

# LaSPACE

## Research Enhancement Award (REA) Program

Offered by the Louisiana Space Grant Consortium



Under the authority of the  
NASA Space Grant College and Fellowship Program

Louisiana Space Grant Consortium (LaSPACE)  
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*Revised, April 2020*

*All previous versions of this program's guidelines are null and void.*

# REA Program Summary Page

## About Research Enhancement Awards (REA)

The LaSPACE Research Enhancement Awards (REA) Program is intended to provide support for faculty (and students) at LaSPACE member institutions, particularly aimed at the emerging researcher or an established researcher who wishes to pursue new research directions, for the development of projects, contacts, and collaborations that will bring Louisiana scientists into the mainstream of NASA related research activity, thereby increasing their chances to successfully compete in the aerospace R&D marketplace. As with all LaSPACE Programs, minority participation is strongly encouraged. The REA Program is funded by state matching funds, through the Louisiana Board of Regents Support Fund. The awards are intended to develop expertise and to contribute to research competitiveness. However, awards are not intended purely to support faculty salaries or student stipends. It is anticipated (and advised) that students will be involved in REA projects, but the overriding goal is the development of research capabilities and infrastructure in support of the country's space/aerospace endeavors. In that regard, contacts/collaborations/ties to NASA centers and NASA researchers are strongly encouraged.

## Program Summary

- A **Notice of Intent (NOI)** to propose is required for the REA program. NOIs do not need to be routed for institutional approvals/signature the way the final proposal needs to be.
- The overall goal for this Program is to effectively utilize the resources available through LaSPACE as incentive for faculty and students: 1) to develop research competitiveness, 2) to develop new research projects or directions, and 3) to foster collaborations among the campuses, as well as with NASA centers and/or other federal laboratories and with the business/industry community.
- The REA Program is separated into two component parts or subprograms, The Research Facilitation/Initiation Subprogram and the Visiting Researcher Subprogram.
- Only tenured, tenure-track, or research faculty at the level of Assistant/Research Professor or higher affiliated with LaSPACE campuses are eligible to apply. In cases where support is requested for visiting scientists, the application must be submitted by, and be the responsibility of, a LaSPACE institution faculty member. On ALL proposals, only one PI can be proposed. For a multi-institution proposal, the lead at the secondary institution will be considered a Co-I.
- The final invoices and a final technical report must be submitted to the LaSPACE office within 30 days of the project end date. Photographs and copies of all papers, presentations, and posters generated should be shared with LaSPACE as they occur and collected/referenced in the final report. A new final report template is available from the LaSPACE office.

## Proposal Submissions

- Submit all properly executed proposals via email as fully searchable pdf documents to [laspace@lsu.edu](mailto:laspace@lsu.edu) by **11:59 pm on Monday, June 15, 2020.**
- Important Dates:
  - Proposal Release Date: Friday, April 17, 2020
  - **NOI Due Date: Friday, May 29, 2020**
  - **Proposal Due Date: Monday, June 15, 2020**
  - Anticipated Award Announcements: late July / early August 2020
  - Award Period of Performance: 09/01/2020 - 08/31/2021

# LaSPACE General Guidelines

## Introduction to the Louisiana Space Grant Program

The Louisiana Space Grant Consortium (LaSPACE) is a Designated Consortium in the NASA National Space Grant and Fellowship Program network, which was designed to network colleges, universities, and state education boards with partners in business, industry, and the non-profit sector in order to promote, develop, and strengthen aerospace science, research, technology, education, and awareness. Our mission is “To enhance Space and Aerospace related research, education, and public awareness throughout the State of Louisiana and thereby promote math/science education, training of professionals, and economic development.” LaSPACE promotes scientific research, workforce development, and public outreach to develop and strengthen long-term research capabilities within Louisiana that will make significant contributions to the research and technology Mission Directorates of NASA while supporting the goals of the state.

## Basis of Authority

The Louisiana Space Grant Consortium (LaSPACE) currently comprises Louisiana public and private colleges and universities in addition to business/industry partners and other organizations. The consortium is funded jointly by the National Aeronautics and Space Administration (NASA) and by the Louisiana Board of Regents Support Fund (BORSF). The consortium is administered by the LaSPACE Council, under the aegis of NASA and the Board of Regents. The basis of authority for this and other programs of LaSPACE rests in part on the above funding. It is important, therefore, to note that the implementation of LaSPACE-supported projects must conform to applicable Federal and State regulations, in general, and to the NASA stipulations, in particular.

## NASA Agency Information

### NASA 2018 Strategic Plan

NASA’s 2018 strategic plan aligns the Agency’s future activities along three strategic themes of Discover, Explore, and Develop, as well as a fourth theme focused on the activities that will enable the Agency’s mission.

- DISCOVER references NASA’s enduring purpose of scientific discovery.
- EXPLORE references NASA’s push to expand the boundaries of human presence in space.
- DEVELOP references NASA’s broad mandate to promote the technologies of tomorrow.
- ENABLE references the capabilities, workforce, and facilities that allow NASA to achieve its Mission.

The complete plan can be downloaded [here](#).

## NASA Vision

To discover and expand knowledge for the benefit of humanity.

## NASA Mission

Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and bring new knowledge and opportunities back to Earth. Support the growth of the Nation’s economy in space and aeronautics, increase understanding of the universe and our place in it, work with industry to improve America’s aerospace technologies, and advance American leadership.

# NASA Office of STEM Engagement

NASA's journeys have propelled technological breakthroughs, pushed the frontiers of scientific research, and expanded our understanding of the universe. These accomplishments, and those to come, share a common genesis: education in science, technology, engineering, and math. NASA's [Office of STEM Engagement](#) (OSTEM) delivers tools for young Americans and educators to learn and succeed. OSTEM seeks to:

- Create unique opportunities for students and the public to contribute to NASA's work in exploration and discovery.
- Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA people, content, and facilities.
- Strengthen public understanding by enabling powerful connections to NASA's mission and work.

