in Research, the Year 2017 Prize in Physics from the Dimitris N. Chorafas Foundation, the Purdue College of Engineering Outstanding Research Award, NSBE Golden Torch Award, Best Paper Award at the ASME conference, a Carnegie African Diaspora Fellowship Award, and elevation to a Senior Member position at IEEE. He was also honored as one of Nanoscale's Emerging Investigators in Nanotechnology and Nanoscience. His Carnegie African Diaspora Fellowship Award enabled him to engage in outreach activities, promoting the field of nanophotonics among students in West-Africa and making it more accessible to students from diverse backgrounds. In 2023 he received the Kaminow Outstanding Early-Career Professional Prize and was a Optica Foundation Challenge recipient. Dr. Ndukaife's passion for advancing the field and empowering students exemplifies his commitment to scientific progress and mentorship.

Jose Pozo



Originally from Spain, Jose Pozo has spent more than 25 years working in photonics. He earned a PhD in quantum physics from the University of Bristol, UK, and an M.Sc. and B.Eng. in telecom engineering from UPNA, Spain / VUB, Belgium. Prior to joining EPIC in 2015 as CTO, Jose was a Senior Photonics Technology Consultant with PNO Consultants, with some of the main accounts such as CERN, Thales or TE Connectivity. He has worked at TNO, The Netherlands Organization for Applied Scientific Research, and as a post-doctoral researcher at the Eindhoven University of Technology in the Netherlands, where he contributed to the early development of EFFECT Photonics.

Jannick P. Rolland



Jannick Rolland is the Brian J. Thompson Professor in Optical Engineering at the University of Rochester with joint appointments in the Center for Visual Science and the Department of Biomedical Engineering. She is the director of the Center for Freeform Optics (CeFO) supported by the National Science Foundation in the U.S. and corporations worldwide. She is the CTO and co-founder of LighTopTech, a biotech company that commercializes sub-cellular resolution Gabor-domain

optical coherence 3D microscopy, which she invented. She earned an optical engineering diploma from the Institut D'Optique Théorique et Appliquée, France, and MS and PhD in optical science from the University of Arizona. Rolland thrives in developing novel optical engineering solutions across a wide range of fields: she designed the optics for SPOT4, a satellite in orbit from 2008-2013 to monitor the Earth. In medical imaging, she developed mathematics to describe the “lumpy background” noise that plagues medical images, which gave rise to a widely-adopted method to assess image quality in diagnostic instruments. She invented Gabor-domain optical coherence microscopy for high-definition 3D imaging. She has been recognized as one of eight Influential women pioneers in augmented and virtual reality. In the last ten years, she inspired the broad adoption of freeform optics in imaging systems and addressed a key challenge in AR/VR with a novel type of optical component, the metaform. Freeform and metaform optics are disruptive technologies poised to penetrate a variety of markets. Rolland is a Fellow of the Society. She has received numerous awards for her work, including the 2014 David Richardson Medal and the 2020 Joseph Fraunhofer Award/Robert M. Burley Prize.

Johannes Trbola



Johannes started developing Laser know-how at RWTH Aachen and Fraunhofer ILT as a project Lasers became the key technology in the life of Johannes Trbola. Graduated in Mechanical Engineering in 1989 Johannes Trbola started his professional life with TRUMPF Lasertechnik GmbH. Based on the understanding of lasers and their applications, he accompanied and also formed TRUMPF's way from a newcomer to a market leader. Core Technology in that time was laser welding with CO₂-lasers. 2000

Johannes Trbola started his entrepreneurial live. He developed the Austrian brand plasmio from a not-known brand to a leading brand for quality assurance in laser welding. Since 2008 he supports several companies with his expertise in marketing, branding and sales, mainly in the field of multi kW cw lasers. While sheet metal cutting was not in the focus but joining technologies like welding and brazing are core competence-in both fields: market know how as well as process understanding. Recently Johannes Trbola added a good expertise in the upcoming field of short and ultrashortpulse lasers. In 2008 Johannes Trbola joined the business of M&A activities participating on a company today named TR&B GmbH & Co KG. The basic idea was technology brokerage but the main focus today are M&A activities focused on machine tools as well as photonic industries. 2014 the Johannes Trbola tied up additionally with a Laser Manufacturing company during an M&A project - Dausinger

+ Giesen GmbH as Shareholder as well as General Manager Main target here is to develop the company as well as brand from a component manufacturer to a successful laser manufacturer. Since end of 2019 Johannes Trbola supports mainly start up companies with his expertise in laser technology and their markets.

