

ELIZABETH CITY STATE UNIVERSITY  
**Research Week 2015**  
**Undergraduate Research**

*Endless Possibilities*

April 13-17, 2015



**Dear Participants:**

Greetings and welcome to Elizabeth City State University. We are excited about your participation in our first university research week. Our theme for this week is *Endless Possibilities* as we join the many institutions across the nation in celebrating exploration of ideas. Our faculty has worked tirelessly to make the sessions engaging and to provide you with a wealth of knowledge.

We are extremely honored to have representatives from the National Aeronautics and Space Administration (NASA), University of New Hampshire, Indiana University, and Elizabeth City State University alumni who have joined us to lead the various sessions. Sharing of their vast experience is greatly appreciated.

Elizabeth City State University continues to strive for excellence guided by our *Path to Prominence*. You are encouraged to take full advantage of the intellectual resources available to you during this week.

Thank you again for joining us and for helping to make this initiative a great success.

Stacey Franklin Jones, Ph.D.  
ECSU Chancellor

# Schedule of Events

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## Monday April 13, 2015 - NASA Day

- ∞ **Department Displays**  
9:00 am - 1:30 pm, Lobby, Jenkins Science Center  
Presiding: Dr. Jeanette Morris
- ∞ **Opening Session**  
10:00 - 10:30 am, Room 138, Jenkins Science Center  
Presiding: Dr. Harry Bass  
Welcome: Dr. Stacey Franklin Jones, Chancellor  
The Occasion: Dr. Flora Brown, Provost
- ∞ **NASA Opportunities Seminar**  
10:30 am - 12 noon, Room 138, Jenkins Science Center  
Presiding: Dr. Darnell Johnson  
Joeletta Patrick, NASA Minority University Research Program (MUREP) Manager  
Janet E. Sellars, Director NASA LaRC Office of Education
- ∞ **12 noon – 1:30 pm Refreshment Break by VESTEM**
- ∞ **NASA Strategy Session**  
2:00 - 3:00 pm, Room 107, Gilchrist Educational Building  
Presiding: Dr. Linda Bailey Hayden  
Dr. Stephen Hale, University of New Hampshire, ESTEEM  
Dr. Edmond Koker, Comp. Chemical (AMES)  
Mr. Ed Swindell, (Drones) CERSER
- ∞ **NASA Classroom Visitations**  
2:00 - 4:00 pm, Room 228, Dixon-Patterson Hall  
Presiding: Mr. Orestes Gooden  
Mr. Roger Hathaway'72, NASA Langley MSI Liaison Officer  
Mr. Samuel James'87, Mechanical Eng Tech, NASA LaRC
- ∞ **NASA Exhibit and Open House**  
2:00 - 5:00 pm, G.R. Little Library  
Presiding: Dr. Juanita Midgette Spence  
Refreshments

## Tuesday April 14, 2015

- ∞ **Oral Student Research Presentations I**  
9:00 - 10:50 am, Room 103 Pharmacy Complex  
Presiding: Dr. Anthony Emekalam
- ∞ **Web Development Workshop by the MIS Club**  
2:00 - 3:30 pm, Room 158, Williams Hall  
Presiding: Dr. Anupam Nath  
Refreshments
- ∞ **Student Performance**  
3:30 - 4:15 pm, Burnim Fine Arts Auditorium  
Presenter: Chela Faulkner
- ∞ **Graduate Success Seminar I**  
5:00 - 6:30 pm, Room 226, Dixon Patterson Hall  
Presiding: Dr. Linda Bailey Hayden  
Featuring: Jerome Mitchell'07, Indiana University  
Ryan Lawrence'13, University of New Hampshire  
Dr. Napoleon Paxton'05, Naval Research Laboratory  
Refreshments
- ∞ **ECSU Jazz Festival**  
7:30 pm, Burnim Fine Arts Auditorium  
Presiding: Dr. Jeanette Morris  
US Navy Commanders Jazz Ensemble