To achieve these goals, NASA's Office of STEM Engagement strives to increase K-12 involvement in NASA projects, enhance higher education, support underrepresented communities, strengthen online education, and boost NASA's contribution to informal education. The intended outcome is a generation prepared to code, calculate, design, and discover its way to a new era of American innovation.

The National Space Grant College and Fellowship Program, from which LaSPACE is derived, is a component of the NASA Office of STEM Engagement's larger portfolio, managed at NASA Headquarters in Washington D.C., in alignment with the NASA Mission Directorates, and engagement with all NASA centers and facilities.

NASA Office of STEM Engagement, and by extension LaSPACE, supports the four strategic goals detailed in the 2018 plan. Research and design work supported by Space Grant or NASA EPSCoR must align with one or more of these strategic goals and corresponding objectives.

## NASA Mission Directorates (MD)

*Research and technology priorities are aligned with one or more of NASA's Mission Directorates:*

The [Science Mission Directorate \(SMD\)](#) expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth.

The [Aeronautics Research Mission Directorate \(ARMD\)](#) transforms aviation with research to dramatically reduce the environmental impact of flight, and improves aircraft and operations efficiency while maintaining safety in increasingly crowded skies. ARMD also generates innovative aviation concepts, tools, and technologies for development and maturation by the aviation community.

The [Space Technology Mission Directorate \(STMD\)](#) pursues transformational technologies that have high potential for offsetting future mission risk, reducing cost, and advancing existing capabilities. STMD uses merit-based competition to conduct research and technology development, demonstration, and infusion of these technologies into NASA's missions and American industry. This mission directorate is being refocused as a new Exploration Research & Technology (ER&T) organization to support exploration as a primary customer.

The [Human Exploration and Operations Mission Directorate \(HEOMD\)](#) leads human exploration in and beyond low Earth orbit by developing new transportation systems and performing scientific research to enable sustained and affordable human life outside of Earth. HEOMD also manages space communication and navigation services for the Agency and its international partners.

All NASA subprograms must relate to and support one or more of these directorates. Likewise, all programs supported by LaSPACE must support the NASA organization, align with the NASA Strategic Plan, and support the goals of the Office of STEM Engagement.

## NASA MD Contacts for University Researchers

### Science Mission Directorate (SMD)

POC: Kristen Erickson, Director, Science Engagement Partnerships Phone: (202) 358-1017, [Kristen.Erickson@nasa.gov](mailto:Kristen.Erickson@nasa.gov)

### The Aeronautics Research Mission Directorate (ARMD)

POC: Karen L. Rugg, Lead, Communications and Education Phone: (202) 358-2197, [karen.l.rugg@nasa.gov](mailto:karen.l.rugg@nasa.gov)

### Space Technology Mission Directorate (STMD)

POC: Damian Taylor, SBIR and STTR Mission, Directorate Liaison Phone: (202) 358-1432, [damian.taylor@nasa.gov](mailto:damian.taylor@nasa.gov)

### Human Exploration and Operations Mission Directorate (HEOMD)

POC: Bradley Carpenter Phone: (202) 358-0826, [BCarpenter@nasa.gov](mailto:BCarpenter@nasa.gov)

## NASA Center Liaisons

Ames Research Center, <i>Brenda Collins</i> Chief, Education and Public Outreach Phone: (650) 604-3540 <a href="mailto:brenda.j.collins@nasa.gov">brenda.j.collins@nasa.gov</a>	Kennedy Space Center, <i>Jeffrey A. Kohler</i> Technology Transfer Office Phone: (321) 867-2462 <a href="mailto:jeffrey.a.kohler@nasa.gov">jeffrey.a.kohler@nasa.gov</a>
Armstrong Flight Research Center, <i>Dave Berger</i> University Affairs Officer Phone: (661) 276-5712 <a href="mailto:Dave.e.Berger@nasa.gov">Dave.e.Berger@nasa.gov</a>	Langley Research Center, <i>Kim Brush</i> LaRC OSTEM Integration Manager Phone: (757) 864-6454 <a href="mailto:kimberly.m.brush@nasa.gov">kimberly.m.brush@nasa.gov</a>
Goddard Space Flight Center, <i>James L. Harrington</i> Computer Research and Development Phone: (301) 286-4063 <a href="mailto:james.l.harrington@nasa.gov">james.l.harrington@nasa.gov</a>	Glenn Research Center, <i>Mark David Kankam, Ph.D.</i> University Affairs Officer Phone: (216) 433-6143 <a href="mailto:Mark.D.Kankam@nasa.gov">Mark.D.Kankam@nasa.gov</a>
Jet Propulsion Laboratory, <i>Linda Rodgers or Petra Kneissl</i> University Programs Administrators Linda Phone: (818) 354-3274 <a href="mailto:Linda.L.Rodgers@jpl.nasa.gov">Linda.L.Rodgers@jpl.nasa.gov</a> Petra Phone: (818) 201-8805 <a href="mailto:Petra.a.kneissl-milanian@jpl.nasa.gov">Petra.a.kneissl-milanian@jpl.nasa.gov</a>	Marshall Space Flight Center, <i>Frank Six</i> University Affairs Officer Office of Academic Affairs (HS30) Phone: (256) 961-0678 <a href="mailto:Norman.F.Six@nasa.gov">Norman.F.Six@nasa.gov</a>
Johnson Space Center, <i>Kamlesh Lulla</i> Director, University Research Collaborations and Partnership Office Phone: (281) 483-3065 <a href="mailto:Kamlesh.P.Lulla@nasa.gov">Kamlesh.P.Lulla@nasa.gov</a>	Stennis Space Center, <i>Mitch Krell, Ph.D.</i> Data Analysis Phone: (228) 688-1821 <a href="mailto:mitch.krell@nasa.gov">mitch.krell@nasa.gov</a>

