

## Optics, Photonics and Digital Technologies for Imaging Applications

Tuesday - Thursday 24 - 26 April 2018

### Conference Sessions At A Glance

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- 1: Medical Imaging I
- 2: Medical Imaging II
- 3: Microscopic Imaging
- Hot Topics II
- Posters-Tuesday
- 4: Plenoptic Image Processing
- 5: Display Systems
- 6: Holographic Imaging and Rendering
- 7: Image Acquisition
- Hot Topics III
- 8: Quality Assessment
- 9: Image Analysis

### Important Dates

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- Abstract Due:  
25 October 2017
- Author Notification:  
26 January 2018
- Manuscript Due Date:  
26 March 2018

### Conference Committee

[SHOW](#) | [HIDE](#)

#### Conference Chairs

- [Peter Schelkens](#), Vrije Univ. Brussel (Belgium)
- [Touradj Ebrahimi](#), Ecole Polytechnique Fédérale de Lausanne (Switzerland)
- [Gabriel Cristóbal](#), Consejo Superior de Investigaciones Científicas (Spain)

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- [Jana Dittmann](#), Otto-von-Guericke-Univ. Magdeburg (Germany)
- Marek Domanski, Univ. of Poznan (Poland)
- [Boris Escalante-Ramírez](#), Univ. Nacional Autónoma de México (Mexico)
- [Pascuala Garcia-Martínez](#), Univ. de València (Spain)
- Laurent Jacques, Univ. Catholique de Louvain (Belgium)
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- [Tomasz Kozacki](#), Warsaw Univ. of Technology (Poland)

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- [Dragan Kukolj](#), RT-RK Institute for Computer Based Systems (Serbia)
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- [Colin James Richard Sheppard](#), National Univ. of Singapore (Singapore)
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- [Gerald Zauner](#), FH OÖ Forschungs & Entwicklungs GmbH (Austria)

**TUESDAY 24 APRIL**[Show All Abstracts](#)

### Opening Remarks

Tuesday 24 April 2018  
8:35 AM - 8:40 AM  
Location: Salon 1

### Session 1: Medical Imaging I

Tuesday 24 April 2018  
8:40 AM - 10:20 AM  
Location: Salon 1


Session Chair: [Boris Escalante-Ramírez](#), Univ. Nacional Autónoma de México (Mexico)

#### Quality enhancement of multispectral images for skin cancer optical diagnostics

Paper 10679-1

Time: 8:40 AM - 9:00 AM

Author(s): Katrina Bolochko, Dmitrijs Bliznuks, Riga Technical Univ. (Latvia); Ilze Lihacova, Alexey Lihachov, Univ. of Latvia (Latvia)


[Add To My Schedule](#) 

**Monitoring of the excretion of fluorescent nanocomposites out of the body using artificial neural networks**

Paper 10679-2

Time: 9:00 AM - 9:20 AM


Author(s): Olga Sarmanova, Sergey Burikov, M.V. Lomonosov Moscow State Univ. (Russian Federation); Sergey Dolenko, Alexander Eftorov, Igor Isaev, Skobeltsyn Institute of Nuclear Physics (Russian Federation); Kirill Laptinskiy, M.V. Lomonosov Moscow State Univ. (Russian Federation); Neeraj Prabhakar, Jessica Rosenholm, Åbo Akademi Univ. (Finland); Tatiana Dolenko, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Cloud infrastructure for skin cancer scalable detection system**

Paper 10679-3

Time: 9:20 AM - 9:40 AM


Author(s): Pavels Osipovs, Dmitrijs Bliznuks, Riga Technical Univ. (Latvia); Alexey Lihachev, Institute of Atomic Physics and Spectroscopy, Univ. of Latvia (Latvia)

[Add To My Schedule](#) **Deep features using convolutional neural network for early stage cancer detection**

