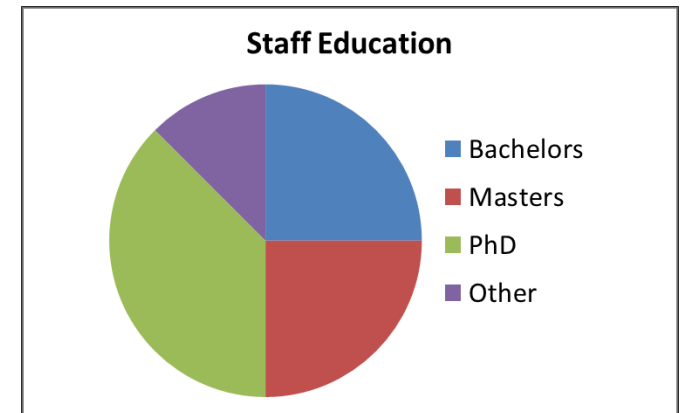




INNOVATIVE IMAGING & RESEARCH

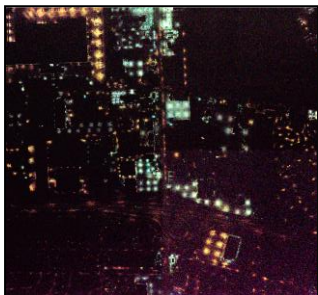
- Innovative Imaging and Research (I2R)
- Lead Investigator: Mary Pagnutti (President and Co-Founder)
 - MS ME with 30+ yrs experience in systems engineering, remote sensing, computational modeling, EO/IR system calibration, mechanical engineering, program management, strategic planning
- Team Members
 - Robert E. Ryan, PhD optical physics (I2R CTO and Co-Founder)
 - I2R Technical Staff
 - Advanced degrees in Physics, EE, ME, Mathematics
 - Strong relationships with
 - University faculty members (US cit.)
 - Commercial remote sensing industry
 - Satellite, Aerial, UAV
 - NASA, NOAA, USDA, USGS



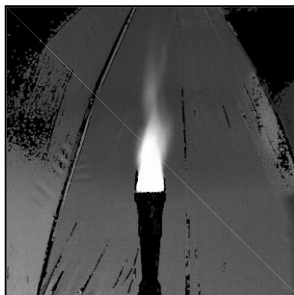


Research Areas of Interest

- EO/IR Imaging and Applications Development (UV – TIR)
 - Low light level/nighttime imaging
 - Scientific high dynamic range sensing
 - Polarimetric imaging
- Day/Night sensor calibration and data harmonization
 - Vicarious (in-field) and laboratory calibrations
 - Radiometric, spatial, spectral, geometric calibrations
- Sensor fusion and image information extraction
- UAV remote sensing applications and sensors



Multispectral
Night Image



Polarized
Mask



UAV Visible Imagery
Based Bathymetry



NIST-traceable
Calibration Source

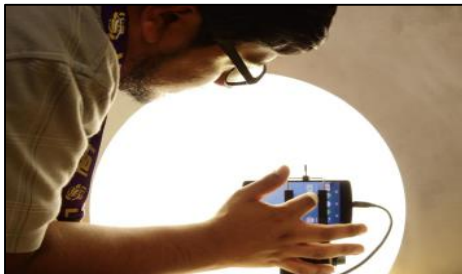


Calibrated
HDR Imagery

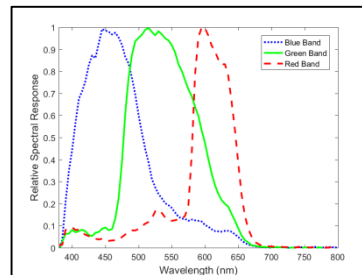


Unique Qualifications and Capabilities

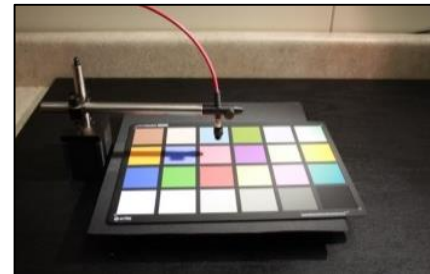
- EO/IR System systems engineering and performance expertise
 - Phenomenology, sensing architecture, processing chain
- Algorithm development
 - Spectral, temporal, spatial, polarization, ...
 - Real-time processing with GPUs
- Atmospheric correction and radiative transfer
- Laboratory calibrations (UV – TIR)
 - Spectral response, radiometric cal, spatial assessments, geometric cal
- Strong understanding of commercial and civil remote sensing, airborne and satellite system performance and applications



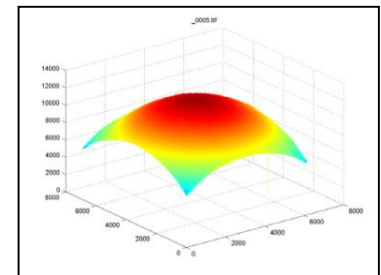
Radiometry



Spectral Response



Colorimetry



Flat Fielding Surface

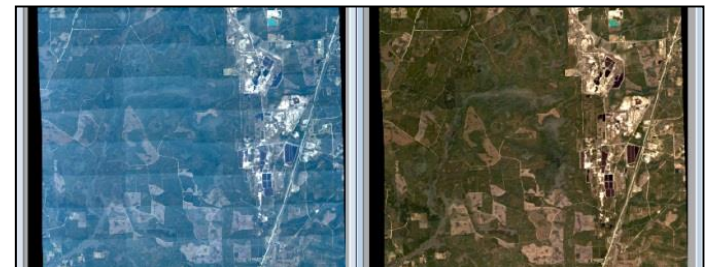


Teaming

- Exploring forming a team and/or joining an existing team
- Forming a Team
 - Seeking team members that have expertise in estimating and classifying human activity using remotely sensed imagery fused with other data sources
- Joining a Team
 - Seeking to join teams that need sensor design and performance modeling, image and signal processing, in-field vicarious calibration, laboratory calibration, advanced imaging capabilities, UAV-based imaging, atmospheric correction



Radiometrically and geometrically corrected high-speed extreme HDR video



Atmospheric correction with radiometric aerial triangulation



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