## LaSPACE Program

The Louisiana Space Grant Consortium, part of the National Space Grant College and Fellowship Program and in partnership with the Louisiana Board of Regents, supports programs at affiliated academic institutions and other Louisiana organizations that address the NASA mission, federal CoSTEM goals, and state education and economic priorities. LaSPACE programs for Research, Higher Education, Workforce Development, K-12 Teacher Development, and Public Outreach, strengthen the Science, Technology, Engineering, and Math (STEM) education needed for a diverse technical workforce, and develops the research and economic infrastructure to boost Louisiana's contribution to the aerospace frontier.

## Goals and Objectives

LaSPACE Goals and Objectives are directly aligned with NASA Office of STEM Engagement and National Program Emphases on Diversity, Workforce Development, Community Colleges, Pre-College teacher engagement, Competitiveness, NASA Research Relevance, Industry Relations, and State Government Involvement. The updated LaSPACE 2019 Strategic Plan describes a comprehensive program of Research, Education, and Service via 5 strategic goals, each in line with one or more NASA OSTEM objectives, to (1) Foster aerospace research and education (OSTEM 1.1, 1.2, 2.1, 2.2, 2.4, 3.2), (2) Foster and support hands-on experiential programs for higher education students (2.1, 2.2, 2.3, 2.4), (3) Contribute to pre-college STEM education excellence (1.2, 3.1), (4) Engage and educate the general public (3.1), and (5) Maintain an effective consortium of institutions involved in LaSPACE.

Major objectives for the achievement of these goals includes (1) Support for student and faculty research at consortium institutions, (2) Strengthening interactions between Louisiana aerospace industries, faculty, and students, (3) Increased participation in Space Grant programming with the state's HBCUs and Community & Technical Colleges, (4) Provide support to undergraduate and graduate students for research, design, and internship opportunities, (5) Engage students in experiential learning environments, (6) Support middle and high school educator training, and (7) Foster informal education and public outreach. Proposals to LaSPACE programs should explicitly support one or more of these seven objectives.

## LaSPACE Program Administration & Institutional Coordinators

General administration and management is the responsibility of the LaSPACE Staff headquartered at Louisiana State University (LSU). Questions about applications to any LaSPACE programs should be directed to the Director or Assistant Director via the general [laspace@lsu.edu](mailto:laspace@lsu.edu) email address. Unless otherwise directed, all proposals, invoices, reports, and queries should be submitted via email to the program email address ([laspace@lsu.edu](mailto:laspace@lsu.edu)).

LaSPACE Program Office, [laspace@lsu.edu](mailto:laspace@lsu.edu), 225-578-8697

LSU Department of Physics & Astronomy | 364 Nicholson Hall, Baton Rouge, LA 70803

T. Gregory Guzik, Director, [tgguzik@lsu.edu](mailto:tgguzik@lsu.edu) | Colleen H. Fava, Assistant Director, [colleenf@lsu.edu](mailto:colleenf@lsu.edu) | Meaghin Woolie, Program Manager, [mwooli2@lsu.edu](mailto:mwooli2@lsu.edu) | Doug Granger, Student Flight Program Manager, [dgrang2@lsu.edu](mailto:dgrang2@lsu.edu)

Additionally, all member institutions have appointed an institutional coordinator who sits on the LaSPACE Advisory Council and is available to discuss opportunities and processes related to LaSPACE programs. Contact information for all advisors is provided below. For institutions with a vacancy, contact the program manager listed above.

