



Arizona Imaging and Microanalysis Society

Using light, electrons, ions, electromagnetism and x-rays

## AIMS 2014 Conference | Arizona State University

# Digital Images and their Ethical Use in Science Workshop

Old Main Basha Library | March 20<sup>th</sup>, 2014

Images are a form of scientific data that must be obtained, processed and analyzed without compromising integrity. This workshop will review what is required to obtain good images as well as the terminology and concepts associated with digital imagery. Topics include pixels, resolution, over-saturation, color space, bit depth, image processing filters and common formats used in presentations. While the use of digital images is common in a wide variety of scientific disciplines, this workshop will focus on image data that is acquired through microscopy. A particular focus of this workshop will address the accepted limitations of image manipulation and the ethical responsibility of presenting and publishing image data. It should be noted that this is not a workshop on image analysis, microscope techniques or a Photoshop/ImageJ tutorial. This presentation provides four hours of training that can be applied to the ethics training required by NSF and NIH funded grants. A record of attendance will be collected for each attendee.

### Check-In & Lunch

| 12:00 - 12:30p.m. |

### Opening remarks

Page Baluch - AIMS President

| 12:25 – 12:30p.m. |

### What is a Digital Image

Brooke Beam, Ph.D., Director W.M. Keck Center for Imaging, Univ. of Arizona, Tucson, Az.

| 12:30 - 1:15p.m. |

### Presenting and Viewing Digital Images

Doug Cromey, M.S., Assistant Scientific Investigator, SWEHSC, ARL-Biotechnology, and Cellular and Molecular Medicine, Univ. of Arizona, Tucson, Az.

| 1:15 - 2:00p.m. |

### Break

| 2:00 - 2:15p.m. |

### Ethics & Scientific Digital Imaging

Doug Cromey, M.S., Assistant Scientific Investigator, SWEHSC, ARL-Biotechnology, and Cellular and Molecular Medicine, Univ. of Arizona, Tucson, Az.

| 2:15 - 3:05p.m. |

### Demonstrations – Manipulating Digital Images (I)

David Elliott, Ph.D., Assistant Professor, Cellular and Molecular Medicine, Univ. of Arizona, Tucson, Az.

| 3:05 – 3:45p.m. |

### Break

| 3:45 - 4:00p.m. |

### Demonstrations – Manipulating Digital Images (II), David Elliott

| 4:00 – 5:00p.m. |