Paper 10679-4

Time: 9:40 AM - 10:00 AM


Author(s): Sawon Pratiher, Indian Institute of Technology Kanpur (India); Shubhobrata Bhattacharya, Indian Institute of Technology Kharagpur (India); Sabyasachi Mukhopadhyay, Nirmalya Ghosh, Indian Institute of Science Education and Research Kolkata (India); Gautham Pasupuleti, Biodesign Innovation labs Private Limited (India); Prasanta K. Panigrahi, Indian Institute of Science Education and Research Kolkata (India)

[Add To My Schedule](#) **Probing tissue multifractality for optical diagnosis of diabetic retinopathy**

Paper 10679-5

Time: 10:00 AM - 10:20 AM

Author(s): Sawon Pratiher, Indian Institute of Technology Kanpur (India); Sabyasachi Mukhopadhyay, Indian Institute of Science Education and Research Kolkata (India); Sukanya Mukherjee, UEM Kolkata (India); Ritwik Barman, Indian Institute of Science Education and Research Kolkata (India); Gautham Pasupuleti, Biodesign Innovation labs Private Limited (India); Jay Chhablani, LV Prasad Eye Institute (India); Prasanta K. Panigrahi, Indian Institute of Science Education and Research Kolkata (India)

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**Coffee Break 10:20 AM - 10:50 AM**

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**Session 2:  
Medical Imaging II**

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Tuesday 24 April 2018

10:50 AM - 12:30 PM


Location: Salon 1

Session Chair: [Boris Escalante-Ramirez](#), Univ. Nacional Autónoma de México (Mexico)**Classification of brain tissue with optical coherence tomography by employing texture analysis**

Paper 10679-6

Time: 10:50 AM - 11:10 AM


Author(s): Marcel Lenz, Ruhr-Univ. Bochum (Germany); Robin Krug, Univ. Knappschafts Krankenhaus Bochum GmbH (Germany); Christopher Dillmann, Technische Fachhochschule Georg Agricola zu Bochum (Germany); Nils C. Gerhardt, Ruhr-Univ. Bochum (Germany); Hubert Welp, Technische Fachhochschule Georg Agricola zu Bochum (Germany); Kirsten Schmieder, Univ. Knappschafts Krankenhaus Bochum GmbH (Germany); Martin R. Hofmann, Ruhr-Univ. Bochum (Germany)

[Add To My Schedule](#) **Visual measurement of any shape of the flaccid membrane of the extracorporeal pneumatic heart assist pump**

Paper 10679-7

Time: 11:10 AM - 11:30 AM


Author(s): Wojciech Sulej, Krzysztof Murawski, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland)

[Add To My Schedule](#) **Dual-beam manually-actuated distortion-corrected imaging (DMDI) using galvanometer scanner (Conference Presentation)**

Paper 10679-8

Time: 11:30 AM - 11:50 AM

Author(s): Madeline Harlow, Anthony Lee, Geoffrey Hohert, Pierre Lane, Calum MacAulay, BC Cancer Research Ctr. (Canada)

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**Lunch/Exhibition Break 12:30 PM - 2:00 PM**

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**Session 3:  
Microscopic Imaging**

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Tuesday 24 April 2018

2:00 PM - 4:00 PM

Location: Salon 1

Session Chair: Gloria Bueno, Univ. de Castilla-La Mancha (Spain)

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#### Fluorescence imaging for whole slide scanning using LED-based color sequential illumination

Paper 10679-11

Time: 2:00 PM - 2:20 PM

Author(s): Leon van der Graaff, Technische Univ Delft (Netherlands); Fanny Boyaval, Leiden University Medical Center (Netherlands); Lucas van Vliet, Sjoerd Stallinga, Technische Univ. Delft (Netherlands)

[Add To My Schedule](#) 

#### Axial scanning and spherical aberration correction in confocal microscopy employing an adaptive lens

Paper 10679-12

Time: 2:20 PM - 2:40 PM

Author(s): Katrin Philipp, TU Dresden (Germany); Florian Lemke, Matthias C. Wapler, Univ. of Freiburg (Germany); Nektarios Koukourakis, TU Dresden (Germany); Ulrike Wallrabe, Univ. of Freiburg (Germany); Jürgen W. Czarske, TU Dresden (Germany)

