

electronic IMAGING2021

[REGISTER](#)
[EI HOME/ABOUT](#)
[SYMPOSIUM PROGRAM](#)
[SHORT COURSES](#)
[CONFERENCE PROGRAMS](#)
[SYMPOSIUM PLENARIES](#)
[CONFERENCE KEYNOTES](#)
[ATTEND/REGISTER](#)
[EXHIBIT/SPONSOR](#)
[FOR STUDENTS](#)
[AUTHOR/SUBMIT](#)

Share [Tweet](#)
Follow [@ElectroImaging](#)

IMPORTANT DATES

	2020
Abstract submission opens	1 June
Final submission deadline	7 Oct
Manuscripts due for FastTrack publication	23 Nov
Early Bird registration ends	18 Dec
Early registration ends	31 Dec
	2021
Short Courses begin	11 Jan
Symposium begins	18 Jan
All manuscripts due	8 Feb

[About HVEI 2021](#)
[HVEI Program](#)
[For HVEI Authors](#)
[HVEI History/Proceedings](#)

Human Vision and Electronic Imaging 2021

[New York](#)
[Paris](#)
[Tokyo](#)

NOTES ABOUT THIS VIEW OF THE PROGRAM

- Below is the the program in New York time.
- Talks are to be presented live during the times noted and will be recorded. The recordings may be viewed at your convenience, as often as you like, until **30 April 2021**.

TUESDAY 19 JANUARY 2021

PLENARY: Deep Internal Learning—Deep Learning with Zero Examples

Session Chair: Charles Boumen, Purdue University (United States)
10:00 – 11:10

Plenary Room

Deep internal learning—Deep learning with zero examples
Michal Irani, Professor in the Department of Computer Science and Applied Mathematics at the Weizmann Institute of Science (Israel)

Michal Irani is a professor at the Weizmann Institute of Science. Her research interests include computer vision, AI, and deep learning. Irani's prizes and honors include the Maria Petrou Prize (2016), the Helmholtz "Test of Time Award" (2017), the Landau Prize in AI (2019), and the Rothschild Prize in Mathematics and Computer Science (2020). She also received the ECCV Best Paper Awards (2000 and 2002), and the Marr Prize Honorable Mention (2001 and 2005).

11:10 – 11:40 SESSION BREAK: Join speakers in the EI2021 Discord Voice Channel corresponding to the color of the room in which the session occurs or join an Open Discord Channel of your choice. After a plenary, join the Plenary Discord Voice Channel.

14:30 – 18:00 Break in program to accommodate time zones.

WEDNESDAY 20 JANUARY 2021

Applications of Neural Networks

10:00 – 11:15

Green Room

10:00

Conference Introduction

10:15

HVEI-110

Deep quality evaluator guided by 3D saliency for stereoscopic images, *Oussama Messai¹, Aladine Chetouani², Fella Hachouf¹, and Zianou Ahmed Seghir³*; ¹University of Mentouri Brothers Constantine 1 (Algeria), ²University of Orléans (France), and ³University of Abbes Laghrour (Algeria)

10:35

HVEI-111

JPI-pending: FP-nets for blind image quality assessment, *Philipp Grüning and Erhardt Barth, University of Lübeck (Germany)*

10:55

HVEI-112

Controllable medical image generation via generative adversarial networks, *Zhihang Ren, Stella Yu, and David Whitney, UC Berkeley / ICSI (United States)*

11:15 – 11:45 SESSION BREAK: Join speakers in the EI2021 Discord Voice Channel corresponding to the color of the room in which the session occurs or join an Open Discord Channel of your choice. After a plenary, join the Plenary Discord Voice Channel.

14:15 – 18:00 Break in program to accommodate time zones.

THURSDAY 21 JANUARY 2021**PLENARY: The Development of Integral Color Image Sensors and Cameras**

Session Chair: Jonathan B. Phillips, Google Inc. (United States)
10:00 – 11:10

Plenary Room

The development of integral color image sensors and cameras

Kenneth A. Parulski, Expert Consultant: Mobile Imaging (United States)

Kenneth Parulski is an expert consultant to mobile imaging companies and leads the development of ISO standards for digital photography. He joined Kodak in 1980 after graduating from MIT and retired in 2012 as research fellow and chief scientist in Kodak's digital photography division. His work has been recognized with a Technical Emmy and other major awards. Parulski is a SMPTE fellow and an inventor on more than 225 US patents.

