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Wolfgang Osten
Armando Albertazzi Gonçalves Jr.**
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Introduction

The conference "Optical metrology systems for industrial inspection" is an essential part of the biannual Munich SPIE symposium "Optical Metrology" and the "LASER World of Photonics Congress" which have had a long and successful tradition. The meeting brings scientists from academia and industry together aiming at knowledge exchange and discussing new trends, applications, and developments in optical metrology.

This year's conference will be the twelfth in a still running series. Unfortunately, due to the lasting COVID-19 pandemic the symposium couldn't take place as an in-person meeting for the first time in more than 20 years.

Although the pandemic situation was quite uncertain at the time of the submission deadline we are happy that nearly 100 contributions were received.

As before, applications of optical metrology in nearly all relevant fields of industrial production are covered, ranging from high-precision and resolution enhancement techniques to novel optical sensors and their characterization.

This impressively demonstrates that the acquisition of knowledge, based on reliable measurement data, is one of the most important prerequisites to stimulating sustainable progress in industrial manufacturing.

In addition, the trend towards optical metrology is still driven by the increasing availability of advanced optical components and systems such as high-speed/high-resolution cameras, high-performance objective lenses, and light sources of various spectral characteristics. Another important driver is increasing computing power, which pushes especially high-speed, in-process and in-situ applications of optical metrology but also paves the way for implementing machine learning techniques.

Hence, recent developments enable optical metrology to expand its position as one of the most dynamic fields of measurement technology effectively acquiring relevant data in order to control, assess, and improve industrial products and processes.

This year's conference will be held online as a Digital Forum comprising brief presentations by the authors and offering the possibility to have discussions. Furthermore, authors were asked to provide presentation videos of their contributions.

Therefore, we hope that even under these difficult circumstances the conference will be a forum of international scientific exchange and discussion of the latest results. Due to the digital form of the conference we refrained from invited talks. However, one contribution was selected as a Keynote talk and held live in the Digital Forum. Nevertheless, due to the high number and outstanding level of submissions we are optimistic in view of the success of the conference.

As in previous years, a significant number of submissions deal with optical measurement of geometrical features on different scales. All relevant measuring techniques ranging from fringe projection and deflectometry to digital holography and interference microscopy will

be part of the conference. Applications such as displacement, deformation and vibration measurement as well as non-destructive testing will be addressed.

Finally, we would like to express our sincere gratitude to the members of the program committee for their support of the conference. Additionally, many thanks are due to the SPIE staff for their professional and cooperative work during the conference organization and preparation of this proceedings volume.

We would also like to thank all authors who gave added value to our community by contributing to this proceedings volume. We hope that you will enjoy the conference even in its limited form and hope to meet you at the next in-person conference scheduled for 2023.

Peter Lehmann
Wolfgang Osten
Armando Albertazzi Gonçalves Jr.