[Add To My Schedule](#) 

#### Application of Raman microscopy to cytology

Paper 10679-13

Time: 2:40 PM - 3:00 PM

Author(s): Bryan M. Hennelly, National Univ. of Ireland, Maynooth (Ireland); John J. Healy, Univ. College Dublin (Ireland); Xin Fan, National Univ. of Ireland, Maynooth (Ireland)


[Add To My Schedule](#) 

#### Lights and pitfalls of convolutional neural networks for diatom identification

Paper 10679-14

Time: 3:00 PM - 3:20 PM

Author(s): Anibal Pedraza, Gloria Bueno, Oscar Déniz, Jesus Ruiz-Santaquiteria, VISILAB, Univ. de Castilla-La Mancha (Spain); Carlos Sanchez, Instituto de Óptica "Daza de Valdés" (Spain), Consejo Superior de Investigaciones Científicas (Spain); Saúl Blanco, Maria Borrego-Ramos, Adriana Olenici, Univ. de León (Spain); Gabriel Cristobal, Instituto de Óptica "Daza de Valdés" (Spain), Consejo Superior de Investigaciones Científicas (Spain)


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#### Image scanning microscopy (ISM) with a single photon avalanche diode (SPAD) array detector

Paper 10679-15

Time: 3:20 PM - 3:40 PM

Author(s): Colin J. R. Sheppard, Istituto Italiano di Tecnologia (Italy), Univ. of Wollongong (Australia); Mauro Buttafava, Politecnico di Milano (Italy); Marco Castello, Alberto Diaspro, Giorgio Tortarolo, Istituto Italiano di Tecnologia (Italy); Alberto Tosi, Politecnico di Milano (Italy); Giuseppe Vicidomini, Istituto Italiano di Tecnologia (Italy); Federica Villa, Politecnico di Milano (Italy)


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#### The generation of optical needle and magnetization needle with tunable longitudinal depth

Paper 10679-16

Time: 3:40 PM - 4:00 PM

Author(s): Jian Fu, Ying Wang, Peifeng Chen, Huazhong Univ. of Science and Technology (China)

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**Coffee Break 4:00 PM - 4:30 PM**

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## Hot Topics II

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Tuesday 24 April 2018

4:30 PM - 6:05 PM

Location: Schweitzer Auditorium

### Photonics Europe 2018: Hot Topics Session II

#### Coherent combination of fiber amplified ultrafast laser pulses

Jens Limpert, Institute of Applied Physics, Friedrich Schiller Univ. Jena, Germany

#### 2D materials and their heterostructures: fundamentals, applications and prototypes

Frank Koppens, ICFO-The Institute of Photonic Sciences, Spain

For additional details, please visit <http://spie.org/x12297.xml>

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## Session PSTue: Posters-Tuesday

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Tuesday 24 April 2018

6:00 PM - 7:30 PM

Location: Hall Rhin

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday 17.45 to 19.30. Posters will be on display after 10.00 Tuesday morning in the Hall Rhin. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers

will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions. Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/x34963.xml>.


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**Hough transform-based image processing algorithm in the optical-electronic angle measuring device**

Paper 10679-47

Time: 6:00 PM - 7:30 PM


Author(s): Anton A. Nogin, Timofey K. Korolev, Igor A. Konyakhin, ITMO Univ. (Russian Federation)

[Add To My Schedule](#) **Influence of noise on the estimation method to reject damped sinusoidal vibrations in adaptive optics systems**

Paper 10679-48

Time: 6:00 PM - 7:30 PM


Author(s): Dariusz Kania, Wroclaw Univ. of Technology (Poland); Józef Borkowski, Wroclaw Univ. of Science and Technology (Poland)

[Add To My Schedule](#) **Augmented logarithmic Gaussian process regression methodology for chlorophyll prediction**

