

Upcoming Events

<http://nia.ecsu.edu/>

Distinguished Lecture Series

Thursday, 19 April, 2012 5:00 pm

<http://nia.ecsu.edu/ur/1112/120419dls/>

UNH Undergraduate Research Conference

Friday, 25 April, 2012

<http://www.unh.edu/urc/>

USA Science & Engineering Festival

Friday, 27 April, 2012

<http://www.usasciencefestival.org/>

REU/URE in Ocean, Marine, and Polar Science

Tuesday, 29 May, 2012

<http://nia.ecsu.edu/ure.pdf>

2012 IGARSS

Sunday, 22 July, 2012

<http://www.igarss12.org>

Science Cloud Summer School Course

July 30 - August 3, 2012

<http://www.vscse.org>

NASA NICE Summer Workshop

Monday, 6 August, 2012

<http://nia.ecsu.edu/nice/2012/120806nice/>

NASA NICE Webinar

Monday, 17 September, 2012

<http://nia.ecsu.edu/nice/2012/120927web/>

9th AARSE Conference

Monday, 29 October, 2012

<http://www.aarse2012.org/>

Supercomputing Conference 2012

Saturday, 10 November, 2012

<http://sc12.supercomputing.org>

International Conference on Appropriate Technology

Wednesday, 21 November, 2012

<http://www.appropriatetech.net/>

AGU Fall Meeting

Thursday, 6 December, 2012

<http://www.agu.org/meetings/>



CERSER

<http://cerser.ecsu.edu>

The goal of the ECSU Center of Excellence in Remote Sensing Education and Research (CERSER) is to develop and implement innovative and relevant research collaborations focused on ice sheet, coastal, ocean, and marine research. CERSER is also the home of the IEEE-Geoscience and Remote Sensing Society Eastern North Carolina Chapter #03181 and IEEE-GRSS Student Chapter Branch #66221.

CENTER FOR EXCELLENCE IN REMOTE SENSING EDUCATION AND RESEARCH

Dixon Hall Room 229/232 Elizabeth City State University Box 672 Elizabeth City, NC 27909

Phone: (252) 335-3992 Fax: (252) 335-3790

Dr. Linda B. Hayden, Principal Investigator

ONR NSF

NSF CReSIS FY2005-108CMI

ONR Grants: #N00014-11-0529 & #N00014-01-1070 // NSF Watershed Watch # H98230-06-1-0173

GEOSCIENCE AND REMOTE SENSING SOCIETY

Distinguished Lecture Series

Dr. Reginald Fletcher

Research Agronomist, USDA-ARS

April 19, 2012

Mapping Invasive Weeds and Their Control with Spatial Information Technologies

Meeting of the Eastern North Carolina IEEE-GRSS Chapter #03181

ECSU

ELIZABETH CITY STATE UNIVERSITY

Elevate Higher. Emerge Stronger.



IEEE-GRSS Distinguished Lecturer

Dr. Reginald Fletcher

Research Agronomist, USDA-ARS, Weslaco, Texas

ABSTRACT

We discuss applications of airborne multispectral digital imaging systems, imaging processing techniques, global positioning systems (GPS), and geographic information systems (GIS) for mapping the invasive weeds giant salvinia (*Salvinia molesta*) and Brazilian pepper (*Schinus terebinthifolius*) and for monitoring biological control of saltcedar (*Tamarix* spp.), in Texas. An airborne six-camera multispectral digital video imaging system and an unsupervised image classification approach were used to map the invasive water weed giant salvinia in a bayou in northeast Texas. User's and producer's accuracies for the giant salvinia class were 74.6% and 87.2%, respectively. An airborne five-camera multispectral true digital imaging system and a supervised classification image approach were employed for mapping the invasive terrestrial plant Brazilian pepper at a resaca in south Texas. User's and producer's accuracies for the Brazilian pepper class were 100% and 84.2%, respectively. During 2010 and 2011 in west Texas, a medium format true digital color camera was integrated with GPS and GIS technologies to monitor biological control of saltcedar with the saltcedar leaf beetle (*Diorhabda* spp.) and to track beetle movement. Foliage of saltcedar trees with moderate damage caused by beetle and larvae feeding appeared in distinctive orange and brown color tones on the airborne imagery; defoliated trees had dark gray color tones on the imagery. The camera was tethered to a GPS that recorded the coordinates of the center of each frame and saved this information into an exif file. Coordinate information obtained with the GPS was used to derive a map showing the locations of trees damaged by the beetle. Technologies employed in these studies are promising tools that natural resource managers can use now and in the future to map invasive weeds and to monitor biological control of invasive plants.



Schedule of Activities

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Tuesday, April 17, 2012 :: Room 111 :: Lane Hall :: ECSU

5:00pmUndergraduate Research Experience Closing Presentations

Survey to Detect Long-Term Variability in Pine Island Bay Coastal Ice Using Archived Landsat Imagery

Ya'Shonti Bridgers, Ryan Lawrence, Glenn Koch, Michael Jefferson Jr.

The Use of Math Sprint in a Tutorial Program for Seventh Grade Students to Improve End of Grade Test Scores

Malcolm McConner, Jean Bevins, Joyce Bevins, Autumn Luke, Cedric Hall

Construction of a University Navigational Mobile Application

Robyn Evans, Nadirah Cogbill, Patrina Bly

Team Web Site Presentations

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Thursday, April 19, 2012 :: Room 229 :: Dixon Hall :: ECSU

4:30pm IEEE-GRSS Meeting and Distinguished Lecture Series

Call to Order **Dr. Linda Hayden**
GRSS Chapter President

Minutes..... **Mr. Jeff Wood**
GRSS Chapter Secretary

Student Research Presentation

Integration with a Web Application to Create Navigational Instructions for Locations on the Campus of Elizabeth City State University

Nyema Barmore, Michael Austin, Andrew Brumfeild, Justin Deloatch

Speaker Introduction.....**Dr. Darnell Johnson**
Education Coordinator, CERSER

Dr. Reginald Fletcher USDA-ARS

Mapping Invasive Weeds and Their Control with Spatial Information Technologies

Closing Remarks and IGARSS Update..... **Dr. Linda Hayden**