## LaSPACE Affiliate Institutional Coordinators

Baton Rouge Community College (BRCC)	Sandra Guzman	<a href="mailto:guzmans@mybrcc.edu">guzmans@mybrcc.edu</a>	225-216-8213
BREC / Highland Road Park Observatory (HRPO)	Christopher Kersey	<a href="mailto:observatory@brec.org">observatory@brec.org</a>	225-768-9948
Cain Center for STEM Literacy (Cain Center)	Frank Neubrandner	<a href="mailto:fneubr1@lsu.edu">fneubr1@lsu.edu</a>	225-578-4082
Delgado Community College (DCC)	Raymond Duplessis	<a href="mailto:rduple@dcc.edu">rduple@dcc.edu</a>	504-671-6419
Dillard University (Dillard)	Abdalla Darwish	<a href="mailto:adarwish@dillard.edu">adarwish@dillard.edu</a>	504-816-4840
Grambling State University (GSU)	Matthew F. Ware	<a href="mailto:waremf@gram.edu">waremf@gram.edu</a>	318-274-2391
Louisiana Arts and Science Museum (LASM)	vacant	<a href="#">vacant</a>	vacant
La Board of Elementary & Secondary Education (BESE)	Ann Wilson	<a href="mailto:Ann.wilson@la.gov">Ann.wilson@la.gov</a>	225-342-0140
Louisiana Board of Regents (BOR)	Jessica Patton	<a href="mailto:jessica.domingue@la.gov">jessica.domingue@la.gov</a>	225-342-4253
Louisiana Business and Technology Center (LBTC)	Roy Keller	<a href="mailto:rkeller@lsu.edu">rkeller@lsu.edu</a>	225-578-3985
Louisiana Public Broadcasting (LPB)	Christina Melton	<a href="mailto:cmelton@lpb.org">cmelton@lpb.org</a>	225-757-4215
Louisiana State University and A&M College (LSU)	Stephen D. Beck	<a href="mailto:sdbeck@lsu.edu">sdbeck@lsu.edu</a>	225-578-5833
Louisiana State University Agricultural Center (LSU-Ag)	Wade Baumgartner	<a href="mailto:wbaumgartner@agcenter.lsu.edu">wbaumgartner@agcenter.lsu.edu</a>	225-578-7742
Louisiana State University Health Sciences (LSUHSC)	Lynn Harrison	<a href="mailto:lharrison@lsuhsc.edu">lharrison@lsuhsc.edu</a>	318-675-4213
Louisiana State University of Shreveport (LSU-S)	Urska Cvek	<a href="mailto:urska.cvek@lsus.edu">urska.cvek@lsus.edu</a>	318-795-4266
Louisiana Tech University (LaTech)	Mary Caldorera-Moore	<a href="mailto:mcmoore@latech.edu">mcmoore@latech.edu</a>	318-257-2207
Loyola University (Loyola)	Martin McHugh	<a href="mailto:mmchugh@loyno.edu">mmchugh@loyno.edu</a>	504-865-2451
McNeese State University (McNeese)	Ning Zhang	<a href="mailto:nzhang@mcneese.edu">nzhang@mcneese.edu</a>	337-475-5873
National Center for Biomedical Research & Training (LSU-NCBRT)	Jason Krause	<a href="mailto:jkrause@ncbrt.lsu.edu">jkrause@ncbrt.lsu.edu</a>	225-578-0285
Nicholls State University (Nicholls)	Matt Marlow	<a href="mailto:matthew.marlow@nicholls.edu">matthew.marlow@nicholls.edu</a>	985-448-4576
Northshore Technical Community College (NTTC)	Chuck Crabtree	<a href="mailto:charlescrabtree@northshorecollege.edu">charlescrabtree@northshorecollege.edu</a>	985-545-1231
Northwestern State University of Louisiana (NSULA)	Anna Dugas	<a href="mailto:dugasa@nsula.edu">dugasa@nsula.edu</a>	318-357-5519
Nunez Community College (NCC)	Andreas Pashos	<a href="mailto:apashos@nunez.edu">apashos@nunez.edu</a>	504-278-6287
River Parishes Community College (RPCC)	Esperanza Zenon	<a href="mailto:ezenon@rpcc.edu">ezenon@rpcc.edu</a>	225-743-8713
SciPort Louisiana's Science Center	vacant	<a href="#">vacant</a>	vacant
Southeastern Louisiana University (SELU)	Gerard Blanchard	<a href="mailto:gerard.blanchard@selu.edu">gerard.blanchard@selu.edu</a>	985-549-2159
Southern University and A & M College (SUBR)	Michael Stubblefield	<a href="mailto:michael_stubblefield@subr.edu">michael_stubblefield@subr.edu</a>	225-771-5231
Southern University of New Orleans (SUNO)	Illya Tietzel	<a href="mailto:itietzel@suno.edu">itietzel@suno.edu</a>	504-286-5111
Tulane University (Tulane)	Mark J. Fink	<a href="mailto:fink@tulane.edu">fink@tulane.edu</a>	504-862-3568
University of Louisiana at Lafayette (ULL)	Afef Fekih	<a href="mailto:afef.fekih@louisiana.edu">afef.fekih@louisiana.edu</a>	337-482-5333
University of Louisiana at Monroe (ULM)	Ken Leppert	<a href="mailto:leppert@ulm.edu">leppert@ulm.edu</a>	318-342-1918
University of New Orleans (UNO)	Matthew Tarr	<a href="mailto:mtarr@uno.edu">mtarr@uno.edu</a>	504-280-1038
Xavier University of Louisiana (Xavier)	Ashwith K. Chilvery	<a href="mailto:achilver@xula.edu">achilver@xula.edu</a>	504-520-5149



# LaSPACE Requirements and Restrictions

In this section, requirements and restrictions applied to all LaSPACE programs are summarized. Additional requirements and restrictions pertaining to individual programs offered by LaSPACE are detailed later in these guidelines.

## Public Nature of Applications to LaSPACE

Once an application is received in the LaSPACE office, it becomes public record. Although the staff will not disseminate applications to individuals other than to reviewers, applicants should be aware that, if a request for information is made by the public (e.g., the news media), a copy of the application, by law, must be provided.

## Disclosure of Information

All LaSPACE programs must conform to applicable Federal, State and NASA regulations and stipulations. This includes annual reporting of award participant information to both the Louisiana Board of Regents and NASA. Part of this information will include both directory information such as name, address, telephone number, date of birth, and demographic information such as gender, ethnicity, and race for all award participants including faculty, staff, and students. Further, LaSPACE outreach includes public dissemination of its supported programs through *The Spaceporter Newsletter*, the LaSPACE website (<https://laspace.lsu.edu/>), as well as papers and/or presentations at Space Grant or related Education & Public Outreach conferences. The contents of award reports, including participant names, titles, institution, project summaries, results or conclusions and images, might be included in such public outreach articles. It is not intended that these public articles will disclose directory or demographic information except as aggregated statistical data. **The reporting template provided by the LaSPACE office must be used for all progress and final reporting on LaSPACE awards.** Additional reporting, such as disclosure of inventions resulting from LaSPACE funded projects, must be submitted using NASA forms. The NASA Form 1679 (NF1679) - Disclosure of Invention and New Technology (Including Software) must be completed by the Subawardee's institution for submittal to LaSPACE and NASA. A Microsoft Word version of NF1679 can be accessed here: <https://invention.nasa.gov/assets/downloads/nf1679.doc>

## Diversity

It is a national priority to increase diversity in Science, Technology, Engineering, and Mathematics (STEM), from university students, faculty, and staff to industry employees. Traditionally, minority groups and women have been under-represented in the STEM disciplines as students and faculty as well as in the workplace after graduation. LaSPACE is committed to addressing this priority and utilizing its programs, to the degree possible, to increase the diversity among its awardees. **All proposers are encouraged to help recruit diverse participants to their proposed projects.**

## Animal Use

Any project proposing the use of an animal model for validation must include a local IACUC approval letter, fully signed, which specifies a validity period longer than the proposed project period. Failure to obtain the Institutional Animal Care and Use Committee's approval in advance, is grounds for returning the proposal unreviewed. Attach the IACUC material as an additional appendix.

