The Notre Dame Integrated Imaging Facility (NDIIF) is pleased to announce two awards for best imaging publications for calendar year 2015.

The Best Electron Microscopy Imaging Publication 2015 is awarded to Sara Fathipour, a graduate student with Professor A. Seabaugh in the Department of Electrical Engineering. Fathipour and coworkers published a paper entitled “Synthesized Multiwall MoS₂ Nanotube and Nanoribbon Field-Effect Transistors”. Using advanced Transmission Electron Microscopy, the study revealed surprising physical attributes of MoS₂ nanotubes grown by chemical vapor transport and used as the channel in field effect transistors. Instead of being cylindrical in geometry the tubes have an ellipsoidal cross section with a semimajor axis of ~60 nm, a semiminor axis of ~30 nm, and a bending radius on the order of 2 nm. The transistors have ON/OFF current ratios more than 20 x greater than MoS₂ nanotubes field effect transistors grown by other methods. The study was published in Appl. Phys. Lett. 2015, 106, 022114.

The Best Biological Imaging Publication 2015 is awarded to Dr. Manuela Lahne, a Research Assistant Professor collaborating with Professor D. Hyde in the Department of Biological Sciences and the Center for Zebrafish Research. Lahne and coworkers published a paper entitled “Actin-Cytoskeleton- and Rock-Mediated INM Are Required for Photoreceptor Regeneration in the Adult Zebrafish Retina”. The study employed regular and multiphoton confocal cell microscopy to monitor in real time the behavior of Müller glia/neuronal progenitor cells in light damaged adult zebrafish retinal cultures. Continuous live cell imaging for several hours through the retinal thickness enabled observation of
Müller glia/NPC nuclei migrating from the inner to the outer nuclear layer of the retina to divide before the majority of nuclei returned to the inner nuclear layer. The study was published in *J. Neurosci.* 2015, 35, 15612-34.


Bradley Smith, Director of the Notre Dame Integrated Imaging Facility (NDIIF) states; “These outstanding publications illustrate the cutting edge science and engineering research that is enabled by the superb imaging equipment within the NDIIF.” Further information about the NDIIF can be gained by visiting www.ndif.nd.edu.