

Florida Space Research Program

2009 Program Announcement & Request for Proposals
Sponsoring Statewide University Involvement in
Aerospace Research, Technology Development and Education
to Expand and Diversify Florida's Economy

Sponsored by



Florida Space Grant Consortium www.floridaspacegrant.org



Space Florida <http://www.spaceflorida.gov>



University of Central Florida <http://www.ucf.edu>

Timeline:

January 16, 2009	Request for Proposals Issued
February 16, 2009	Notice of Intent and Abstract sent to fsgc@mail.ucf.edu
April 17, 2009	Proposals Due
June 31, 2009	Grants Announced
July 15, 2009	Awards made (subject to receipt of funding from NASA for 2009 program cycle)

The purpose of this grant program is to support the expansion and diversification of Florida's aerospace industry by addressing workforce development and increasing statewide academic involvement in space research, technology development, engineering, education and training programs that are consistent with the state's space industry priorities.

Funding is intended to support research that will: a) compete for larger sponsored research awards; b) attract and leverage other federal or industry funding; c) produce technologies that lead to commercial opportunities; d) promote Florida leadership in emerging aerospace technologies; e) address workforce development issues and/or f) in other ways enhance the technological competitiveness of Florida universities and space industry.

Contact for More Information...

Dr. Jaydeep Mukherjee, FSGC Director
Mail Code : FSGC,
Building M6-306, Room 7010,
Kennedy Space Center, Florida 32899
Tel # 321-452-4301 - Fax # 321-449-0739
Email: fsgc@mail.ucf.edu

Eligibility: Grants are intended for faculty researchers from Florida’s public and private universities and community colleges. Other non-academic organizations are also eligible to receive grant awards, especially if their proposed projects include Florida academic involvement.

Since FSGC is funded by NASA under a Training Grant and as required under the Terms and Conditions for a Training Grant the following conditions apply :-

- a) **Research proposals from PIs who are US citizens may include direct support funds eg. Salary, travel etc. However, proposal from PIs who are non-US citizens may be selected for funding (based on their reviews) provided that NO salary, stipend, travel or any other form of direct support to the non US citizen PI is funded from this award.**
- b) **Students supported and funded by PIs under this program have to be US citizens only – no exceptions are allowed.**
- c) **PI’s are allowed to submit only one proposal per category**

Exceptions and Previous Funding

A submitted proposal that falls into any of the following categories must provide the documentation requested to be considered for funding:

- Any Principal Investigator who is required to submit a FSRP final report for a previously funded program but has not done so is ineligible for funding until a complete final report is received by FSGC. Please note that this program was called the Florida Space Research and Education Grant Program in the past)
- Any Principal Investigator who has received previous funding from FSGC under the FSRP/FSREGP but is not yet required to submit a final report must include a brief progress report in the proposal (item 10) citing the current status of the previously funded project.
- A Principal Investigator who has received a FSREGP grant between 2000 through 2008 may apply for the 2009 FSRP, so long as all the above conditions are met.

Categories & Budget:

Grants will be awarded within three broad categories. The following chart lists the categories, anticipated budgets, and gives examples of the types of projects that may be proposed, based on priorities identified by federal agencies like NASA and the Air Force. More information on NASA’s “spaceport technology” priorities can be found on FSGC’s website at http://www.floridaspacegrant.org/fsgc_fellowships_details.php?ID=16 Proposals need not be consistent with these project examples. The following pages describe specific category requests. Matching investment is strongly encouraged, but not required. Matching can be in-kind. **Academic overhead and indirect costs are not allowed.**

Grant Category	Project Examples (not intended as a limitation)	Budget	# of Grant Awards
Space Exploration and Spaceport Technology Development (SESTP)	- Range Systems Development and Evaluation - In-Situ Resource Utilization Technologies - Lunar and Mars Base/Settlement Technologies - Advanced Sensors and Detectors - Cryogenic Systems - Hydrogen Production	Approx. \$150K	Estimate of 6-8 grants to be awarded. Maximum estimated grant award of up to \$25,000.
Space-Based Research and Payload Development (SRPD)	- Space-Based Electronics & Computing - ZERO-G Microgravity Experimentation - Micro Satellites - Space Station Utilization - On-Orbit Robotics - Electrostatic Characterization & Mitigation - Biotechnology and Life Sciences	Approx. \$150K	Estimate of 6-7 grants to be awarded. Maximum estimated grant award of up to \$25,000.
Space Education & Training Programs (SETP)	- Leveraging of NASA & Florida Education Resources - Workforce Training Programs - Space-Focused Math and Science Teacher Professional Development - Curriculum Development - Distributed Virtual Learning Environments	Approx. \$50K	Estimate of 4-5 grants to be awarded. Maximum estimated grant award of up to \$12,500.