## Human Subjects

Projects that involve human subjects are not acceptable for this program.



## Eligibility

PI must be associated with a LaSPACE affiliated institution. PI must be a research or tenure-track faculty member or designated institutional representative recognized by LaSPACE. Note that there is only one Principal Investigator (PI) for a given REA project. All other senior researchers involved with the project can be listed as Key Personnel. All NASA funded participants must be U.S. citizens. Additional, or altered, restrictions may apply to specific programs.

## Budgeting

Historically, the Research Facilitation awards have been in the vicinity of \$30-35K. Proposals submitted to this solicitation should keep their budgets within these ranges.

These awards have generally been too small to support collaborative, inter-disciplinary projects among two or more LaSPACE campuses. Thus, we have established a larger award level up to ~\$70,000 that will support a multi-institution project which may involve partnerships between a large, or majority, research-experienced institution and a minority/HBCU or small, non-research intensive institution.

Capital Equipment purchases and Foreign Travel are, in general, not allowable costs. While equipment and foreign travel are technically allowed under Louisiana Board of Regents rules, such items must be well justified and might cause the proposal to not review well. Projects requesting these items cannot be funded using NASA funds. Currently BoR funds are exclusively used to fund Space Grant REA projects. When available, NASA funding may be considered to fund additional, qualified proposals. This program is not designed to fully support a graduate student, and student tuition is not an allowable expense.

LaSPACE permits indirect (F & A) costs at the BOR rate (currently calculated as 25% of Salaries, Wages and Fringe) on all REA proposals (Unrecovered F & A is an allowed form of cost sharing). The LaSPACE program management team may choose to use available NASA funds to support an REA project, and in such instances the proposing institution agrees to retain the BOR indirect rate charges, as originally proposed.

Further, a significant cost sharing by the submitting institutions and by collaborators is required (approximately 1:1). Cost sharing indicates an institution's commitment to the proposed project and is one of the criteria used by the reviewers in their evaluation. Further, LaSPACE is a federal-state partnership -- a 'seed' program -- that requires local matching funds to be generated. For a multi-institution project involving two or more LaSPACE affiliates, the match on the total project will be used for the evaluation. The lead institution could provide a 1:1 or greater match, while the smaller, collaborating institution could provide 1:1 or a match smaller than 1:1.

Applications solely for the acquisition of equipment, or solely to support a graduate student, will not be funded. However, some support for graduate and undergraduate students is anticipated within an application. Student tuition is **not** an allowable expense.

Funds are intended to be used to support research related activities of the participants. Research-related travel funds may be included in the budget, including conference registration fees to present results of LaSPACE funded research and/or for students to participate in a student paper/poster session (Louisiana State travel regulations apply to all travel).

Purchase of general office computers/software is not allowed unless it is specifically designated for the research, such as a dedicated laptop used on a research vessel, or the like. Other research-related expenditures will be considered on a case-by-case basis.

## Disbursement of Funds

LaSPACE Award fund distribution will be managed by the applicant's college or university, either via a cost-reimbursable subcontract if the applicant is at an affiliate other than LSU, or by transfer of funds from LaSPACE to the applicant's department for projects at LSU. The institution/department will assume responsibility for administering, distributing, and documenting costs charged to this program.

## Period of Performance

Unless otherwise stated, LaSPACE programs have a default period of performance of no greater than 12 months. Shorter periods of performance may be proposed, or even required by the LaSPACE office, to meet any requirements or restrictions related to the parent grant. *A proposed period of performance is provided for each program cycle on the summary page; proposers may request a different period with a start date up to 60 days after our proposed start date, unless otherwise indicated.*

## No-Cost Extension Policy

No cost extensions (NCEs) for ongoing projects may be submitted to the LaSPACE program office no later than 60 days before the initial project end-date. All NCE requests must include a status report which addresses all accomplishments made to-date on the project (including all publications, proposals, presentations, patents, etc), where the project is in relation to the originally proposed end date, reasons why the project has been delayed, and a proposed plan for completing the project. This status report must also identify all participants on the project (students, post-docs, faculty, and staff). No cost extensions (NCEs) for ongoing projects may be submitted to the LaSPACE program office no later than 60 days before the initial project end-date. All NCE requests must include a status report which addresses all accomplishments made to-date on the project (including all publications, proposals, presentations, patents, etc), where the project is in relation to the originally proposed end date, reasons why the project has been delayed, and a proposed plan for completing the project. This status report must also identify all participants on the project (students, post-docs, faculty, and staff).

## Number and Duration of Awards

LaSPACE expects to make varying numbers of awards in the subprograms of the Research Enhancement Awards Program, typically 4-5 single institution awards and 1-2 multi-institution projects.