Paper 10679-49

Time: 6:00 PM - 7:30 PM

Author(s): Subhadip Dey, Indian Institute of Technology Kharagpur (India); Sawon Pratiher, Indian Institute of Technology Kanpur (India); Chanchal K. Mukherjee, Indian Institute of Technology Kharagpur (India); Saon Banerjee, Bidhan Chandra Krishi Viswavidyalaya (India); Arnab Chakraborty, RCC Institute of Information Technology (India)

[Add To My Schedule](#) **Optical design and unification of objectives: CCF PlanApo for 28 mm observation in the microscope**

Paper 10679-51

Time: 6:00 PM - 7:30 PM


Author(s): Dmitry N. Frolov, Olga A. Vinogradova, Labor-Microscopes (Russian Federation); Vladimir N. Frolov, Pavel S. Vakulov, JSC NPP "AME" (Russian Federation)

[Add To My Schedule](#) **A multiphase active contour model based on the Hermite transform for texture segmentation**

Paper 10679-52

Time: 6:00 PM - 7:30 PM


Author(s): Erik Carbajal-Degante, Jimena Olveres, Boris Escalante-Ramírez, Univ. Nacional Autónoma de México (Mexico)

[Add To My Schedule](#) **Particle image models for optical flow-based velocity field estimation in image velocimetry**

Paper 10679-55

Time: 6:00 PM - 7:30 PM

Author(s): Grzegorz Glomb, Grzegorz Świmiak, Wroclaw Univ. of Science and Technology (Poland)

[Add To My Schedule](#) **Fluid flow measurements using optical flow velocity field estimation and LED-based light sheet illumination**

Paper 10679-56

Time: 6:00 PM - 7:30 PM


Author(s): Grzegorz Glomb, Grzegorz Świmiak, Wroclaw Univ. of Science and Technology (Poland)

[Add To My Schedule](#) **Freeform optics complexity estimation: comparison of methods**

Paper 10679-57

Time: 6:00 PM - 7:30 PM


Author(s): Eduard R. Muslimov, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ. (France); Emmanuel Hugot, Simona Lombardo, Mélanie Roulet, Marc Ferrari, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ. (France)

[Add To My Schedule](#) **Endogenous two- and three-photon fluorescence of a biological substance with a picosecond ultrawide band laser source**

Paper 10679-58

Time: 6:00 PM - 7:30 PM

Author(s): Claire Lefort, XLIM Institut de Recherche (France); Laetitia Magnol, Univ. de Limoges (France); Philippe Lévêque, XLIM Institut de Recherche (France); Véronique Blanquet, Unité de Génétique Moléculaire Animale (France)

[Add To My Schedule](#) **Optical system design of the telescopic system with a variable magnification****(Canceled)**

Paper 10679-59

Time: 6:00 PM - 7:30 PM


Author(s):

**The optimal planning methods of remote sensing experiment in IR-range for the satellite meteorology problems**

Paper 10679-60

Time: 6:00 PM - 7:30 PM

Author(s): Nikolay Uvarov, EOS Data Analytics, Inc. (Ukraine); Anton Sokolov, Laboratoire de l'Atmosphère (CNRS EA 4493) Univ. du Littoral Côte d'Opale (France)


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**Sparse matrix-based image enhancement for target detection using deep learning**

Paper 10679-61

Time: 6:00 PM - 7:30 PM

Author(s): Shih-Yu Chen , Zhe-Yuan Kao, Fu-Ming Yang , Yen-Chung Chen , National Yunlin Univ. of Science and Technology (Taiwan)

[Add To My Schedule](#) **A method for automatic analysis of scanned 3D models of human hands and feet**

Paper 10679-62

Time: 6:00 PM - 7:30 PM


Author(s): Mihails Kovalovs, Riga Technical Univ. (Latvia)

[Add To My Schedule](#) **Multi-sensor array for polarimetric light-field imaging**

