PROCEEDINGS OF SPIE

Infrared Remote Sensing and Instrumentation XXVII

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Editors

12–14 August 2019
San Diego, California, United States

Sponsored and Published by
SPIE

Volume 11128

Proceedings of SPIE 0277-786X, V. 11128

Infrared Remote Sensing and Instrumentation XXVII, edited by Marija Strojnik, Gabriele E. Arnold, Proc. of SPIE
Vol. 11128, 1112801 · © 2019 SPIE · CCC code: 0277-786X/19/$18 · doi: 10.1117/12.2551560

The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at SPIEDigitalLibrary.org.

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Please use the following format to cite material from these proceedings:
Author(s), "Title of Paper," in *Infrared Remote Sensing and Instrumentation XXVII*, edited by Marija Strojnik, Gabriele E. Arnold, Proceedings of SPIE Vol. 11128 (SPIE, Bellingham, WA, 2019) Seven-digit Article CID Number.

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

ISBN: 9781510629493
ISBN: 9781510629509 (electronic)

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

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Introduction

This year the annual conference on Infrared Remote Sensing and Instrumentation was held 10–15 August 2019 in San Diego, California, as part of the annual SPIE Optics & Photonics symposium. SPIE is a technical society dedicated to the advancement of science and engineering through the use of light, more specifically photonics and optics. We completed the 27th in this series of conferences, which is one of the longest running conferences at the annual meeting. The next meeting will be held again in San Diego in August 2020. We are quite proud that every year, SPIE takes our most successful session and develops it into a new conference, some within the remote sensing track, some in astronomy, and others in nanotechnology, dealing with such important issues as emissivity, surface finish, and coatings, and others dealing with sensors, detectors, and engineering.

On behalf of the conference participants, and especially on our own behalf, we wish to express our most profound appreciation to the authors-presenters and the lively audience who had more questions than we were able to accommodate during the sessions. The atmosphere at this conference proved once again that a face-to-face discussion between the presenter and curious listeners is needed for a true exchange of information, including, occasionally, a difference of opinion. Such lively discussion makes personal participation mandatory.

Approximately 42 papers were presented during the conference, with truly international scientific participation. A few presentations were cancelled with advanced warning allowing us to modify the schedule, but not the scheduled presentation times. The great majority of presenters (31) found the necessary time to write their research accomplishments in a technical paper and submit their work for inclusion in the proceedings. On behalf of the readers of the proceedings, we thank the authors for their dedication. Their papers may be downloaded from the SPIE Digital Library. The SPIE Digital Library continues to expand and offer more benefits to SPIE members and readers by making research accomplishments published in the proceedings and journals available worldwide.

Within the last ten years or so, an advisory note has been inserted in the SPIE Call for Papers that the chairs and members of the technical committee review all papers. Many SPIE participants used to assume that this was just *pro-forma*, so our conferences would look good. The truth is that each paper has been read carefully by at least one chair, for as long as we have been involved in these activities. The engineer/scientist who is interested in many subjects, and enjoys to some degree interpersonal interaction, is usually attracted to the conference organization. Such a researcher enjoys reading about new technology, engineering, and science and about the new projects that their colleagues have undertaken. The papers at our conference have historically been of the highest quality. We believe that one more

review of the final submitted work can make the paper even better.

The conference this year was organized into eight oral sessions and one poster session with the presentations thematically grouped within the sessions. We started with two sessions on Planets, Moons, and Minor Bodies, chaired by the conference chair. The third session was titled Infrared and Enabling Technology. It was chaired by Dr. Josef Vojtech, CESNET z.s.p.o. from Prague in Czech Republic. The fourth session was Infrared and Enabling Instruments. It was moderated by Dr. Samuel Butler from the Air Force Institute of Technology in United States. Session five, Interferometry for Space Exploration: Fourier Transform and Simulations, was chaired jointly by both conference chairs. Dr. Marija Strojnik, Centro de Investigaciones en Óptica, A.C., in Leon, Mexico, chaired session six, on NASA LiDAR experiments. The final two sessions were dedicated to Quantum Remote Sensing. Dr. Siwen Bi, of Institute of Remote Sensing and Digital Earth, CAS, in China, chaired both sessions, except for the presentation delivered by session organizer where the Chair stepped in to assist with moderation.

Special thanks are extended to the SPIE staff for providing friendly guidance and organizational support to meet all the deadlines. Organizing a technical conference and publishing proceedings in the form of an e-book involves hard work of a team of dedicated and knowledgeable people. We thank them for their efficient assistance, patience, and constant support.

Marija Strojnik
Gabriele Arnold