## Assessment by External Reviewers

All applications that meet the eligibility requirements and guidelines established for this program will be reviewed by out-of-state consultants for merit. A strong proposal will clearly address each of the following:

1. Scientific and Technical merit of the proposed project.
2. Relevance of the project to aerospace goals and alignment with NASA and one of its Mission Directorates or Centers.
3. Competency of the project personnel with emphasis on the potential degree of enhancement and of the probability for the project to lead to increased competitiveness and subsequently funded work.
4. Degree to which new research directions and capabilities are to be developed.
5. Contribution of the project to increasing diversity, particularly under-represented groups, women, and persons with disabilities.

6. Degree to which the project will contribute to workforce development and human capital needs, both locally and nationally.

After receiving the recommendations of the out of state reviewers, LaSPACE will prepare a report on the evaluations for the Board of Regents (BoR). Once approved by the BoR, award letters will be issued and subcontracts will be drafted by the LSU Office of Sponsored Programs (OSP).

## Evaluation Criteria

Each proposal submitted under the Research Enhancement Awards Program will be evaluated by out-of-state reviewers from Space/Aerospace fields, but not generally by an expert in any particular subject area. Sufficient information must be clearly stated by the proposer to allow the reviewer to make an informed judgment. Failure to supply the appropriate information will lead to lower scores and non-funding of the project. Proposals will be evaluated using the following criteria which are reflective of LaSPACE Goals and Objectives and the NASA Mission.

1. The degree to which this proposal is relevant to Aerospace goals and to NASA's Mission (15%).
2. Scientific and technical merit of the proposed project (25%).
3. Competency of the proposer(s) to carry out the research plan and achieve the stated goals (10%).
4. Probability for the project to develop new capabilities and its potential for increased involvement in Space or Aerospace R & D for the investigator(s) (10%).
5. Adequacy of the project goals and objectives and the cited project outcomes (5%).
6. Appropriateness of the budget to carry out the project, including institutional contributions or other matching funds (10%).
7. Degree of student involvement in the Research Plan (10%).
8. Degree to which the project contributes to workforce and/or economic development (5%).
9. Contribution of the proposed project to increased diversity (10%).

# Research Enhancement Award (REA)

## Application Guidelines

### About the REA Program

The LaSPACE Research Enhancement Awards (REA) Program is intended to provide support for faculty (and students) at LaSPACE member institutions, particularly aimed at the emerging researcher or an established researcher who wishes to pursue new research directions, for the development of projects, contacts, and collaborations that will bring Louisiana scientists into the mainstream of NASA related research activity, thereby increasing their chances to successfully compete in the aerospace R&D marketplace. As is true with all LaSPACE Programs, minority participation is strongly encouraged. The REA Program is funded by state matching funds, through the Board of Regents Support Fund. The awards are intended to develop expertise and to contribute to research competitiveness. However, awards are not intended purely to support faculty salaries or graduate student stipends. It is anticipated (and strongly advised) that students (both graduate and undergraduate) will be involved in REA projects, but the overriding goal is the development of research capabilities and infrastructure in support of the country's space/aerospace endeavors. In that regard, contacts / collaborations / ties to NASA centers and NASA researchers are strongly encouraged

The overall goal for this Program is to effectively utilize the resources available through LaSPACE as incentive for faculty and students: 1) to develop research competitiveness, 2) to develop new research projects or directions, and 3) to foster collaborations among the campuses, as well as with NASA centers and/or other federal laboratories and with the business/industry community.

### Subprogram Descriptions

The REA Program is separated into two component parts or subprograms, The Research Facilitation/Initiation Subprogram and the Visiting Researcher Subprogram.

**THE RESEARCH FACILITATION/ INITIATION AWARDS SUBPROGRAM** is intended to support LaSPACE Goals with the objective to build research infrastructure.

1. To increase, in quantity and in quality, Louisiana's production of aerospace and related science and engineering graduates and professionals,
2. To enhance in scope, depth, and number, research and development activities in aerospace and related sciences and engineering, and
3. To indirectly increase aerospace and related industries in the state -- not only for economic development but also for economic diversification.

### NOI Program Requirement for REAs

An NOI is now required for LaSPACE REA proposals. Only proposers who have successfully submitted an NOI are eligible to submit an REA proposal. NOIs do not need to be routed through for institutional approvals/signature the way the final proposal needs to be. NOIs are required so that our office has more time to line up appropriate reviewers in advance of the proposal submittal date. The NOI deadline is provided on the program summary

page and the form and instructions for submitting an NOI are included with all the other forms at the end of these guidelines.

## Proposal Format Requirements

All proposals submitted to LaSPACE must follow the format listed below. Proposals not constructed as follows may be rejected without review. Any forms mentioned below are included in the attachments following these guidelines.

- Cover Page Form
- Prior LaSPACE Awards Form
- Table of Contents
- Proposed Project Summary Form

*The project summary (abstract) must be 250 words or less. It should concisely describe the proposed project, giving the objectives, key features, and proposed outcomes, and provide a timetable for project implementation. How the proposed research supports the goals and objectives of at least one NASA Mission Directorate and/or NASA Center must be explicitly stated and named. The subprogram must be indicated underneath the title. Summaries are to be written in general terms, understandable by a non-expert in the field.*

### A. Project Narrative

*The project narrative should be about ten (10) single-spaced pages (12 point font). Typical subsections of the narrative should include, in the order listed, the following:*