Paper 10679-63

Time: 6:00 PM - 7:30 PM


Author(s): Yunsong Nie, Beijing Institute of Space Mechanics and Electricity (China); Chongde Zi, Yunqian Li, Tao Yue, Xun Cao, Nanjing Univ. (China)

[Add To My Schedule](#) **Electrochromic tunable filters based on nanotubes with viologen incorporation**

Paper 10679-66

Time: 6:00 PM - 7:30 PM


Author(s): Alexander Hein, Technical Univ. Kaiserslautern (Germany); Carsten Kortz, Egbert Oesterschulze, Technische Univ. Kaiserslautern (Germany)

[Add To My Schedule](#) **Opto-electronic scanner for operational control of security holograms authenticity on documents**

Paper 10679-67

Time: 6:00 PM - 7:30 PM

Author(s): Ivan Tsyganov, Vasily V. Kolyuchkin, Vladimir E. Talalaev, Nikolay V. Piryutin, Sergey B. Odinkov, Liudmila A. Naiden, Vsevolod D. Cheburkanov, Bauman Moscow State Technical Univ. (Russian Federation); Evgenii Y. Zlokazov, National Research Nuclear Univ. MEPhI (Russian Federation)

[Add To My Schedule](#) **Analysis of light-guide parameters for multicolor augmented reality indicator based on DOEs**

Paper 10679-68

Time: 6:00 PM - 7:30 PM

Author(s): Yanina Grad, Vladimir Nikolaev, Sergey B. Odinkov, Artem B. Solomashenko, Alexander Yanev, Bauman Moscow State Technical Univ. (Russian Federation)

[Add To My Schedule](#) **Asymmetric optical encryption technique implementing spatially incoherent illumination**

Paper 10679-70

Time: 6:00 PM - 7:30 PM

Author(s): Pavel A. Cheremkhin, Nikolay N. Evtikhiev, Vitaly V. Krasnov, Ekaterina D. Minaeva, Vladislav G. Rodin, Anna V. Shifrina, National Research Nuclear Univ. MEPhI (Russian Federation)

[Add To My Schedule](#) **Digital hologram quality improvement by elimination of imaging sensor noise**

Paper 10679-71

Time: 6:00 PM - 7:30 PM

Author(s): Pavel A. Cheremkhin, Nikolay N. Evtikhiev, Vitaly V. Krasnov, Vladislav G. Rodin, Rostislav S. Starikov, National Research Nuclear Univ. MEPhI (Russian Federation)

[Add To My Schedule](#) **Deep learning object recognition in multi-spectral UAV imagery**

Paper 10679-72

Time: 6:00 PM - 7:30 PM


Author(s): Vladimir A. Knyaz, Sergey Zheltov, GosNIAS (Russian Federation)

[Add To My Schedule](#) **Methods of entering of compensation distortions into images for projection on nonplanar surfaces by development of systems of augmented reality**

Paper 10679-73

Time: 6:00 PM - 7:30 PM


Author(s): Kseniia Ezhova, Anton Chukhlamov, ITMO Univ. (Russian Federation)

[Add To My Schedule](#) **Pattern recognition based on analysis of the summary ellipse polarization state in the Fraunhofer diffraction area**

Paper 10679-76

Time: 6:00 PM - 7:30 PM


Author(s): Barbara N. Kilosanidze, George Kakauridze, Irina Kobulashvili, Institute of Cybernetics, Georgian Technical Univ. (Georgia)

[Add To My Schedule](#) **Dense disparity estimation based on the bi-dimensional empirical mode decomposition and Riesz transformation**

Paper 10679-78

Time: 6:00 PM - 7:30 PM

Author(s): Feifei Gu, Shenzhen Institutes of Advanced Technology (China); Hong Zhao, Xi'an Jiaotong Univ. (China); Zhan Song, Shenzhen Institutes of Advanced Technology (China), The Chinese Univ. of HongKong (Hong Kong, China); Juan Zhao, Shenzhen Institutes of Advanced Technology (China)

