PROCEEDINGS OF SPIE

Optics Education and Outreach VIII

G. Groot Gregory
Anne-Sophie Poulin-Girard
Editors

21–22 August 2024
San Diego, California, United States

Sponsored by
SPIE

Published by
SPIE

Volume 13128

Proceedings of SPIE 0277-786X, V. 13128

Optics Education and Outreach VIII, edited by G. Groot Gregory, Anne-Sophie Poulin-Girard, Proc. of SPIE Vol. 13128, 1312801 · © 2024 SPIE
0277-786X · doi: 10.1117/12.3052416

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.

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 *Optics Education and Outreach VIII*, edited by G. Groot Gregory, Anne-Sophie Poulin-Girard, Proc. of SPIE 13128, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

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

ISBN: 9781510679160
ISBN: 9781510679177 (electronic)

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

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
SPIEDigitalLibrary.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

POSTER SESSION

Conference Committee

Conference Chairs

G. Groot Gregory, Synopsys, Inc. (United States)
Anne-Sophie Poulin-Girard, ABB (Canada)

Conference Program Committee

Katie E. Chong, Sydney Photonics Industry Network (Australia)
Barbara A. Darnell, Cubert GmbH (United States)
Judith F. Donnelly, Problem Based Learning Projects (United States)
Danielle J. Harper, Wellman Center for Photomedicine (United States)
Svetlana G. Lukishova, The Institute of Optics, University of Rochester (United States)
Amanda K. Meier, Front Range Community College (United States)
Brian Monacelli, Pasadena City College (United States) and Jet Propulsion Laboratory (United States)
Ignacio Moreno, University Miguel Hernández (Spain)
Bishnu P. Pal, Mahindra University Hyderabad (India)
Matthew T. Posner, Axonal Networks Inc. (Canada)
Paul B. Ruffin, Alabama A&M University (United States)
Marcelo Saito Nogueira, Tyndall National Institute (Ireland)
Danuta M. Sampson, The University of Western Australia (Australia) and Lions Eye Institute (Australia)
Donn M. Silberman, Optics Institute of Southern California (United States)
Caitriona Tyndall, Tyndall National Institute (Ireland)
Perla Marlene Viera-González, University Autónoma de Nuevo León (Mexico)
María Viñas Peña, Instituto de Óptica "Daza de Valdés" (Spain)
Linhui Yu, Apple Inc. (United States)
María J. Yzuel, University Autònoma de Barcelona (Spain)