



ICCV 2017 Workshop  
October 29 (PM only), 2017, Venice, Italy

- Invited Speakers
- Description
- Important Dates
- Organizing Committee
- Paper Submission
- Program Committee

#### Contact

Jose Alvarez

#### Call for Papers

[Download call for papers](#)

### Program

<b>13:00 – 13:45</b>	<b>Rafal Mantiuk (University of Cambridge)</b>
<b>13:45 – 14:45</b>	<b>Contributed Talks</b>
<b>13:45 – 14:00</b>	<b>LIT: a system and benchmark for light understanding (T. Tsesmelis, I. Hasan, M. Cristani, A. Del Bue, F. Galasso)</b>
<b>14:00 – 14:15</b>	<b>Depth Super-Resolution Meets Uncalibrated Photometric Stereo (S. Peng, B. Haefner, Y. Queau, D. Cremers)</b>
<b>14:15 – 14:30</b>	<b>Shape-from-polarisation: a nonlinear least squares approach (Y. Yu, D. Zhu, W. Smith)</b>
<b>14:30 – 14:45</b>	<b>Color Consistency Correction Based on Remapping Optimization for Image Stitching (M. Xia, Y. Jian, R. Xie, M. Zhang, J. Xiao)</b>
<b>14:45 – 15:00</b>	<b>coffee break</b>
<b>15:00 – 16:00</b>	<b>Session 2 (contributed Talks)</b>
<b>15:00 – 15:15</b>	<b>The importance of smoothness constraints on spectral object reflectances when modeling metamer mismatching (T. Stiebel, D Merhof)</b>
<b>15:15 – 15:30</b>	<b>Deep Generative Filter for Motion Deblurring Sainandan Ramakrishnan, Shubham Pachori, Aalok Gangopadhyay, Shanmuganathan Raman</b>
<b>15:30 – 15:45</b>	<b>Linear Data Compression of Hyperspectral Images Kaori Tanji, Hayato Itoh, Atsushi Imiya, Naohiro Manago, Hiroaki Kuze,</b>
<b>15:45 – 16:00</b>	<b>A Three-pathway Psychobiological Framework of Salient Object Detection Using Stereoscopic Technology Chunbiao Zhu, Ge Li</b>
<b>16:00 – 17:00</b>	<b>Session 3 (contributed Talks)</b>
<b>16:00 – 16:15</b>	<b>A New Low-Light Image Enhancement Algorithm using Camera Response Model Zhenqiang Ying, Ge Li, Yurui Ren, Ronggang Wang, Wenmin Wang,</b>
<b>16:15 – 16:30</b>	<b>Global and Local Contrast Adaptive Enhancement for Non-uniform Illumination Color Images Qi-Chong Tian, Laurent Cohen</b>
<b>16:30 – 16:45</b>	<b>Image-Based Relighting with 5-D Incident Light Fields Shinnosuke Oya, Takahiro Okabe</b>
<b>16:45 – 17:00</b>	<b>Color Image Processing Using Reduced Biquaternions with Application to Face Recognition in a PCA Framework Moumen Elmelegy, Aliaa Kamal</b>
<b>17:00 – 17:05</b>	<b>Concluding remarks</b>

### Invited Speakers

Sponsored by



- Rafal Mantiuk, University of Cambridge, UK

## Description of the workshop

When light interacts with surfaces and participating media, it is altered in terms of its spectrum, polarization state, and spatial and angular distributions. Modeling and analyzing these processes has a long history in vision, and it has deepened our understanding of biological vision systems and enabled the development of a variety of computational tools for analyzing and organizing visual data.

Over the last decade, with the acceleration of digital photography and the advances in appearance scanners, image sensors, and displays, we have seen explosive growth in the amount of visual data that is available, and equally explosive growth in the opportunities for image understanding by machines.

This workshop will leverage this growth and exploit these opportunities by providing new insights for the understanding of color and photometry in computer vision. As color and photometry are shared among various research fields, this workshop places them at the junctions of different areas, including color science, applied optics, computational photography, computer vision, computer graphics, and machine learning. It seeks to enable knowledge discovery using area-specific expertise and cross-understanding.

We encourage researchers to formulate innovative color theories, color representations, and color processing techniques, and to evaluate their effectiveness. We also encourage new theories and processes for organizing images and inferring scene information from images through analysis of photometry and/or color that is motivated by perception, physics, and phenomenology. We are soliciting original contributions that address a wide range of theoretical and practical issues including, but not limited to:

- **Theory:** Color spaces; reflection models; scattering models; light transport; multi-spectral, hyper-spectral, and polarization models; appearance analysis; color appearance models.
- **Sensors:** Imaging systems; active illumination systems; spectrum and polarization sensing; light probes; shape and material scanners; radiometric and colorimetric calibration.
- **Image/Video Processing:** Filtering, enhancement, feature detection, and segmentation informed by color and/or photometry; white balance; relighting; image decomposition via intrinsic images, specular removal, and shadow removal; color texture; colorization.
- **Material, Object, Scene, and Video Recognition:** Photometric invariants; color invariants; material recognition; lighting estimation; shape estimation; color saliency; color constancy; color descriptors and matching.
- **Vision Science:** Material perception; shape perception; lighting perception; lightness and color perception.
- **Applications:** Industrial inspection; human computer interaction; navigation; medical diagnosis; biology and biomedicine.

## Important Dates

- Submission Deadline: **EXTENDED July 25th (23:59 Pacific Time)**.
- Notification of Acceptance: **August 19th**.
- Camera-ready Deadline: August 25th.
- Workshop: October 29th.

## Organizing Committee

- Prof. Theo Gevers (University of Amsterdam, The Netherlands)
- Prof. Graham Finlayson (University of East Anglia, UK)
- Dr. Jose Alvarez (Data61 / CSIRO, Australia)

## Paper Submission

- The submission site is <https://cmt3.research.microsoft.com/CPCV2017/>
- The maximum paper length is 8 pages (including references) using the ICCV main conference format.
- Submissions will be rejected without review if they exceed the maximum length or violate the double-blind policy.

## Program Committee

- Simone Bianco, Universita degli Studi di Milano-Bicocca, Italy
- Mark Drew, Simon Fraser University, Canada
- Takahiko Horiuchi, Chiba University, Japan
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