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WEDNESDAY 25 APRIL

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## Session 4: Plenoptic Image Processing

Wednesday 25 April 2018

8:30 AM - 10:30 AM

Location: Salon 1


Session Chair: [Peter Schelkens](#), Vrije Univ. Brussel (Belgium)

### Information processing challenges of full parallax light field displays

Paper 10679-17

Time: 8:30 AM - 8:50 AM

Author(s): Zahir Y. Alpaslan, Hussein S. El-Ghoroury, Ostendo Technologies, Inc. (United States); Peter Schelkens, Vrije Univ. Brussel (Belgium)


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### Benchmarking coding standards for digital holography represented on the object plane

Paper 10679-18

Time: 8:50 AM - 9:10 AM

Author(s): Marco Bernardo, Antonio M. G. Pinheiro, Manuela Pereira, Univ. da Beira Interior (Portugal)


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### Compression scheme for sparsely sampled light field data based on pseudo multi-view sequences

Paper 10679-19

Time: 9:10 AM - 9:30 AM

Author(s): Waqas Ahmad, Mårten Sjöström, Roger Olsson, Mid Sweden Univ. (Sweden)


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### View-dependent compression of digital hologram based on matching pursuit

Paper 10679-20

Time: 9:30 AM - 9:50 AM

Author(s): Anas El Rhammad, b<>com (France); Patrick Gioia, Orange SA (France); Antonin Gilles, b<>com (France); Marco Cagnazzo, Béatrice Pesquet, Télécom ParisTech (France)


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### Advanced mobile three-dimensional display based on computer-generated integral imaging

Paper 10679-21

Time: 9:50 AM - 10:10 AM

Author(s): Munkh-Uchral Erdenebat, Yan-Ling Piao, Nyamsuren Darkhanbaatar, Ki-Chul Kwon, Nam Kim, Chungbuk National Univ. (Korea, Republic of)


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### Rapid vertical tissue imaging with clinical multiphoton tomography

Paper 10679-81

Time: 10:10 AM - 10:30 AM

Author(s): Hans Georg Breunig, Benjamin Sauer, JenLab GmbH (Germany); Ana Batista, Univ. des Saarlandes (Germany); Karsten Koenig, JenLab GmbH (Germany)

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Coffee Break 10:30 AM - 11:00 AM

## Session 5: Display Systems

Wednesday 25 April 2018

11:00 AM - 12:20 PM

Location: Salon 1


Session Chair: [Jukka-Tapani Mäkinen](#), VTT Technical Research Ctr. of Finland Ltd. (Finland)

### Laser speckle reduction based on partial spatial coherence and microlens-array screens

Paper 10679-22

Time: 11:00 AM - 11:20 AM

Author(s): Jaël Pauwels, Guy Verschaffelt, Vrije Univ. Brussel (Belgium)


[Add To My Schedule](#) 

### Camera-based color measurement of DLP projectors using a semi-synchronized projector camera system

Paper 10679-23

Time: 11:20 AM - 11:40 AM


Author(s): Marcel Heinz, Guido Brunnett, Danny Kowerko, Technische Univ. Chemnitz (Germany)

[Add To My Schedule](#) **Optical flow-based filtering for effective presentation of the enhanced vision on a HUD**

Paper 10679-24

Time: 11:40 AM - 12:00 PM


Author(s): Vladimir V. Kniaz, GosNIIAS (Russian Federation)

[Add To My Schedule](#) **Conception of a touchless human machine interaction system for operating rooms using deep learning**

Paper 10679-80

Time: 12:00 PM - 12:20 PM

Author(s): Florian Pereme, Jesus Zegarra, Mirko Scavazzin, Franck Valentini, Jean-Pierre Radoux, Altran Technologies (France)

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**Lunch/Exhibition Break 12:20 PM - 1:50 PM**

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**Session 6:  
Holographic Imaging and Rendering**

