

Dr. Stephen M. Ruffin, <u>stephen.ruffin@ae.gatech.edu</u> http://www.ae.gatech.edu/community/staff/bio/ruffin-s



SPACE GRANT EXECUTIVE COMMITTEE UPDATES

Dr. Stephen M. Ruffin Director, NASA's Georgia Space Grant Consortium Professor, School of Aerospace Engineering Georgia Institute of Technology Atlanta, GA

> National Council of Space Grant Directors **Fall 2016 Southeast Regional Meeting** September 28-30, 2016 Lexington, KY



Outline

- Excomm Communications
 - Telecons (2 per month)
 - Deputy Administrator Meeting, July 2016
 - Transition Meeting, July 2016
 - Mission STEM, August 2016
 - OSIRIS Rex Launch, Sept. 2016
- NIFS Feedback
- NASA Strategic Plan Collaboration
- Space Grant Website
 - <u>http://national.spacegrant.org/</u>
 - Publicity Committee Volunteers needed
- Spring National SG Meeting: March 2-4, 2017
 - Student Poster Session
 - Flipped Meeting Session
 - Speakers Needed



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Plan Enacted in 2012

- Space Grant 10 Year Strategic Plan

Major Actions



(Slide 1 of 2) Most important actions Space Grant should take to improve its effectiveness over the next 10 years

- 1) Increase funding and funding stability.
 - Provides for engagement of more students and educators, especially those from under-represented populations.
 - Expand the funding base to also include support from entities other than NASA.
- 2) Improve relationship with NASA management and the larger NASA community.
- 3) Improve visibility of Space Grant programs.
 - Ensure that opportunities and program impact are known across NASA, with local, state and federal government, with students, educators and the public



Major Actions (Slide 2 of 2)

Most important actions Space Grant should take to improve its effectiveness over the next 10 years

- 4) Utilize the unique space grant network and pipeline to enhance the impact of K-12 programs.
 - Engage students and educators in inter-disciplinary and experiential training activities

5) Increase industry involvement in space grant.

- Build national and local partnerships to support internships, collaborative research and enhanced workforce training
- 6) Conduct collaborative multi-state experiential higher education programs.
 - Should be cooperative and not just competitive activities.



Goal

Contribute to the nation's science enterprise by funding education, research, and informal education projects through a national network of university-based Space Grant consortia.

Objectives

- 1) Establish and maintain a national network of universities with interests and capabilities in aeronautics, space and related STEM fields.
- 2) Engage in cooperative programs among universities, aerospace industry, and Federal, state and local governments.
- 3) Engage in interdisciplinary training, research and public service programs in aeronautics, space and related STEM fields.
- 4) Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology.
- 5) Promote a strong science, technology, engineering, and mathematics (STEM) education base from elementary through secondary levels while preparing teachers in these grade levels to become more effective at improving student academic outcomes.



Establish and maintain a national network of universities with interests and capabilities in aeronautics, space and related STEM fields.

- a) Better advertise and promote Space Grant and other NASA Higher Education opportunities through more effective use of social media, NASA TV and other methods available to the extensive space grant network.
- b) Seek and utilize funding from other entities as well as from NASA to support the space grant network and student engagement.
- c) Promote the development and availability of STEM curriculum in community and technical colleges and rural campuses.
- d) Conduct undergraduate scholarship, graduate fellowship and faculty and student research programs which increase student skills and motivation in aeronautics, space and related STEM fields.
- e) Conduct high-quality student group projects and competitions which increase student skills and motivation in aeronautics, space and related STEM fields. Collaborate with technical experts from NASA, industry and other partners in these programs.



Engage in cooperative programs among universities, aerospace industry, and Federal, state and local governments.

- a) Increase the interaction between space grant consortia and industry through actions such as increasing the number of student internships in industry and promoting more collaborative research involving industry, faculty and students.
- Increase the number of industry affiliates in the space grant network and build strategic national and local partnerships with aerospace companies to provide enhanced workforce training.
- c) Establish more direct communication and collaboration with local and state governments and school systems to ensure greater inclusion of NASA resources, content, and programs.
- d) Obtain greater statewide buy-in by seeking and utilizing funds from state and local governments to expand the impact of space grant programs.
- e) Develop a closer relation to the NASA Centers and more direct role in placing students at these Centers.



Engage in interdisciplinary training, research and public service programs in aeronautics, space and related STEM fields.

- a) Conduct multi-state, experiential higher education programs. These should be cooperative and not just competitive activities and may include teamoriented interdisciplinary research or design projects and coursework.
- b) Enhance publicity and communication of space grant activities in the general public.
- Support fellowships, research, design programs, space and aeronautics hardware programs, and internships which engage students in interdisciplinary activities.
- d) Better communicate and support design competitions sponsored by NASA, FAA, DoD and other federal agencies, professional societies and industry.



Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology.

- Broadly and effectively advertise wide range of STEM opportunities conducted by federal and state agencies, industry and other organizations to students at space grant institutions.
- b) Broadly and effectively advertise space grant activities on each campus specifically targeting student and university organizations on campus that serve under-represented populations.
- c) Develop and promote programs specifically addressing retention and recruitment issues of under-represented populations.
- d) Enhance the impact and integration of Minority Serving Institutions (MSI's) in the space grant national network.
- Improve efficiency and completeness of data collection processes showing student recruitment, engagement, retention, employment and diversity (geographic, 1st generation in college, Appalachian, disability, gender, race, ethnicity, ...). Better utilize this data with stakeholders within each state and nationally to increase support for space grant.



Promote a strong science, technology, engineering, and mathematics (STEM) education base from elementary through secondary levels while preparing teachers in these grade levels to become more effective at improving student academic outcomes.

- a) Increase collaboration with Colleges of Education and State Departments of Education in training of future teachers and in continuing education programs for current teachers.
- b) Promote interaction of university faculty and space grant affiliates with K-12 schools, educators and informal education providers in STEM programs. These interactions should include teacher training workshops involving development and use of NASA relevant content to be infused into classroom settings and STEM curriculum support.
- c) Continue and expand hands-on and team-oriented programs engaging K-12 students, educators and informal education organizations.
- d) Seek and utilize funding from other federal and state agencies (in addition to NASA) to conduct K-12 STEM programs.
- e) Conduct programs which bring K-12 students, educators, and informal education providers to space grant university campuses. Promote interaction between community and higher-education students and faculty.