11:10 – 11:40 SESSION BREAK: Join speakers in the EI2021 Discord Voice Channel corresponding to the color of the room in which the session occurs or join an Open Discord Channel of your choice. After a plenary, join the Plenary Discord Voice Channel.

HVEI Potpourri I

11:40 – 13:00

Blue Room

11:40 HVEI-157
Micro-expression recognition with noisy labels, *Tuomas Varanka, Wei Peng, and Guoying Zhao, University of Oulu (Finland)*

12:00 HVEI-158
Impact of virtual reality head mounted display on the attentional visual field, *Vasilii Marshev^{1,2}, Jean-Louis de Bougrenet de la Tocnaye¹, Beatrice Cochenet³, and Vincent Nourrit¹*; ¹IMT Atlantique Bretagne-Pays de la Loire - Campus de Brest, ²Universite de Bretagne Occidentale, and ³CHRU Morvan (France)

12:20 HVEI-159
JPI-pending: Psychophysical study of human visual perception of flicker artifacts in automotive digital mirror replacement systems, *Nicolai Behmann, Sousa Weddige, and Holger Blume, Leibniz University Hannover (Germany)*

12:40 HVEI-160
Cerebellum vs. cerebrum in mental visualization, *Lora Likova, Kristyo Mineff, and Spero Nicholas, Smith-Kettlewell Eye Research Institute (United States)*

CONFERENCE INTERACTIVE POSTERS, DEMONSTRATIONS, AND BREAK

13:00 – 13:30

see below for location

Posters and/or Demonstrations presented live during this break are related to any of the conferences held today. Zoom links to visit the posters and/or demonstrations are found on the home page of the Symposium Portal. We invite you to visit with the presenters in the designated Zoom or meet with other attendees in Discord.

HVEI-156
ZOOM A — HVEI POSTER: Cartography as spatial representation: A new assessment of the competing advantages and drawbacks, *Christopher Tyler, Smith-Kettlewell Eye Research Institute (United States)*

Color and Lightness

13:30 – 14:30

Blue Room

13:30 HVEI-151
Neurocomputational model explains spatial variations in perceived lightness induced by luminance edges in the image, *Michael Rudd, University of Nevada (United States)*

13:50 HVEI-152
The effect of display brightness and viewing distance: A dataset for visually lossless image compression, *Aliaksei Mikhailiuk, Nanyang Ye, and Rafal Mantiuk, University of Cambridge (United Kingdom)*

14:10 HVEI-153
 Color threshold functions: Application of contrast sensitivity functions in standard and high dynamic range color spaces, *Minjung Kim, Maryam Azimi, and Rafal Mantiuk, University of Cambridge (United Kingdom)*

14:30 – 18:00 Break in program to accommodate time zones.

HVEI Potpourri II

18:00 – 19:15

[Blue Room](#)

18:00

Conference Introduction

18:15 HVEI-161
 Extension of ITU-T P.1203 model to tile-based omnidirectional video streaming, *Yuichiro Urata, Masanori Koike, Kazuhisa Yamagishi, Noritsugu Egi, and Jun Okamoto, Nippon Telegraph and Telephone Corporation (Japan)*

18:35 HVEI-162
 JPI-first: The difference in impression between genuine and artificial leather: Quantifying the feeling of authenticity, *Shuhei Watanabe¹, Shoji Tominaga², and Takahiko Horiuchi²*; ¹Ricoh Company, Ltd. and ²Chiba University (Japan)

18:55 HVEI-163
 Prediction of individual preference for movie poster designs based on graphic elements using machine learning classification, *Hyeon-Jeong Suk, Juhee Kim, and Chulmin Kim, Korea Advanced Institute of Science and Technology (Republic of Korea)*

CONFERENCE INTERACTIVE POSTERS, DEMONSTRATIONS, AND BREAK

19:15 – 19:45

[see below for location](#)

Posters and/or Demonstrations presented live during this break are related to any of the conferences held today. Zoom links to visit the posters and/or demonstrations are found on the home page of the Symposium Portal. We invite you to visit with the presenters in the designated Zoom or meet with other attendees in Discord.