## Wednesday April 15, 2015

- ∞ **Internship Roundtable I**  
10:00 - 10:50 am, Room 204, Pharmacy Complex  
Presiding: Dr. Eyualem Abebe and Dr. Cheryl Lewis  
Featuring: Makitta Whitehurst-McLean
- ∞ **Oral Student Research Presentations II**  
1:00 - 1:50 pm, Room 138, Jenkins Science Center  
Presiding: Dr. Shyamal Das
- ∞ **Supporting Faculty Research (For Staff)**  
3:00 - 4:50 pm, Room 104, McLendon Hall  
Presiding: Dr. Confidence W. Amadi  
Featuring: Sponsored Programs Staff
- ∞ **Music Performance**  
7:30 - 9:00 pm, Burnim Fine Arts Auditorium  
Presiding: Dr. Shawnya Harris  
Featuring: Marcus Anderson, Saxophonist for Prince  
Free for Students, \$10 for all others

## Thursday April 16, 2015

- ∞ **Graduate Success Seminar II**  
11:00 am -12:20 pm, Room 121, ITC  
Presiding: Dr. Debjani Kanjilal
- ∞ **STEM in Pre-School Years Demonstration**  
12:30 - 1:50 pm, Room 204, Gilchrist Educational Building  
Presiding: Dr. Delbert Ganes  
Featuring Dr. Natasha Spellman
- ∞ **MUS 101 Student Recital Presentations**  
3:00 - 4:50 pm, Burnim Fine Arts Auditorium  
Presiding: Dr. Shawnya Harris
- ∞ **ECSU History Presentation**  
3:30 pm, 2nd Floor Boardroom, G. R. Little Library  
Presiding: Dr. Juanita Midgette Spence  
Featuring: Dr. Glen Bowman, Professor of History  
Refreshments
- ∞ **Junior Recital Presentation**  
7:30 - 9:00 pm, Burnim Fine Arts Auditorium  
Presiding: Dr. Shawnya Harris  
Featuring: Matthew Evans

## Friday April 17, 2015

- ∞ **STEM Outreach Hands-on Seminars**  
9:30 am - 2:00 pm, Jenkins Science Center  
Presiding: Dr. Margaret Young
  - ∞ **Student Research Poster Session**  
11:00 am - 1:00 pm, Williams Hall Gym  
Presiding: Dr. Darnell Johnson and Dr. Velma Blackmon
  - ∞ **Internship Roundtable II**  
2:00 - 3:00 pm, Room 216, Ridley Student Center  
Presiding: Dr. Joy Smith
  - ∞ **Student Activities Day**  
2:30 - 4:30 pm, 2nd Floor Boardroom, G. R. Little Library  
Presiding: Ms. Jenny Snyder
  - ∞ **Business Student Recognitions**  
3:30 - 5:00 pm, Room 216 Ridley Student Center  
Presiding: Dr. Narendra Sharma  
Refreshments
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## Welcome!



On behalf of the students, Faculty and staff at Elizabeth City State University, I would like to welcome all participants to Research Week 2015 at Elizabeth City State University. This year's theme, "Endless Possibilities" recognizes the emphasis placed on undergraduate research coupled with faculty development. These

partnerships provide a thrust of new talent into all academic fields providing an avenue of advancement for those often left behind. ECSU's various world renowned research efforts have allowed students and faculty to travel to all parts of the globe to expand and share their knowledge. This year's event bring representatives from graduate programs, professional schools, state and federal agencies, and various departments from within the university to offer information about internships, research collaborations, and various graduate programs throughout the country. It is our hope that the panel discussions, seminars, poster presentations, and displays will engage your interest to seek out further information regarding undergraduate research.

Serving students well is the core of our mission and the goal of all our efforts. We take pride in the accomplishments of our faculty, students and staff in scholarly activities and competition for external resources. We must advance the university's research agenda, invest in promising new initiatives, and optimize research support services as we look forward to the continued successes and recognition that our university so richly deserves.

