PROCEEDINGS OF SPIE

7th International Conference on Image Formation in X-Ray Computed Tomography

Joseph Webster Stayman
Editor

12–16 June 2022

Sponsored by
Johns Hopkins University Department of Biomedical Engineering (United States)
Canon Medical Systems Corporation (Japan)
GE Healthcare (United States)
Philips Healthcare (United States)
Siemens Healthineers (United States)
United Imaging Healthcare (China)

Published by
SPIE

Volume 12304

Proceedings of SPIE 0277-786X, V. 12304

7th International Conference on Image Formation in X-Ray Computed Tomography,
edited by Joseph Webster Stayman, Proc. of SPIE Vol. 12304, 1230401
 · 0277-786X · doi: 10.1117/12.2662172

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 *7th International Conference on Image Formation in X-Ray Computed Tomography*, edited by Joseph Webster Stayman, Proc. of SPIE 12304, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

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

ISBN: 9781510656697
ISBN: 9781510656703 (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

MONDAY POSTER SESSION

TUESDAY POSTER SESSION

WEDNESDAY POSTER SESSION

Conference Committee

Conference Chair

Joseph Webster Stayman, Johns Hopkins University (United States)

Organizing Committee

Grace J. Gang, *Chair*, Johns Hopkins University (United States)
Junyuan Li, Johns Hopkins University (United States)
Yiqun Q. Ma, Johns Hopkins University (United States)
Alejandro Sisniega, Johns Hopkins University (United States)
Matthew Tivnan, Johns Hopkins University (United States)
Wenying Wang, Johns Hopkins University (United States)
Yijie Yuan, Johns Hopkins University (United States)
Wojciech Zbijewski, Johns Hopkins University (United States)

Program Committee

Adam Wang, Stanford University (United States)
Bruno De Man, GE Research (United States)
Cristian Badea, Duke University (United States)
Cyril Riddell, GE Healthcare (France)
Emil Sidky, University of Chicago (United States)
Frédéric Noo, University of Utah (United States)
Ge Wang, Rensselaer Polytechnic Institute (United States)
Guang-Hong Chen, University of Wisconsin-Madison (United States)
Hengyong Yu, University of Massachusetts Lowell (United States)
Hiroyuki Kudo, University of Tsukuba (Japan)
Ioannis Sechopoulos, Radboud University (Netherlands)
Jeff Fessler, University of Michigan (United States)
Jeff Siewerdsen, Johns Hopkins University (United States)
Jerome Liang, Stony Brook University (United States)
Jing Wang, University of Texas Southwestern (United States)
Jingyan Xu, Johns Hopkins University (United States)
Johan Nuyts, KU Leuven (Belgium)
John Boone, University of California, Davis (United States)
Jongduk Baek, Yonsei University (South Korea)
Karl Stierstorfer, Siemens Healthineers (Germany)
Katsuyuki Taguchi, Johns Hopkins University (United States)
Ke Li, University of Wisconsin-Madison (United States)
Ken Sauer, University of Notre Dame (United States)
Kirsten Boedeker, Canon Medical Systems (United States)
Lifeng Yu, Mayo Clinic (United States)
Marc Kachelrieß, German Cancer Research Center (Germany)

Mats Danielsson, KTH Royal Institute of Technology (Sweden)
Michael McNitt-Gray, University of California, Los Angeles (United States)
Peter Noël, University of Pennsylvania (United States)
Rongping Zeng, U.S. Food and Drug Administration (United States)
Scott Hsieh, Mayo Clinic (United States)
Srinivasan Vedantham, University of Arizona (United States)
Stanislav Zabic, Philips (United States)
Stefan Sawall, German Cancer Research Center (Germany)
Thomas Koehler, Philips Research Hamburg (Germany)
Thomas Koenig, Ziehm Imaging (Germany)
Joseph Webster Stayman, Johns Hopkins University (United States)
Wenli Wang, Avant Tomography Consulting LLC (United States)
Xiaochuan Pan, University of Chicago (United States)
Xun Jia, University of Texas Southwestern (United States)
Yuxiang Xing, Tsinghua University (China)
Zhicong Yu, Accuray (United States)
Zhou Yu, Canon Medical Research (United States)
Zhye Yin, GE Research (United States)

Session Chairs

1 Novel CT Technologies
Bruno De Man, GE Research (United States)
Ke Li, University of Wisconsin-Madison (United States)

2 Reconstruction and Deep Learning
Marc Kachelrieß, German Cancer Research Center (Germany)
Koen Michielsen, Radboud University (Netherlands)

3 CT Acquisition
Adam Wang, Stanford University (United States)
Rolf Clackdoyle, Université Grenoble Alpes (France)

4 Spectral CT
Kevin Brown, Philips (United States)
Cristian Badea, Duke University (United States)

5 Artifacts and Sparse CT
Xiaochuan Pan, University of Chicago (United States)
Jerome Liang, Stony Brook University (United States)

6 Modeling and Assessment
Grace J. Gang, Johns Hopkins University (United States)
Kirsten Boedeker, Canon Medical Systems (United States)

7 Deep Learning Assessment
Saiprasad Ravishankar, Michigan State University (United States)
Rongping Zeng, U.S. Food and Drug Administration (United States)

8 Spectral and Polyenergetic CT Reconstruction
Emil Sidky, University of Chicago (United States)
Johan Sunnegårdh, Siemens Healthineers (Germany)

9 Interventional Imaging
Cyril Riddell, GE Healthcare (France)

10 Cardiac CT and Motion Compensation
Katsuyuki Taguchi, Johns Hopkins University (United States)
Simon Rit, CREATIS, Université de Lyon (France)