Timeline:

2009 Cycle	January 16, 2009 February 16, 2009 April 17, 2009 June 31, 2009 July 15, 2009	Request for Proposals Issued Notice of Intent and Abstract sent to fsgc@mail.ucf.edu Proposals Due Awards Announced Awards made (subject to receipt of funding from NASA for 2009 program cycle)
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The above timeline represents the nominal schedule for this grant cycle. Proposals received after the published due date may be considered during the next grant cycle. However, because important grant-eligible opportunities may arise outside of this nominal timeline, meritorious proposals may be submitted, evaluated and awarded at any time throughout the year upon direction of the grant program sponsors (FSGC, Space Florida, and UCF). Grant funds will be awarded for approved projects based on funding availability. Therefore, early delivery of proposals may facilitate grant awards.

Equipment: *NO Equipment purchase using these funds is allowed.* Equipment is defined as “an article of nonexpendable, tangible personal property with a life of more than one year that costs over \$1000.

Delivery: The original proposal must be printed and submitted to the FSGC office at the address mentioned hereunder. Failure to submit the proposal exactly in the manner stated here (both electronically and paper copy) will result in the proposal being considered as incomplete and will not be considered for review and participation in the funding process. You must also sign up for an FSGC online account at www.floridaspacegrant.org and upload your proposal. You simply have to provide an e-mail address and create a username and password.

Proposals must be mailed to FSGC at the following address:

Jaydeep Mukherjee
Florida Space Grant Consortium,
Mail Code: FSGC,
Building: M6-306, Room 7010
Kennedy Space Center, Florida 32899

Proposers are requested to provide a notice-of-intent to FSGC, including a generalized proposal summary of no more than two paragraphs, to fsgc@mail.ucf.edu. Proposals should contain adequate technical detail to enable a peer review process.

Proposers should follow the format outlined below:

- 1) Completed Signature Page (see attached)
- 2) Project Summary (limit 200 words)
- 3) Significance of Project
- 4) Work Plan
- 5) Related Research & Development
- 6) Extent to which the proposed work supports the State's goals of building the space industry in Florida and/or supporting the KSC Spaceport Technology Center vision
- 7) Potential Sources for Continued Support
- 8) Key Personnel and Levels of Commitment
- 9) Budget (showing funding allocation to each participating organization)
- 10) Previous Funding status (if required)
- 11) Co-PI's Standard Curriculum Vita (including list of relevant publications)
- 12) NSF Form 1225 (Do not submit this form electronically. Please mail this form with the original proposal.)

Proposals will be limited to twelve (12) pages in length (exclusive of items 1, 10, 11, and 12 above), preferably less. The proposal must be single- or double-spaced, using standard size (8 1/2" x 11") paper, in no smaller than 11-point font with a minimum of 1" margins on all sides for each page. Use an easily readable font face (e.g. Geneva, Helvetica, Times Roman). All pages must be numbered. No supplementary materials will be accepted, and over-length proposals may not be submitted for merit review.

Evaluation of Proposals: The proposals will be evaluated by panels of industrial and academic reviewers chosen by the grant program sponsors. Each proposal will be judged and scored on its own merits using the criteria listed below:

- 1) Scientific/technical merit of the proposed project
- 2) Extent to which the proposed work supports the State's goals of building the space industry in Florida and supporting the KSC Spaceport Technology Center vision
- 3) Potential for continued project development, including commercial or government support
- 4) Qualifications of the project team as evidenced by related refereed publications and award success
- 5) Soundness of proposed work plan, budget, and schedule
- 6) Student involvement in the project – proposals having higher numbers of student participation is strongly encouraged and will be weighted favorably

Other issues will be considered in the award of grants when evaluations based on the four above-listed criteria indicate substantially equal merit. These other issues will include: amount and quality of matching contributions (please include documentation showing matching contributions); geographic diversity; and level of collaboration between industry and academia;

Intellectual Property: Due to the use of NASA funding for this grant program, grant recipients shall follow all applicable NASA rules and regulations for the ownership and use of intellectual property developed under any grant project. As sponsors of the grant program, FSGC and Space Florida shall have no ownership or control of such intellectual property, unless a sponsor is also a direct participant, or intended beneficiary, of any grant project. In such cases, intellectual property rights shall be covered under a separate agreement with the grant recipient.

Publications: Principal Investigator may publish the results of the work in its own form. FSGC will require a copy of any publication within 60 days of the publication date.

Principal Investigator's publication shall acknowledge support of FSGC by inclusion of the following sentence in the published document " THIS PROJECT WAS SUPPORTED BY THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION THROUGH THE UNIVERSITY OF CENTRAL FLORIDA'S FLORIDA SPACE GRANT CONSORTIUM".