Flora Brown, Ph.D.

Interim Vice Chancellor for Academic Affairs

## RESEARCH WEEK COMMITTEE

- Harry Bass Jr. ....Interim Associate Vice Chancellor
- Linda Hayden, Chair.... Mathematics and Computer Science
- Farrah Jackson Ward .. Mathematics and Computer Science
- Darnell Johnson.....Education and Psychology
- Delbert Games .....Education and Psychology
- Natasha Spellman .....Education and Psychology
- Eyualem Abebe .....Natural Science
- Gloria Payne.....Natural Science
- Margaret Young .....Natural Science
- Anthony Emekalam .....Pharmacy and Health Professions
- Confidence W Amadi.....Business and Economics
- Dejani Kanjilal.....Business and Economics
- Yan Jin.....Business and Economics
- Shyamal Das .....Social and Behavioral Sciences
- Charles V. Reed .....Social and Behavioral Sciences
- Shawnya Harris .....Visual and Performing Arts
- Boung Jin Kang ..... Physical Education and Health
- Orestes Gooden .....Technology
- Jeanette Morris..... Language, Literature & Communication
- Velma Blackmon.....Honors Program

## Oral Presentations I

9-10:50 am, Room 103, Pharmacy Complex

### Application of Remote Sensing Equipment in Wind Resource Assessment

White, S.

### Downtown Elizabeth City

Seufer, C.

### Enrichment of Pristine Degrading Bacteria Present in Uncontaminated Soil

Midgett, J.

### Green Marketing and Consumer Behavior

Jenkins, T.

### How the agile process effects different generations?

Pittman, T., Pope, L.

### Optical and Electrical Properties of Vanadium Dioxide (VO2) thin film doped

Agyapong, A.

### Population Dynamics

Shaw, J.

### Real-Time Data Acquisition and Structural Health Monitoring System

Harrison, G.

### Understanding the Role of Functional Divisions in Effective System Analysis & Design

Fitts, C., Neal, K., Roach, L.

### Which development strategy would be best to create the ultimate social networking site for students?

Shaw, J., Warren, Q.

## Oral Presentations II

1-1:50 pm, Room 138, Jenkins Science Center

### Hinduism and Daoism: A comparative review of the ethical issue, Abortion

Pettaway, K.

### Homicide Rates in Islamic Societies: Does Culture Affect?

Simpson, E., Spencer, S., Tann, T., Whitaker, V., White, A.

### Human Development in Islamic Societies: Does Culture Affect?

Gatling, A., Glasper, L., Harvey, B., Henry, S., Knight, S.

### States of Women in Islamic Societies: Does Culture Affect?

Barco, J., Blowe, J., Chapman, K., Felton, D., Garris, A.

### Status of Access to Health Care in Islamic Societies: Does Culture Affect?

Lee, D., Mallory, T., Melton, R., Pettaway, K., Phillips, G., White, T.

## Poster Presentations

Friday, April 17, 2015, 11 am -1 pm, Williams Hall Gym

### 24 hour Daycare

Foster, J., Hansson, I., Jenkins, T., Smith, K., Watts, C.

### A Project Management Framework for Cloud and HPC Resource Providers

Ridgeway, J.

### Accounting firm need analysis

Eaton, R.

### After School Math and Science Tutorial Services (ASMASTS)

Beale, T., Bolden, D., Hyman, B., Roebuck, D., Riche, B.

### Analyzing the Security Infrastructure of the Android Operating System

Morris, D.

## Poster Presentations (continued)

### Apache Big Data Stack

Matthews, T.

### Application of Meteorological Tower in Wind Resource Assessment

Fitts, C.

### Arsenic Levels in United States Drinking Water and the Resulting Incidence Rates for Bladder and Lung Cancers/ Impact of Cell Phone Use and Secondary Effect on Non-Users and the Level of its Distraction

Smith, S.

