



## Special Issue on Optics and Photonics at Harvard University

***Submission Deadline: 31 December 2024***

### **Illustration**

This special issue is cooperated by Harvard University and journal Light: Science & Applications, which aims to highlight the most cutting-edge research works in optics and photonics performed recently at Harvard University, showcasing the forefront advancements of science, technology and engineering.

### **Brief introduction of Harvard University**

Harvard University, founded in 1636, stands as one of the oldest and most prestigious universities in the world. Situated in Cambridge, Massachusetts, Harvard has consistently been a trailblazer in academic excellence, research, and innovation. It boasts a rich history of cultivating influential leaders, scholars, and Nobel laureates across various disciplines.

Within its distinguished academic landscape, Harvard has made remarkable achievements in the fields of optical imaging, optical communication, quantum optics, biophotonics and medical optics, etc. Harvard's emphasis on cross-disciplinary approaches and collaboration further enhances the ability of researchers to break the boundaries of knowledge and address complex challenges, leading to its pivotal role in advancing the frontiers of optical science.

### **Interested Topics**

The interested topics will include but not limit to:

- Biophotonics and Medical Optics
- Fiber Optics and Optical Communications
- Integrated and Optoelectronic Devices
- Lasers and Laser Optics
- Micro- and Nanophotonics,
- Nonlinear Optics and Ultrafast Optics
- Optical Imaging and Display

- Optical Materials and Photonic Crystals
- Optical Metrology and Detection
- Quantum Optics and Quantum Information

## About Submission

The type of Original Research Article/Review/Perspective will be welcome.

The authors should state that their manuscript is submitted to this special issue and identify the corresponding author from Harvard University, or Harvard alumni in the cover letter.

Please submit via: <https://mts-lsa.nature.com>

## Guest Editors-in-Chief



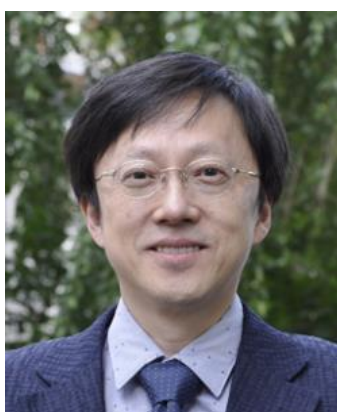
**Prof. Eric Mazur**  
**Harvard University, USA**

Eric Mazur is the Balkanski Professor of Physics and Applied Physics and Academic Dean for Applied Sciences and Engineering at the John A. Paulson School of Engineering Applied Science at Harvard University, Member of the Faculty of Education at the Harvard Graduate School of Education, and Past President of Optica (formerly the Optical Society). Mazur is a prominent physicist known for his contributions in nanophotonics, an internationally recognized educational innovator, and a sought-after speaker. In education he is widely known for his work on Peer Instruction, an interactive teaching method aimed at engaging students in the classroom and beyond. In 2014 Mazur became the inaugural recipient of the Minerva Prize for Advancements in Higher Education. He has received many awards for his work in physics and in education and has founded several successful companies. Mazur has widely published in peer-reviewed journals and holds numerous patents. He has also written extensively on education and is the author of *Peer Instruction: A User's Manual* (Prentice Hall, 1997), a book that explains how to teach large lecture classes interactively, and of *Principles and Practice of Physics* (Pearson, 2015), a book that presents a groundbreaking new approach to teaching introductory calculus-based physics. Mazur is a leading speaker on optics and on education. His motivational lectures on interactive teaching, educational technology, and assessment have inspired people around the world to change their approach to teaching.



**Prof. Marko Lončar**  
**Harvard University, USA**

Marko Lončar is Tiansai Lin Professor of Electrical Engineering at Harvard's John A Paulson School of Engineering and Applied Sciences (SEAS), as well as Harvard College Professor. Lončar received his Diploma from University of Belgrade (R. Serbia) in 1997, and his PhD from Caltech in 2003 (with Axel Scherer), both in Electrical Engineering. After completing his postdoctoral studies at Harvard (with Federico Capasso), he joined SEAS faculty in 2006. Lončar is expert in nanophotonics and nanofabrication, and his current research interests include quantum and nonlinear nanophotonics, quantum optomechanics, high-power optics, and nanofabrication. He has received NSF CAREER Award in 2009 and Sloan Fellowship in 2010. In recognition of his teaching activities, Lončar has been awarded Levenson Prize for Excellence in Undergraduate Teaching (2012), and has been named Harvard College Professor in 2017. Lončar is fellow of Optical Society of America, and Senior Member of IEEE and SPIE. He is Co-founder of and board member for HyperLight Corporation, VC backed startup commercializing lithium niobate photonic technology.



**Prof. Seok-Hyun (Andy) Yun**  
**Harvard University, USA**

Prof. Yun earned his Ph.D. in physics from KAIST, Korea, in 1997, specializing in fiber optics. His groundbreaking thesis work paved the way for a venture-funded startup in San Jose, CA, where he served as a co-founder and engineering manager, ultimately contributing to its acquisition LG-Nortel. In 2003, Prof. Yun transitioned to the biomedical sector, joining the faculty of Harvard Medical School and the Wellman Center for Photomedicine at Massachusetts General Hospital (MGH). Currently, he holds the position of a full Professor at Harvard Medical School, serving as the Patricia and Scott Eston MGH Research Scholar and a faculty member of the Harvard-MIT Division of Health Sciences and Technology. Additionally, he fulfills the role of the Director of the Harvard-MIT Summer Institute for Biomedical Optics. Prof. Yun's research is dedicated to advancing innovative light-based technologies for biomedical applications. His significant contributions have been recognized with various awards, including the NIH Director's Pioneer Award and NIH Director's Transformative Research Award. With a remarkable portfolio, he has contributed to over 80 patents, many of which have been successfully licensed to industry partners. Furthermore, he played a key role in establishing two startups that originated from his laboratory, specializing in the commercialization of Brillouin microscopy and laser-particle technologies.



**Dr. Dushan N Wadduwage**

**Harvard University, USA**

Dushan is a John Harvard Distinguished Science Fellow and leads a computational imaging group at Harvard's Center for Advanced Imaging. Broadly trained in biomedical optics, computer science, and electronic engineering, he works at the intersection of optics and machine learning to develop new computational imaging systems for applications in biology. Dushan did his PhD at Singapore-MIT Alliance for Research and Technology (SMART) under professors Paul Matsudaira and Peter So. Before joining Harvard, he also briefly worked at the MIT Laser

Biomedical Research Center (LBRC).