ERVR-179D

ZOOM A — ERVR DEMO: "Server-aided 3D DICOM viewer for mobile platforms", *Menghe Zhang and Jürgen Schulze, University of California San Diego (United States)*

In the ERVR demo, following up the oral presentation of the same title, Menghe Zhang will present the DICOM Viewer application on a Samsung s10 device. The process includes browsing/loading data, user interaction, and share view with the app on other devices.

HVEI-155

ZOOM B — HVEI POSTER: Scrambling parameter generation to improve perceptual information hiding, *Koki Madono^{1,2}, Masayuki Tanaka^{2,3}, Masaki Onishi², and Tetsuji Ogawa¹*; ¹Waseda Daigaku, ²The National Institute of Advanced Industrial Science and Technology, and ³Tokyo Kogyo Daigaku (Japan)

HVEI Conference Wrap-up Discussion

Session Chairs: Damon Chandler, Shizuoka University (Japan); Mark McCourt, North Dakota State University (United States); and Jeffrey Mulligan, NASA Ames Research Center (United States)

19:45 – 20:45

[Blue Room](#)

Meet for the traditional HVEI discussion and social hour.

MONDAY 25 JANUARY 2021

PLENARY: Making Invisible Visible

Session Chair: Jonathan B. Phillips, Google Inc. (United States)
10:00 – 11:10

Plenary Room

Making invisible visible

Ramesh Raskar, Associate Professor, MIT Media Lab (United States)

Ramesh Raskar is an associate professor at MIT Media Lab and directs the Camera Culture research group. His focus is on AI and imaging for health and sustainability. They span research in physical (e.g., sensors, health-tech), digital (e.g., automated and privacy-aware machine learning), and global (e.g., geomaps, autonomous mobility) domains. He received the Lemelson Award (2016), ACM SIGGRAPH Achievement Award (2017), DARPA Young Faculty Award (2009), Alfred P. Sloan Research Fellowship (2009), TR100 Award from MIT Technology Review (2004), and Global Indus Technovator Award (2003). He has worked on special research projects at Google [X] and Facebook and co-founded/advised several companies.

11:10 – 11:40 SESSION BREAK: Join speakers in the EI2021 Discord Voice Channel corresponding to the color of the room in which the session occurs or join an Open Discord Channel of your choice. After a plenary, join the Plenary Discord Voice Channel.

14:30 – 18:00 Break in program to accommodate time zones.

WEDNESDAY 27 JANUARY 2021

PLENARY: Revealing the Invisible to Machines with Neuromorphic Vision Systems: Technology and Applications Overview

Session Chair: Radka Tezaur, Intel Corporation (United States)
10:00 – 11:10

Plenary Room

Revealing the invisible to machines with neuromorphic vision systems: Technology and applications overview

Luca Verre, CEO and Co-Founder at Prophesee (France)

Luca Verre is co-founder and CEO of Prophesee, the inventor of the world's most advanced neuromorphic vision systems. Verre is a World Economic Forum technology pioneer. His experience includes project and product management, marketing, and business development roles at Schneider Electric. Prior to Schneider Electric, Verre worked as a research assistant in photonics at the Imperial College of London. Verre holds a MSc in physics, electronic and industrial engineering from Politecnico di Milano and Ecole Centrale and an MBA from Institut Européen d'Administration des Affaires, INSEAD.

11:10 – 11:40 SESSION BREAK: Join speakers in the EI2021 Discord Voice Channel corresponding to the color of the room in which the session occurs or join an Open Discord Channel of your choice. After a plenary, join the Plenary Discord Voice Channel.

14:30 – 18:00 Break in program to accommodate time zones.

19:15 – 19:45 SESSION BREAK: Join speakers in the EI2021 Discord Voice Channel corresponding to the color of the room in which the session occurs or join an Open Discord Channel of your choice. After a plenary, join the Plenary Discord Voice Channel.