### Bioremediation of Copper by the Herb *Centaurea cyanus*, Elemental Tissue Analysis and Effects of Copper on Total Protein and Chlorophyll Levels

Toney, S.

### Calibration of hyperspec VNIR imaging sensor to assist in nanoparticle predictions

Headen, J.

### Can Microsoft HoloLens Maintain a Competitive Advantage with Augmented Reality?

Condrel, J., Mitchell, B.

### Caspase Activation in U937 cells by Pentachlorophenol

Ebron, A.

### Change by Design

Boyd, A.

### Comparison of Decadal Sea Surface Temperature and Salinity Trends Between the ALOHA and BATS Stations.

Valenski, S.

### Configuring and Customizing the Hubzero Experience

Guion, A.

### CubeSat Coronagraph

White, S.

### Curcumin Protects Manganese-Induced Neurotoxicity in Astrocytes

Bullard, R., Raulerson, A., Thomas, T., Vinson, C.

### DNA Fragmentation and p53 Activation in U937 Cells by Pentachlorophenol

Egbuna, C.

### Do we need a full-function recording company in Elizabeth City?

Hoskins, M.

### Downtown Elizabeth

Seufer, C.

### ECSU Fine Arts Commercial

Watkins, M.

### Effects of Paromomycin on Self and Cross Pollinated

### Cultivars of Wisconsin Fast Plants

Bell, D., Cole, C., Williams, J.

### Enhancing Parent Involvement in NC-CCSS for K-2

### Mathematics

Hathaway, J., Kahan, W., Reynolds, A., Williams, R.

### Enrichment of Diesel-Degrading Bacteria in Uncontaminated Soil

Wilmot, R.

### Enrichment of Gasoline Degrading Bacteria Present in Uncontaminated Soil

Valenski, S.

### Evaluating the Performance of MPI Java in FutureGrid

Pugh, N.

### Health Disparities in United States

Brooke, R.

### How Costco's Strategy has led to it out performing Walmart and Target

Lumsden, D.

### Impact of 9/11 on the office space demand and supply in New York City

Hansson, I., Johnson, T.

### Implementation of an Interactive Database Interface Utilizing HTML, PHP, and MySQL in support of water quality assessments in the Northeastern North Carolina Pasquotank Watershed

Burton, K., Guion, A., Hodgkins, H., Morris, D.

### J. C. Penney and the Hispanic Consumer

Cooper, D., James, T.

### Monitoring Pocosin Lakes Wildlife Refuge Regrowth Using Arc GIS and Landsat Images

Curlings, T.

### Morphological Analysis of Contamination in solid-phase nutrient agar microbial cultures using the scanning electron microscope.

Wilmot, R.

### Nike and the Minority Consumer

Bolden, D., Horton, M.

### Optical and Electrical Properties of Vanadium Dioxide (VO<sub>2</sub>) thin film doped with niobium (Nb)

Patel, T.

### Results Gym: change the people's lifestyle

Batts, S., Norris, L.

### Retailing Companies that use prominent strategies in order to accommodate diversity amongst consumers

Vaughan, A.

### Scanning Electron Microscope (SEM)

Dutton, D.

### The Elizabeth City State University's "I am my family's health support" community project: An African American chronic health disparities intervention program

Jones, B., Pearson, T., Pickett, T.

### The Morphological Effects of Chloroquine on Early Development of White Leghorn Chickens

Wofford, A.

### The Panther Water Car

Appadu, J., Davis, I., Welch, N.

### The Use of Parallelization Support to Speed up PlotViz3

Satchell, K.

### The Use of Sodium Butyric Acid as a Mutagen for Wisconsin Fast Plants (*Brassica rapa*)

Carmack, J.

### Treatment for Diabetes Mellitus Type 2

Boston, J.

### Update of the CERSER TeraScan Cataloguing System TeraScan Image Processing Scripts

Wilbon, T.