

*Where Industry and Academia Meet*

Join us

**EI15: DIGITAL IMAGING AND ASTRO PHOTOGRAPHY****Instructor:** Daniele Marini, Università degli Studi di Milano (Italy) | **Monday January 29, 8:30 AM – 12:45 PM****Course Level:** Introductory | **Fee:** Member: \$275/ Non-member: \$300 / Student: \$95 (\*prices for all increase by \$50 after January 8, 2018)

Photography is a fundamental tool for Astronomy and Astrophysics that try to capture the nature of the Universe by collecting electromagnetic radiation emitted or reflected by cosmic objects. Astro photography is not only a professional activity, but also an amateur activity. From the viewpoint of the Electronic Imaging Symposium, astro photography covers a wide range of issues, from image processing, to sensor characteristics, to image and color rendering and image reproduction. We can distinguish between two main phases: how an image is taken and how an image is rendered and for which purpose. The course will clarify these issues by an introductory overview.

**Benefits:**

- Understand the process of astro photography using DSLR and CCD cameras.
- Identify the critical problems of low light and long exposure digital image capture.
- Understand the role of contrast and color rendering when imaging astronomic data.

**Intended Audience:** Scientists and engineers in the area of astronomy and astrophysics; amateur astronomers; engineers and technicians involved in the design and evaluation of image quality of digital cameras for this specific application; researchers and software developers in the area of image enhancement.

**Instructor:** **Daniele L.R. Marini** graduated in physics at Università degli Studi di Milano (1972). He taught computer graphics, image processing, and fundamentals of digital communications at the school of Computer Science while doing research in these same fields. His focus in the last 20 years has been on digital imaging, with particular interest in computational modeling of human visual perception and contributed to the study and development of innovative algorithms in this field. He has published more than 200 papers and scientific communications. He is Fellow of IS&T.

**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

To register or learn more, visit  
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