PROCEEDINGS OF SPIE

Thermosense: Thermal Infrared Applications XXXVIII

Joseph N. Zalameda
Paolo Bison
Editors

18–21 April 2016
Baltimore, Maryland, United States

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SPIE

Volume 9861

Proceedings of SPIE 0277-786X, V. 9861

Thermosense: Thermal Infrared Applications XXXVIII, edited by Joseph N. Zalameda, Paolo Bison, Proc. of SPIE Vol. 9861, 986101 · © 2016 SPIE · CCC code: 0277-786X/16/$18 · doi: 10.1117/12.2244355

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Please use the following format to cite material from these proceedings:
Author(s), "Title of Paper," in *Thermosense: Thermal Infrared Applications XXXVIII*, edited by Joseph N. Zalameda, Paolo Bison, Proceedings of SPIE Vol. 9861 (SPIE, Bellingham, WA, 2016) Six-digit Article CID Number.

ISSN: 0277-786X
ISSN: 1996-756X (electronic)
ISBN: 9781510601024

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445
SPIE.org

Printed in the United States of America.

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Introduction

The SPIE Thermosense conference continues to be the oldest and one of the leading international technical conferences focused on scientific, industrial and general uses of infrared imaging, infrared temperature measurements, and image analysis. This annual conference met in Baltimore, Maryland, 17–21 April 2016, and had 51 abstracts submitted, 44 scientific papers presented, and an additional 16 presentations in the vendor session. The presentations comprised 15 different countries (Australia, Austria, Brazil, Canada, China, Finland, France, Greece, India, Italy, Japan, the Russian Federation, Spain, Taiwan and the United States).

In these proceedings, you will find an unequaled depth and breadth of technical information and reference data from worldwide leaders in the application, research, and industrial experts in the field of thermal imaging. The session topics included additive manufacturing, robotic scanning and remote sensing, vibro-thermography, nondestructive testing and composites, thermal modeling and signal processing, building materials and infrastructure applications, detectors and imaging systems, biological and medical applications and remote and multi-discipline imaging. I would like to thank the conference sponsors FLIR Systems, Inc. and IRCameras LLC, for the Best Paper Award and Best Student Paper Award, respectively.

I am especially excited to see new research presented in the areas of additive manufacturing and robotic scanning for composites fabrication. Additive manufacturing and robotic scanning for composites fabrication are a growing field with many potential applications, however the field has its challenges of repeatability, closed loop control, and real time defect inspection. Thermography offers a natural solution since these processes require heat during the build process. It will be exciting to see the solutions develop as they are undoubtedly presented at future Thermosense conferences.

I would also like to mention the 40th Anniversary, which will come up in a couple more years. This meeting will return back to Orlando, Florida in 2018. This city has been the traditional location of Thermosense for roughly 30 years. It is hoped that many past conference attendees and committee members will attend and help to celebrate 40 years of existence.

I would like to mention Andres Rozloznik for his work in leading the vendor session, his overall help in the conference, and his recognition by SPIE for many years of membership and involvement. I would also like to thank the previous chair Sheng-Jen (Tony) Hsieh for his past efforts in Thermosense 2015 and Paolo Bison as conference co-chair for 2016.

Additionally, I would like to thank the committee for entrusting me with chairing the 2016 conference. The support over the past 2 years from the committee and colleagues has made it a rewarding experience. I also want to thank my wife Anita for her support during my travels. As the conference goes forward I want to encourage future conference chairs and committee members to embrace the challenge, take personal ownership, and enjoy the experience of forwarding the rich tradition of Thermosense, setting the example for many successful years to come.

Joseph N. Zalameda