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Introduction

This proceedings volume is a collection of papers based on the invited and contributed presentations at the conference, Optical Data Storage 2018: Industrial Optical Devices and Systems, which was held on 19 August 2018, at the San Diego Convention Center, as part of SPIE Optics + Photonics 2018.

The Optical Data Storage (ODS) conference had been held as a stand-alone conference from 1973 to 2012 and has been held as part of larger conferences since 2013. This was the fifth time for the ODS conference to be held as part of SPIE Optics + Photonics. This time, we extended the scope of the ODS conference to "industrial Optical Devices and Systems (iODS)" to discuss the possibility of applications of optical technologies to emerging industrial domains such as IoT, big data, intelligent cars, healthcare, security, etc.

ODS 2018 was basically a successful conference. A total of 17 papers (4 invited papers and 13 contributed papers) were presented orally. In the morning sessions, there were nice presentations about new developments in technologies for future ODS systems such as nano-photonics, holographic data storage, etc. In the afternoon sessions, there were interesting presentations about optical technologies for intelligent cars such as LiDARs, head-up displays, etc. We would like to emphasize that the number of attendees was greatly increased especially in the afternoon session compared with ODS 2017.

We are very happy that a total of 12 papers are included in this proceedings volume. They represent important and interesting achievements in the current field of traditional ODS and new iODS. We hope that the readers find this proceedings volume stimulating and exciting, as well as helpful for their future research and development.

We would like to have ODS 2019 as part of SPIE Optics + Photonics 2019, which will be officially announced later. To activate the ODS conference more, we are planning to highlight the new scope and to bring it to the forefront.

Finally, we would like to express our sincere gratitude to the committee members, session chairs, and all of the presenters and attendees of ODS 2018, as well as the SPIE staff for their great contributions.

Ryuichi Katayama
Yuzuru Takashima