IS&T International Symposium on Electronic Imaging Science and Technology 2020

3D Measurement and Data Processing 2020

Burlingame, California, USA
26 - 30 January 2020

Editors:

William Puech
Robert Sitnik

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

3D MEASUREMENT AND DATA PROCESSING 2020

Monday, January 27, 2020

3D/4D NN-based Data Processing

Session Chair: Tyler Bell, University of Iowa (United States)

8:45 – 10:10 am
Grand Peninsula A

8:45
Conference Welcome

8:50   3DMP-002
Deadlift recognition and application based on multiple modalities using recurrent neural network, *Shih-Wei Sun[1], Ting-Chen Mou[2], and Pao-Chi Chang[2]; [1]Taipei National University of the Arts and [2]National Central University (Taiwan)...1*

9:10   3DMP-003
Learning a CNN on multiple sclerosis lesion segmentation with self-supervision, *Alexandre Fenneteau[1], Pascal Bourdon[1,2,3], David Helbert[1,2,3], and Christophe Habas[4]; [1]University of Poitiers, [2]I3M, Common Laboratory CNRS-Siemens, University and Hospital of Poitiers, [3]XLIM Laboratory, and [4]Quinze-Vingts Hospital (France)...6*

9:30   3DMP-004
Action recognition using pose estimation with an artificial 3D coordinates and CNN, *Jisu Kim and Deokwoo Lee, Keimyung University (Republic of Korea)...12*

9:50
3DMP Q&A Session Discussion

10:10 – 10:50 am Coffee Break

3D/4D Measurement and Processing

Session Chair: Tyler Bell, University of Iowa (United States)

10:50 am – 12:10 pm
Grand Peninsula A

10:50   3DMP-034
Variable precision depth encoding for 3D range geometry compression, *Matthew Finley and Tyler Bell, University of Iowa (United States)...18*

11:10   3DMP-035
3D shape estimation for smooth surfaces using structured light patterns, *Yin Wang and Jan Allebach, Purdue University (United States)...24*

11:30   3DMP-036
Quality assessment for 3D reconstruction of building interiors, *Umamaheswaran Raman Kumar, Inge Coudron, Steven Puttemans, and Patrick Vandewalle, Katholieke Universiteit Leuven (Belgium)...32*

11:50
3DMP Q&A Session Discussion

12:30 – 2:00 pm Lunch

PLENARY: Frontiers in Computational Imaging

Session Chairs: Radka Tezaur, Intel Corporation (United States) and Jonathan Phillips, Google Inc. (United States)

2:00 – 3:10 pm
Grand Peninsula Ballroom D
Imaging the Unseen: Taking the First Picture of a Black Hole,
Katie Bouman, assistant professor, Computing and Mathematical Sciences Department, California Institute of Technology (United States) N/A

3:10 – 3:30 pm Coffee Break
5:00 – 6:00 pm All-Conference Welcome Reception