

*Where Industry and Academia Meet*

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# IMAGE QUALITY AND SYSTEM PERFORMANCE (IQSP) XV

**NVIDIA**

Conference Sponsors

Conference days: 29-31 Jan

## CONFERENCE KEYNOTES

- **Imaging System Performance: Experiencing mixed reality using the Microsoft HoloLens**, Kevin Matherson, Microsoft Corporation (US)
- **Imaging and Astronomy: Computer vision and deep learning applied to simulations and imaging of galaxies and the evolving universe**, Joel Primack, University of California, Santa Cruz (US)

## SPECIAL EVENTS

- Imaging and Astronomy Discussion
- Image Quality Panel

## CONFERENCE SESSIONS

- Automotive Camera Image Quality (with Autonomous Vehicles and Machines Conf.)
- Camera Image Quality
- Imaging System Performance (with Photography, Mobile, and Immersive Imaging Conf.)
- Imaging and Astronomy (with Color Imaging Conf.)
- Machine Learning and Image Quality
- Image Quality Modeling

## RELATED SHORT COURSES

- **EI07: Digital Camera Image Quality Tuning**  
*Luke Cui, Amazon (US); Sunday 28 January 8:00 am – 12:15 pm*
- **EI11: Perceptual Metrics for Image and Video Quality in a Broader Context: From Perceptual Transparency to Structural Equivalence**  
*Sheila Hemami, Draper, and Thrasyvoulos Pappas, Northwestern Univ. (US) Sunday 28 January 1:30 – 5:45 pm*
- **EI12: Optics and Hardware Calibration of Compact Camera Modules**  
*Uwe Artmann, Image Engineering (Germany), and Kevin Matherson, Microsoft Corp. (US); Sunday 28 January 1:30 – 5:45 pm*
- **EI15: Digital Imaging and Astro Photography**  
*Daniele Marini, Università degli Studi di Milano (Italy) Monday 29 January 8:30 am – 12:45 pm*
- **EI19: Color and Calibration in Mobile Imaging Devices**  
*Uwe Artmann, Image Engineering (Germany), and Kevin Matherson, Microsoft Corp. (US); Sunday January 28, 8:00 – 10:00 am*
- **EI20: Introduction to CMOS Image Sensor Technology**  
*Arnaud Darmont, APHESA SPRL (Belgium); Sunday Jan 28, 8:00 – 10:00 am*
- **EI21: Resolution in Imaging Devices: Concepts and Measurements**  
*Uwe Artmann, Image Engineering (Germany), and Kevin Matherson, Microsoft Corp. (US); Sunday 28 January 10:15 am – 12:15 pm*
- **EI24: Camera Image Quality Benchmarking**  
*Henrik Eliasson, Eclipse Optics (Sweden); Sunday 28 January 1:30 – 3:30 pm*
- **EI26: Introduction to Image Quality Testing: Targets, Software, and Standards**  
*Peter Burns, Burns Digital Imaging, and Don Williams, Image Science Associates (US) Sunday 28 January 3:45 – 5:45 pm*
- **EI28: Camera Noise Sources and its Characterization Using International Standards**  
*Uwe Artmann, Image Engineering (Germany), and Kevin Matherson, Microsoft Corp. (US); Monday 29 January 8:30 – 10:30 am*

## SYMPOSIUM PLENARY TALKS

**Monday:** Overview of Modern Machine Learning and Deep Neural Networks – Impact on Imaging and the Field of Computer Vision,  
**Greg Corrado, co-founder of Google Brain and Principal Scientist at Google**

**Tuesday:** Fast, Automated 3D Modeling of Buildings and Other GPS Denied Environments, **Avideh Zahkor, Qualcomm Chair & Professor at UC Berkeley**

**Wednesday:** Ubiquitous, Consumer AR Systems to Supplant Smartphones, **Ronald T. Azuma, Intel Labs Researcher and Augmented Reality Pioneer**

## SYMPOSIUM HIGHLIGHTS

- 18 conferences featuring 30 keynote talks by world reknown experts
- 3D Theatre
- Tours of Stanford University Labs
- Industry Exhibition
- Meet the Future: Showcase of Student and Young Professional Research
- Demonstration Session
- Poster Session
- Welcome Reception
- Women in Electronic Imaging Breakfast
- Human Vision in Electronic Imaging 30<sup>th</sup> Year Banquet

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