- 1) **Introduction:** Indicate REA subprogram and state the technical or scientific problem to be addressed.
- 2) **Objectives of the Project:** Scientific, technical objectives, workforce development, diversity objectives, and research capability development should be concisely delineated.
- 3) **Implementation Strategy or Scientific Method and Timetable:** The scientific and technological methodology to be employed in the work should be succinctly described. Strategies germane to the successful implementation of the project should be discussed. A concise timetable, preferably in a tabular form, should be provided. Key milestones toward the successful completion and possible continuation and expansion of the project should be shown in this table along with measurable outcomes from the project.
- 4) **Relevance to NASA Mission:** While direct collaboration with a NASA Center is not a requirement of the REA Program, it is desirable if possible. Previous or potential collaborations with NASA should be mentioned; explicit alignment with research goals at a Center and/or Mission Directorate must be stated.
- 5) **Long Term Benefits:** Describe the expected long range benefits from the project to Space and Aerospace R & D and infrastructure at the institution, as well as to the project personnel. Describe your plan for dissemination of the results. Discuss plans and prospects for submitting a follow-up proposal to NASA, other federal agencies, BORSF, or non-public sources. Describe patent potential, if applicable.
- 6) **Key Personnel/Management:** Identify the key personnel and succinctly describe their qualifications and experiences as they relate to the successful execution, continuation, and expansion of the

project. Discuss how the project contributes to creating a diverse workforce and meeting the human capital needs of government, industry and academia.

- 7) **Student Participants:** NASA is committed to the development of a strong aerospace workforce. Thus, it is strongly encouraged that undergraduate and/or graduate students be involved. NASA requires detailed longitudinal information on all participants, especially on students. Thus, all students must complete the online LaSPACE Student Participation Form with required demographic, contact, and future career information (links provided on Student Participant List attachment).
- B. Budget, Budget Explanations and Current/Pending Support  
*Please provide the project budget on the Budget Form provided. Note that F&A for the LaSPACE Funds Requested is calculated at the BOR rate of 25% of salaries, wages, and fringe benefits only. Unrecovered F&A may be included as part of your Institutional Match Funds. Tuition is not an allowable cost. You will be required to document the institutional contributions in your financial reports. Budget explanations should be provided on a separate page; they should be succinct, but provide sufficient information for a reviewer to judge the need for and importance of the items requested. Budget explanations must also include a formula explaining how any institutional contribution of unrecovered F&A was calculated. Following the budget explanations, provide current and pending support information for each Principal Investigator.*
- C. Vita/Resume  
*Attach a two-page Vitae for the Principal Investigator. There can only be one Principal Investigator per project proposal. For a multi-institutional proposal the PI would be the investigator from the lead institution. The partner institution's lead investigator would be considered a Co-I and a two-page vitae for this person should also be included.*
- D. Letter of Support (if applicable)  
*If the proposal involves work with a NASA center or other Federal laboratory or with a business-industry partner, attach a letter of support from the contact at the collaborating/participating institution (an e-mail is acceptable). A strong letter of support, describing the specific contributions in personnel or facility/laboratory use, will reflect well. Letters of support for the research goals without an explicit commitment of collaboration are also appropriate for this program.*

## Notes for Success

Remember, the reviewers will not be expert in all sub-fields. They will be generalists, usually faculty members at other universities. Avoid highly technical jargon as much as possible and write at a level for the average scientist/engineer in a clear and concise fashion, i.e. what has been called the "Scientific American Level." Keep in mind also that the proposal is your opportunity to present yourself in the most positive light and to emphasize your best points and accomplishments (and/or research career plans) in your research efforts. Any prior or planned contacts with NASA or aerospace-related institutions should be mentioned. Follow the format instructions and respond clearly to the requested information. Diversity and involving undergraduates or graduate students in the research, along with opportunities for student papers/posters or as co-authors is strongly encouraged. Review the Proposal Evaluation Criteria for additional hints for discussion points for a successful proposal.

## Additional Format Requirements for Multi-Institutional Proposals

A multi-institutional proposal will involve researchers at different LaSPACE affiliate campuses. Only one proposal is submitted and will be reviewed for funding. The cover page will be from the lead institution and will include

the entire requested funding amount and the entire cost-match. The Lead Institution must be clearly identified in the proposal. The lead proposal should include all items specified above, a completed “Multi-Institution Summary Page” plus a “Collaborator Proposal” for each collaborating campus. Further, the lead proposal must also include a discussion of how the multi-campus project will be managed. An extra page in the Project Narrative (total of 11) is allowed for this discussion. Finally, in the budget section the division of requested funds, match and/or subcontracts between campuses need to be clearly explained. The individual awards contained in the subcontract total cost shown on the budget form should be identified in the budget justification and correspond to the total budget and match shown in the “Collaboration Proposal.”

The “Collaboration Proposal” consists of a signed-off cover page, a “Multi-Institution Summary Page” indicating the lead institution and collaborating institution investigators, plus a narrative Statement of Work (SOW), identification of collaborating institution personnel and students, completed budget form and budget narrative.



# Attachments

## Required Proposal Forms

### Required Forms

All proposals submitted to LaSPACE must use the forms included following this page. Proposals not using these forms may be rejected without review.

- Notice of Intent – Submit this prior to submitting your proposal
- Cover Sheet
- Proposed Project Summary
- Prior LaSPACE Awards
- Proposal Budget Form
- Student Participant List (online form completion certification)

## LaSPACE REA Program Notice of Intent (NOI) to Propose

*This NOI must be submitted by the PI to LaSPACE on, or before, Friday, ~~May 11, 2019~~ May 29, 2020 via email to [laspace@lsu.edu](mailto:laspace@lsu.edu).*

NAME OF PRINCIPAL INVESTIGATOR (PI):	NAME INSTITUTION:
PI DEPARTMENT	PI PHONE NUMBER and EMAIL ADDRESS
TITLE OF PROPOSED PROJECT:	
LIST PROJECT DISCIPLINES:	
ADDITIONAL INSTITUTIONS IF SUBMITTING A PARTNERSHIP PROPOSAL	
THE PROPOSED WORK WILL SUPPORT THE RESEARCH PRIORITIES OF THE FOLLOWING NASA DIRECTORATES AND NASA FIELD CENTERS:	
PROJECT ABSTRACT (maximum 250 words):	

