Special Issue

Emerging Technology in Laser Scanning

Message from the Guest Editors

Laser scanning technology is at the forefront of high-precision data acquisition and imaging, data writing, display, and material processing, transforming industries such as architecture, autonomous navigation, precision metrology, and advanced manufacturing. State-of-the-art laser scanners deliver unparalleled precision in high-resolution point cloud generation, advanced imaging, and processing, enabling intricate 3D modeling, real-time analysis, and seamless integration in diverse applications. These innovations eclipse conventional techniques by providing rapid, non-contact data acquisition, superior visualization, and enhanced accuracy across fields such as precision metrology, autonomous navigation, and advanced manufacturing. This Special Issue aims to present a comprehensive overview of cutting-edge research visions, results, and their applications. Topics of interest include, but are not limited to, the following:

- Precision metrology;
- Nanomanufacturing;
- Lidar;
- Frequency combs;
- Optical encoder;
- Confocal laser scanning;
- Silicon photonics;
- Femtosecond laser;
- AI-driven optical metrology;
- Machine vision.

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Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

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