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Wednesday 25 April 2018

1:50 PM - 3:10 PM


Location: Salon 1

Session Chair: [Jukka-Tapani Mäkinen](#), VTT Technical Research Ctr. of Finland Ltd. (Finland)**Image blur and visual perception for rainbow holographic display**

Paper 10679-26

Time: 1:50 PM - 2:10 PM

Author(s): Hyon-Gon Choo, Electronics and Telecommunications Research Institute (Korea, Republic of); Maksymilian Chlipala, Tomasz Kozacki, Warsaw Univ. of Technology (Poland)

[Add To My Schedule](#) **Spatial frequency response of nanocomposite holographic gratings**

Paper 10679-27

Time: 2:10 PM - 2:30 PM


Author(s): Yasuo Tomita, Toshihiro Nakamura, Agyl F. Rizky, Ryota Fujii, The Univ. of Electro-Communications (Japan); Jinxin Guo, Beijing Univ. of Technology (China)

[Add To My Schedule](#) **Holographic stereogram printer for computer-generated holograms**

Paper 10679-28

Time: 2:30 PM - 2:50 PM


Author(s): Erkhembaatar Dashdavaa, Anar Khuderchuluun, Chang-Won Shin, Young-Tae Lim, Nam Kim, Chungbuk National Univ. (Korea, Republic of)

[Add To My Schedule](#) **Diffraction elements by nanoparticle composites for holographic display**

Paper 10679-29

Time: 2:50 PM - 3:10 PM

Author(s): Lin Cao, Jinxin Guo, Lu Rong, Xinping Zhang, Dayong Wang, Beijing Univ. of Technology (China)

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**Coffee Break 3:10 PM - 3:40 PM**

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**Session 7:  
Image Acquisition**

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Wednesday 25 April 2018

3:40 PM - 5:40 PM

Location: Salon 1


Session Chair: Olivier Aubreton, Univ. de Bourgogne (France)

**Curved detectors for wide field imaging systems: impact on tolerance analysis**

Paper 10679-30

Time: 3:40 PM - 4:00 PM

Author(s): Eduard R. Muslimov, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ. (France); Emmanuel Hugot, Lab. d'Astrophysique de Marseille, Aix Marseille Univ. (France); Simona Lombardo, Lab. d'Astrophysique de Marseille, Aix Marseille Univ. (France); Mélanie Roulet, Thibault Behaghel, Lab. d'Astrophysique de Marseille, Aix Marseille Univ. (France); Marc Ferrari, Wilfried Jahn, Lab. d'Astrophysique de Marseille, Aix Marseille Univ. (France); Christophe Gaschet, Bertrand Chambion, David Henry, Univ. Grenoble Alpes (France), CEA-LETI (France)


[Add To My Schedule](#) 

**Real-time spatially adaptive deconvolution for CFA images**

Paper 10679-31

Time: 4:00 PM - 4:20 PM


Author(s): Ljubomir Jovanov, Wilfried Philips, Univ. Gent (Belgium)

[Add To My Schedule](#) **Real-time high-speed motion blur compensation method using galvanometer mirror for shape sensing of microfabricated objects**

Paper 10679-33

Time: 4:40 PM - 5:00 PM


Author(s): Kenichi Murakami, Tomohiko Hayakawa, Jerome Pitogo de Leon, Masatoshi Ishikawa, The Univ. of Tokyo (Japan)

[Add To My Schedule](#) **Curved CMOS sensor: characterization of the first fully functional prototype**

Paper 10679-34

Time: 5:00 PM - 5:20 PM

Author(s): Simona Lombardo, Thibault Behaghel, Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France); Bertrand Chambion, CEA-LETI (France); Wilfried Jahn, Emmanuel Hugot, Eduard R. Muslimov, Mélanie Roulet, Marc Ferrari, Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France); Christophe Gaschet, David Henry, Stéphane Caplet, CEA-LETI (France)

[Add To My Schedule](#) **Optical feedback interferometry applied to visualize an acoustic stationary wave**

