PROCEEDINGS OF SPIE

SPIDigitalLibrary.org/conference-proceedings-of-spie

Front Matter: Volume 11745

, "Front Matter: Volume 11745," Proc. SPIE 11745, Passive and Active Millimeter-Wave Imaging XXIV, 1174501 (30 April 2021); doi: 10.1117/12.2598584

Event: SPIE Defense + Commercial Sensing, 2021, Online Only

PROCEEDINGS OF SPIE

Passive and Active Millimeter-Wave Imaging XXIV

David A. Wikner
Duncan A. Robertson
Editors

12–16 April 2021
Online Only, United States

Sponsored and Published by
SPIE

Volume 11745

Proceedings of SPIE 0277-786X, V. 11745

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Passive and Active Millimeter-Wave Imaging XXIV, edited by David A. Wikner, Duncan A. Robertson, Proc. of SPIE
Vol. 11745, 1174501 · © 2021 SPIE · CCC code: 0277-786X/21/\$21 · doi: 10.1117/12.2598584

Proc. of SPIE Vol. 11745 1174501-1

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 SPIDigitalLibrary.org.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from these proceedings:

Author(s), "Title of Paper," in *Passive and Active Millimeter-Wave Imaging XXIV*, edited by David A. Wikner, Duncan A. Robertson, Proc. of SPIE 11745, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 0277-786X

ISSN: 1996-756X (electronic)

ISBN: 9781510643277

ISBN: 9781510643284 (electronic)

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time)

SPIE.org

Copyright © 2021 Society of Photo-Optical Instrumentation Engineers (SPIE).

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of fees. To obtain permission to use and share articles in this volume, visit Copyright Clearance Center at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher.

Printed in the United States of America by Curran Associates, Inc., under license from SPIE.

Publication of record for individual papers is online in the SPIE Digital Library.

SPIE. DIGITAL LIBRARY
SPIDigitalLibrary.org

Paper Numbering: A unique citation identifier (CID) number is assigned to each article in the Proceedings of SPIE at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

- The first five digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

Contents

JOINT SESSION WITH CONFERENCES SI205 AND SI208: MILLIMETER WAVE RADAR

11745 03	Radar imaging based on multiple non-coherent antennas [11745-1]
11745 04	3D image autofocus for millimeter-wave forward-looking SAR [11745-2]
11745 05	Generation of planar and arbitrary flight path spotlight SAR imagery utilizing a compact radar range [11745-3]

IMAGING TECHNIQUES

11745 07	Image enhancement in active incoherent millimeter-wave imaging [11745-5]
11745 08	Millimetre wave ray tracing simulator with phase and beam effects using the Wigner distribution function [11745-6]
11745 0A	Motion estimation from video for high-throughput lens-less 3D millimeter-wave imaging [11745-8]
11745 0B	Single-pixel compressive direction of arrival estimation using programmable metasurface apertures [11745-9]
11745 0C	Towards a convolutional neural network coupled millimetre-wave coded aperture image classifier system [11745-10]
11745 0D	From compressed sensing to learned sensing with metasurface imagers [11745-11]

DEVICES AND IMAGING APPLICATIONS

11745 0E	Electromagnetic wave leakage absorption film using CNT spray [11745-12]
11745 0G	High-throughput anomaly detection in document envelopes with 3D millimeter wave imaging [11745-14]
11745 0I	Full-body submillimeter-wave thermography for counter-pandemic applications [11745-16]

PHENOMENOLOGY AND PERFORMANCE CHARACTERIZATION

- 11745 OJ **On the resolution characterization of THz and MMW FPA-based active imaging systems**
[11745-17]
- 11745 OK **Simulant development of a powder explosive materials for a millimeter wave imaging system**
using a resonant cavity with ensemble averaging and the Houston criterion [11745-18]
- 11745 OL **NEP characterization and analysis method for THz imaging** [11745-19]
- 11745 OM **Depth resolution evaluation for an active wideband millimeter-wave imaging system**
[11745-20]
- 11745 OO **Accurate surface estimation from high-resolution 3D microwave images** [11745-22]