Brian Vohnsen



Brian Vohnsen is a man of many interests, and he considered a wide range of careers before deciding on physics. As a child, he thought about becoming a baker or a cartographer, and later in life, he considered becoming a pilot. But when it came time to make decisions about college, he encountered many questions and unknowns. He had always been interested in science, so he decided that should be his field, but doing what? Where should he study? He remembers, “I was so undecided that I [chose] to take a year off and went traveling.” This time away allowed him to learn about himself and what he wanted out of life. His adventures led him to decide on studying engineering at Aalborg University in Denmark, north of his hometown Aarhus. He settled on Aalborg, not for the subject matter but the teaching style. The engineering department taught the students in groups, and he comments, “you learn through the group work [how] to solve practical problems.” Even though engineering turned out not to be his chosen career, he still found the experience valuable. Soon, he was able to transition into the field of optics, completing a PhD in Nanooptics at the same university and later serving as an Assistant Professor with his former lecturers as colleagues. After three years, he felt the need for a change, so he pursued the Marie-Curie Fellowship, which led him to Spain and the field of visual optics and retinal imaging. After seven years in Spain, he concluded that more opportunities might be available in other countries and moved to Ireland in 2008 and has remained at the University College Dublin ever since. Over the years, Brian has explored numerous research areas, always following new interests and his curiosity. Today, he is most excited about his work with the retina, an interest inspired by a brief exploration of the Stiles-Crawford Effect in 2004. What started as an interesting tangent has now turned into a fulfilling research area. He currently works to understand how the retina works and to educate others on its functionality. He shares, “what is really exciting in our research is that we are looking at the three-dimensionality of the retina and what role this plays for vision and retinal imaging.” This work has critical applications, especially in treating and understanding myopia, or shortsightedness, which is expected to affect half of the world’s population by 2050. Brian is not afraid to pursue his interests and follow what makes him happy. His advice for young scientists is: “Try to look deep inside of yourself more than at what other people are doing. Try to find yourself.” He practices his own advice by traveling and giving himself time and space to think. He shares that his favorite part of the research process is very early on when he’s just thinking about the project, commenting, “Suddenly, you have a bright idea on something. Then...I come home and start to develop it. It might be quick, or it might be something [that lasts a few years].” The society has been essential for Brian’s career. While at Aalborg University, he discovered the society's print journals and spent afternoons in the library reading through the issues. He then became involved with FiO and later as an

editor of Optics Letters. Brian believes that the society shares his philosophy of doing science not only to solve problems but to learn and to make a difference. The camaraderie he feels among members, the opportunities, and the shared mentality all lead to Brian calling the society his professional home.

Donnell Walton



Dr. Donnell Walton is director of the Corning West Technology Center in Sunnyvale, CA. In this role, he leads research and business development to match Corning's existing and emerging capabilities and opportunities in the western United States, in particular, the Silicon Valley region of California. Walton joined Corning's Science and Technology Division after serving as a physics professor at Howard University. At Howard, Walton won the National Science Foundation's CAREER Award and established a laboratory for optical fiber based lasers and amplifiers. After conducting and leading research programs, Walton joined the Corning Gorilla Glass Division where he built and developed a global team of customer-facing engineers which helped grow the Division's revenue to over \$1B in only five years. He then returned to the Science and Technology Division to lead our West Coast R&D efforts. Walton earned a Ph.D. in applied physics from the University of Michigan, Ann Arbor after graduating summa cum laude with bachelor's degrees in physics and electrical engineering from North Carolina State University.

Winnie Ye



Winnie Ye is a Fellow of the Engineering Institute of Canada (EIC) and a Full Professor in the Department of Electronics at Carleton University. Her expertise is in silicon photonics and its applications in telecommunications, data communication, biophotonics, and renewable energy. Dr. Ye received her B.Eng., M.A.Sc., and Ph.D. degrees from Carleton University and the University of Toronto, in 2000, 2002, and 2007, respectively. She won the prestigious 2021 IEEE MGA Leadership Award and the Partners In Research's 2020 Technology and Engineering Ambassador Award. She is the recipient of the 2018 IEEE Women-in-Engineering (WIE) Inspiring Member Award, the 2018 Engineering Medal for Research and Development from the Ontario Professional Engineers (PEO), the PEO Ottawa Chapter's 2018 Engineering Excellence Award, as well as two University Research Excellence Awards. She has been the elected Chair of the IEEE Canada WIE, and the Chair of Optica's Photonics and Opto-electronics Technical Division since 2021.

Amplify Optics Immersion Program Attendees



Sandra Achieng
Multimedia University of Kenya
Kenya



Elliot Dogbe
University of Energy and Natural
Resources
Ghana



Churchill Benahili Agoni
University of Eastern Finland
Finland



Sumae Embalo
Universidade da Integração
Internacional da Lusofonia Afro-
Brasileira -UNILAB
Brazil



Enoch Justice Arthur
University of Energy and Natural
Resources
Ghana



Leticia Foiani
Federal University of ABC
Brazil



Leiani Butler
Rochester Institute of Technology
USA



**Winny Dariska Domkem
Kameni**
Carleton University - Algonquin
College
Canada



Camilla Costa
University of São Paulo
Brazil



Bhargav Kanjarla
University of Cincinnati
USA



Franklina Owusu Darko
University of Energy and Natural
Resources
Ghana



Ubaid Kazianga
Northwestern University
USA



Abdullahi Diriye
Carleton University
Canada



Elphas Khata
Rochester Institute of Technology
USA



Paula Kirya
University of California San Diego
USA



Gift Ndubuisi
Kaduna State University
Nigeria



Brian Kibirige
Montana State University
USA



Priscilla Ndukaife
Purdue University Northwest
USA



Pierre Leonardo
Delaware State University
USA



Sheilah Njoka
Multimedia University of Kenya
Kenya



Avion Lowery
University of Maryland, Baltimore
County
USA



Peter Noertoft
Stanford University
USA



Brianna Malcolm
University of Pennsylvania
USA



Asagwegbe Obaze
University of Alabama
USA



Natasha Mulenga
Rollins College
USA



Favour Ogbinaka
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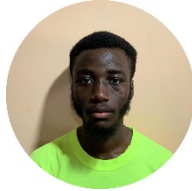
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