

PROCEEDINGS OF SPIE

Thirteenth International Conference on Quality Control by Artificial Vision 2017

**Hajime Nagahara
Kazunori Umeda
Atsushi Yamashita**
Editors

**14–16 May 2017
Tokyo, Japan**

Sponsored by
SPIE
Technical Committee on Industrial Application of Image Processing (IAIP), The Japan Society
for Precision Engineering (Japan)

Published by
SPIE

Volume 10338

Proceedings of SPIE 0277-786X, V. 10338

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

Thirteenth International Conference on Quality Control by Artificial Vision 2017, edited by Hajime Nagahara,
Kazunori Umeda, Atsushi Yamashita, Proc. of SPIE Vol. 10338, 1033801 · © 2017 SPIE
CCC code: 0277-786X/17/\$18 · doi: 10.1117/12.2277475

Proc. of SPIE Vol. 10338 1033801-1

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 SPIEDigitalLibrary.org.

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

Author(s), "Title of Paper," in *Thirteenth International Conference on Quality Control by Artificial Vision*, edited by Hajime Nagahara, Kazunori Umeda, Atsushi Yamashita, Proceedings of SPIE Vol. 10338 (SPIE, Bellingham, WA, 2017) Seven-digit Article CID Number.

ISSN: 0277-786X

ISSN: 2410-9045 (electronic)

ISBN: 9781510611214

ISBN: 9781510611221 (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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Printed in the United States of America.

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Introduction

We are pleased to welcome you to the Thirteenth International Conference on Quality Control by Artificial Vision (QCAV2017). As you know, QCAV started in 1993 at Le Creusot, France, and this year the thirteenth QCAV Conference is in Tokyo, Japan. This is the fourth time QCAV has been in Japan. The first was in Kagawa in 1998, then Nagoya in 2005, and later Fukuoka in 2013.

The objective of the QCAV2017 Conference remains the same as the previous ones: to provide a forum for researchers, engineers, suppliers, and users of vision systems to present and discuss the state-of-the-art developments in machine and computer vision and image processing techniques, with an emphasis on quality control.

This proceedings volume contains forty-six reviewed papers selected from fifty-two submitted papers. All presentations are oral and in a single track. We believe this makes the conference more unified and helps produce deep and intensive discussions on the presented papers.

Moreover, we are proud to have three fabulous plenary talks:

- Prof. Mohit Gupta (University of Wisconsin-Madison): *Towards Next Generation 3D Cameras.*
- Prof. Stéphane Canu (INSA de Rouen, Normandie Université): *Machine Learning, Deep Learning and Optimization in Computer Vision.*
- Dr. Yukiyasu Domae (Mitsubishi Electric Corporation): *Machine Vision for Various Manipulation Tasks.*

We really appreciate the plenary speakers for sharing their cutting-edge research and development results with us.

We would like to thank The Technical Committee on Industrial Application of Image Processing (IAIP) and The Japan Society for Precision Engineering for sponsoring QCAV2017. In addition, we also would like to thank the ten organizations that contributed to the conference as technical sponsors.

We hope all attendees enjoy not only the conference itself, but also Tokyo, one of the largest megalopolises in the world and the venue of next summer Olympic Games in 2020.

QCAV2017 Organizing Committee