Paper 10679-35

Time: 5:20 PM - 5:40 PM

Author(s): Fernando Urgiles, Julien Perchoux, Francis Jayat, Lab. d'Analyse et d'Architecture des Systèmes (France); Clément Tronche, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); Thierry Bosch, Lab. d'Analyse et d'Architecture des Systèmes (France)

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**THURSDAY 26 APRIL**[Show All Abstracts](#)

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**Hot Topics III**

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Thursday 26 April 2018

9:00 AM - 10:35 AM

Location: Schweitzer Auditorium

**Photonics Europe 2018: Hot Topics Session III****From extreme nonlinear optics to ultrafast atomic physics**

Anne L'Huillier, Lund Univ., Sweden

**Quantum computations and quantum simulations with trapped ions**

Rainer Blatt, Institute for Experimental Physics, Univ. of Innsbruck, Austria

For additional details, please visit <http://spie.org/x12297.xml>

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**Coffee Break 10:35 AM - 11:00 AM**

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**Session 8:  
Quality Assessment**

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Thursday 26 April 2018

11:00 AM - 12:40 PM

Location: Salon 1

Session Chair: [Peter Schelkens](#), Vrije Univ. Brussel (Belgium)

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**How to measure image quality of virtual reality cameras in practice**

Paper 10679-36

Time: 11:00 AM - 11:20 AM

Author(s): Veli-Tapani Peltoketo, Nokia Corp. (Finland)

[Add To My Schedule](#) **Speckle reduction in laser cinema projection display**

Paper 10679-37

Time: 11:20 AM - 11:40 AM

Author(s): Pierre Walczak, Stéphane Barland, Institut de Physique de Nice (France); Xavier Hachair, BBright (France)


[Add To My Schedule](#) **Automating the surface inspection on small customer-specific optical elements**

Paper 10679-38



Time: 11:40 AM - 12:00 PM

Author(s): Alexander Schöch, Patric Perez, Sabine Linz-Dittrich, Carlo Bach, Carsten Ziolek, NTB Interstaatliche Hochschule für Technik Buchs (Switzerland)

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### 3D measurement of yarn hairiness via multi-perspective images

Paper 10679-39

Time: 12:00 PM - 12:20 PM

Author(s): Lei Wang, Jiangnan Univ. (China); Bugao Xu, Univ. of North Texas (United States); Weidong Gao, Jiangnan Univ. (China)


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### The device for automated quality inspection and authentication of security holograms

Paper 10679-40

Time: 12:20 PM - 12:40 PM

Author(s): Vasily V. Kolyuchkin, Sergey B. Odinkov, Vladimir E. Talalaev, Ivan Tsyganov, Bauman Moscow State Technical Univ. (Russian Federation); Vsevolod Cheburkanov, Bauman MSTU (Russian Federation); Evgeny Zlokazov, National Research Nuclear University MEPhI (Russian Federation)

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## Lunch Break 12:40 PM - 1:50 PM

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## Session 9: Image Analysis

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Thursday 26 April 2018

1:50 PM - 3:10 PM

Location: Salon 1

Session Chair: [Peter Schelkens](#), Vrije Univ. Brussel (Belgium)


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### Face recognition method for cases of an insufficient training set, using 3D models of face that were created using two facial images

Paper 10679-41

Time: 1:50 PM - 2:10 PM

Author(s): Olga Krutikova, Riga Technical Univ. (Latvia); Aleksandrs Sisojevs, Ventspils Univ. College (Latvia)


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### Research on method of vision navigation for mobile robot in unstructured environment

Paper 10679-42

Time: 2:10 PM - 2:30 PM

Author(s): Liming Zhao, Yi Zhang, Xiaodong Xu, Hong Xiao, Chongqing Univ. of Posts and Telecommunications (China)


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### Fast object recognition method from random measurements of compressive sensing camera

Paper 10679-44

Time: 2:30 PM - 2:50 PM

Author(s): Qi Wang, Lingling Ma, Chuanrong Li, Lingli Tang, Yongsheng Zhou, Chinese Academy of Sciences (China)

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