International Compliance: Projects involving international recipients must comply with all applicable export control laws and federal regulations. Proposals that feature international participation should include a brief section on their plans to comply with federal requirements, or describe why such requirements do not apply to their project.

Reporting Requirement: An interim technical report (not to exceed 1,500 words) is due four months after the grant project commencement. The final technical report is due 13 months after commencement. This final report may contribute to follow-on proposals that can be submitted to other agencies for continued support of the project.

For approved projects, the grant program sponsors may coordinate with Principal Investigators to submit their final reports or abstracts for presentation and publication at upcoming Space Congress events and other space-related conferences. FSGC may establish a special seminar or conference where all funded research will be reported

Leveraged Funding: Proposers must indicate in their proposals whether their project is receiving funds from other sources, or whether they are involved in similar projects that are funded by state or federal grants. These other funding sources should be listed.

2009 Florida Space Research & Education Grant Program
Sponsored By FSGC, Space Florida and UCF

PROPOSAL COVER PAGE

Name of Project: _____

Faculty or Industry PI: _____

Department/Institution: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Budget Request:	Note: A detailed budget justification is required.
Grant	\$ _____
Matching Contribution	\$ _____
Total Project Cost	\$ _____

Please identify which categories are applicable to your project (check one that is most appropriate):

- Space Exploration and Spaceport Technology Development
- Space-Based Research & Payload Development
- Space Education & Training Programs

Will the grant be used to buy equipment? Yes ___ No ___

Does your project have any student participation? Yes ___ No ___
If yes, how many? _____

Start Date: _____ Ending Date: _____

(Signature) Faculty PI / Date

(Signature) Department Head / Date

Name

Name

Title

Title

(Signature) College Official/ Date

(Signature) Institute Official / Date

Name

Name

Title

Title

INFORMATION ABOUT PRINCIPAL INVESTIGATORS/PROJECT DIRECTORS

Submit only ONE copy of this form with your proposal. Attach it on top of the cover page of the copy of your proposal that bears the original signatures. Leave the back of the page blank. Do not include this form with any of the other copies of your proposal including the electronic submission, as this may compromise the confidentiality of the information. Please check the appropriate answers to each question for all principal investigator(s)/project director(s) listed on the cover page, using the same order in which they were listed there:

	Faculty Principal Investigator	Second Additional PI	Third Additional PI	Fourth Additional PI	Fifth Additional PI
1. Is this person					
Female	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Male	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is this person a					
U.S Citizen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permanent Resident	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other non-U.S. Citizen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Which one of these categories best describes this person's ethnic/racial status? (If more than one category applies, use the category that most closely reflects the person's recognition in the community.)					
American Indian or Alaskan Native	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Black, not of Hispanic Origin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hispanic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pacific Islander	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White, not of Hispanic Origin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Does this person have a disability* which limits a major life activity?					
Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check here if the person does not wish to provide some or all of the above information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Required: Check here if this person is currently serving (or has previously served) as PI, Co-PI or PD on any Federally funded project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AMERICAN INDIAN OR ALASKAN NATIVE: A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

ASIAN: A person having origins in any of the original peoples of East Asia, Southeast Asia, or the Indian subcontinent. This area includes for example, China, India, Indonesia, Japan, Korea and Vietnam.

BLACK, NOT OF HISPANIC ORIGIN: A person having origins in any of the black racial groups of Africa.

HISPANIC: A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.

PACIFIC ISLANDER: A person having origins in any of the original peoples of Hawaii; the U.S. Pacific territories of Guam, American Samoa, and the Northern Marianas; the U.S. Trust Territory or Palau; the islands of Micronesia; or the Philippines.

WHITE, NOT OF HISPANIC ORIGIN: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

*DISABLED: A person having a physical or mental impairment that substantially limits one or more major life activities; one who has a record of such impairment; or who is regarded as having such an impairment.

WHY THIS INFORMATION IS BEING REQUESTED:

The Federal Government and the FSGC have a continuing commitment to monitor the operation of its review and award processes to identify and address any inequities based on gender, race, ethnicity, or disability of the proposed principle investigators/project directors and co-principle investigators. To gather the information needed for this important task, you should submit a single copy of this form with each proposal; however, submission of the requested information is not mandatory and is not a precondition of award. Any individual not wishing to submit the information should check the box provided for this purpose. (The exception is information about previous Federal support, the last question above.)

Information from this form will be retained by the FSGC as an integral part of their Privacy Act Systems of Records in accordance with the Privacy Act of 1974. These are confidential files accessible only to appropriate personnel and will be treated as confidential to the extent permitted by law. Data submitted will be used in accordance with criteria established by the respective Federal agency for awarding grants for research and education, and in response to Public Law 99-383 and 42 USC 1885c.

NSF Form 1225(1/90) Adapted by Florida Space Grant Consortium (11/00)