



Geoscience and Remote Sensing Society 2019 Annual Chapter Report

Chapter Name: IEEE-GRSS Eastern North Carolina Chapter#03191

Chapter Officers (full name + email address):

- Chair: Dr. Linda B. Hayden
- Vice-Chair: Dr. Johnny Houston
- Secretary: Mr. Jeffrey A. Wood
- Treasurer: Mr. Joal Hathaway

Reporting Period: 2019 Activities Report

Date Submitted: Jan 12, 2020

Web Site: <http://nia.ecsu.edu/ieee/>

Wish to be considered for Chapter Excellence Award: Yes No

Please provide explanation on activities and accomplishments in each of the following categories. Provide backup documentation to properly justify each entry. To be considered for a Chapter Excellence Award, all categories must be addressed. Each category will receive a score of 1-3 (3 being the highest). The Chapter with the highest overall score will win the award.

1. Technical Seminars Organized: (for each seminar, provide speaker name, affiliation, date of visit, title of talk, number of people in attendance, location, whether the speaker was a GRSS Distinguished Lecturer, etc.)

Title: NC Coast and Climate Change

Date: THURSDAY APRIL 4, 2019 10:00 – 11:45 am

Location: Rm 204, Gilchrist Complex

Number of people in attendance: 24

Not a GRSS Distinguished Lecturer

Speakers Dr. Timothy Goodale, Dr. Mike Piehler: Director, UNC Institute for the Environment (UNC-Chapel Hill) and Dr. Robert Y. George, George Institute/CERSER.

2. Other Technical Activities (technology initiatives, development of focused technical topics, instrumentation, etc.)

Nothing to Report

3. Education and Outreach (development or sponsorship of short courses, workshops, tutorials, open houses, etc.)

The chapter has chosen to focus activities on enhanced learning of hydrology and atmospheric protocols while assisting local students and teachers in understanding these protocols. As such, Elizabeth City State University was selected by the National Aeronautics and Space Administration's Global Learning and Observations to benefit the Environment (GLOBE) program. This worldwide program brings together 112 international universities along with their students, teachers, scientist and citizens to promote science and learning about the environment.

Northeastern North Carolina and Southeastern Virginia, primary and secondary school will benefit from a variety of science, technology, engineering and mathematics programs. University and community college science and education majors will have opportunities to participate in local, regional, and national workshops, conferences, distance learning programs, and other unique activities.

The collaborative partners are the NASA's National GLOBE Office and Langley Research Center's Science Directorate, North Carolina Space Grant Office, and ECSU's Computational Mathematics and Computations Office and its STEM Academy. ECSU's leading representatives are Dr. Linda Hayden and Dr. Timothy Goodale.

On March 5-7, GRSS chapter representatives took part in a three-day workshop at NASA Langley in Hampton, Virginia. The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment.

4. Professional Development (career advising, mentoring, etc.)

Representatives from NASA GLOBE and the workshop made presentations at local schools on March 7th. Dr. Tony Murphy, Director of the GLOBE Implementation Office and GRSS chapter representatives visited various classrooms in the area.



Event: GLOBE North American Regional Meeting (NARM) 2019 and Atmosphere Professional Learning Workshop
Event Date: 03/05/2019 - 03/07/2019
Location: NASA Langley, Hampton, VA
Number of people in attendance: 68
Not a GRSS Distinguished Lecturer

NASA Langley's Science Directorate are global experts in air quality, radiation and climate, atmospheric composition, and active remote sensing. This GLOBE Atmosphere Professional Learning Workshop was designed to provide introductory information, as well as in-depth understanding of atmosphere concepts; specifically focusing on clouds and aerosols, and the relation to NASA's active Missions studying this area of atmospheric science. This workshop provided GLOBE Protocol Certification in Clouds and Aerosols and deeper understanding of the topic for current and new trainers.

5. Involvement with GRSS (participation in IGARSS and other GRSS-sponsored conferences, number of papers vs. number of membership, sessions organized at such conferences, hosting conferences, etc.)

- The Chapter is providing leadership for outreach activities during IGARSS 2020 in Hawaii. Dr. Hayden leads the GRSS High School/Undergraduate Student Education committee.
- Chapter member attended IGARSS 2019 in Japan in support of HSUSO Education events.
- Led monthly conference GRSS Education Committee calls related to HSUSO outreach.



6. Membership Development (report number of members in the last three years including the current one and comment the trend of memberships and possible actions performed, senior and fellow elevation, nominations submitted for senior and fellow members, etc.)

Dr. Johnny Houston was added as a member of the chapter. Chapter focus for 2020 will be to increase teacher membership in the chapter. Participants in GLOBE training events will be assisted with membership applications and in some cases with membership fees.

7. Fundraising (any activity for fundraising within the local industry, government, membership, etc.)

Funding from Langley Research Center and the NSF Science Gateways Community Institute were used to support participation of one student's summer involvement in the GLOBE program at NASA Langley. That student provided illustrations and significant input in the design of the new GLOBE Science Process poster NP-2019-09-063-LaRC.

Event GLOBE Hydrology Workshop for Teachers

Event Date: 04/05/2019 - 04/06/2019

Location: Elizabeth City State University

Number of people in attendance: 20

Not a GRSS Distinguished Lecturer

On April 5-6, 2019, GLOBE at Elizabeth City State University sponsored a Workshop for Teachers, which included the hydrology, clouds, and atmosphere protocols. Speakers included Lin Chambers - Science Education Integration Manager, NASA. Lin Chambers is a Physical Scientist at NASA Langley Research Center. She has had a variety of roles over the years, including directing both the Students' Cloud Observations On-Line and MY NASA DATA Projects. She began working with GLOBE around 2003 when she developed a protocol for observing contrails, which is now part of the GLOBE clouds protocol. Currently she is serving as the Science Education Integration Manager at NASA HQ.



8. Membership Diversity (involvement of under-represented groups including women, and activities to promote and increase engagement of underrepresented groups)

Seventy (70%) of the membership is African American. The chapter is housed on the campus of a Historically Black College/University.

9. Web Presence (web site development and evidence that it is widely used, especially to enhance the above activities)

The Chapter maintains a website at <http://nia.ecsu.edu/ieee/>. Its GLOBE related activities with NASA Langley Research Center are documented at <http://nia.ecsu.edu/globe/>