# LaSPACE REA Program Proposal Cover Sheet

1. Title of Proposed Project: \_\_\_\_\_

2. Principal Investigator: \_\_\_\_\_  
(Name) (Highest Degree Earned) (Citizenship)  
\_\_\_\_\_  
(Department)

3. Institution of Higher Education: \_\_\_\_\_

4. Address: \_\_\_\_\_  
(Street Address/P.O. Box Number)  
\_\_\_\_\_  
(City, State) (Zip Code)

5. Telephone: \_\_\_\_\_ FAX: \_\_\_\_\_

E-mail: \_\_\_\_\_

6. Date of Submission: \_\_\_\_\_

7. Total Funds Requested: \$ \_\_\_\_\_ Institutional Match: \$ \_\_\_\_\_

\*\*\*\*\*

**Certification of Compliance with Applicable Executive Orders and U.S. Code:** By signing and submitting this proposal, the signatories certify that the statements made in this proposal are true and complete to the best of their knowledge; they agree to comply with LaSPACE award terms and conditions if an award is made as a result of this proposal; and the institution and proposed project are in compliance with all applicable Federal and State laws and regulations including, but not limited to, Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participant's responsibilities; Non-Discrimination; Certification against Lobbying imposed by section 1352, title 31, U.S. Code; Compliance with China Funding Restriction as detailed in Public Laws 112-10 Section 1340(a) and 112-55, Section 539; ACORN Compliance in accordance with 534 of the Consolidated and Further Continuing Appropriations Act of 2012 (Pub. L.112-55); and does not have a federal tax liability or federal felony conviction (sections 544 and 543 of Public Law 112-55).

8. Signature of Principal Investigator: \_\_\_\_\_

9. Name of Authorized Institutional Rep: \_\_\_\_\_

10. Signature of Authorized Institutional Rep: \_\_\_\_\_

11. Date Signed: \_\_\_\_\_

For Multi-Institution Proposals Indicate: Lead Institution or Subaward Institution

## Proposed Project Summary

NAME OF INSTITUTION (INCLUDE BRANCH/CAMPUS AND SCHOOL OR DIVISION)
ADDRESS (INCLUDE DEPARTMENT, BUILDING & ROOM #, CITY, STATE, ZIP)
PRINCIPAL INVESTIGATOR NAME, TITLE, & EMAIL
PROJECT TITLE
PERIOD OF PERFORMANCE 09/01/2020 – 08/31/2021
ABSTRACT (DO NOT EXCEED 250 WORDS)

## Multi-Institution Proposed Project Summary

NAME OF INSTITUTION (INCLUDE BRANCH/CAMPUS AND SCHOOL OR DIVISION, and DEPT)

PRINCIPAL INVESTIGATOR NAME, TITLE, and ADDRESS (INCLUDE PHONE & EMAIL)

Co-INVESTIGATOR INSTITUTION (DEPT), NAME, TITLE, and ADDRESS (INCLUDE PHONE & EMAIL)  
**(for multi-institution proposals only. Co-Investigators at a single institution is not allowable)**

PROJECT TITLE

PERIOD OF PERFORMANCE

09/01/2020 – 08/31/2021

ABSTRACT (DO NOT EXCEED 250 WORDS)

## Prior LaSPACE Awards

(Limit this list to the last 5 years)

For each prior LaSPACE award, as a PI or a Co-I please provide the following:

1. Project Title:
2. Dates:
3. Was a final technical report submitted? \_\_\_\_\_YES \_\_\_\_\_NO\*

If no, explain:

4. Did a proposal to a funding agency result? \_\_\_\_\_NO \_\_\_\_\_YES

If yes, Agency:

Title:

Date:

Status: \_\_\_\_\_Funded \_\_\_\_\_Declined \_\_\_\_\_Pending

(Add additional pages as necessary.)

## LaSPACE REA Proposed Budget Form

*Include this form in your proposal. Be sure to only ascribe funds to categories explicitly open to the program area to which you are applying. Following this form, include a detailed narrative explanation of all proposed costs.*

Proposal Title: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

Institution: \_\_\_\_\_

	LaSPACE Funds Requested	Institutional Match Funds*
<b>A. Direct Labor</b>		
1. Researchers	\$	\$
2. Graduate Student(s)	\$	\$
3. Undergraduate Student(s)	\$	\$
4. Fringe Benefits	\$	\$
5. Subtotal A	\$	\$
<b>B. Supportive Expenses</b>		
1. Travel	\$	\$
2. Supplies & Materials	\$	\$
3. Communications & Equipment	\$	\$
4. Other Direct Costs (Identify)	\$	\$
5. Subcontracts	\$	\$
6. Subtotal B	\$	\$
7. F&A (Indirect)	\$	\$
<b>C. Total Project Cost</b>		
	<b>\$</b>	<b>\$</b>

*\*Must be certified on all financial billings/reports.*



## Student Participant List

Student Participant List must be completed and online demo forms filled out in advance of submitting this application. If students are to be selected after award, you must commit to completing these forms **as soon as students are recruited** to the project.

Name	Classification	Major	Project Role
<i>e.g. Jane Smith</i>	<i>Undergraduate, Junior</i>	<i>Electrical Engineering</i>	<i>Electrical Design Lead; Technical Writing Co- Lead</i>

[Link to Undergraduate Student Participation Form](#)

[Link to Graduate Student Participation Form](#)

Check this box to confirm that all students listed above have completed an online participant form.

Check this box to commit that all recruited students will complete the online form as soon as they are recruited.