The Chester F. Carlson Center for Imaging Science is a highly interdisciplinary University Research and Education Center, which has been pushing the frontiers of imaging for over 25 years.
From Photons to Information
From Research to Impact
A Systems Approach to Imaging
ACADEMICS

25 full-time faculty + 17 faculty with joint appointments from across RIT

11 Degree Programs:
- BS/MS/PhD Imaging Science
- MS/PhD Color Science
- MS Program in Environmental Forecasting and Emergency Response
- MS/PhD Astrophysics Science and Technology (with Physics & Math)
- BS in Digital Cinema (with the School of Film and Animation)

2 Delivery Methods:
- On-campus and Online

~175 Students:
- 120 Graduate, 55 Undergraduate
RESEARCH

~20 research staff in addition to the 42 faculty
~$8 million annual research
Digital Imaging and Remote Sensing

Collection and processing of hyperspectral imagery

Modeling and simulation
Wildfire Research

WASP: Wildfire Airborne Sensor Program
4-band prototype system to demonstrate early detection of fires
Emergency Response

Information Products Laboratory for Emergency Response - RIT/World Bank Haiti Response.
THE HAITI RESPONSE EFFORT
LESSONS LEARNED AND FUTURE REQUIREMENTS

David Lallemand
Sustainable Development Network
The World Bank Group

November 12, 2010
9:15-10:15 AM
Carlson Auditorium
(76-1125)
Environment and Earth Systems Imaging
High Dynamic Range Imaging, Digital Cinema, Cultural Heritage Imaging

Munsell Color Science Lab
Computational Photography, Print & Media Displays, Image Analysis
Astrophysical Science and Technology

Multi Wavelength Astrophysical Research

Computational Astrophysics and Astro-Informatics

Astro-Technology: Development of astronomical instrumentation, missions and telescopes
Laboratory for Advanced Instrumentation Research

Optics, Sensor, Instruments, telescopes, for applications from medical imaging to remote sensing to astronomy to nanoscience and beyond.

Chester F. Carlson
CENTER for IMAGING SCIENCE
NanoImaging and Nano Materials

Imaging with electron and scanning probe microscopes

Fabricating imaging devices with nanomaterials

Synthesizing nanoparticles
Multidisciplinary Vision Research Laboratory

- RIT Portable Eye Tracker - development and application
- Eye Movements and Symmetry Detection
- Eyetracking studies in Visual Search, Cuing and Change Detection
- Use in Clinical Settings
Biomedical Imaging

• Ultrasound, MRI, fMRI, Hyperpsectral
• Instrument and Algorithm Development
• Quantitative Imaging, Data fusion
• Applications in Prostate, Breast, Skin Cancer, Tissue Characterization, Schizophrenia,
Advanced imaging and image processing of ancient and damaged manuscripts

Ancient Documents
STEM Education Research and Outreach

Annually we expose over a 1000 K-12 students to imaging science and conduct research in STEM education approaches.
And that’s just for BS Graduates! Masters/PhD Graduates do even better…
Summer High School Intern Program

Undergraduate Majors

Summer REU Program

Graduate Programs:
  MS/PhD Imaging Science
  MS/PhD Color Science
  MS/PhD Astrophysical Sci
  MS Environmental Forecasting

Assistantships, Postdocs, Scientists, Engineers (jobs)

Weekly Imaging Seminars – broadcast online
This Summer!

Research Experiences for Undergraduates
SEE YOUR FUTURE IN A NEW LIGHT
with world renowned Masters and Doctoral programs at

THE CHESTER F. CARLSON CENTER FOR IMAGING SCIENCE

Graduate Assistantships available to well qualified applicants

MS and PhD DEGREES IN IMAGING SCIENCE
graduate study in...
- Remote Sensing and Earth Systems
- Vision and Perception
- Biomedical Imaging
- Astronomy and Space Science
- Imaging Algorithms and Systems
- Disaster Response
- Cultural Imaging and Manuscript Restoration
- Nanomaterials and Imaging

MS and PhD DEGREES IN COLOR SCIENCE
graduate study in...
- Color Perception
- Low Vision
- High Dynamic Range Imaging and Display
- Art Conservation Science
- Color and Image Appearance Modeling
- Digital Cinema
- Color Modeling
- Spectral-Based Color Reproduction

PhD DEGREE IN ASTROPHYSICAL SCIENCES AND TECHNOLOGY
available as joint offering between the Department of Physics, the School of Mathematical Sciences, and the Chester F. Carlson Center for Imaging Science. Visit www.rit.edu/cos/astrophysics for more information.

RIT
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